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PANORAMA

INSIGHTS INTO ASIAN
AND EUROPEAN AFFAIRS

AGEING AND POLITICS

CONSEQUENCES FOR ASIA AND EUROPE

Konrad
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Preface

Even if we cannot be sure about being out of the last financial and economic crisis, there are a series of other challenges ahead which urgently demand special skills of governance at a national and an international level. One of those issue is related to the demographic change and ageing of the population, at least in some nations, both in Asia and in Europe.

Europe is the trendsetter of the demographic change which has already reached some Asian countries. The tendency in Europe is towards declining birth rates and older societies. Although the groundwork of this trend was laid some decades ago, its consequences are getting more and more obvious only recently—and so is the need for governance. With a still growing overall population on the globe, the problem of shrinking societies may have seemed to be of minor relevance. World population is expected to still grow in the next decades from 6.8 billion to 9.4 billion in 2050. But this overall increase with all its problems for resource consumption and sustainability cannot cover up anymore the increasing problems of a decreasing population in some countries and regions.

Germany, in some way, can be characterised as the frontrunner of this development. Its fertility rates have been constantly low for 35 years, with two children replacing every three adults. Since 1972, the number of newborns never exceeded the number of deaths. For some decades, immigration figures could camouflage the natural losses—and tranquilize public awareness and policy makers. But since 2003, the overall German population has declined and there is no return in sight.

By 2030, most Middle and East European regions will face similar processes of population losses. Remote rural areas with weak economies will be most affected by this trend. The majority of European countries will see a decline in their workforces over the next several decades. In parallel, in all of Europe the number of people over age 60 will rise by more than 50 percent between 2004 and 2030. The size of the working-age population (those between 15 and 64) in the European Union will shrink by 40 million up to 2050 and the number of people in the actual workforce will drop by 30 million, from 238 million (2008) to 207 million (2050). Without the foreseeable immigration the number would drop by 70 million. It is obvious that these demographic developments will have serious economic and social consequences.

Nevertheless, these challenges are not only facing the European welfare states which rely on the younger generations as premium payers for the pension funds of the elderly and the unemployment compensation—to name only the two biggest social payments. Japan and South Korea are ageing even faster. Emerging nations such as China, Malaysia, and Indonesia are discovering that they will be affected by the same demographic changes in a compressed way and they have started to perceive the possibility of growing old before becoming rich.

The demographic change by declining birth rates and ageing societies brings ahead demands for new governance responses in a wide range of areas. Tax and pension systems, organisation of the work force while dealing with the unavoidable increase of the working age, reforms of different areas of the healthcare system, adjustment of the educational system, and new ways to deal with immigration and immigrants are issues which urgently need to be handled in new ways. These reforms will provoke complicated discussions and even conflicts within the affected societies, which can already be studied in some European countries, where the extension of the retirement age is rejected by trade unions and some of the political parties. On the other hand, the younger generations refuse to pay constantly more taxes and contributions to the social system for the elderly as they do not have any expectation to profit in the same way when they become old. A new conflict between the younger and older cohorts of societies is on the way.

Among the challenges for the Asian countries is the necessity to attract young talents and foreigners. Nevertheless, this can produce tensions within a country and lead to a competition for talents between countries. However this development will go on, it seems quite predictable that the demographic change will have a huge impact on the policies and further economic development in Asia and Europe.

This edition of *Panorama: Insights into Asian and European Affairs* is dealing with the topic of ageing and the challenges that occur due to the demographic changes. On the one hand, we present some specific issues regarding ageing which will be discussed in overview articles for both continents, Asia and Europe. These articles specially focus on the aspects of employment, social security system, family, and policy challenges. On the other hand, we present some analyses which deal with the consequences and challenges of the phenomenon of ageing for some specific countries, like Japan, South Korea, and Singapore in Asia, and Germany, Spain, and the Netherlands in Europe. We hope to contribute to an upcoming debate which will gain intensity during the next years.

Dr. Wilhelm Hofmeister

IMPACT ON POLITICS

Impact of Ageing on Migration in Asia

Fariha Haseen and Sureeporn Punpuing

Background

The demographic transition started with mortality reduction, followed after a time by declining fertility, then by an interval of increasing and then decreasing population growth, and finally by population ageing (Lee, 2003). Globally, two demographic trends have recently drawn widespread attention: population ageing and migration. Population ageing can refer to either an increased proportion of older persons in a population (structural ageing) or an increase in the number of older persons (numerical ageing), or both. Population ageing has become a concern in both developed and developing countries, especially in countries whose fertility rate is already below replacement level. Adding to this concern, developed countries will experience a "retirement bulge" as post-World War II baby boomers retire over the next two decades (Poot, 2008). In Asia, Japan especially is experiencing such a retirement bulge (Ogawa & Retherford, 1997). Another significant phenomenon is the growth in international migration. In 2010, it is estimated that 213 million of the world population are international migrants, of which 61 million are in Asia. The number of international migrants in the world and in Asia, which was, respectively, 155 million and 50 million in 1990, has increased over time. In addition, there will be almost 11 million refugees in Asia in 2010 (United Nations, 2008).

Objective of the Paper

This paper aims to examine the impacts of ageing on migration in Asia. First, the process of population ageing in Asia and the implications of this phenomenon in developed and developing countries are reviewed. Second, the effect of ageing on migration in terms of how it affects both young and elderly people is discussed. Next, migration in Asia and its distinct pattern are examined. Finally, policy issues on ageing and migration are recommended.

Why is Population Ageing Important in Asia?

Population ageing will be one of the most important social phenomena of the next half century. It is important because eligibility for most social transfer programs is strongly related to age and will be affected by changes in age population structures. People of different ages have different skills, interests, needs, and intentions. Shifts in the age structure will gradually change the focus on the social landscape and the focus of public attention. Changes in the aggregate age structure are already evidenced within nearly all social institutions, from families to firms. How these institutions accommodate themselves to these changes in population age structures will have a significant effect on the quality of life of the elderly in the 21st century (Martin & Preston, 1994).

Population ageing alters the age structure of the population, which results in increasing proportions of the population at older ages and, consequently, decreasing proportions at younger ages (Hermalin & Myers, 2005). At the end of 20th century one in ten human beings was over age 60; this ratio will reach one in five by 2050 (Palacios, 2002). Population ageing will affect the labour market on both supply and demand sides in Asia (Scortino & Punpuing, 2009). For example, the population of Japan is projected by the United Nations to begin to decline after 2010, and those of China and Korea after 2035. Before the total population begins to decline, however, the population of working age people begins to decline, while that of older persons expands, often very fast (Huguet, 2003). Some countries will have a high proportion of young people, such as Bangladesh, India, Indonesia, Myanmar, Pakistan, the Philippines, and Vietnam. But, as a whole, population ageing is happening all over the world (Christensen et al., 2009).

How has Population Ageing Occurred in Asia?

Reduction of fertility, increased longevity, and the gap in life expectancy at birth between females and males have resulted in changes in the age and sex structures of populations.

Reduction of Fertility

The rapid decline in fertility in Asia, especially in East and Southeast Asia, during the second half of the 20th century constitutes one of the most fundamental social changes that occurred during this period. Asia has displayed a very diverse trend of fertility over the last half decade (Ghubaju, 2006). By 1990, fertility had dropped in almost all Asian countries. It dropped to below replacement level (2.1 births per woman) in East and Northeast Asian countries; in Myanmar, Singapore, Thailand, and Vietnam in Southeast Asia; in Sri Lanka in South and Southwest Asia; and, during the period of 1990-1995 in North and Central Asia, Armenia, Azerbaijan, Georgia, and the Russian Federation. The lowest fertility can be found in Hong Kong, Japan, Singapore, and the Russian Federation, all of which have a TFR of 1.5 or lower. In contrast, in 2010, the

TFR still exceeded five births per woman in Afghanistan (United Nations, 2009), and many Asian countries had fertility rates ranging from 2.1 to 5.0 births per woman, for example, Bangladesh, Cambodia, India, Indonesia, Malaysia, Nepal, and Pakistan (United Nations, 2009).

Transition in Mortality

The reduction in mortality levels in Asia over the past 50 years has been impressive. For example, in East Asia the life expectancy at birth increased from 43 years in 1950-1955 to 74 years in 2010, while the infant mortality rate fell from 181 infant deaths per 1,000 to 20. In Southeast Asia, life expectancy at birth increased from 41 to 70 years during the same period, and the infant mortality rate was reduced from 168 to 30 (PRB, 2009). Mortality reduction will continue to be a priority policy goal in these countries, which will have the effect of further accelerating population ageing. The rising number of elderly on the one hand, and the declining number of younger people on the other will create a shortage of caregivers for the elderly population. As females will outnumber males in the older groups, elderly women's social and financial security as well as their health will comprise one of the largest problems faced by ageing societies. Females are more likely to be dependent upon family members and public programs, especially at advanced ages, due to illness and disability, which will place a burden on family members as caregivers (Gubhaju, 2008).

Transition from Younger Population to Ageing Population

While transition from a younger population to an ageing population occurred over a much longer period in the West, the speed of population ageing has been much faster in the low fertility countries of Asia. In addition, improvement in mortality rates not only increases life expectancy at birth but also increases the number of additional years that persons aged 60-80 years are expected to live. These improvements in old-age mortality have contributed to the ageing of the elderly themselves (United Nations, 2007).

Growing Concerns of Populating Ageing

Population ageing has implications for the labour force, for the aggregate expenditure on goods and services, for physical and mental health, and for the demand for long-term care (Yip & Lee, 2000). Until recently, the focus was on rapid population growth. Only Japan had been experiencing low fertility and ageing population. But there has now been a major change in focus. Ageing has become an issue of major concern, not because most countries of the region have a high proportion of elderly (they do not, at least if we compare them with European countries) but because projections show that they will soon become ageing countries. The number of elderly is growing rapidly in all the countries of this region. As a result, two kinds of mobility will occur in Asia:

a rapid increase in international retirement migration in the region and high mobility among young people needed to care for the elderly, particularly nurses and domestic workers (Jones, 2008).

Increased Potential Support Ratio

An ageing population will eventually lead to a decline in the overall growth of the population in general and the working-age population in particular. An old-age structure provides the momentum for a decline in population, just as the young-age population promotes accelerated population growth. Low fertility has changed the age structure of many Asian countries. In the future there will be major reductions in the population support ratio[1] (PSR) shrinking by half. Although the PSR in Asia as a whole is relatively high at 11, there are variations among countries and several low fertility countries in Asia will experience a sharp decline in the PSR in the near future (Gubhaju, 2008).

Economic Productivity

Population ageing has economic implications, especially in terms of the labour force. A reasonable strategy to cope with the economic implications of population ageing is to raise the typical age of retirement, and most governments are moving in this direction. If part-time work becomes common for elderly people, then more opportunities for full-time work might open up for young people (Christensen et al., 2009). Thailand has already stated that it is working to change the definition of "elderly" from 60 to 65 years since life expectancy has increased and the health condition of elderly people has been improving (Prasartkul & Vapattanawong, 2010).

Feminization of Ageing

A large gender gap will occur in low fertility countries of Asia due to population ageing. The feminization of the elderly population (more female elderly than male elderly) is particularly evident in Japan, the Republic of Korea, and Thailand, where the sex ratios at ages 60 years and older and 80 years and older are significantly lower. For example, in Thailand females outnumber males and constitute the majority of the older population. Due to longer life expectancy of females, the ratio of males to females declines with age, and thus females outnumber males in older age groups. In 2005, more than half (50.6%) of the older population were female, and females made up 70% of the oldest old (UNFPA, 2006). Elderly women suffer more problems compared to males due to low education, poverty, morbidity and disability, less accessibility to the health services, and less formal social support as they get older (UNFPA, 2006; WHO, 2002; Gubhaju, 2008).

[1] Potential support ratio (PSR) is defined as persons aged 15-64 per persons aged 65 and over.

Shortage in the Work Force

Currently, several Asian countries, such as Japan, Korea, and Singapore, are faced with labour force shortages. Japan was once a migrant sending country, but after the economic boom in the 1960s, the number of emigrants from Japan decreased, and by the early 1990s the national emigration project had ended. Then, after introducing the new immigration law in 1990, Japan became a migrant receiving country. Japanese society is likely to face more labour force problems as Japan's population continues to decline. The country is likely to experience increasing social problems due to population ageing, especially as more and more of the massive seven-million-member baby boomer generation begins to retire. It is estimated that the percentage of the population over 65 years old will increase to 29 per cent by 2025 and to 40 per cent by 2055, compared to 20 per cent in 2006. Because of the falling birth rate and the demographic changes in the labour force, there is now a shortage of young workers to support the elderly people who depend on them. There will be more labour shortages, especially for IT professionals, technicians, and caregivers (Yamashita, 2008).

Disability and Ill Health

There are three traditional periods of life: childhood, adulthood, and old age. Old age is now evolving into three segments, young old (60-69 years), middle old (70-79 years), and oldest old (80 years and above). The disease prevalence in old age has increased over time, and disability increases as age advances[2]. In Japan, however, between 1993 and 2002, six of ten ADL indices and instrumental ADL improved after adjusting for age; deterioration occurred mainly in instrumental ADL. The proportion of people who reported any disability fell by 4.4% per year (Schoeni et al., 2006).

Although mortality is higher for men than for women at all ages, women have more functional limitations and more difficulties with ADL and instrumental ADL (Christensen et al., 2009). But the prevalence of disability among young-elderly people is decreasing, and not only are individuals living longer than they did in previous years, they also have improved functional status in successive cohorts because of prevention of disease and disabilities as well as treatments and environmental changes that compensate for the consequences of disease.

[2] Disabilities in basic activities of daily living (ADL) measures feeding, dressing, bathing or showering, transferring from bed and chair, and continence. Disability in instrumental ADL includes telephone use, shopping, housekeeping, preparation of food, doing laundry, use of various types of transport, handling drugs, and management of finances. Surveys usually use the short version of questions to assess the level of disability among older people.

Burden on Health Sector

Population ageing has significant effects on the whole society, and its impact is particularly evident in healthcare services (Yip & Lee, 2000). If the health of individuals at any particular age improves, there could be an increased total burden if the number of individuals at that age rises sufficiently. Healthcare often requires service sector or family-member labour by human beings; this labour is not easily substituted by machines, although assistive technology is likely to reduce the need for personal care in high-income countries (Christensen et al., 2009).

An increase in the size of the elderly will change the structure of the diseases also. Yip and Lee (2000) have given the example of cardiovascular disease, one of the leading causes of death and one that affects mostly the elderly. Medical expenses grow along with increases in the size of the elderly population because older people make more hospital visits, constitute a larger number of in-patients, have a longer duration of hospital stay, and incur higher hospitalization charges compared to people from other age groups. Furthermore, the treatment costs of the diseases most frequently seen among the elderly, such as malignant neoplasms and cardiovascular and cerebrovascular diseases, is higher than those of other diseases. It is therefore essential to plan for the provision of healthcare services in the face of an ageing population. Several countries are recognizing and working on the need for a medical insurance system for the elderly. Otherwise, the costs would have to be borne solely by the government.

Migration in Asia

During the 1970s and 1980s, the main destination countries for migrants from Asia were Europe, North America, Australia, New Zealand, and the Middle East. Past migration was related to decolonization after WWII by, in particular, three European countries, namely, the Netherlands from Indonesia, France from Vietnam, and the United Kingdom from the India and Hong Kong. In the United States, the number of Asian migrants increased from 17,000 in 1965 to an average of more than 250,000 annually in the 1980s and over 350,000 per year in the 1990s. In 1985, there were about 3.2 million Asian migrants; this number increased to 8.6 million in 2002. In 2004, Asian migrants accounted for 40 to 70 percent of the workforce in Middle Eastern countries (Graeme, 2005; ILO, 2006).

Since the 1990s, the destination countries for Asian migrants have shifted to newly industrialized countries, particularly in East and Southeast Asia. Migration within Asia grew significantly in the first half of 1990s. During 2004-2005, Asian migrants in Singapore made up approximately 28 percent of the population. In Malaysia this figure was 12 percent and in Japan less than 2 percent (ILO, 2006). All countries in Asia have experienced both emigration and immigration. The main receiving countries are Brunei, Hong Kong, Japan, Singapore, South Korea, and Taiwan. Sending countries

are Bangladesh, Cambodia, China, India, Indonesia, the Lao PDR, Myanmar, Nepal, Pakistan, the Philippines, Sri Lanka, and Vietnam, while Malaysia and Thailand act as both sending and receiving countries (Castles and Miller, 2009).

It is important to note that these figures represent only regular migrants. These figures would double or expand even more if irregular migrants were counted. In Asia in particular, more than half of cross-border migrants enter destination countries without any documents. In Thailand, by the end of 2009, there were 1,314,382 undocumented migrants from Myanmar, the Lao PDR, and Cambodia. Within this group, about four in five are migrants from Myanmar, and one in five work in Bangkok (Ministry of Labour, Thailand). The Asian and global economic crises in 1997 and 2008 respectively, led to an intention to reduce "dependence" on migrant workers in many receiving countries (ILO, 2009).

Why do People Move?

Most migration flows from low income countries to middle or high income countries. People move to look for work or to seek an education, but many others flee their countries as refugees or to follow family members who have already migrated (Castles & Miller, 2003). Factors influencing migration include uneven population and economic growth (labour shortages and labour surpluses), cultural changes, and the existence of legal recruitment networks and the smuggling of labourers (Martin, 1996).

Strong networks and government policies in sending countries such as India, Bangladesh, the Philippines, Sri Lanka, and Pakistan have made it possible for large numbers of workers to seek employment in the Middle East and have been responsible for the dispersal of migrants within Asia. In addition to government policies promoting employment abroad, labour brokers and financial support systems, including money lenders who finance visa and passport fees, smooth the way for those who want to migrate. When Asian labour migration began in the mid 1970s, contractors arranged to send male migrant workers to the Middle East in exchange for fees paid by employers. As more women went abroad in service occupations (as maids, for example), fees tended to increase and were paid by the worker rather than the employer (Martin, 1996).

When countries with limited labour supplies shift from manufacturing to service economies, at which point their own citizens are qualified for the best jobs, lower-level jobs become available for migrant workers in declining small- and medium-sized manufacturing firms. Jobs also become available in construction and factory work for men and as maids or entertainers for women. The wages that workers send home (remittances) are important contributions to their families' incomes as well as to their countries' economies (Martin, 1996).

Migration Contributions

Migrant workers certainly contribute to the economy of both origin and destination countries. For example, in 2007, migrants' remittance was equal to 15.5% of Nepal's GDP, while they were 11.6%, 9.5% and 8.1% of the Philippines, Bangladesh and Sri Lanka's GDP respectively (Abella and Ducanes,2009). On the other hand, at the destination or receiving country, it is estimated that undocumented migrants, particularly those from Myanmar, Laos, and Cambodia, contributed about US$2 billion to the Thai economy, representing about 1.25 percent of the nation's GDP in 2005 (Martin, 2007). Furthermore, the low wage rate for migrant workers helped in keeping the Thai rate of inflation low (Chalamwong & Prugsamatz, 2009). In addition, labour skills and technology transfers have been recognized as benefits to the origin communities (Wickramasekara, 2002).

Age Composition and Migration

Migration not only increases the population size of receiving countries but also affects the population's age distribution. Age composition is relevant for population policy for several reasons. First, age composition has important consequences for economic viability, for the provision of services, and for the ability of communities to organize to meet challenges at the local level. For example, younger populations mean labour force expansion, higher fertility, higher rate of school enrolment, expansion of housing, and associated concerns. In contrast, older people have different needs and constraints arising from changing income, household size, health, and related life cycle changes (Fuguitt & Heaton, 1995). Second, migration is highly age-graded. Migration probabilities peak in the early twenties, when leaving home, entering college, and beginning a career are common. Mobility declines sharply after the twenties, but rises slightly in the primary retirement ages. Just as migration affects a society's age composition, changing age composition of the population has altered patterns of migration (Fuguitt & Heaton, 1995).

Distinct Features of Migration in Asia

In Asia, political stability, economic development, and increasing integration of countries in the region into the world economy has resulted in increased trade and enhanced flows of capital, labour, raw materials, and technology. Movement of labour have accelerated in response to differences in income levels and levels of human resource development as workers cross borders to seek better working and living conditions. In this context of enhanced migration activity in the region, two dimensions of contemporary Asian migration, emigration of health workers and the feminization of migration, have had a particular impact on the well-being of migrants and non-migrants, including those "left behind" (Nguyen et al., 2006).

Movement of Health Workers

Globalization has increased linkages between Asian countries and linked them more closely with countries on other continents, as evidenced by sharply rising flows of goods and capital moving over national borders (Martin, 2008). The ageing of the populations in developed countries and the low to negative growth in the working-age population has increased the demand for international workers to provide long-term care services. A dual labour market of long-term care workers, increasingly made up of women, is becoming internationalized by the employment of migrating nurses from developing countries (Redfoot & Houser, 2008). On the other hand, rising demand for health workers in more developed countries in the region and policies supporting emigration as a means of producing remittances in the less developed source countries have created heavy burdens on the healthcare systems of sending countries and hence directly affect the health and healthcare behaviour of the left-behind population (Nguyen et al., 2006). For example, the Philippines is facing a shortage of formal care givers due to migration of health staff.

Feminization of Migration

Another dimension of migration in Asia is the "feminization" of migration (Nguyen et al., 2006; Piper, 2004). Increasingly, more and more women are migrating, sometimes exceeding the number of male migrants. The Philippines, Indonesia, and Sri Lanka are the major sending countries for female migrants to Singapore, Malaysia, Thailand, Hong Kong, Taiwan, Korea, and Japan (Piper, 2004). One path for migration, both internal and external, is marriage. Fan and Li (2001) define "marriage migration" as migration to join one's spouse in another area usually at or soon after the marriage. In East and South Asia, women move to their husband's house after marriage. This marriage migration often affects local labour force productivity. A study conducted in two villages in China found that marriage migration benefited women when they migrated after marriage and that it was positive for their husband's families since the newly immigrated wife contributed to the local labour force (Fan & Li, 2001). Marriage migration also occurs in an international context. In Japan, for example, women from Korea, Thailand, the Philippines, India, and Sri Lanka have been able to secure legal residence status and work permits when they marry Japanese men (Piper, 1999; Knight, 1995).

Many Asian women who were traditionally the caregivers in the family are now migrants, thus leaving many Asian families in sending countries to face a "care crisis" (Nguyen et al., 2006). This emerging phenomenon requires more investigation. Due to the higher proportion of female migration, many children are left behind and require more attention from other family members. This is the case in Sri Lanka, especially, where three quarters of the female migrants are married and 90 per cent of these married women leave children behind (Gambund, 2003). The "left-behind elderly" in the

sending country, who typically need special care in old age due to ill health, disability, and financial hardship, is another important group. With an increasing number of younger women entering the labour force, often far away from home, availability of caregivers for older persons is also decreasing. In the context of the rapid urbanization, globalization, and migration being experienced by many countries, the situation is worsening, leading many older persons to be left behind in rural areas without caregivers (Nizamuddin, 2003).

Migration of Young People

The migration of young people, who are normally better educated than their rural counterparts, has led to an ageing population structure in rural areas. This phenomenon is referred to as "ageing in place." In order to recover from such a demographic depression, it is necessary to increase the input of the working-age population either by increasing in-migration or female labour-force participation (Gubhaju, 2008). Migration of young people does not always economically benefit the older people of the country of origin. A study conducted in Kyrgyzstan found that in remote areas the old people were living in poverty and that young emigrants could not send enough money to help their families (Ablezova et al., 2008). On the other hand, Zhuo and Liang (2006) found that the rural elderly of China with migrant children received more economic support from their children and also had better housing than those without migrant children. Despite the established findings about the positive economic effects on families of rural-to-urban migration, as well as the extensive research on intergenerational co-residence, some studies have focused directly on the impact of migration on the elderly left behind. The findings from the China study suggest that having migrant children improves both the economic well-being and living conditions of the rural elderly in China, although no significant influence is found on the psychological status of the elderly. A recent study conducted in Kanchanburi demographic surveillance system of Thailand found that migration of the children was not the most important factor affecting depression status of left-behind elderly (Abas et al., 2009).

Ageing and Migration

Transnationalism and Care of Older Persons

A number of studies examine the transnational activities of women in relation to family and kin, but only very few works focus on the care of the elderly relatives in transnational settings (Zechner, 2008). Members of transnational families spend at least part of their lives geographically dispersed in separate countries (Herrera, 2001). Despite the separation caused by national borders and distances, they look after one another, share resources, and maintain their social relations. Members of transnational families also provide emotional care and guidance from afar (Zechner, 2008). But the care depends

on distance, migrant resources, elderly people's circumstances, and the culture of care in specific places. If older persons remaining in the country of departure face difficulties in their physical and social circumstances, those living abroad must maintain frequent contact, which goes beyond remittances.

Elderly Migration

Not only are young people moving, but so are some elderly. For example, a significant number of elderly from Japan and Korea have relocated to Thailand, Malaysia, or Indonesia. Over the last few years, a new concept, "retirement migration," has evolved to describe this phenomenon. "Retirement migration" is defined by Miyazaki (2008) as a move or change of living space in one's life-cycle, viewed from an individual's point of view. It forms a part of the system of exchanging labour, which inevitably includes the exchange of goods, wealth, and space. This concept has been mentioned in several studies.

Mobility of those past retirement age (say, 65+) has not been given much attention. This is not because this age group is immobile. Indeed, mobility of the elderly is considerable throughout Southeast Asia; an example being the tendency for many elderly in cities to return to their rural or small town place of origin when they retire. Elderly people have the choice of domestic migration (Jones, 2008). Living in the countryside attracts some retirees, while others may prefer to migrate to other countries for at least several months. While the initial attempt to create overseas settlements for elderly people received a cold reception from the countries of destination, the shift from immigration to "long stay" has generally been welcomed by foreign governments, which often offer special treatment for elderly "visitors" who are not supposed to earn any money locally but rather to consume local products. For example, some countries offer visa extensions under certain conditions, such as depositing a certain amount of money in a local bank (Miyazaki, 2008). Host countries in Southeast Asia have sometimes responded by providing a special kind of retirement visa, such as the "Malaysia My Second Home program" and the "elderly visa" in Indonesia (Yamashita, 2008). In Thailand, people aged 50 years and above can apply for a "retirement visa" if they have a fixed deposit of 800,000 baht in a local bank.

The number of people moving overseas after their retirement is still limited and such moves depend at least partially on the economic situation and foreign exchange rates. Many old people from Western countries migrate to Asia and settle down by marrying local woman. For example, in the last Thai census, among the 60,000 cross-cultural marriages around 20 percent of men were from Western countries (Limanonda, 2007).

For a number of reasons, retirement migration is likely to increase. For one thing, the number of those aged 65 and over is rapidly increasing in the wealthier Asian countries. Second, there has been a rise in the proportion of the elderly who have retired

from the workforce and who therefore rely on income support either from their family, from pensions or superannuation, or from other sources. For many of these middle class retirees, available income support is inadequate to enable them to live in the manner that they had hoped. There is also a tendency for fewer elderly to live with their children, thus placing them in a more independent situation with regard to decisions about moving elsewhere. Finally, there is an increasing familiarity with other countries and acceptance of the idea of going to other countries, either for tourism or on a more permanent basis (Jones, 2008).

Challenges to Address the Issue

Both population ageing and migration are inevitable and a very distinct feature of today's Asia. Population ageing has a significant impact on migration in both developed and developing countries of Asia and on both sending and receiving countries. Policy makers are trying to formulate different policies to address the issue. Two key challenges lie ahead: the replenishment of the labour force in order to foster economic growth ("replacement migration") and caring for the older people of left-behind countries.

Replacement Migration

Different concepts have evolved to address the phenomenon of population ageing and migration. One concept is "replacement migration," as developed by the United Nations, Population Division. This term refers to the number of international migrants that would be required in order to prevent declines in the total population, in the number of persons of working age, or in the potential support ratio (Huguet, 2003). The concept was developed based on the question of whether the problems of population decline and ageing in East and Southeast Asia can be averted by immigration from other countries. By definition, if the net reproduction rate of a population closed to migration remains below 1.0, the level at which each generation replaces itself, the population will eventually begin to decline (Frejka, 1973). The population of Japan is projected by the United Nations (2001) to begin to decline after 2010, that of Singapore after 2030, those of China and Korea after 2035, and that of Sri Lanka after 2040. The working population aged 15-64 in Singapore is projected to begin to decline after 2015, those of China, Sri Lanka, and Thailand in 2025, and those of Indonesia, Myanmar, and Vietnam after 2040.

However, the concept of replacement migration has some limitations. While permanent immigration could prevent populations from declining, it cannot counteract the effects of population ageing because the migrants themselves will also age and begin to retire perhaps 40 years after entering. Also, the assumed sex and age patterns of the replacement migrants have considerable growth potential built into them: 26 per cent of the migrants are assumed to be below age 15 and 52.6 per cent are assumed to be fe-

males. This pattern is not ideal for responding to labour demands. Rather, economies in East and Southeast Asia that wish to alleviate labour shortages by increasing migration are more likely to accept temporary male migrants aged 20-39 years. Female migrant workers, such as domestic workers, are often discouraged from marrying local nationals or having children in the host country (Huguet, 2003).

The migration patterns of the elderly can also be examined from a developmental perspective. For those elderly who migrate, three kinds of moves tend to occur: when they retire, when they experience moderate forms of disability, and when they have major forms of chronic disability (Litwak & Longino, 1987). A study conducted by Nyanguru (2007) in Zimbabwe found that a higher proportion of elderly migrated from rural to urban areas though three-quarters preferred to stay in the village. In Asia, after their retirement many elderly want to go back to their village and re-settle.

Importance of Informal Care

The 21st century will be characterized by aged and ageing nations, making eldercare a growing concern. Most elderly care in most nations will be provided informally, primarily by female family members.

Helping these people understand the dimensions of eldercare is key to effective and cost-effective care-giving (Rosenberg, Jullamate, & da Azeredo, 2009). Currently, Japan is encouraging and promoting the informal care concept in their society to reduce the burden of government and formal care.

Increased Mobility of Caregivers

Because of the attraction of much higher potential salaries in wealthier countries, the mobility of potential caregivers is likely to increase. Barriers to significant increases in this kind of mobility have been noted, namely, reluctance of some countries, notably Japan and South Korea, to allow significant numbers of foreigners to settle permanently or to permit recruitment of foreign domestic workers as contract workers. With regard to foreign nurses, the hurdles they must clear in order to be eligible for local salary levels can be quite high. Nevertheless, demographic realities in these countries with ultra-low birth rates will inevitably lead to changes, and in some countries, such as Singapore, Hong Kong, and Taiwan, caregiver intake is already high (Jones, 2008).

Howe (2009) discussed the role of migrant caregivers in long-term care (LTC), an issue that has drawn attention in Australia. In Australia, one-fourth of the population is overseas-born and two-thirds of them have come from non-English-speaking countries. Many of these people have already grown old and need long-term care (LTC). For LTC of these people, caregivers are from the same culture and can speak the same language. Currently, although overseas workers providing LTC enjoy better working conditions, there remains a labour shortage in this sector. This indicates that Australia has to find a new strategy to address this problem.

Vulnerability of Migrants

The vulnerability of migrants is an important issue in Asia. The International Labour Organization (ILO) has identified domestic workers, irregular workers, and temporary migrants as the most vulnerable. The safeguards needed to protect their health, safety, and wages, as well as their other rights are inadequate (Piper, 2004). One of the main challenges is how to better understand the health vulnerabilities of migrants in both their communities of origin and destination (Jatrana et al., 2005).

Using the 1948 WHO definition of health, migrant health would refer to "a state of complete physical, mental and social well-being of migrants". "Health" in this context refers to migrants' well-being during the process of migration ranging from pre-departure, departure, and arrival and return. Although, migrants often are selected from male, young, educated, and healthy people (Lee, 1996), in Asia the majority of migrants work in 3-D (Difficult, Dirty, and Dangerous) jobs. Migrants often face occupational health dangers including injuries from accidents and illnesses from communicable diseases such as HIV/AIDS and other STDs, tuberculosis (TB), malaria, and emergent diseases including SARS, H1N1, and avian influenza. Female migrants are at high risk for reproductive health problems associated with contraception, unwanted pregnancy and abortion. And migrant children require vaccinations to help them ward off illness (Srivirojana & Punpuing, 2009; Sciortino & Punpuing, 2009; IOM & WHO, 2009). Importantly, psychological and mental disorders are rising, particularly among female migrants (Norwegian Directorate of Health, 2009; Punpuing, 2007). Migrants are often blamed for the spread of HIV/AIDS, which normally spreads faster through communities of displaced persons and temporary migrants than among the local population, for example, through the sex trade concentrated along the Greater Mekong Sub-region[3] (GMS) countries' border zones (Archavanikul, 1998; Beesey, 2008; Caouette et al., 1998; Lyttleton & Amaraphibal, 2000). Cambodia is recognized as an AIDS explosive centre in Southeast Asia partly because of an influx of cross-border migrants, particularly from Vietnam, who were found to have low rates of condom use (CARAM Asia, 2006).

Migrant workers experience constant exploitation, unhealthy living environments, reduced or no support from family or friends, and limited accessibility to healthcare. Cultural and language barriers, attitudes of health service providers and receivers, health beliefs, healthcare costs, working hours, socioeconomic status, and migration status are all related to migrants' access to healthcare (Aung et al., 2009; Isarabhakdi, 2004; IOM & WHO, 2009; Taotawin, 2008). Lack of information as well as ethnically insensitive health service practices result in ineffective specific disease prevention and treatment (such as for HIV/AIDS) among migrant workers in Thailand (Chamratrithirong & Bunchalaksi, 2009).

[3] GMS consists of China (Yunan), Cambodia, Lao PDR, Myanmar, Thailand and Vietnam.

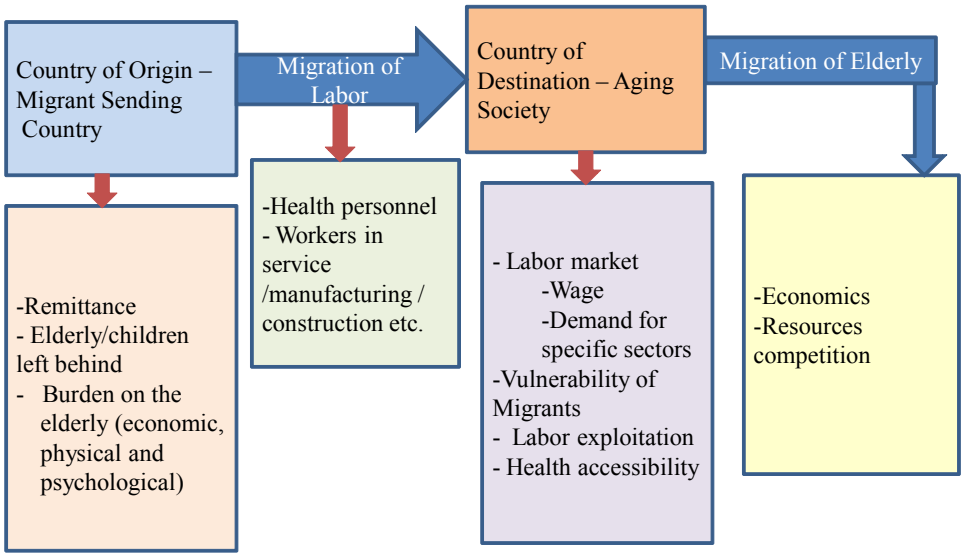
Furthermore, migrant health is often closely related to severe weather and climate changes that can produce droughts or flooding, thus increasing the spread of epidemics and vector-borne diseases, affecting food production as well as the availability of clean drinking water (Norwegian Directorate of Health, 2009).

Conclusion

The world is ageing, and Asia is ageing even faster. Population ageing affects not only those countries with low or ultra-low fertility, but also those countries whose population has not aged as rapidly. Both developed and developing countries in Asia have to prepare to meet the demands of their labour force, including trained healthcare service providers, sustainable social protection schemes, and family preparedness. On the other hand, migration has been more common in almost all countries in Asia. Timely, needs-based policies are required for both sending and receiving countries to address the issue of ageing within the context of rapid and massive migration.

The study of migration involves both places of origin and destination, where economic, demographic, and social conditions can be very different. Most migration occurs among the working age population, who are motivated to migrate by economic considerations. Therefore, causes and consequences of migration in the origin or migrant-sending countries need to be taken into account, particularly with regard to remittances, the elderly, and children left behind. The burden of migration on elderly people's financial, physical, and mental well-being needs careful consideration as do the effects of missing parents on children left behind. In the Asian context, the migration of working age people involves semi- or low-skilled migrants working in the field of health (both formal and informal health sectors such as nursing, caregivers, or traditional massage and spa workers) and service jobs, manufacturing, or construction. Migrants in destination countries face exploitation and risks in terms of their working conditions, health and health accessibility. On the other hand, the migration of elderly, particularly from the better-off countries, is an increasing phenomenon in Asia. Elderly migration can have both positive and negative effects in the destination countries, while the migration of elderly definitely contributes and creates employment in the destination countries. Competition for resources, particularly in terms of healthcare and social services of receiving countries are important. To address relationships between ageing and migration in Asia, this study proposes a conceptual framework that can serve as a starting point for reviewing migration and ageing policies.

Proposed Conceptual Framework – Aging and Migration in Asia



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Ageing and Migration in Europe: Germany's New Politics towards Migration and Integration

Iris Hoßmann

Is Germany an immigration country? Until a few years ago this question was denied by the German federal government. Although the country had, since the 1960s, experienced several waves of immigration and the population had grown steadily with foreign roots, the federal government was still firmly on the return of their guest workers. That they had built a new life in the country for themselves and their families after more than 20 years of residence in Germany remained thereby out of consideration. The question of integration of 16 million people with immigrant background was also left unconsidered. Already in the 1980s, it was known to the government that children from immigrant backgrounds perform worse in school and that their parents are more often active in low-skilled jobs.

Since 2000, migration has stalled, and led eight years later to the first immigration deficit for more than 50 years in the history of the Federal Republic. This is certainly also due to the Immigration Act of 2005, which is designed primarily for highly qualified workers. The restricted movement of people for the new EU member states Romania and Bulgaria is also limiting immigration from those countries. The family migration from the former recruitment countries of the first guest workers came almost to a complete standstill, since proof of sufficient knowledge of German of the foreign spouse complicates their immigration to Germany.

New immigration remains widely absent in Germany, while the proportion of people with an immigrant background is rising steadily. In international comparison, Germany performs only poorly in the integration of especially the second generation of immigrants. For too long it was neglected to encourage and challenge the children as well as the parents of immigrant backgrounds. The current integration initiatives are to pave the way to greater equality of opportunity, particularly through education and learning the German language.

In Germany, about 20 percent of the population have an immigrant background

In 2009, some 16 million people with an immigrant background lived in Germany. One in five inhabitants in Germany is an immigrant from another country or has at least one parent that fits this.[1] Overall, about two-thirds of people with a migrant background are themselves migrants (first generation), while nearly one-third were already born in Germany (second or third generation). Turkish immigrants are, with almost three million in numbers, the largest immigrant group in Germany. A half as large group constitutes the migrants from Poland as well as people from the former Soviet Union. Other countries of origin of a large number of migrants are Italy, Spain and Greece—also known as former recruitment countries. As so-called guest workers, most of the migrants came from southern Europe and Turkey to Germany in the 1960s. The economic boom after the Second World War desperately required workforce, which was at that time not available in the German labour market. Many of the former guest workers have remained, and their children and grandchildren live as second or third generation in Germany.

Immigration to Germany is decisively determined by the demand for labour and family migration. The recruitment of guest workers was only made possible when contracts with the governments of Italy, Spain, Greece, Turkey, Morocco, Portugal and Yugoslavia were concluded between 1955 and 1968. In doing so, Germany did not consider itself as an immigration country and pursued therefore no integration policy. Foreign workers were not supposed to settle permanently in the country, but return to their homeland.

In the former federal territory, the share of foreigners was yet around one percent before the recruitment until the late 1950s, and went up due to family migration to more than seven percent by 1980.2 The recruitment stop of 1973 could not change anything in the rising proportion of foreigners, as in the same year 17 percent of all newborn children were already of foreign parents. The federal government held on to their plans for the return of guest workers to their home countries, but still allowed family migration.

About 60 percent of Turks and nearly 45 percent of Italians who were not born in Germany have until now come to Germany in the context of family reunion.

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[1] According to the household survey "micro census" of the Federal Statistical Office, all people are considered with immigrant background having immigrated after 1949 to the present territory of the Federal Republic of Germany, all foreigners born in Germany and all born in Germany as Germans with at least one parent having immigrated or being born as a foreigner in Germany. Only the people possessing a foreign citizenship adhere to the group of foreigners. Since this reflects only a small portion of people with migration experience and represents a "subgroup" of people with an immigrant background, the term "foreigner" is used less frequently.

[2] Federal Agency of Migration and Refugees: Progress of integration. On the situation of the five largest groups of foreigners living in Germany. Research Report 8. Nürnberg 2010.

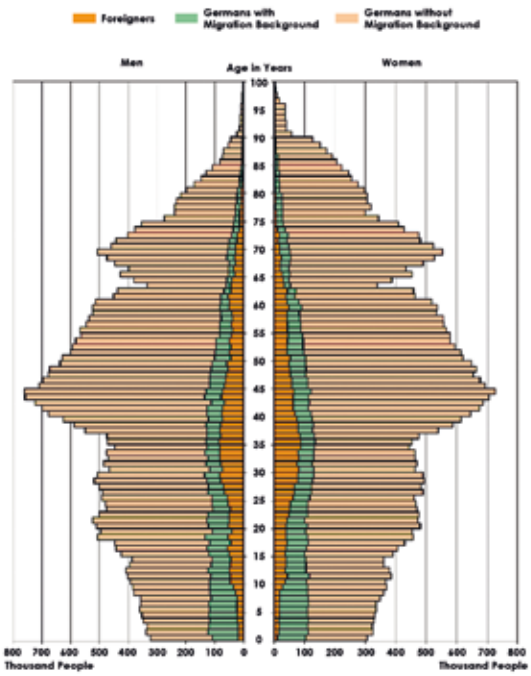

Figure 1: Age pyramid in 2009, by immigrant background.
Source: Federal Statistical Office Germany, Micro-census.

The population of migrants is younger and has more offspring than the West German average. One in three children under five years old has an immigrant background. Unlike the population pyramid for Germany as a whole: In the younger age groups, the pyramid turns increasingly slimmer and the inferior offspring in terms of numbers no longer replaces the parental generation.

Another great immigration wave began in the 1990s when the Russian Germans, referred to as ethnic German immigrants, "returned" to the Federal Republic after the collapse of the Soviet Union. Until the late 1990s, almost 200,000 people per year immigrated to Germany, of whom the majority received German citizenship by repatriate law. Since then, Germany has experienced no major immigration. This culminated in 2008 even in a migration loss: For the first time in decades more people migrate abroad than people immigrating to Germany. Among West European countries, Germany stands alone with this development. Almost all neighbouring countries have a population growth largely due to high immigration rates. These countries also consider themselves better equipped to meet the future lack of skilled workers and to slow the ageing of the population, given that immigrants today are increasingly well qualified and arrive at an early age in their countries of destination.

Foreign high-skilled individuals do not have it easy in Germany

Germany has not been inactive in recent years, but measures to attract young, skilled workers remained largely unsuccessful. The Green Card introduced in the year 2000 was supposed to counter the increasing shortage of skilled personnel in the areas of computer and information technology, which allowed a maximum of 20,000 foreign skilled workers with higher education, immigration and work in the IT industry. They had to document a job with an annual income of 80,000 Euros to get a work permit and a temporary residence permit. Four years later, not even 18,000 work permits have been issued.[3] This was not only far below the expectations of the federal government but also led to the end of the Green Card.

The potential of migrants in Germany that are highly qualified is however insufficiently exploited. Foreign graduates of German universities have to leave Germany for a long time immediately after graduation, even though they have the best foundation. They have learned the German language, are young and well educated locally. Many of them, however, did not return to their home countries after graduation in Germany, but moved to other European countries. Only since 2005, the graduates got the opportunity to also find employment after graduation in Germany.

The federal government has given them therefore a grace period of twelve months.[4] In addition, about half a million immigrants live in Germany whose foreign education is not recognised. Their integration is therefore not supported but disabled. New regulations on recognition of diplomas obtained abroad are therefore discussed in the «Bundestag».

Discrimination against people with immigrant background already starts in the school system

The integration of migrants has for a long time has not been an issue in Germany. Foreign nationals were guests in the country. German politics did the rest by refusing until a few years ago to call Germany a country of immigration. At that time it was long understood among experts and many immigrants that the foreigners brought into the country as guest workers fifty years ago were an integral part of the German society and had adjusted to a permanent residence in the country. Family reunion and family formation in the new homeland are just two of many evident motives.

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[3] Federal Agency for Civic Education: Carolin Reißlandt / Jan Schneider. Regulations of labour migration until 2004. 2007. www.bpb.de/themen/U189VO.html

[4] Herbert Brücker / Carola Burkert: Immigration and Labour Market Integration - What can Germany learn from the experience of classical immigration countries? Dossier Mobility and Inclusion – Managing Labour Migration in Europe. Heinrich-Böll-Foundation. 2010.

For the first generation of immigrants there was a lack of qualification opportunities due to the nonexistent integration policy. The highly selective German educational system hampered their children and grandchildren's social advancement to this day. The federal government was able to convince itself of this fact when the first PISA-results attested Germany of the poor school performance by international standards of students of immigrant background.[5] The results of neighbouring countries like the Netherlands, Denmark, and Belgium showed that the second generation of immigrants can achieve higher educational qualifications than their parents.

The Forum of Migrants (FDM) in the Joint General Association analysed, within the framework of the initiative "Towards the Future", the participation of migrants in the German educational system, especially in German universities. In the last ten years, children and young people with immigrant backgrounds achieved increasingly higher educational degrees, but the gap to the degrees of children without migration background remains virtually unchanged.

The proportion of young Germans having completed high school with the «Abitur» (A-levels) has increased from 26 percent to 32 percent. Even among the foreign school graduates more students have reached the university entrance qualification—an increase from ten to twelve percent. As pleasing as this positive trend is, however, the German high school graduate rate remains almost three times as high as that among foreigners.[6]

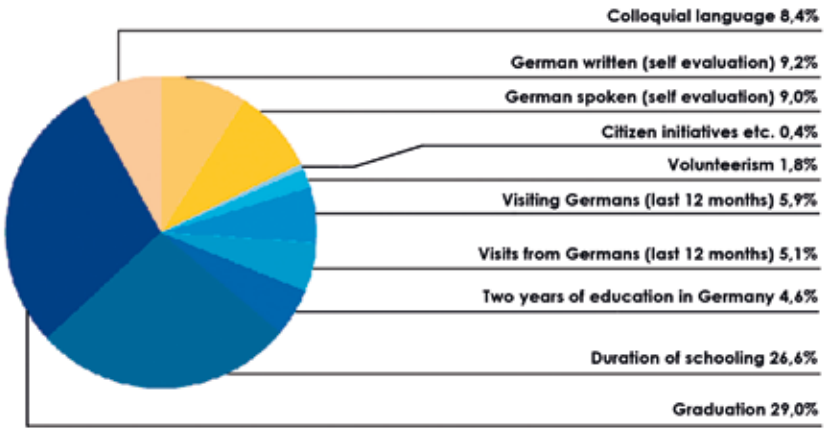

Figure 2: Influence of the studied traits on individual integration condition.
Source: Federal Ministry for Migration and Refugees.

[5] Expert Advisory Board of German Foundations for Integration and Migration: Qualification and Migration: Potentials and personnel policy in the "company" Germany. 2009

[6] The Joint Welfare Association: Education initiative «AB In die Zukunft». "Into the future". http://www.abindiezukunft.de/index.php?id=abindiezukunft

The most important precondition for integration is the achieved degree. Higher education determines the options to take on training, studies and ultimately job opportunities in the labour market. Thus, the education in Germany is a key factor that determines successful integration of people with immigrant backgrounds.

The number of students has also increased in recent years. The number of students has risen to nearly half of all young people in the age group and continues to rise steadily. The proportion of foreign students having obtained their high school degree in Germany remained, however, constant at three percent. The education initiative attributes this to the more difficult social situation of foreign students. While nearly one in two students with immigrant background comes from an uneducated or low-income parents' house, this only applies for every eighth student without migration background.

Migrants receive therefore less financial support from their parents and depend significantly more on federal financial aid and their own merit.

An OECD study of 2008 confirmed the low career opportunities of migrants in Germany. In only a few countries of the EU 27 do the foreign-born people a possess worse level of skills than in Germany. Less than 20 percent have a tertiary education; only in Austria and Italy are there even less.[7]

This trend is also shown in professional qualifications. One in three of the 25 to 34-year-old immigrants have no vocational education. Out of the migrants of the second generation one in four cannot show a professional degree. The lower qualification level of migrants has far-reaching consequences for their chances on the labour market: Migrants often carry out low-skilled jobs in cyclical industries and are more likely to lose their jobs. They have less secure employment and are more often in temporary jobs.[8]

A study by the OECD on the descendants of immigrants comes to the conclusion that the second generation has a worse perspective on the labour market than non-migrants—even with the same level of education. Especially among children of Turkish immigrants in Belgium, Austria, and Germany the largest employment deficits among migrants are identified. Young people with immigrant background are furthermore under-represented in Germany's public administration. Only about three percent work in public schools as a teacher, are policemen or work at the registration office, for instance. In no other country are the differences bigger.[9]

It is not only the lower qualification of migrants compared to people without a migration background, but also the lack of career opportunities in the second generation that leads to the greater importance of migrant networks and to a greater formation of ethnic enclaves, which in turn hinders the acquisition of language skills and other

[7] OECD: A Profile of Immigrant Population in the 21st Century. Paris 2008.

[8] OECD: International Migration Outlook. Paris 2010.

[9] Thomas Liebig / Sarah Widmaier: Children of Immigrants in the Labour Markets of the EU and OECD Countries: An Overview. OECD Social, Employment and Migration Working Papers no. 97. Paris 2009.

essential skills for social, cultural, and economic participation. The parents of children with immigrant background are thereby important pioneers, and through their own level of education they have great influence on the educational opportunities of their children.

The authors Brücker and Burkert come to this conclusion in their discussion paper "Immigration and Labour Market Integration - What can Germany learn from traditional immigration countries?"[10]

Germany accepts itself as an immigration country and is breaking new ground in the integration policy

The view over the borders and the international comparison such as the PISA study increased the pressure for action on policy. In recent years, more effort has therefore been made to face the obvious problem of integration in Germany. Established in 2008, the Expert Advisory Board of German Foundations for Integration and Migration—a much appreciated initiative by the federal Government—spoke for the first time of Germany as an immigration society. The federal government did not argue, but took a position on the mentioned shortcomings of the integration policy and future challenges. Previously a new approach in the integration policy had already loomed, when the commissioner for integration, Maria Böhmer, took office in 2005, and received for the first time in the nearly 30-year history of this position the rank of Minister of State at the Chancellery.

Many political integration initiatives such as the integration plan of the federal government with its three integration summits and the German Islamic Conference are aimed at the general public. They have a rather symbolic character and signal that Germany wants to assume responsibility for its 16 million migrants. These forms of integration initiatives are less well known among the migrants, as they hardly affect their daily lives. In a survey conducted by the Expert Advisory Board of German Foundations for Integration and Migration, only six percent of the respondents with migrant background indicated that they knew about the National Integration Plan and eleven percent was familiar with the German Islamic Conference.

In contrast, the integration courses and the naturalisation tests with the proof of German language knowledge are much more commonly known with about 21 versus 36 percent.[11] Almost every immigrant is familiar with the requirement introduced in 2007 of basic German knowledge for German spouses subsequently arriving from abroad.[12]

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[10] Herbert Brücker / Carola Burkert: Immigration and Labour Market Integration - What can Germany learn from traditional immigration countries? Dossier Mobility and Inclusion – Managing Labour Migration in Europe. Heinrich-Böll-Foundation. 2010.

[11] Expert Advisory Board of German Foundations for Integration and Migration: Immigration society 2010. Berlin 2010.

[12] The Commissioner of the Federal German Government for Migration, Refugees and Integration: 8. Report on the situation of the foreigners in Germany. Nuremberg 2010.

The federal government is increasingly emphasising on learning the German language in order to achieve a better integration of migrants, as only those who master the German language can participate in the German educational system and also complete it successfully, obtain an apprenticeship, or study at the university. Also, associated with a higher education level are the better chances on the labour market. The current integration policy sees besides the language competency, education as the key to better integration. The Integration Plan of the federal government lists therefore extensive education-related integration measures: beginning with early childhood education of young children in nurseries to further education for older migrants. The federal government calls on parents to participate and includes the companies in its deliberations, as they shall allocate training and jobs to migrants.[13]

But the support of people with an immigrant background is not the only focus of the federal government. Chancellor Angela Merkel said in a recent interview that integration is to encourage and challenge. Migrants are welcome, but have to integrate themselves into German society. Federal Interior Minister Thomas de Maizière named in connection with the government's Integration Plan a number of around one million migrants in Germany who were not willing to learn the German language. He stated that the dropout rate among participants in German courses was around 30 percent. To these integration-reluctant people, the federal government is planning to increasingly respond with consequences such as the reduction of transfer payments.

The goal of the modern integration policy is to encourage and challenge children with a migrant background early—and preferably include the parents in the responsibility. A study by the Bertelsmann Foundation supports this approach explicitly.

Accordingly, the authors' calculations showed that children from migrant families that attend a day-nursery have a higher probability of 27 percent to go to a «Gymnasium» school later. For those who do not attend a nursery, the probability is reduced by more than a third.

The influence of the educational achievements of the parents is, however, far greater than the migration background: Children of parents who have achieved the «Abitur» have the greatest opportunities to attend the «Gymnasium» themselves. Regardless of one visiting a nursery, over 60 percent of these children manage to achieve higher education and to qualify for further studies.[14]

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[13] Press and Information service of the Federal Government: Offering immigrants a perspective on the labour market. Press Statement by the Federal Government to the press conference 02.10.2009 Otto Kentzler, President of the Central Association of German Trade and Minister of State Böhmer.

[14] Tobias Fritschi / Tom Oesch: Economic benefits of early childhood education in Germany. Published. Bertelsmann Foundation. 2008.
http://www.bertelsmann-stiftung.de/cps/rde/xbcr/SID-95E77BDD-0A67B392/bst/xcms_bst_dms_30351_30352_2.pdf

What can Germany do to improve integration?

The integration debate has been held only for a few years in Germany and is partly driven by heated discussions. Nevertheless, the discussion is necessary to highlight the issue of integration. What has been blinded out for decades by—the poor performances of migrant children in school, and the high unemployment rate of the parents—had to be brought out in public first, so that the next step could be taken. The pressure on politics is growing to find solutions for the referred to problems. First steps have been taken, such as the promotion of the German language and early childhood education. Whether these measures will be adopted by the migrants and how to deal with "people unwilling to integrate" remains to be seen.

A further step must be to give the immigrants the same opportunities as people without migration background, especially in the German school system, which has major gaps with regard to this. The recommendation for the «Gymnasium» high school is still too often dependent on the origin and not determined by the school performance of the child. The inequality of opportunity currently covers the fact that there are many immigrants who could reach a high level of qualification, and not all migrant families possess a low level of education. Thus, Germany is only at the beginning of its integration efforts.

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Impact of Ageing on Social Security and Pension Systems in Asia

Mukul G. Asher and Azad Singh Bali

I. Introduction

As Asian countries strive to sustain their international competitiveness and growth momentum during the current global economic crisis, their task is complicated by the challenges posed by rapidly ageing populations. The need for addressing these challenges has been evident at least since the 1997-98 Asian economic crises. But these efforts were not sustained in most Asian countries as swift and robust economic recovery reinforced the notion that pursuit of high economic growth should take precedence over strengthening social security and pension systems.

The current global crisis has two major implications for meeting the challenges arising from rapid population ageing.

First, unlike the 1997-98 Asian crisis, the current global crisis is expected to lower the medium-term growth rate of most Asian countries as compared to the projections before the 2008 global crisis. It is generally recognized that the single most important macroeconomic variable that can potentially provide economic security for both the young and the old is the trend rate of economic growth. Its impact on social protection would be stronger if the growth in Asian countries is widely shared among different regions and groups, and if livelihood generation per unit of GDP is strong.

The contribution of Japan and other industrial countries in the European Union and North America has been significant in Asia's growth dynamism. But the global economic crisis, which has its origins in the US, UK, and the European Union, is expected to reduce their medium-term growth as they re-balance their economies towards lower levels of consumption, higher savings, and lower external and public sector deficits. This rebalancing in turn will require significant adjustments in the economic behaviour of governments, households and businesses. The process of adjustment will also create economic, social, and political uncertainties in these countries.

Many of the Asian countries, notably China, Republic of Korea, and Singapore, will also need to re-balance their economies, however in the opposite direction, i.e., increase consumption, lower savings rates, and lower external surpluses. Such re-

balancing will pose challenges, but also provides opportunities to strengthen social protection systems.

Second, lower medium-term growth could adversely impact the pace and quality of livelihoods created in many Asian countries. Unlike earlier generations, the younger cohorts joining the labour market are likely to have high expectations about standards of living. These factors lend urgency to policies designed to strengthen social protection, as the capacity of Asian countries to meet these expectations is reduced due to the lower trend rate of growth, aggressive fiscal stimulus measures, and potentially lower remittances flows. More efficient management of resources devoted to social protection and innovations in pension product design and delivery systems will be needed.

It is in the above context that this paper analyses the impact of rapid ageing in East and South Asian countries on social security and pension systems. Bloom and Finlay (2009) have found that the importance of demographic factors in explaining economic growth in East Asia continues to be considerable. Relatively young populations have a positive impact on growth, other things being equal, and when the population ages, there is a tendency for slower growth.

A possible approach to analyzing the impact of demographic trends on pensions and healthcare costs in these countries would be to select an appropriate simulation model, and then explore options of how the increased expenditure may be shared among different mechanisms such as social risk pooling and individual or employers bearing the risks[1]. Different methods of financing, such as mandatory pension and healthcare contributions, non-contributory budget or tax-based financing, individual savings, and financing by the employers could also be explored.

The general conclusion which emerges from the literature is that population ageing, and national health and pension expenditure are positively correlated (Heller 2003). The numerical impact and the measures to finance additional expenditure may, however, vary from country to country.

This paper, however, focuses on the selected policy issues and reform themes which policy makers in East and South Asian countries may need to address in strengthening their social security and pension systems to cope with the rapid ageing. The applicability of issues and themes of course vary from country to country. It is argued that broader understanding of what is involved in strengthening social security and pension systems may be more relevant given the nature of public policy discussions in many Asian countries.

The main objectives of any social security system are consumption smoothening over lifetime for individuals; insurance (particularly against longevity and inflation

[1] See Heller (2003); and for application to Vietnam, Giang and Pfaur (2009).

risks)[2]; income redistribution for society as a whole; and poverty relief. However, these have to be traded off against economic growth, labour market efficiency and flexibility, and against other needs such as health, education, and infrastructure. Individual, fiscal, and societal affordability should be kept in mind in constructing social security systems.

Such a complex objective function has three important policy implications (Barr and Diamond, 2008). First, pension policies should try to optimize, not maximize or minimize across a range of objectives. Second, a "first-best"[3] approach is not always appropriate in designing pension policies or pension reform. Third, pension reform design recommendations must take into account a country's fiscal, institutional, and capital market capacities.

Each provident and pension fund[4] must perform five core functions with a reasonable degree of competence and efficiency (Ross, 2004). These are: reliable collection of contributions, taxes, and other receipts (including any loan payments in the security systems)[5]; payment of benefits for each of the schemes in a timely and correct way; securing financial management and productive investment of provident and pension fund assets; maintaining an effective communication network, including development of accurate data and record keeping mechanisms to support collection, payment, and financial activities; and production of financial statements and reports that are tied to providing effective and reliable governance, fiduciary responsibility, transparency, and accountability to these traditional functions.

To these traditional functions, promotion of financial literacy, actuarial profession, and development of the institutional and human capital aspects of the pension industry may be added as essential in East and South Asian countries.

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[2] Longevity risk concerns the probability that accumulated savings and retirement benefits may be inadequate to last until death. Inflation risk concerns the probability that the value of retirement benefit may not be protected against inflation during the retirement period.

[3] The "first-best" approach assumes that there is efficient resource allocation arising from perfectly competitive markets. Much of conventional economic analysis is based on the "first-best" assumption. Once the economy is not assumed to be in a "first-best" situation, assessing the impact of policies and formulating appropriate reforms become less straightforward and more contextual.

[4] A provident fund is essentially a savings scheme which while primarily is used to finance retirement expenditure, could also enable members to obtain withdrawals for housing, education, and other purposes. They may be mandatory or voluntary. They are defined contribution (DC) schemes, in which contributions are defined but the benefits are left undefined. As in any DC scheme individual members bear investment and other risks. Participants usually receive a lump sum at a specified retirement age, though annuity features could be easily incorporated. Contributions are typically made by employers and employees, though in some cases the government may also contribute.

[5] In many provident and pension fund schemes, a member is permitted to borrow for housing, education or other purposes, but the loans need to be repaid.

The rest of this paper is organized as follows. A brief discussion of projected demographic and labour market trends in East and South Asian countries is undertaken in Section II. This is followed by an overview of existing social security and pension programs in these countries in Section III. In the following two sections, selected social security reform issues and reform themes are discussed respectively. The final section provides concluding observations.

II. Demographic and Labour Market Trends

Asia will experience rapid ageing, resulting in its demographic profile increasingly resembling a typical OECD country, but at a much more rapid pace and at a relatively lower per capita income. The share of China, India, and Indonesia, the three Asian countries with the largest population in the world's elderly, is projected to increase from 37 percent in 2006 to 42 percent in 2050 (Table 2).

In this section, key demographic trends and their implications for labour markets in East and South Asian countries are briefly discussed. Table 1 provides key demographic indicators for selected Asian countries. On the basis of data in this table, the following observations are made.

Country	Total Population (millions)		Total Fertility Rate		Median Age		Life Expectancy at Age 60, 2000–2005		Percentage of Total Population Aged 60 and Above		Population Aged 60 and Above (millions)	
	2007	2050	2005–10	2045–50	2005–10	2045–50	Male	Female	2005	2050	2005	2050
World	6671.2	9191.3	2.6	2	28	38.1	NA	NA	10.3	21.8	672.8	2005.7
China	1328.6	1408.8	1.7	1.8	32.5	45	18	21	11	31.1	144 .0	437.9
India	1103.4	1592.7	3.0	1.8	24.3	38.7	17	19	8	21	89.9	329.6
Indonesia	231.6	296.9	2.2	1.8	26.5	41.1	17	19	8.3	24.8	18.9	73.6
Korea, Rep. of	48.2	42.3	1.2	1.5	35.0	54.9	19	24	13.7	42.2	6.6	17.8
Malaysia	26.6	39.6	2.6	1.8	24.7	39.3	18	20	6.7	22.2	1.7	8.8
Philippines	87.9	140.5	3.2	1.8	21.8	36.3	17	19	6	18.2	5.1	25.5
Singapore	4.4	5	1.2	1.6	37.5	53.7	17	21	12.3	39.8	0.5	2.0
Thailand	63.9	67.4	1.8	1.8	32.6	44.3	17	22	11.3	29.8	7.1	20.1
Vietnam	87.4	120	2.1	1.8	24.9	41.6	19	21	7.6	26.1	6.5	31.3

Table 1: Key Demographic Indicators in East and Southern Asian Countries
Calculated from UNDESA (2009); and http://data.un.org/Data.aspx?q=Life+Expectancy&d=GenderStat&f=inID%3A36
Source: Calculated from Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2008 Revision, http://esa.un.org/unpp, 07 July, 2010

Asia is set to experience rapid ageing in the 21st century. The sample countries included in Table 1 will have nearly 40 percent more elderly persons by 2050 than the corresponding figure for the world in 2005. The share of these countries in the world's elderly is projected to increase from 42 percent in 2005 to 47 percent by 2050. If all Asian countries were included, Asia will be home to more than half of the world's elderly by 2050, or over 1 billion people.

The rapid ageing of Asia is a result of a combination of declining total fertility rates[6] and increasing life expectancy—at birth and at age 60. As is well known, increased longevity raises pension costs disproportionately. Uncertainty about longevity trends (due to the uncertain impact of medical technology and other factors) increases the complexity of designing pension programs. Even during the 2005-10 period, only The Philippines and India are projected to exhibit fertility rates above the global average; but six of the nine sample countries exhibit fertility rates significantly below the population replacement rate.

The statutory pensionable age, however, remains relatively low, ranging from 55 to 65 years for men and 50 years to 65 years for women. Some of the high-income countries such as Japan, Republic of Korea, and Singapore are taking measures to increase the retirement age, or age at which full pension rights accrue.

As women live longer, and on average have relatively lesser exposure to the labour force, their lower retirement age gives them, on average, less resources to finance old-age needs, including healthcare. Addressing gender issues should therefore be an integral part of programs in all branches of social security. Some countries, such as China, are planning to equalize the retirement ages for men and women.

The median age in the sample countries (with the exception of the Philippines) will be well above average for the world in 2050 (Table 1). In the Republic of Korea and Singapore, the median age will be nearly 55 years. Similarly, only in the Philippines and India will the percentage of total population aged 60 and above be less than the global average (Table 1).

Challenges arising from sharply increasing median age, rising old-age dependency ratios[7], and concomitant reduction in the share of working-age population will need to be addressed. One of the methods to meet these challenges would be to pursue policies

[6] Total Fertility Rate (TFR) is defined as the average number of children that would be born to a woman during her lifetime. The Population Replacement Rate is defined as the level of fertility at which a cohort of women on the average are having only enough children to replace themselves and their partner in the population. By definition, "replacement" is considered only to have occurred when the offspring reach 15 yrs. A TFR of 2.15 is considered to be the population replacement level (http://www.marathon.uwc.edu/geography/demotrans/demodef.htm)

[7] This is usually defined as the ratio of the number of persons sixty five years and above to the persons between ages of fifteen and sixty four. The reciprocal of this ratio provides the number of potentially economically active persons to support each elderly person.

designed to leverage demographic complementarities for expanding economic space, and for achieving greater economic integration. Rapidly ageing Asian countries such as Korea and Singapore could make more extensive and innovative use of off-shoring activities, involving countries such as the Philippines, Vietnam, and India, which are currently in a demographically favourable phase (i.e., where the share of working-age population to total population is rising). They can also use technology to minimize the use of labour in economic activities, including in elderly care. Some Asian countries, such as Malaysia and Thailand, perceive hosting affluent elderly as long-term residents from rapidly ageing Asian countries as a good business opportunity.

Four major implications of the above demographic trends suggesting varying levels and pace of ageing among Asian countries may be noted.

First, rapid population ageing signified by rising old-age dependency ratios, and increasing life expectancy at age 60, suggests that greater resources will need to be devoted to the elderly. A substantial share of the increase in resources will be through the government budget. Finding more budgetary resources, particularly when the medium-term growth rates are likely to be moderate, will be a challenge as there will be other demands on the budgetary resources. Better management and governance by the social security organizations, and need to undertake parametric reforms in the design of various provident and pension fund schemes to ensure their medium-term financial sustainability, have therefore become even more urgent in Asian countries.

Aggressive fiscal stimulus packages by Asian countries to sustain growth during the current global crisis may also constrain future fiscal flexibility, as the resulting future budget deficits will need to be financed. Thus, in Australia, the budget deficit is projected to be 2.3 percent of GDP in 2009 and 3.5 percent of GDP in 2010; in sharp contrast to average annual surplus of 1.7 percent of GDP during the 2003-2008 period (IMF 2009). Similarly, IMF projects that in 2009 and in 2010, Japan's budgetary deficit will be close to 10 percent of GDP, as compared to 5.2 percent of GDP during the 2003-2008 period. If the slowdown in global economic growth continues, the fiscal situation in most Asian countries will become even more constrained. In some countries, such as China and Singapore, there is, however, considerable fiscal capacity to expand government expenditure, including on social security and safety nets (*The Economist*, 2009).

Second, the social security needs of foreign workers will need to be addressed by Asian countries. There are many countries in the region, such as Singapore, Malaysia, UAE, Saudi Arabia, and Kuwait, which are large and persistent recipients of foreign labour, much of which is supplied from countries from within the region, such as the Philippines, Thailand, Bangladesh, Myanmar, Sri Lanka, and India. Many of the Gulf countries, with excess demand for labour, also rely on foreign workers, primarily from Asia, to sustain growth. Totalisation agreements[8], and agreements involving working

[8] Totalisation agreements are designed to ensure that individuals and employers do not end up paying social security taxes or contributions in more than one jurisdiction, or alternatively avoid paying them in any jurisdiction.

and living conditions of foreign workers, involving Asian countries will need to be encouraged. Recent agreements by Japan with the Philippines and with Indonesia for special arrangements for workers from these two countries to be employed in Japan on a temporary basis represent an example of taking advantage of demographic complementarities, as well as draw attention to the social security needs of foreign workers.

Third, these demographic trends have important labour market implications. In countries with a rising share of economically active age group to total population ratio (such as India, Indonesia, Vietnam, and the Philippines), creating sustainable and economically productive jobs will need to be given greater weight than simply preserving existing jobs (ILO, 2009). Countries with a declining ratio (such as Japan, Korea, and Singapore) will need to stress on increased productivity of workers, and finding ways (such as greater use of off-shoring, and of short-term visits by professional and technical workers) to take advantage of the demographic complementarities with other countries in Asia and beyond (ILO, 2009).

Fourth, more than three-fifths of the potential livelihoods generation between 2005 and 2020 will be in the Asian region (Table 2). India alone would need to generate a quarter of the potential global livelihoods, while China and Indonesia's share will be 8.5 and 3.8 percent respectively (Table 2). In sharp contrast, Europe's working-age population will exhibit a decline, while the share of North America in potential livelihoods generation will be only 2.8 percent. Africa, with a share of 27.5 percent will also face significant challenges in livelihoods generation.

Potential Livelihoods Generation by Region (2005-2020)			
		No (Millions)	**% of world total**
World		846.6	100.0
Asia-Pacific		526.7	62.2
of which	India	211.7	25.0
	China	71.8	8.5
	Indonesia	32.0	3.8
Africa		232.6	27.5
Europe		-17.8	-2.1
Latin America and Caribbean		79.3	9.4
North America		23.6	2.8

Table 2: Potential Livelihoods Generation* by Region (2005-2020)
Note: *This is defined as the number of economically active persons, defined as those between 15 and 64 years of age in a given region, for whom livelihoods will need to be generated in the formal or the informal sectors.
Source: Calculated from Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision, http://esa.un.org/unpp, July 07, 2010.The share of formal sector employment varies: 84.3 percent in the developed economies to only 20.8 percent in South Asia (Hagemejer, 2009). While

the corresponding share is higher in Southeast Asia and Pacific (38.8 percent) and in East Asia (42.6 percent), even these proportions are lower than the global average of 46.9 percent (Hagemejer, 2009). There are also variations according to gender, with the share of women in formal employment being considerably lower than that of men, particularly in South Asia (Hagemejer, 2009).

In the developed economies, it was the expansion of the formal sector, with identifiable and relatively stable employer-employee relationships, which contributed to earnings-related, social insurance-based social security programs. The prospects for increasing the share of formal sector employment are however not promising in many Asian countries. The global economic crisis is expected to lower the medium-term trend rate of economic growth, and subsequently increases in per capita income over the next several years. As there is positive correlation between per capita income and coverage, some Asian countries will find it challenging to increase coverage through formal sector employment growth[9]. The above analysis suggests the need to create a better balance between creation of new livelihoods on one hand, and preservation of existing but economically unsustainable jobs on the other.

III. An overview of Social Security Systems in East and South Asia

Table 3 provides information on the availability of social security programs in East and South Asian countries. As may be expected, there is considerable heterogeneity in social security systems in these countries, reflecting a host of historical and other factors, including the level of economic development and structure of the economy.

[9] There may be room for some expansion of coverage, both in terms of number of persons covered, and the benefit levels through application of greater professionalism, including more extensive use of technology, and through parametric reforms.

Country	Old age, disability	Maternity – cash benefits	Maternity-cash benefits + care	Work Injury	Unemployment	Family Allowances
Country	X	*X*	*X*	X	*X*	*X*
India	X	*a*	*X*	X	*Y*	*Y*
China	X	*a*	*b*	X	*a*	*a*
Indonesia	X	*a*	*b*	X	X	*a*
Korea	X	*a*	*b*	X	*a*	*a*
Malaysia	X	X	X	X	*a*	*a*
Philippines	X	X	X	X	*a*	*a*
Singapore	X	a	b	X	Y	X
Thailand	X	X	X	X	*a*	*a*

a - Information not available; b - medical benefits only; X - program available

Table 3: Availability of Social Security programmes in Selected East and Southern Asian countries
Source: http://www.ssa.gov/policy/docs/progdesc/ssptw/2006-2007/asia/ssptw06asia.pdf

The availability of a social security program, however, does not necessarily imply that it is well designed, has wide coverage, or is financially sustainable. It also does not imply that the social security organization administering it is well governed; or that different components of the social security system complement each other to bring about systemic effectiveness and financial sustainability.

The challenge facing East and South Asian countries is therefore to strengthen and expand their existing systems with the objective of constructing a multi-tiered social security systems, involving a mix of risk-sharing arrangements among the stakeholders—the beneficiaries, the employers, the state, the family and the community, and not-for-profit organizations (both domestic and foreign).

In a multi-tiered system, the retirement income (pensions) is not solely based on earnings or contributions. These would need to be supplemented by other types of retirement income transfers (Figure 1).

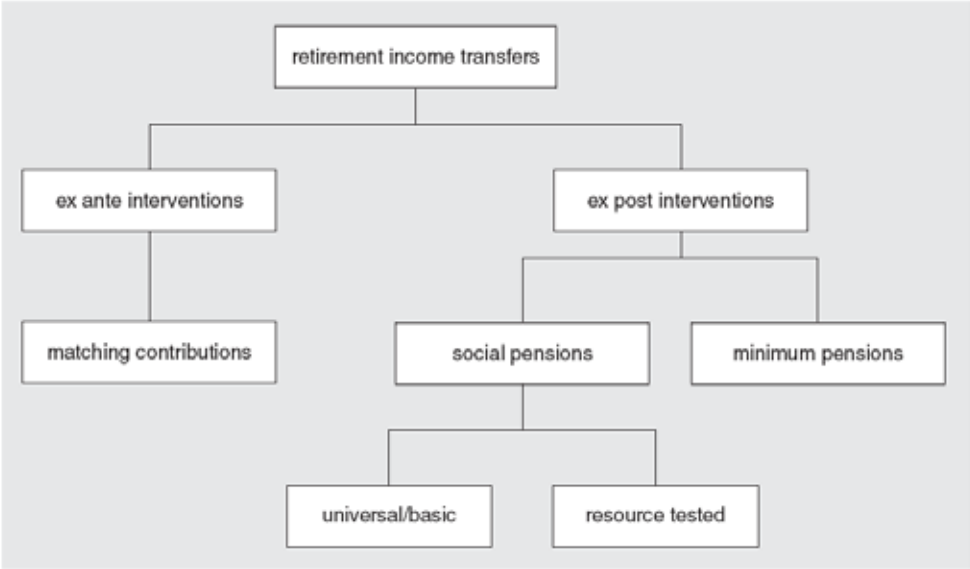

Figure 1: Taxonomy of Retirement Income Transfers
Source: Robalino and Holzmann (2009), Figure 1.1, p.3.

As Figure 1 suggests, retirement income transfers may be approached through *ex-ante* (during working life) and *ex-post* (after retirement) interventions. In the former, the main challenge is to design matching contributions by the state to ensure an adequate benefit, but without adversely affecting the contribution density, retirement decisions, and incentives to participate in the formal systems, while ensuring fiscal sustainability.

The *ex-post* interventions can be in the form of social pensions or minimum guarantees under the formal sector pension systems. The social pension can be universal, i.e., provided to eligible individuals as a right, or resource-tested. In each case, there are considerable challenges with respect to design, implementation, and linkages with the rest of the pensions system.

Retirement income transfers should be distinguished from social assistance, whether universal or resource-tested. The latter is available to all who qualify regardless of their age. Retirement transfers on the other hand are targeted at the retirees. For general poverty mitigation through transfers, social assistance programs are more effective than retirement income transfers. However, when co-relation between old age and poverty is very high, and fiscal budgets are severely constrained, retirement income transfers may merit serious policy consideration.

Asia is also becoming increasingly urbanized. In 2007, half of Asia's four-billion population were classified as urban, and this share is expected to increase (World Bank, 2009). In general, the need for formal social protection increases with urbanization. Those Asian countries which are over-reliant on the external sector for trade, investment, and technology are also attempting to re-balance their economies to increase the

relative importance of domestic demand as a response to the current global economic crisis (IMF, 2009).

An important implication of the above trends is the need for Asian countries to cultivate and sustain political support and trust among the population. Social security (and social safety net) reform designed to provide adequate, affordable, and sustainable retirement security is one of the instruments for enhancing social cohesion and resilience.

IV. Selected Issues

This section discusses eight key issues in social security reform facing Asian countries. The importance of each may, however, vary from country to country. Each country must consider in an integrated manner how it wants to address these issues as there is no blueprint that has emerged from the literature and from international experiences. An integrated systemic perspective is essential as ad hoc, piecemeal reform of a complex social security system is generally ineffective in addressing these core issues.

(a) Single or Multiple Objectives?

In some countries (Malaysia, India, Sri Lanka, Singapore, and the Philippines), there is a tendency to pursue multiple objectives using a national provident fund or a social insurance-based retirement system. These may range from permitting loans (or outright withdrawals) for specified purposes: such as healthcare and housing financing, varying contribution rates according to presumed capabilities and importance of sectors or regions, investing in infrastructure projects preferred by the authorities, and developing financial and capital markets.

Asian countries (such as Malaysia, Singapore, the Philippines, India, and Sri Lanka) have preferred multiple-objectives approach towards social security. The recent trend has, however, been towards focusing only on the retirement objective (Chile, Hong Kong, and many Central European countries).

There are two main advantages of focusing narrowly on the retirement objective. The first is that multiple objectives make establishing accountability of the social security organizations for retirement financing more difficult. A narrow objective permits better accountability for the results.

Second, multiple-objectives systems have higher contribution rates (exceeding 20 percent) than those narrowly defined (around 10 to 12 percent). Higher contribution rates may distort labour markets, and increase the cost of hiring a full-time employee. They thus induce greater informalisation of the labour force, and provide incentives to under-report wages subjected to mandatory contributions. There is evidence of such under-reporting in countries such as Malaysia where the contributions rates for national provident funds exceed 20 percent. Higher rates may also lead to extensive pre-retire-

ment withdrawals on the ground that they lead to liquidity constraints for the members. This may help explain extensive use of such withdrawals in India, Singapore, Malaysia, and the Philippines.

(b) Civil Service Pension Reforms

In most Asian countries, civil servants (and armed forces personnel) occupy a special position. This has resulted in considerably more comprehensive (covering longevity and inflation risks), and generous (providing higher levels of retirement income and security as pensions are regarded as statutory payments) benefits. This is a particularly difficult area of reform, both politically and technically (Asher, 2000). Main reform measures include increasing the funding through higher contributions, and setting aside dedicated sinking funds, which are then invested in the capital markets in a professional manner with a high level of importance attached to fiduciary responsibility. Some of the aspects of this trend are evident in Malaysia, Singapore, and Thailand.

Sri Lanka attempted to finance its civil service pensions by requiring contributions from members, but due to political opposition was required to reverse it. India has introduced a far-reaching reform of its civil service pensions, moving from a non-contributory defined benefit (DB) scheme, with generous longevity and inflation risk protection provisions, to a defined contribution (DC) scheme for new civil servants (Asher, 2010).

Many civil service pension systems have evolved over time, with ad hoc changes introduced which require re-examination. As an example, sharply increased longevity of civil servants was not anticipated when such systems were set up, adversely affecting its financial sustainability. The absence of the office of the actuary as part of government, and absence of publicly available actuarial reports on civil service pension systems (and even of private sector workers administered by governments), has predictably led to the absence of informed public debates on their sustainability. This has meant that the implications of future tax revenues which need to be set aside to pay promised civil services pensions have not been considered in assessing fiscal sustainability in many Asian countries.

In pension economics, there is a tyranny of small numbers. Small changes in life expectancy or in the real interest rate credited from pension fund investments could disproportionately affect financial viability and adequacy of retirement benefits. Parametric reforms involving pension benefit formulas and other parameters of the civil service pension systems have the potential to substantially improve financial viability, equity between civil servants and other segments of the population, and labour market functioning. Such reforms therefore should not be overlooked and are politically difficult to implement.

(c) Transition Challenges

Any social security reform requires transitioning from the current system to a new system. The transition arrangements are usually quite complex, linger for a considerable period, and often are costly. Thus, the fiscal costs of transition from a PAYG DB (Pay As You Go, Defined Benefit) scheme to a DC have been as much as 5 percent of the GDP over a prolonged period in Chile, and much of Latin America and Central Europe (Gill et al., 2005).

In countries where fiscal deficits are high (e.g., India), and civil service pensions are undergoing reform, the transition period is likely to be especially long. Thus, the central government employees' pension scheme was changed from DB to DC, but only for those employees who joined after January 1, 2004. Therefore, it will be only after about four decades that all civil servants will be on the new pension scheme (Asher, 2010).

In the interim period, the cost of pension to the government will be higher. This is because the government will be funding current pensions, and will also be contributing monthly to future pensions of current civil servants. The fiscal burden can only be reduced if pension benefits are reduced or contributions are required from those currently on the DB pension scheme.

The transition issues are also relevant at the state enterprise level when it is being privatized or reformed. The state or the taxpayers bear the contingent liabilities arising from unfunded pension liabilities of state enterprises. In many cases, funding these liabilities is a major constraint in restructuring these enterprises to make them more efficient.

As Asian companies become increasingly global, and as Asian countries attract more foreign firms, their accounting rules will need to converge to international norms. Therefore, another transition issue concerns the new accounting rules, which are likely to require greater transparency in reporting unfunded pension and healthcare liabilities of all enterprises. These changes may adversely affect their profits if these liabilities are not fully funded.

(d) Occupational Pensions

The mandatory pension schemes for private sector workers are usually supplemented by occupational pensions. There is increasing recognition among policy makers in Asia that encouraging occupational pension plans, particularly for employees of large public and private sector companies, could have beneficial effects[10]. It could provide a steady flow of long-term contractual savings for investments, helping to develop financial and capital markets; and assist in maintaining a standard of living in retirement of relatively

[10] China has encouraged corporate enterprise level annuities on a voluntary basis since 2004. By end 2008, the annuity funds had reached RMB 180 billion (Zhu, 2009).

high wage earners. It also has the potential to encourage financial innovations, as each company chooses the investment strategies and managers for funding its pension liabilities.

These beneficial effects, however, require considerable professionalism, good governance, consistency in tax policies, and prudential regulation. As an example, segregation of occupational pension fund assets from the organization's finances is essential but not practiced in many Asian countries. In some countries such as India, regulations governing occupational pension plans have not been modernized, and regulatory oversight is minimal (Asher, 2010). Similar issues are evident in China (Zhu, 2009).

Consistent with international trends, occupational schemes in Asia have also exhibited a shift from DB to DC schemes, thus reducing the risk borne by the plan sponsor, usually corporations. Such a shift requires considerable planning and complex transition provisions.

(e) Coverage

Social security coverage in most Asian countries is not universal. Earnings-related provident and pension funds are predicated on a formal employer-employee relationship. However, much of the labour force in Asian countries is in the informal sector, where a formal employer-employee relationship is absent. Labour market inflexibilities and demographic trends signifying rapid ageing further increase the complexity of providing social security coverage to the entire population.

The priority in coverage in Asia should be on effectively constructing a poverty prevention tier in as short a period as feasible. As noted in Section III, this makes expanding coverage through social security instruments that are earnings-based necessary but insufficient for substantially expanding coverage. Innovative use of retirement income transfers will be needed (Holzmann, et al., 2009). As the micro-finance sector expands in these countries, it may be feasible to introduce micro-pension products.

(f) Investment Policies and Performance

For a variety of reasons, pension assets in East and South Asian countries have been exhibiting rapid growth. The Asia-Pacific region's pension assets increased from USD 1251 billion in 2003 to USD 2951 billion by 2008, surpassing Europe, but still behind assets in North America totalling USD 4686 billion in 2008 (Watson Wyatt, 2009). Many of the largest pension funds in Asia are sovereign wealth funds (SWFs).

In many of the sample countries, the limitations of domestic financial and capital markets, and lack of capacity or unwillingness to engage in international diversification of pension fund assets, has meant that the investment risks have been concentrated in terms of geography (domestic assets), and types of assets. In countries such as India, much of provident and pension fund investments are in government debt, while

in countries such as Indonesia, domestic bank deposits account for major share investments. Some sample economies, notably Singapore, Republic of Korea, Thailand, and China have, however, been engaging in international diversification of pension assets.

Financial products are indeed very complex and the financial industry is oligopolistic and highly concentrated. Competition therefore may not bring down the transactions costs to the desired extent as the Latin American experience suggests. In Chile, mutual fund asset management fees for equity funds have stubbornly been around 5 to 6 percent of assets during the 1990-2001 periods (Gill et al., 2005).

The design of a DC scheme providing extensive individual choice may give rise to high marketing and other costs (e.g., Chile) (Asher and Vasudevan, 2009; Gill et al., 2005). An extensive choice of investment vehicles, too frequently exercised, could lead to higher costs not commensurate with extra returns. The UK, with sophisticated capital markets, has had to impose a cap on expenses of private pension providers. Another important issue concerns investment diversification across asset classes and across geographical areas. The international experience suggests that international diversification, and investments abroad, need to be calibrated with institutional and regulatory structures and development of financial and capital markets (Gill et al., 2005).

Intermediating pension savings into productive investments designed to increase medium-term trend rate of economic growth will continue to be a challenge for East and South Asian countries. The global financial crisis has made this challenge even more complex.

(g) Issues in the Payout Phase

In any DC system there is an accumulation phase when balances are accumulated for retirement and the pay-out phase where these balances are drawn-down to finance retirement. The traditional arrangement has been to pay a lump-sum (such as Sri Lanka and Malaysia), or require mandatory annuitisation of at least part of an individual's accumulated balances (as in India). However, annuity markets in most Asian countries are not well developed. Uncertainty over longevity trends and lack of disaggregated and robust databases lead to overly conservative pricing of annuities, leading to less annuity amount for a given capital sum. This in turn reduces the extent to which DC schemes could contribute to income security.

Annuity markets are likely to remain relatively undeveloped and less accessible in Asia. Asian countries will therefore need to find innovative ways to structure the payout phase. One possibility is to develop a programmed or phased withdrawal option. Under this option, accumulated balances may be withdrawn at specified intervals (such as every quarter) in such a way that the amounts are exhausted in 15 to 20 years. In this option, there is no risk pooling. Therefore, unlike in the case of annuities, a person can bequeath the unused balances to survivors.

This option could be implemented through a special investment instrument involving modest social risk pooling financed through the budget. This may take the form of paying slightly higher –than-market interest rates on the instrument. To limit budgetary costs, a ceiling on the balance eligible for subsidy may be prescribed.. The transaction costs of such an arrangement would be quite low, and it will be more suitable for those who do not prefer annuities. To fully manage longevity risks, social pensions (or social assistance for the elderly) could be strengthened and made universal. China in 2007 introduced a social pension to each insured farmer upon retirement to supplement their monthly pension. Such measures will require stronger fiscal capacity and greater effectiveness in delivering social pensions in most Asian countries.

(h) Administration and Compliance Issues

Administrative costs refer to the costs of administering the provident or pension fund scheme by the concerned agency or organization. These costs, usually charged to members, should be evaluated for the entire period of accumulation and payout phases, rather than on one-year basis. The lower these costs are, the greater the potential for accumulation of benefits to the members.

Design and structuring of administrative costs have important equity implications. Thus, flat fees imply higher burden for those with low or irregular contributions. In some countries, such as Sri Lanka, where only about 20 percent of the national provident fund members are active contributors, the cost of administering the inactive members is large. In some of the other Asian countries (such as Malaysia, Indonesia, and India), the proportion of non-active contributors is also relatively high. Provident and pension fund organizations will need to give much higher priority to modernizing their management information systems. this would involve not just the hardware but also preparing the organizations to be proficient in extensive use of information technology.

Compliance costs refer to the costs of compliance by establishments and members with the rules and regulations set by the agency or organization. These also need to be minimized. However, these are more difficult to estimate than the administrative costs.

Compliance costs can be reduced through more simplified reporting requirements for the employers; realistic contribution rates (in general not exceeding 20 percent); and greater service-orientation of provident and pension fund organizations. Employer and worker education on the importance of complying with social security provisions also needs to be strengthened in many Asian countries.

V. Reform Themes

Many of the requirements for effective social security reform in developing Asia are implicit in the discussion in the previous sections. This section, however, enumerates

the key requirements. Each country will need to devise its own strategies for reform to suit its initial conditions, economic, fiscal, and institutional capacities, and political economy. Constructing and sustaining robust social security systems and safety nets is an urgent necessity requiring considerable expertise, sustained focus, and political consensus on a new social contract which is consistent with demographic trends, stakeholder expectations, and institutional, financial, and economic capacities, and the needs of the 21st century. The above requires rethinking existing ideas and practices about social security and not decisions taken in an atmosphere of crisis (Hoskins, 2008).

(a) Professionalism

It is imperative that the five core functions of provident and pension funds identified in Section I must be done with greater professionalism than has been the case so far in many Asian countries (Ross, 2004). This, in conjunction with strong regulation, would enable Asian countries to provide much higher levels of pension benefits from lower contribution rates than is the case now. The focus of these organizations should be on providing benefits to their members that are commensurate with the contribution rates and the transactions costs of administration and compliance.

Some Asian countries, such as Indonesia, have high administrative and compliance costs. They have not been able to undertake record-keeping and management information system tasks adequately, even for a relatively small proportion of the labour force comprising formal sector workers. Their plans to sharply expand the coverage to include informal sector workers may therefore be severely undermined by their inadequate record-keeping capabilities.

Investment policies and performance also remains a challenge in Asia. Limitations of domestic financial and capital markets, legal restrictions on international diversification (e.g., Malaysia, Indonesia, and India), and relatively low importance given to fiduciary responsibilities (which require maximizing returns of provident and pension fund balances for the benefit of the members) have contributed to this outcome.

As pre-funding arrangements, through retirement savings or accumulation of reserves, become increasingly common (pension assets are expected to grow significantly in Asian countries), development of domestic financial and capital markets has become essential. Provident and pension funds will need to increasingly acquire competencies to deal with sophisticated investment strategies using diverse asset classes (e.g., debt, equity, real estate, and currencies) and diverse players (such as hedge funds, private equity investors. and sovereign wealth funds).

Such sophisticated strategies, however, should not be attempted without adequate preparation, and without understanding downside risks. In many low- and middle-income countries, it may be prudent to not fully attempt to obtain upside potential from investments or from financial innovations such as credit-default risks, in order to minimize downside risks. India's New Pension Scheme (NPS) permits equity investments

only through stock-indexed funds, which have much lower costs and relatively lower risks (Asher, 2010).

(b) Systemic Perspective

There are three aspects of this perspective that needs to be addressed. The first aspect involves complimentary reforms in other areas such as labour markets, fiscal policy, and financial and capital markets which are essential for effective social security reform.

Effective social security reform is greatly facilitated by sustainable macro-economic policies which lead to high and stable growth whose benefits are distributed widely. This is because the single most important variable for the economic security of both the young and the old is the long-term trend of economic growth. The labour market regulations and functioning must provide an appropriate balance between creating new jobs and preserving existing jobs. High employment is negatively correlated with poverty, and therefore creating economically viable and sustainable jobs is essential.

Civil service pension reform should form a part of the fiscal policy reforms. These should be based on the full cost (including unfunded liabilities) of pension (and health) benefits being provided to the civil servants, and to improve the delivery of government services (including social assistance or social pensions for the elderly). Without full and explicit costing of civil service benefits, it would be difficult to allocate society's resources devoted to the elderly equitably and efficiently. In many countries without civil service pension (and healthcare) reforms, too large a share of national income devoted to all elderly will accrue to civil servants. This creates intra-generational inequities, and may strain social cohesion.

Financial and capital market reform is essential as the demand for quality investments by provident and pension funds should be matched by the corresponding supply of financial assets, based on both debt and equity. Unlocking the value of state enterprises through partial or full divestments will be an important avenue in many Asian countries for increasing the supply of such assets.

The second aspect of the systemic perspective concerns the multi-tier framework to provide social security. While such a framework may have theoretical limitations (Barr and Diamond, 2008), it is essential for managing the risks of financing old age in any realistic political economy setting, particularly in Asia.[11] In a multi-tier framework, different tiers provide a balance between social risk pooling and individuals bearing investment, longevity, and other risks; between contributory and non-contributory

[11] Recent reforms in Chile which have considerably strengthened and widened the coverage of social pensions financed from the budget are instructive in this regard (Asher and Vasudevan, 2008). There has been growing interest in design and implementation of social pensions financed from the budget and in co-contributing schemes involving pension savings by low income individuals which are matched by governments (Holzmann, D. Robalino, and N. Takayama, 2009)

schemes; and flexibility in managing and accessing retirement contributions or savings. The World Bank (2005) has suggested a five tier framework (see annex-1) but it should be adapted to specific country needs and contexts.

The relative weight of each tier, however, may vary from country to country. Initial conditions would have an important bearing on these weights. Thus, China, the Philippines, Thailand, and Vietnam have pension (and health) systems based on social insurance principles (though coverage of population in each country is far from being universal). Malaysia has primarily relied on a single tier of mandatory savings, which is also used for housing and healthcare. Countries also need to expand their social assistance programs, and introduce social insurance and solidarity principles into their pensions systems.

These countries need to consider building other tiers, particularly social assistance (or social pension) type programs financed from the budget, and individual retirement savings (Palacios and Sluchynsky, 2006). Several Asian countries such as China, Thailand, and the Philippines have, however, found it difficult to implement individual retirement accounts, whether mandatory or on a voluntary basis. Developing robust annuity markets, which are particularly important for defined contribution pension systems, has been a major challenge for many Asian countries.

The main constraints arise due to limited investment instruments to manage longevity and inflation risks during the payout phase. Uncertainties about longevity trends are also a constraining factor, as these lead to conservative pricing of annuities, making them unattractive in comparison to other investments (and in some cases unaffordable, creating adverse selection problems). Therefore, greater attention will have to be given to the payout phase, including phased withdrawals, with some social risk pooling in the form of above-market interest rates, financed from the budget. Greater experimentation and research on group annuities phased withdrawal programs and other such instruments merit serious consideration as alternatives to individual purchase of annuities. Lower fertility rates, urbanization, changing values and expectations of both the young and the old are significantly increasing the need for more formal pension systems in Asia, consistent with the experiences of current industrialized countries who faced these trends earlier. Nevertheless, public policies in Asia should continue to promote traditional family-oriented values and allocate requisite resources and energies towards this goal. This is unlikely to reverse the trend towards more formal pension systems but it may reduce the rate of transition, and somewhat reduce the scope of the formal systems.

It is also essential to recognize the importance of personal savings, home ownership, investing in human capital, including for children, and opportunities for participating in livelihood activities in old age as integral elements of any pension system. If their importance is reflected in tax, regulatory, and government expenditure allocation decisions, these can play a useful supplementary role in addressing pension

challenges. In some countries with well-developed micro-finance institutions, micro-pensions could also play a useful role.

It is important that policy makers enable households to utilize all the tiers, albeit to a varying extent, to obtain the required replacement rate for financial security in retirement. While the precise share cannot be prescribed *a priori,* both the policy makers and the households must consciously strive to make full use of all five tiers.

Regardless of whether the social security systems of a country are primarily based on social insurance and social solidarity principles or on individual and family responsibility, a significant proportion of retirement financing needs in the 21st century will have to be met from individual savings (Spivak, 2008). This strongly suggests that social norms and financial regulation should be so structured in a way that does not undermine thrift and saving habits. The credit culture must be kept in reasonable check lest it undermine household saving, which is the main component of national saving in countries such as India. It is also essential that the responsibilities of families and immediate communities taking care of the elderly are not too rapidly substituted by the state. This will require nurturing appropriate social norms and regulations.

The third aspect of the systemic perspective concerns public policies in Asia is the need to consider pension and healthcare financing arrangements in an integrated manner. In high-income Asian countries such as Korea and Japan, long-term care is already an important health financing issue (Bloom and Finlay, 2009). A significant proportion of individuals above 80 years of age have difficulty performing daily functions. With decreased fertility and greater mobility, healthcare givers for the aged have become scarce. Developing Asian countries such as China, India, and Thailand will also have to address the challenge of long-term care.

(b) Transition Issues

Transition issues in reforming the pension system should be given much greater consideration than has been the case in many Asian countries. These involve not just technical aspects, such as treatment of accumulated pension rights, but also the issues concerning perceptions of fairness and legitimacy of pension reform. Unless these less tangible issues are addressed satisfactorily, the pension reform process may not yield desired results (for example, by adversely impacting compliance levels).

(c) Pension Regulator

Regulation is a public good which the government has the responsibility to provide. There is a strong case for a dedicated pension regulator in developing Asia. Its main functions should be to ensure professionalism in performing core functions, ensuring systemic perspective (to consider all components of the social security system in an integrated manner), to develop the pensions industry, and to promote financial educa-

tion (Asher and Nandy, 2006). In Asia, civil service pension schemes and occupational schemes are in particular need of stronger regulation and supervision.

(d) Financial Education and Literacy

Provident and pension schemes require a greater degree of financial education and literacy on the part of all the stakeholders, particularly individual members. The growing complexity of financial products and multiplicity of new financial players underscore the importance of financial education and literacy. Financial education and literacy should not be interpreted narrowly as only provident and pension funds providing leadership and finances in designing and delivering these services to members. The lessons of financial education and literacy should be incorporated in the design and governance structures of the provident funds. This unfortunately is not the case with many provident funds in Asia.

Asian countries need to make much more systematic efforts in promoting financial education. Such education is needed at all levels—general public, officials and trustees of provident and pension fund organizations, those involved in designing, marketing, and advising of pension products, media, and the policy makers. National campaigns for enhancing financial literacy will be needed.

Such campaigns can also help advance the goal of financial inclusion, which involves widening access and increasing affordability of financial services (such as banking and credit services) to the lower half of income group in Asia (World Bank, 2008).

(e) Indigenous Research Capability

Asian countries need to substantially enhance their capacity to undertake rigorous empirical evidence-based policy-relevant research on pensions and healthcare issues. This will require considerable strengthening of the existing database on morbidity and mortality patterns; and behaviour of individuals and firms concerning saving and retirement. The challenges of ageing in Asia are too immense and complex to delay building such capacity, and not adopt a mindset which translates research findings into timely policy measures. Asian countries may benefit from studying the experiences of the OECD countries, such as Sweden and Germany, and of Chile's experience in encouraging a culture of solid analytical, policy-oriented indigenous research on pension issues and making available a robust database to undertake such research.

Finally, consideration could be given to establishing a forum in Asia to discuss social security issues. Such a forum should bring together not only public officials, but also other stakeholders, such as trade unions, employer organizations, academics, researchers, and pension industry representatives.

Promotion of pension research based on robust empirical databases, particularly concerning morbidity and mortality patterns, and on actual financial behaviour of

households needs to be encouraged with requisite resources and political support. A strategy designed to improve financial literacy will also need to be given a much higher priority in Asia than has been the case till now.

VI. Concluding Remarks

The extent to which countries in East and South Asia succeeds in addressing its social security challenges will have a profound impact not only in Asia, but globally. Asia will exhibit rapid ageing before most Asian counties, including India and China, become high-income economies.

The large informal sector in many Asian countries especially complicates the task of covering a substantial proportion of the population under social security programs. The current global economic crisis has increased the urgency of social security reforms as they have become imperative for social cohesion and political legitimacy. The key focus should be on increasing the labour force participation rates of both men and women in all age groups.

The economics of social security is subtle and therefore its analytical and conceptual foundations must be clearly understood (Barr and Diamond, 2008). Social security systems represent a complex logistical task, even more so for those Asian countries with large populations such as China, India, and Indonesia. The convincing arguments by Barr and Diamond (2008) that there is no single-best pension design, that the government is an essential participant in any pension system, and that fiscal and institutional capacities must be an integral part of pension design and reform strategies, are even more relevant for East and South Asian countries.

International experience strongly suggests that simply changing the social security system (for example, from publicly run DB system to privately run DC system) is unlikely to address the substantive reform issues. A country that manages a public system poorly is also not likely to be able to manage a private system well.

Provident and pension funds must be sustainable and robust for over a long period of seven to eight decades. Social security programs exhibit the tyranny of small numbers. As a result, even a small change in variables such as life expectancy, permitted age at which full pension can be withdrawn, real rate of return, and administrative costs and other taxes in both the accumulation and payout phases, could have a disproportionate impact on the financial viability and the extent to which objectives are realized. Social security reform also requires concomitant reforms in other areas such as labour markets, fiscal management, and capital and financial markets.

The discussion in this paper strongly suggests that policy makers and other stakeholders in Asian countries must accord much higher priority to social security reform. There are at least two areas where mindset change among the policy makers and other

stakeholders is needed. First, the notion that only high growth, even if it is not widely shared or is not employment generating, should be the policy objective and therefore social security and pension systems issues can be addressed later, requires reconsideration. Second, a shift from welfare orientation to professionalism in the design, implementation, and assessment of social security and pension programs is needed. This requires a corresponding shift in investing in the quality of human resources and technology used to administer and manage such programs.

There is currently no developing Asian country where quality graduate-level academic and professional programs on social security are given due importance. Asian countries also lack adequate indigenous research capabilities, and robust databases necessary for high quality research and for price discovery of retirement products. These gaps also need to be urgently addressed. Asia should also consider setting up a social security forum to exchange experiences and strengthen technical capabilities.

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Annex 1: Multi-Pillar Pension Taxonomy of the World Bank

Pillar	Target Groups			Main Criteria		
	Life-time Poor	Informal sector	Formal Sector	Characteristics	Participation	Groups
0	X	x	x	"Basic or "Social pension," at least social assistance, universal or means-tested	Universal or Residual	Budget / general revenues
1			X	Public pension plan, publicly managed, defined-benefit or notional defined-contribution	Mandated	Contributions, perhaps with financial reserves
2			X	Occupational or personal pension plans, funded defined-benefit or funded, defined-contribution	Mandated	Financial assets
3	X	x, X	X	Occupational or personal pension plans, funded defined-benefit or funded, defined contribution	Voluntary	Financial assets
4	X	X	X	Personal savings, homeownership, and other individual financial and non-financial assets	Voluntary	Financial assets

Note: The size of x (relatively small) or X (relatively large) characterizes the importance of each pillar for each target group.
Source: Holzmann and Hinz, 2005.

The Effects of Ageing on Social Security and Employment in Europe

Athina Vlachantoni

1. Introduction

The European population is ageing, albeit with significant differences between countries, and between men and women. For example, in 1980, a German man aged 65 could expect to live an additional 13 years on average, compared to a woman of the same age, who could expect to live an additional 16 years. By 2001, the additional years had increased to 16 and 20 respectively (Council of Europe, 2004). Population ageing is driven by decreasing fertility and mortality rates, which in turn result in higher life expectancy for both men and women, and in European societies ageing as a whole. The policy implications of population ageing are widespread, affecting for instance systems of health and social care provision, patterns of national and international migration, but also inter-generational relationships and support. However, a detailed exploration of the impact of ageing in all spheres of policy-making is beyond the scope of this paper. This paper explores the impact of population ageing on European social security systems, focussing particularly on old-age pension systems, and on European labour markets.

Demographic change affects men and women differently, and these gender differentials are crucial when discussing the impact of population ageing on systems of social security and the organisation of labour markets. Women tend to live longer than men on average; however, their healthy life expectancy tends to be relatively shorter than that of men's. At the same time, although many more women have entered the labour market since the 1970s, women's labour market participation patterns are different from men's, often including interrupted periods in order to provide care to family members. These differences in employment records have implications for men's and women's pension contributions and final pension entitlement in the later part of the life course. Wherever appropriate, this paper briefly discusses the gender implications of demographic changes relating to old-age pension protection and to paid employment.

The remainder of this paper is structured in the following way. The second part of the paper explores the phenomenon of population ageing in Europe in greater detail. It looks at trends of falling fertility and mortality, the resulting rise in life expectancy across the European region, and the differences between men and women in this re-

spect. In the third part, this paper turns to the challenge which population ageing has posed for European systems of social security, focussing particularly on systems of old-age pension protection. Distinguishing between so-called social insurance and multi-pillar pension systems, this part of the paper discusses the ways in which pension systems in Europe have been affected by, but also have tried to address, the challenge of population ageing, drawing important gender implications. The fourth part of the paper turns to the impact of population ageing on European labour markets, focussing in particular on the trend of early retirement, which has been taking place in tandem with women's increasing participation in the labour market and changes in the configuration of European labour markets. Finally, this paper concludes with a brief contextualisation of the challenge of population ageing for policy makers in the current economic climate, and the implications of this analysis for the future organisation of social security and employment policy in Europe.

2. Population Ageing in Europe

Population ageing is the result of the combined effect of decreasing fertility rates and decreasing mortality rates, which in turn produce increasing life expectancy (Davis, 1998; Sleebos, 2003). Since the beginning of the 20th century, both birth and death rates in developed countries have been decreasing in tandem. After the First and Second World Wars, the long-term fertility decline came to a brief halt, but with the end of the "baby-boom" phenomenon by the late 1950s, fertility resumed its previous declining trend. The sharpest decline in total fertility rates happened between 1970 and 1985, after which they continued to decrease more smoothly. By the early 1990s fertility had reached levels well below the replacement rate in many developed countries, maintaining a similar pattern in the 21st century (Sleebos, 2003). The two main reasons behind falling fertility are patterns of later marriage and greater female labour market participation; however, social attitudes and the cost of child-rearing are equally important parameters (Davis, 1998). Figure 1 shows the pattern of declining fertility in a selection of European countries over the last 45 years or so. The figure shows that the total fertility rate in the vast majority of countries in this figure fell from over 2 children per woman to below the population replacement rate (2.1 children per woman) from the early 1980s onwards, and this was indicative of trends in total fertility rates across Europe as a whole. However, more recently the total fertility rates have once again been on the rise, particularly in France and the Nordic countries.

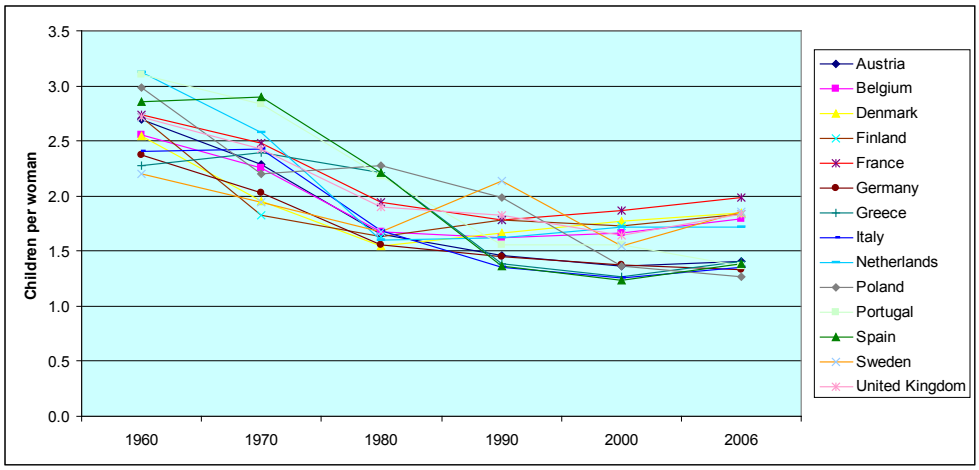

Figure 1: Total fertility rates in selected EU countries, 1960-2006.
Source: OECD, Society at a Glance 2009.

At the same time as fertility rates have dropped in Europe, mortality rates have also continued to fall (Sleebos 2003). It is the combination of falling mortality and fertility which results in rising life expectancy, for both men and women. Figure 2 shows 2008 data for men's and women's life expectancy at age 65 in a selection of European countries. Women's life expectancy was consistently higher than that of men's, although there is considerable diversity between different countries. For example, a 65-year old man in France could expect to live an additional 17 years, compared to a 65-year old woman in France who could expect to live an additional 23 years. In Poland, the additional years on average were 14 for men and 18 for women.

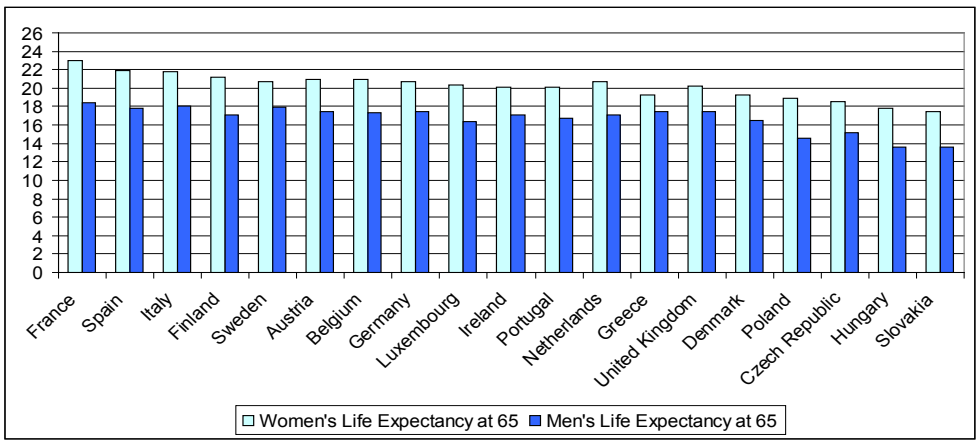

Figure 2: Men's and women's life expectancy at 65, selected EU countries.
Source: OECD Health Data 2008.

The gender differences in the process of ageing are once again evident when looking at the health-adjusted life years at older ages, when men are expected to spend more years

in good health on average. Figures 3a and 3b illustrate the differences between men and women. For example, out of the 23 additional years which French women aged 65 can expect to live on average, only about 10 years are expected to be lived in good health, compared to 13 years which are expected to be lived in not good or disability-ridden health. Conversely, French men aged 65 can expect, on average, to spend an additional 18 years. However, half of that time they can expect to spend in good health and the other half in not-so-good health. There is also significant diversity between the selected European countries depicted in these figures. For example, in Denmark and Sweden, both men and women can expect to live the majority of their additional years at age 65 in good health, while in Germany, Slovakia, and Portugal both men and women aged 65 can expect to live the majority of their additional years in not-good health. Patterns of morbidity in the later part of the life course are crucial determinants of both economic activity and labour market participation, but also of the demand for social security from modern welfare states.

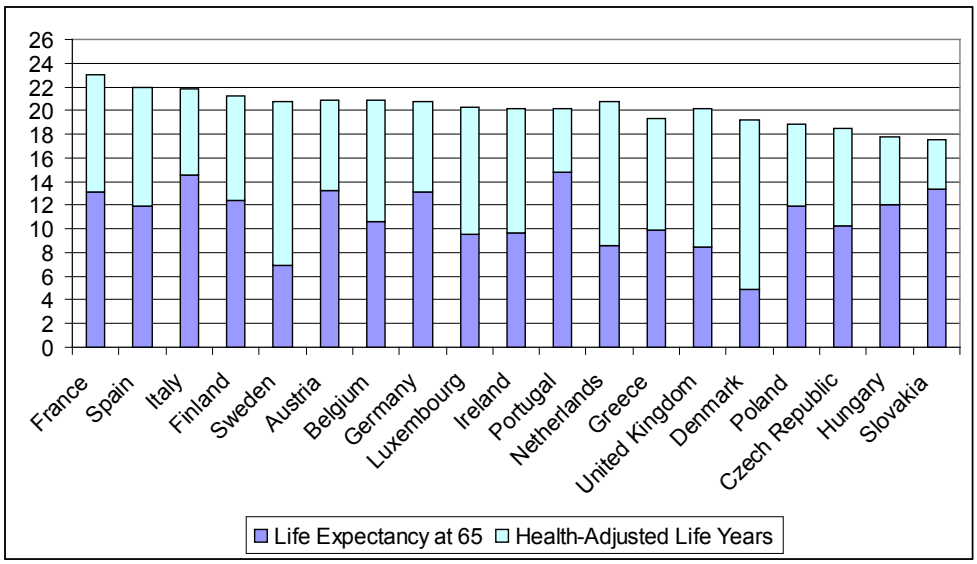

Figure 3a: Women's life expectancy and Health-Adjusted Life Years at age 65, selected EU countries, 2007.
Source: OECD Society at a Glance 2009.

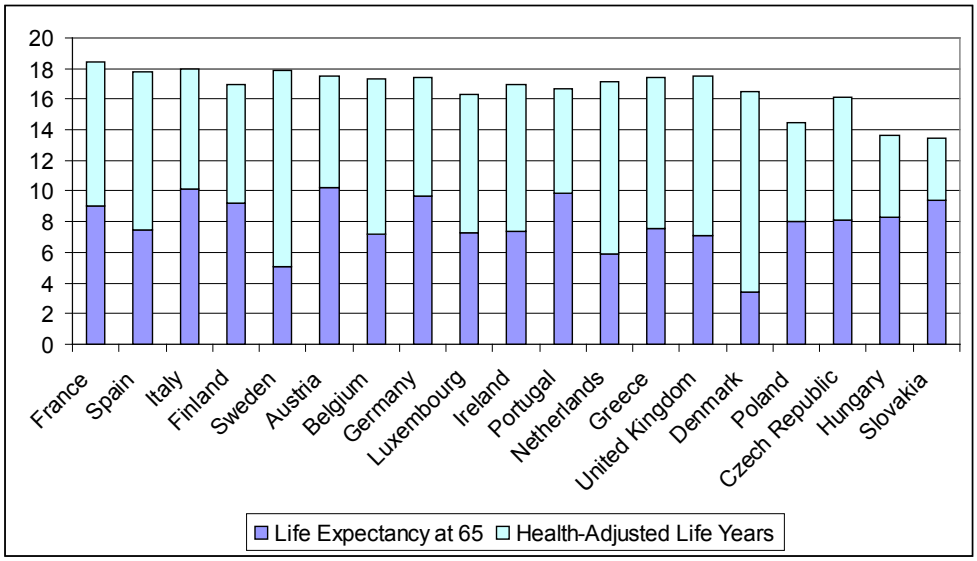

Figure 3b: Men's life expectancy and Health-Adjusted Life Years at age 65, selected EU countries, 2007.
Source: OECD Society at a Glance 2009.

Population ageing is widely acknowledged as a success story. However, European policy makers admit that it also presents one of the biggest challenges facing systems of social security (EPC, 2001). The following section explores the impact of these demographic trends on European systems of social security, and in particular systems of old-age pension protection.

3. The Effects of Population Ageing on European Systems of Social Security

Population ageing is the cornerstone of any discussion of social security reform, and particularly the reform of old-age pension systems (see for example Banks and Emmerson, 2000; Holzmann et al., 2003). There are two main reasons why this is the case. First, an increasing number of older people, who also live longer than previous cohorts, means an increasing number of people claiming pensions for longer periods. Second, at the same time as more and more people are claiming old-age pensions, there are fewer people of working-age who can contribute into pension funds (Davis, 1998). This trend is reflected in measures of "dependency" by pensioners on workers, which are exacerbated by trends of early retirement as the next section of this paper shows. For example, the old-age (or elderly) dependency ratio, most commonly used in debates on social security reform, shows the number of people over 65 as a proportion of the total number of people of working age (15 to 64 year old). Dependency ratios taken at face value can be misleading, not least because not all persons aged 65 and over may be out of the labour market, and not all persons of working age may be in the labour market.

Nevertheless, when discussed in the context of additional demographic indicators such as labour market participation in older ages, dependency ratios are a useful indicator of the composition of a country's population, particularly with regard to the pension system and the labour market. Table 1 below shows the past, current, and projected old-age dependency ratios for a selection of European countries, reflecting a gradual increase. The table shows a projected increase in the dependency ratio between 2000 and 2040 for all countries in the table, although, as before, the diversity between different countries must be taken into account. For example, in 2000 in Italy, there was one person aged 65 and over for every three persons of working age, but by 2040 this relationship is projected to be reversed with one person aged 65 and over being "dependent" on less than two persons of working age. By contrast, Ireland, with a relatively younger population on average, showed a less dramatic change in the dependency ratio from 19% in 2000 to a projected 36% in 2040.

Member State	2000	2010	2020	2030	2040
Belgium	28.1	29.4	35.6	45.8	51.3
Denmark	24.1	27.2	33.7	39.2	44.5
Germany	26	32.9	36.3	46.7	54.7
Greece	28.3	31.6	35.8	41.7	51.4
Estonia	27.1	28.9	33.1	41.7	55.7
France	27.2	28.1	35.9	44	50
Ireland	19.4	19.1	24.5	30.3	36
Italy	28.8	33.8	39.7	49.2	63.9
Luxembourg	23.4	26.2	31	39.8	45.4
Netherlands	21.9	24.6	32.6	41.5	48.1
Austria	25.1	28.8	32.4	43.6	54.5
Portugal	24.5	26.7	30.3	35	43.1
Finland	24.5	27.5	38.9	46.9	47.4
Sweden	29.6	31.4	37.6	42.7	46.7
UK	26.4	26.9	32	40.2	47

Table 1: Projections of old-age dependency in selected EU Member States.
Source: EPC 2001.

The direct implication of deteriorating old-age dependency ratios is that pension expenditure rises as rapidly as the old-age dependency ratio deteriorates (Eurostat, 2004). Pension expenditures in European countries have indeed risen in the last three decades or so; however, the introduction of pension reforms in many countries has often mitigated this trend (see Holzmann et al., 2003 for case studies). Figure 4 below shows the proportion of GDP spent on pensions by a selection of European countries, and this expenditure includes old-age, disability, and unemployment pensions. The line cutting across the figure reflects the European average in 2007, which stood at just under 12%

of a country's GDP. Again, the country differences are significant; for example, Italy spent almost 15% of its GDP on pensions compared to Spain, where the cost amounted to approximately half of that in 2007. Pension expenditures are a particularly important indicator of the effect of population ageing on the welfare state in countries where the welfare state prioritises pension provision over the provision of other types of cash benefits and services (Holzmann et al., 2003).

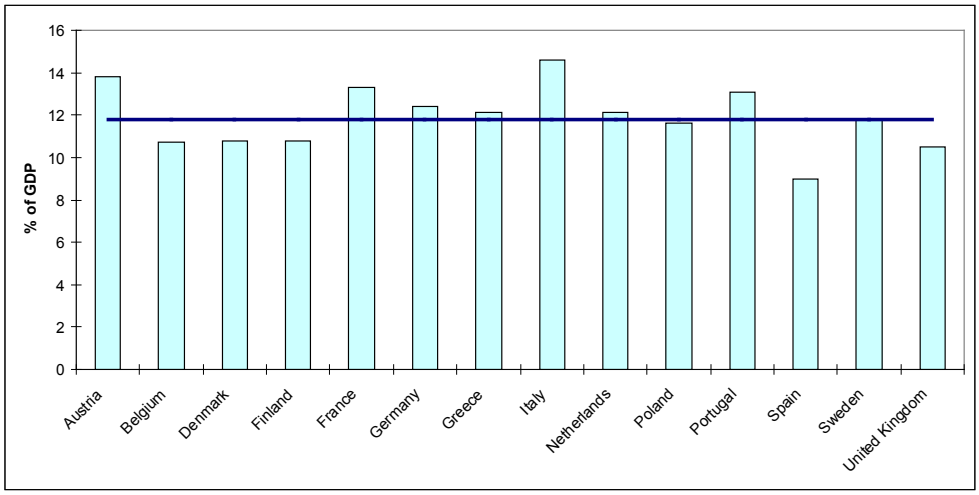

Figure 4: Expenditure on pensions (% of GDP), selected EU countries, 2007.
Source: Eurostat, 2007.
Note: The "Pensions" aggregate comprises part of periodic cash benefits under the disability, old-age, survivors, and unemployment functions. It is defined as the sum of the following social benefits: disability pension, early-retirement due to reduced capacity to work, old-age pension, anticipated old-age pension, partial pension, survivors' pension, early-retirement benefit for labour market reasons.

In principle, a rising expenditure on pensions is a challenge for all types of pension schemes regardless of their specific design, but the pace at which expenditure rises is determined to an extent by the structure of the pension system. This diversity is important in that it determines the nature and level of the impact which population ageing can have on a system of social protection (Palme, 1990). For instance, unfunded pension systems which utilised pension contributions in their early stages of development as public credit or investment resources have faced a greater fiscal challenge (Disney, 1998). Modern pension systems, particularly those in the European region, have undergone significant restructuring over the last 30 years or so, but this restructuring has taken different forms, in different places, at different paces, and has different implications for the insured in each country's context. Notwithstanding this diversity, the literature has distinguished between two broad types of pension systems, the social insurance and the multi-pillar types, although in practice, most modern pension systems include certain elements of each (Myles and Pierson, 2001).

In social insurance systems, pensions are financed through earnings-related taxation, and, more often than not, such systems operate on a Pay-As-You-Go (PAYG) basis, whereby the current generation of workers pays for the pensions of the current generation of pensioners. Insurance-based systems typically provide a means-tested minimum pension for those who reach the age of retirement but have inadequate contributions, while private pension provision is typically under-developed in such systems, given the adequacy of public pension provision. Multi-pillar pension systems, on the other hand, typically prioritise poverty prevention over income replacement in retirement by combining a flat-rate, basic pension with more developed pillars of supplementary (occupational) and private pension provision. The bulk of pension incomes in such systems is thus financed through individual contributions to pension funds, which may be state or privately managed (Bonoli and Shinkawa, 2005).

Population ageing and the resultant deteriorating dependency ratios and rise in pension expenditure can affect both social insurance and multi-pillar pension systems, although in different ways. In social insurance systems, population ageing combined with early retirement trends can shrink the contributory base which supports a continuously expanding amount of claimants, thereby disturbing the inter-generational contract and also challenging the typical generosity of the more dominant public pillar. The PAYG character which insurance-based systems usually have presents a further challenge for policy makers: a switch to a multi-pillar system would almost certainly incur the "double payment problem", whereby younger workers must finance the pensions of current pensioners *as well as* their own pensions (Pierson, 1997). In addition, older workers nearing retirement are likely to resist a reform which breaks, or threatens to break, their contract with the state and forces them to contribute to private pensions towards the end of their working life. Consequently, and in addition to the purely structural obstacles to reform, the policy challenge in countries with insurance-based pension systems acquires a political dimension which is particularly strong (Pierson, 1994).

This policy challenge assumes a rather different form in multi-pillar pension systems. First of all, the fiscal challenge of rising pension expenditures is of a relatively smaller scale given the typically smaller size of the basic (public) pillar of pension provision in such systems. Population ageing, on the other hand, raises the cost of annuities as the average life expectancy rises (Barr, 2002); yet this represents a challenge for individuals, who have to buy the annuities, rather than for governments. Since occupational pension provision is more developed in multi-pillar systems, the restructuring of the labour market is bound to be a considerable part of the pension problem in such systems. Ensuring the long-term sustainability of the pension system as a whole may therefore include a shift from typically more expensive, defined-benefit schemes (DB), where pensions are determined by the employee's salary and the years of work, to defined-contribution schemes (DC), where pensions are determined by contributions

to individual employee accounts that potentially carry a higher risk and a lower return guarantee. Finally, the pension problem within multi-pillar systems may also relate to the broader lack of guarantees which characterises investment decision-making, and which increasingly defines decision-making in the context of social security and pension protection in particular.

In the face of population ageing, European systems of pension protection have responded with changes which affect the balance between the basic, occupational, and private pillars of pension provision (Bonoli and Shinkawa, 2005). Nevertheless, there still remain differences between different kinds of pension systems. Insurance-based systems have aimed to reduce the generosity of the basic pillar, and to introduce tax or other incentives in order to encourage greater participation in occupational and, to a lesser extent, private pension schemes (Davis, 1998). Multi-pillar systems, on the other hand, have aimed to strengthen their occupational pension pillar, while maintaining a restricted basic pillar aimed at poverty alleviation. This can be observed through the shift from defined-benefit (DB) to defined-contribution (DC) schemes and the creation of opportunities to contribute to private funds, even in occupations that produce relatively low earnings (Disney, 1998; Bonoli, 2003).

The challenge of population ageing, and its implications for systems of social security, has particular gender implications which cannot be underestimated, particularly for those with weak links to the labour market, such as many women (Falkingham, Evandrou and Vlachantoni, 2010). Aside from the fact that women constitute the majority of older people, women also make up the majority of older people living under poverty risk (European Commission, 2006). One of the contributing factors to these differentials lies in the labour market participation, which will be further explored in the next section of this paper. As women are more likely to have, or have had, irregular ties with the labour market, women are more likely to rely on statutory pension provision, which is affected by cuts targeted at public pension expenditures (Luckhaus, 1997; Ginn, 2004). The specific design of pension systems is also of crucial importance in this respect. For example, insurance-based systems may hinder pension accumulation for women by establishing minimum qualifying conditions (e.g., 15 years of contributions), or by establishing a formula to calculate pensions based on long periods (e.g., the last or best 15 years of employment). On the other hand, multi-pillar systems may hinder women's ability to accumulate pension contributions through occupational or private pension funds as a result of their typical working patterns that in the end produce lower lifetime earnings (Leitner, 2001).

Pension protection for women has always presented a policy challenge. However, the need to address the impact of population ageing has provided the stimulus for pension reforms which have, to an extent, also benefited women in particular. Pension systems can do a lot to compensate for gender differentials in the division of paid work and unpaid family care provision, and by combining redistributive and non-redistrib-

utive elements in the core of their entitlement structure (Leitner, 2001). For example, women are more likely to be disadvantaged when occupational pension schemes place high thresholds of eligibility in terms of years of service, earnings or the level of contributions (Ginn et al., 2001). The provision of flat-rate benefits and the calculation of pension income according to the "best" income years of employment, rather than the last, are two examples of such policies (Rake, 1999). Within social insurance systems, the principal way of recognising gender differences in working patterns remains the *compensatory* measure of recognising periods of care for dependants (Luckhaus and Ward, 1997). Although such credits are only a partial compensation of time spent caring (Rake, 1999), they are increasingly becoming a central part of pension policy towards women in both insurance-based (Germany and Greece) and multi-pillar (United Kingdom) pension systems. Still, fewer than half of all European countries, including Germany, the UK, and Ireland, offer such credits for care *other* than childcare, at a time when eldercare is rapidly assuming policy importance due to population ageing (Vlachantoni, forthcoming).

Multi-pillar pension schemes, which place greater emphasis on supplementary (occupational) and private pensions, tend to have fewer "solidarity features" which aim both at restoring gender equality within pension provision and at securing an adequate income for women in old age (European Commission, 2006). Under the assumption that the individual will be able to top up her pension income through other pillars of pension provision, a woman's prospects of pension accumulation in such systems are dire unless she can balance work and care. Some European countries with multi-pillar pension systems, like Poland, Sweden, Austria and Denmark, provide state- or employer-financed contributions into occupational schemes for periods of maternity or parental leave. Other countries, such as Ireland and the United Kingdom, have measures in place to encourage parents to contribute to supplementary pension schemes, whether they are employed at the time or not. Most of the European countries have also made it illegal for pension companies to use gendered life-tables in the calculation of pension entitlements, because it disadvantages women as they tend to live longer. Indeed, unisex-tariffs in second- and third-pillar schemes are an important step towards greater equality, especially because women are generally less able to afford contributing to such schemes in the first place (Luckhaus and Ward, 1997).

4. The Effects of Population Ageing on European Labour Markets

The most obvious way of ameliorating the effect of population ageing on systems of pension protection is the optimisation of the working-age population in order to increase the number of people who contribute to pension systems (Sigg, 2002). However, this area represents a distinct challenge for policy makers, both at the country level and at the supra-national, European level. This section of the paper discusses the phe-

nomenon of early retirement in European labour markets, against the background of two trends which have been taking place at the same time. These are the massive entry of women into the labour market, which has concealed a rise in unemployment rates and has added to the contribution base for old-age pension systems; and the changing composition of the European labour force, which impacts on structures of pension entitlement.

European member states have, in the last decade or so, committed to a number of employment targets agreed at the European Councils of Lisbon and Stockholm (2000), which aim at raising the total employment rate to 70 percent, the female employment rate to 60 percent, and the employment rate of older workers (55 to 64 years old) to 50 percent by 2010. Table 2 shows how a selection of member states have performed vis-à-vis these goals in the last few years, depicting those countries which have achieved or surpassed these goals in bold. The table shows that some countries such as the UK and the Nordic countries have reached all three Lisbon targets; some countries such as Ireland, Portugal and Germany have achieved some but not all goals; and other European countries, from Eastern and Southern Europe, which have quite a lot of ground to cover in order to reach these goals. In short, there is considerable diversity within the European Union in terms of the level of labour market participation among the total, female, and older population. However, alongside changes in employment, Europe has also seen changes in the structure of its labour markets, with important consequences for its social protection and labour market policies.

	15-64	**55-64**	**Women**
Italy	58.7	33.8	47.1
Greece	61.5	42.1	48.8
Hungary	57.3	33.1	51.2
Poland	57	29.7	51.3
Slovak R.	60.7	35.7	53.2
Luxembourg	63	34.3	53.6
Belgium	61.6	33.8	55.1
Spain	66.6	44.6	55.8
Czech R.	66.1	46.0	58.0
France	64	38.3	**59.7**
Ireland	69	**54.1**	**61.0**
Germany	69	**51.3**	**64.0**
Portugal	67.8	**50.9**	**66.0**
UK	**72.3**	**57.4**	**67.5**
Netherlands	**74.1**	**50.1**	**68.7**
Finland	**70.5**	**55.0**	**69.1**
Denmark	**77.3**	**58.7**	**74.0**
Sweden	**75.7**	**70.1**	**74.3**

Table 2: Progress against Lisbon targets in selected EU countries, 2007.
Source: OECD Employment Outlook 2008.

Behind these quantitative goals lies a more complex picture, which shows close links between demographic change, social security, and the composition of labour markets. One example is the key trend of women's massive entry into the labour market, which commenced in the 1970s in the Nordic countries and has expanded consistently across the rest of the European region since. The timing of women's massive participation in the labour market is important, as it concealed part of the rise in overall unemployment and in early retirement during the late 1970s and 1980s, particularly among older male workers (Disney 1998). Alongside the size of the labour force, the composition of the labour market and the nature of people's employment are also relevant to the discussion of demographic change and its impact on social security, because they directly affect patterns of pension entitlement and accumulation. Since the late 1980s, new and more diversified employment patterns have surfaced in the European context, which include part-time, temporary, and agency work, and which present a challenge in terms of providing pension security (Bonoli, 2003). In 1999, such jobs accounted for more than 28 percent of the total number of jobs in Europe (SPC, 2000). Changes in the composition of the labour market also mask important gender differences. The typical working patterns of men and women have always differed, even before the changes in the configuration of European labour markets from the late 1970s onwards (Orloff, 2002). The demand for labour gradually shifted away from the manufacturing and agricultural sectors towards the service sector, but it was women that mostly filled this gap in the labour force, especially in the early part of the 1980s (OECD, 2002).

The particular characteristics of part-time work, as well as the over-representation of women among part-time workers in Europe, have a direct effect on part-time workers' accumulation of pension contributions and on the future organisation of European labour markets. Part-time work, for a start, tends to be concentrated in comparatively low-paid occupational sectors, such as the health, education, and service sectors (EFILWC 2003). In addition, the minority of male part-time workers tend to work at the very beginning and/or at the very end of their working life (Kohli, 1991; Laczko and Phillipson, 1991), while their female counterparts may spend their whole life in part-time employment (Ginn and Arber, 1998), impacting differently on their lifetime and retirement incomes. Large variations are also found in the *length* of part-time employment, which, depending on the country's pension legislation, will affect the amount of the accumulated pension. In Sweden and Denmark, for instance, the majority of female part-time workers are in "substantial" part-time jobs (i.e., between 20 and 34 hours per week), often approaching the full-time norm of working hours in other parts of Europe, whereas in Germany, "marginal" part-time work (i.e., up to 19 hours per week) is more widespread. Part-time work may therefore reduce individual earnings on which the calculation of a basic pension is based; may result in a reduced access to occupational pension schemes depending on a country's pension regulations; and, finally, may prohibit an individual from contributing to a private pension scheme (Luckhaus, 1997).

Against the background of women's increasing labour market participation and a changing configuration of European labour markets to include less continuous modes of employment, trends of early retirement over the last 40 years or so have been observed across Europe, albeit with significant variations between countries (Ebbinghaus, 2006). Early retirement, particularly among men aged 50 and over, has been described as an unintended consequence of the expansion of social rights within Europe. The hypothesis is that welfare states, in negotiations with social partners, provided incentives to workers to withdraw from the labour market, but that such incentives have become embedded in welfare structures and are now difficult to reverse. However, what explains early retirement, particularly against the background of population ageing, is a more complex combination of so-called "push and pull" factors, which relate to particular policy developments, patterns of health and ill-health, as well as economic restructuring taking place at different paces in different country contexts. For example, research from the British context found that retirement before the state pension age was explained by a combination of firm-instigated reasons, ill-health, and individual-instigated reasons (Disney, Grundy and Johnson, 1998). The same research has also highlighted the impact of increasing coverage by occupational pensions, which have allowed more people to afford retirement (Ibid.).

The age of retirement is an area with significant gender implications across the European Union, as women have been historically permitted to exit the labour market earlier than men. In theory, earlier retirement was granted to women so that, firstly, the couple would enjoy their retirement simultaneously because women were usually younger than their husbands, and secondly, widows would receive social protection earlier (Thane, 1987). However, in reality, the difference in retirement ages partly compensated for women's relatively low wages in the labour market in addition to women's unpaid labour in the household. The age of retirement is an area where equal treatment is not immediately applicable under Community Law, rather member states must examine their legislation periodically and establish whether the derogation from the equality principle is still justified in each case. Pension legislation in Europe relating to survivor benefits and childcare credits increasingly uses gender-neutral language; however, several member states still have different retirement ages for men and women (Poland, Italy, Slovenia, and Austria until 2024), but are in the process of gradually abolishing them (European Commission, 2006). Such policy measures are considered a particularly important part of addressing population ageing among men and women in modern European welfare states.

For the moment, however, there appear significant differences within the European Union both between social policies relating to men and women, and between men's and women's actual retirement patterns. Figures 5a and 5b illustrate these differences for a selection of European countries, drawing on data on the official (legal) and effective

(actual) retirement ages from 2002-2007[1]. Differences in the official retirement age for men and women are immediately evident; for example, in most countries in Figure 5a, the official retirement for men in 2007 was 65, whereas in most countries in Figure 5b, the official retirement for women in 2007 was between 58-64. The gap between the effective and the official retirement age is where the policy challenge lies for European welfare states, and where the gender differences become more prominent. Among the men represented in Figure 5a, there were only three countries (Greece, Portugal, and Sweden), where the effective retirement age was higher on average than the official retirement age. Nevertheless, it should be noted that in the Greek case the official retirement age was the lowest in this group (58 years). In some countries such as Austria, Finland, Luxembourg, and Slovakia, the gap stood at 6 or 7 years. Among the women represented in Figure 5b, it was Greece, Portugal, Italy, and the United Kingdom where the effective retirement age on average was higher than the official retirement age, although again in the Greek case the latter stood at age 58. The gap between the effective and the official retirement age appeared to be the widest in Slovakia (7 years), and in Luxembourg, Germany, and Finland (4 years).

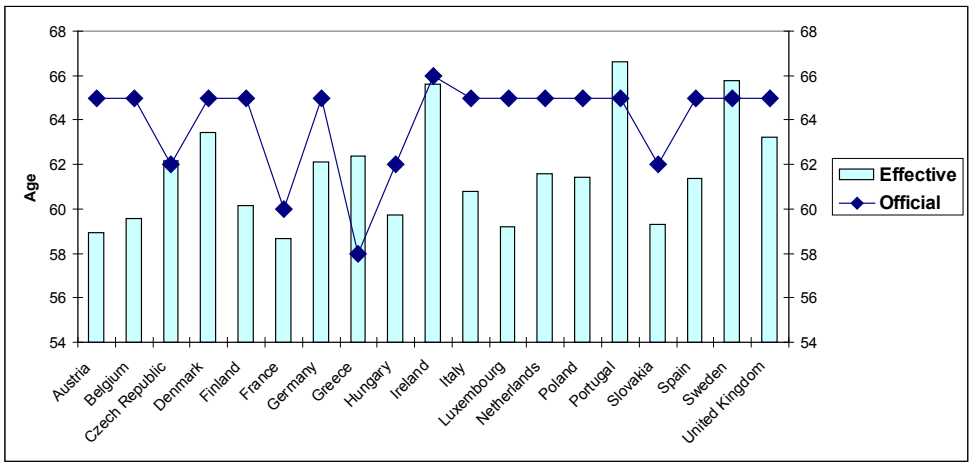

Figure 5a: Men's official and effective retirement age in selected EU countries, 2002-7.
Source: OECD, Society at a Glance 2009.

[1] These figures do not take into account changes in official retirement ages which were introduced in pension reforms after 2007 (e.g., Greece, United Kingdom).

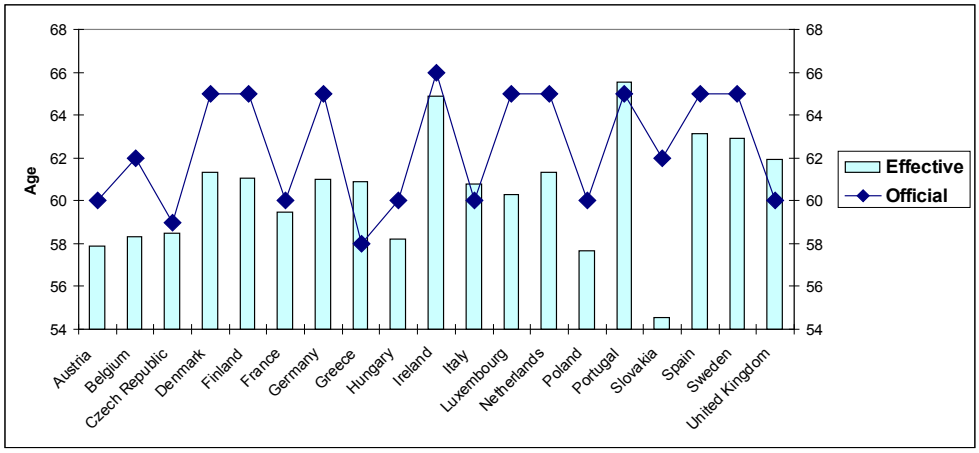

Figure 5b: Women's official and effective retirement ages in selected EU countries, 2002-7.
Source: OECD, Society at a Glance 2009.

Accommodating the continuing entry of women into the labour market, ensuring the smooth incorporation of more flexible modes of employment, and reversing patterns of early retirement are key challenges for European welfare states. Labour markets in the European Union have sought to accommodate these changes against the background of demographic change in a variety of ways, often with a view to improving the effectiveness of both labour market participation and that of social security. For example, the adverse effects of part-time employment on pension acquisition can be mitigated by allowing workers with atypical employment records to "buy" pension contributions (France and Germany), or by not penalising workers from transferring their pension rights from one sector to another (Germany and Denmark), as is common in this mode of employment (European Commission, 2006). Similarly, in the light of deteriorating dependency ratios, many welfare states have combined social security with employment policies to provide incentives for current workers to stay in the labour market at least until the official retirement age, or longer—a concept sometimes referred to in the policy literature as "active ageing". Such measures include the abolition of incentives for early retirement, the increase of the official retirement age, the introduction of anti-ageism discrimination (e.g., in the UK since 2006), and the provision of continuous training for older workers. Finally, the establishment of incentives and a care infrastructure to allow more women to combine paid work with care, as well as efforts to "loosen" immigration regulations in order to attract more economic migrants can prove key tools for European countries to address these challenges (Orloff, 2002; OECD, 2002).

5. Conclusion

Population ageing undoubtedly marks a success story for the European community, as it does for the rest of the developed and developing world. However, the challenges it poses for policy makers in the areas of social security and employment cannot be underestimated. Although the manifestation of population ageing is more or less similar across the continent, there is significant diversity across European countries, reflecting not only the socio-demographic composition of their population, but also the extent to which European welfare states are prepared to transform population ageing into an opportunity for further human and economic development. At the same time, the challenges outlined in this paper, including the regulation of labour market participation towards the later part of the life course and the reform of pension systems to take into account an ageing population, will have different effects on men and women as a result of diverse experiences of ageing, and paid and unpaid work throughout the life course. Indeed, although this paper has been confined to the policy areas of employment and pension protection, social policy makers in adjacent areas, such as health and social care provision, and living arrangements in later life, may also need to take gender differentials into account for the future design of policies.

Employment and social security have always been at the core of the European Union, and have been safeguarded and promoted throughout its continuous expansion. Employment and social security are in fact two integral elements of the so-called "European Social Model", which promises the combination of economic growth and high living conditions for all citizens in its member states. The General Directorate for Employment and Social Affairs of the European Commission notes that the Lisbon Strategy on labour market participation has taken a "new importance" since the economic crisis hit Europe in 2008, and that, if adhered to, this strategy can form an integral part of the Union's recovery and further economic growth. Given the challenges population ageing is coinciding with, it remains to be seen whether those European countries which have achieved the Lisbon ideal will be able to sustain it, and those who have not, will be able to achieve it.

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Ageing Population and Health Care Services in the Asia Pacific Region

Alfred C.M. Chan, Phoebe P.K. Tang and Carol H.K. Ma

Introduction

Population ageing is an unprecedented phenomenon happening around the world. In the Asia Pacific region, it has become an issue of concern since the last decade, due mainly to the rapid increase of aged population combined with the ever-decreasing fertility rate in the region. Having seen the failures of our counterparts in Europe and the United States, whose age-care systems are financed with high taxation to sustain the level of security for aged care as aged population continues to grow while labour participation declines, there are clear signs in developed economies in the Asia Pacific region (e.g., Japan, Australia, Singapore, and Hong Kong) that if the Western model of aged care (i.e., aged care services mainly financed by public revenue) is followed, the same end results will prevail (i.e., unattainable economy). This is particularly evident in health care services where demands increase with age. Countries like Japan, Singapore, and Hong Kong are all vigorously investigating alternatives for their health care systems. The good news for Asians is that we are living longer and healthier, but equally this is bad news for policy makers in balancing service demands, supplies, and financial sustainability. In noting that the Western models are less sustainable, such as the insurance model in the US, and the public welfare models in European countries, many Asian countries are in the process of finding good-fit alternatives for sustaining a health care system in facing population ageing.

In reviewing the ageing trends against the health care provision all over the world, the Asia Pacific region has several characteristics different from the Western developed economies:

a. **Getting old before getting rich**. Unlike countries such as Britain and US, whose industrialization and urbanization came earlier than population ageing—thus accumulating adequate wealth to build the infrastructures needed for an ageing population e.g., universal pension, training institutes, and hospitals—most Asian regions (particularly in rural areas) are still poor when faced with an ageing population e.g., Sri Lanka, India, and China. And thus accessibility, availability, and affordability for health care services are crucial areas for development.

b. **Speed of ageing is a lot faster in the Asia Pacific region**. It took Europe about 120 years to age from 7% to 14% (for the 60+), while the region will take only 60 years (most countries except Japan and Hong Kong were below the 10% mark in 1990) to grow beyond the 25% mark in 2050. There is less time for building the infrastructures needed, for example a social protection system (e.g., provident fund may need at least 40-50 years to mature), and professional training mechanisms and healthcare systems also need time to build.

c. **There is a bigger number and the aged also live longer**. Contrary to popular thinking, despite its widespread poverty (as defined by the UN as less than US$1/day), extreme geographic variations (rural versus urban environments, tropical rain forests versus dry deserts), and socio-political-religious diversities (languages, ethnicities, ideology etc.), about 60% of the world's total aged population live in the Asia Pacific region and many will live into older ages till beyond 70 (the longest average life expectancies from birth beyond 80s are found in Japan, Hong Kong, and some parts of China). The consequences of this mean bigger demands on health care services in general and in specific health concerns associated with age e.g., dementia, osteoporosis, arthritis etc..

d. **Feminization and cultural imperatives**. An unexplained phenomenon is that women tend to outlive men for a few years. Though this is a global trend, it is affecting women more in the region as culturally they are more dependent on men for a living. Asian women are either housewives or more involved in informal sector employment e.g., domestic work; hence, many are not included in the pension or provident schemes even if they have one in the countries they live in. The male-oriented culture in the region also poses threats to women's health e.g., less educated in and accessible to health services, more vulnerable to sexually transmitted diseases.

With reference to the above, health services and the financing of them in the Asia Pacific have to take a different shape. This paper will first provide an overview of the demographic trends of the region, including their health profile and needs. An exploration for a better health care services model will hence be discussed with reference to WHO's (World Health Organization's) frameworks. Along this vein, examples will be drawn from selected Asian countries, such as more advanced economies like Singapore, Hong Kong, and Japan whose health care systems more or less were taken from the Western model are showing problems of sustainability, and are vigorously searching alternatives. For instance, Hong Kong, a newly developed advanced economy, is creating a path of its own for meeting the demands from population ageing in the territory. Its experience in shifting the emphasis from institution-based acute curative health services to an individual-responsibility based primary one, as well as in developing a model of share-care system between family, neighbourhood, and formal institutions,

could lend valuable reference for other countries in the region. The model is particularly applicable to countries having less wealth for building expensive infrastructures but having to meet huge demands for services e.g., India and China.

Demographic Trends in the Asia Pacific Region

Increasing longevity coupled with a low fertility rate leads to an ageing population worldwide. It is estimated that the proportion of persons aged 60 years and older in the world will double between 2000 and 2050, from 10% to 21% (i.e., from 600 million to 2,000 million in absolute numbers). In 2025, it is projected that 15% of the world population will be aged 60 and over. Among the world population aged 60 years and above, 52% lived in the Asia Pacific region in 2002, and this is projected to increase to 59% in 2025 (United Nations Population Division, 2005a). Obviously, population ageing is rapidly increasing in the Asia Pacific region. It took the US and Europe some 120 years to age from having 7% of people aged 60+ to 10%; but the region would take only about 30 years to reach the same 10%. Figure 1 below shows that the aged population in Japan, Hong Kong, Singapore, Taiwan, South Korean, Thailand, and China increased at an alarming speed from 1990 to 2025 (United Nations Population Division, 2006). According to the UNPD (2001). The ageing index of the Asia Pacific region (defined as number of 60+ per 1000 population) will be 64.3 and 115.7 in 2025 and 2050 respectively, which is more than triple that in 2000.

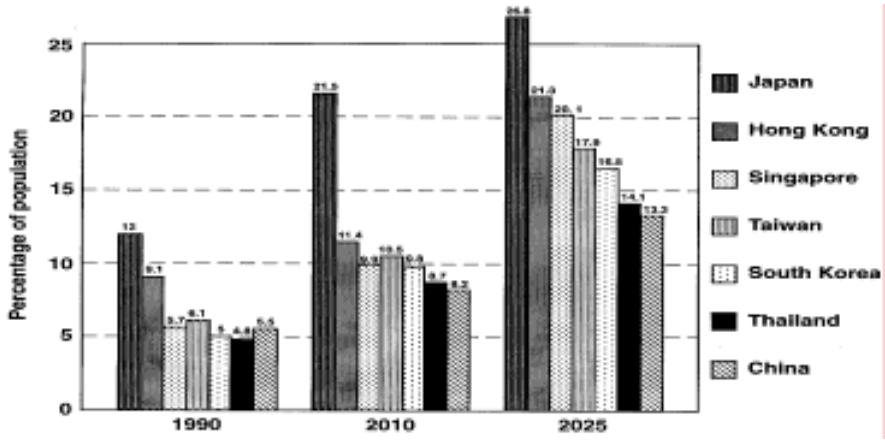

Figure 1: Percentage of Elderly Population (65+) in Asian Countries
Source: United Nations Population Division (2006)

The Asian countries, though diverse, share many similar cultural and historical backgrounds. Their demographic changes and ageing patterns are not identical. For example, Japan is facing challenges of a slow or negative population growth, and the rapid ageing in Japan has impacted very profoundly on its social structure and social allowance system. Others like Hong Kong (current 60+ population is 17.7%), Singapore (current

60+ population is 15.2%), and Korea (current 60+ population is 15.1%) have around 16% of the 60+ in the population currently, but by 2050, the figures will rise to about 40% i.e., near to that of Japan. There are also many young Asian countries, such as Cambodia and Laos, in which population policies are focused around family planning and reproductive health, leading to a shrinking work force in the years to come. These countries therefore have a 15 to 20 year window of opportunity to get themselves into a better position to face the challenges of population ageing. However, a more alarming trend is that countries such as China (11.9%), Thailand (11.2%), and Sri Lanka (11.8%), have a much faster pace of ageing: the proportion of older persons aged 65 or above was recorded at just more than 10% in 2009; the number will double by 2025, and by 2050, most countries in the region are expected to have at least a quarter of the population aged 60 or above (Table 1).

Country		Population aged 60 years or over								
		Number (thousands)			Percentage of total population			Percentage 80 years or over**		
Asia		2006	2025	2050	2006	2025	2050	2006	2025	2050
		363378	708829	1249316	9.2	14.8	23.7	10.6	11.9	19
Eastern Asia										
1	*China	144025	289542	437855	11	20	31.1	10.7	11.3	23.5
2	*Hong Kong SAR	1087	2507	3 534	15.4	30.2	39.4	18.3	0.2	34.4
3	*Macao SAR	49	156	224	10.3	29.2	42.8	17.7	10	33.1
4	*Japan	33725	43528	45077	26.4	35.8	44	18.3	29.7	35.1
5	*Mongolia	152	336	850	5.9	10.8	25.1	12.6	8.9	14.2
6	Republic of Korea	6 571	13 413	17844	13.7	27.4	42.2	10.2	16.1	30.2
South Eastern Asia										
7	Cambodia	716	1545	3 830	5.1	7.9	15.2	6.5	7.2	9.5
8	Indonesia	18869	37165	73595	8.3	13.7	24.8	7.3	9.8	16.1
13	Singapore	531	1613	2002	12.3	31.6	39.8	12	12.6	37.2
14	*Thailand	7122	14782	20 071	11.3	21.5	29.8	11.5	12.4	23.6
15	Viet Nam	6 452	14221	31266	7.6	13.4	26.1	13.3	10.7	18.4
South Central Asia										
16	*Bangladesh	8 777	19040	43135	5.7	9.2	17	6.8	7.3	11.2
17	India	84661	166348	335489	7.5	11.5	20.2	9.2	10.8	15.3

Table 1: Population aged 60 or over of the selected countries in Asia
* Involved in the 2005 ESCAP regional survey.
** Persons 80 years or over as a percentage of the population aged 60 or over.
Source: United Nations Population Division (2007a).

The region's contemporary cultural mosaic has been shaped under several different civilizations and traditions (Simone & Feraru, 1995). The Asian belief systems have spread, resulting in a closely-knit network. A common cultural characteristic in the Asia Pacific region is the family integration groups with an expectation of community welfare above individual interests. Upon the impacts of western influences, alongside with industrialization and urbanization, traditional values and practices are fading. Thus, they are at a crossroad to find out what a sustainable model should be.

Two other significant characteristics could contribute to the need of the health care services in the region: the ageing of the elderly and its feminization. One of the fastest growing segments is the size of the oldest-old population (those aged 80 or above; Kinsella & Phillips, 2005; McCracken & Phillips, 2005). The percentage of people aged 75+ will increase from 23% in 2000 to 38% in 2050. By 2020, 48% of the world's people aged 80+ will reside in Asia, compared to the present 39%. Figure 2 also shows that females are a majority among the older population (65+); all developed and developing Asia Pacific countries were around the 0.90 (0.9 = 900 men for every 1000 women) ratio with India (0.88) nearest to the one to one ratio followed by Hong Kong (0.87) and China (0.86). According to the WHO (2007), the fastest growing group within older women is the oldest-old (aged 80 or above); in general women outlive men by four to five years.

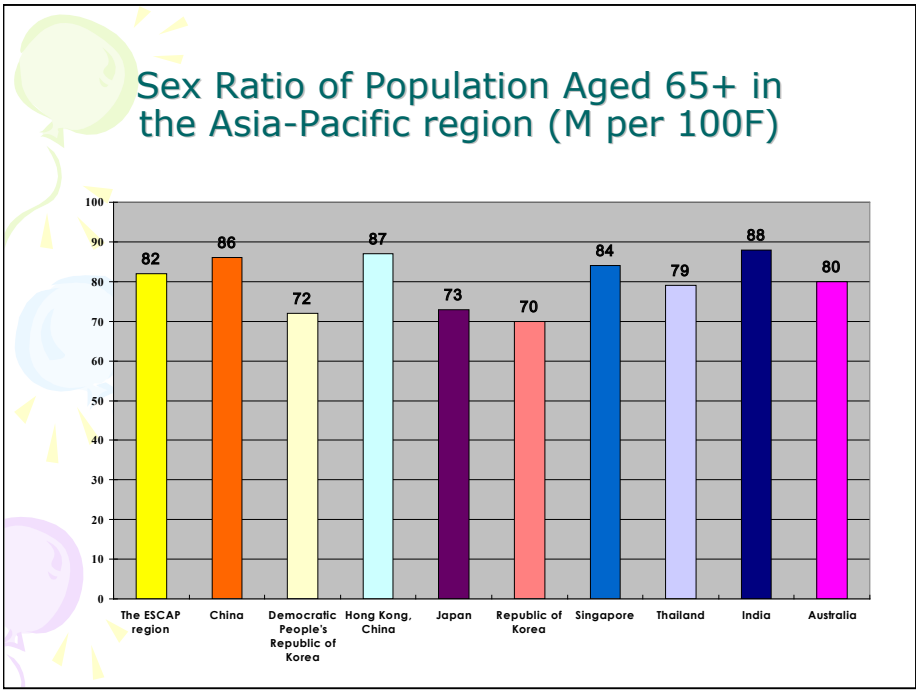

Figure 2: Sex Ratio of Elderly Population (65+) in the Asia-Pacific Region.
Source: Economic and Social Commission for Asia and the Pacific (2001).

Many of these older persons in the region are often without substantial personal resources. Few have participated in any pension schemes and quite a considerable proportion is living in the rural areas where social and welfare services are relatively underdeveloped even today, so they may well suffer if state and family resources are not available. Also, the immense potential need for long-term care (LTC) and for supporting community caregivers is more than obvious, especially if there is not a concomitant increase in the economic and health status of the oldest old populations.

Health Profile and the Needs on Health Care in the Asia Pacific Region

Population ageing increases the prevalence of chronic diseases. In the Asia Pacific region, chronic diseases account for nearly 70% of all deaths across ages (WHO, 2006a, 2006b). As for older people, ischaemic heart disease, chronic obstructive pulmonary disease, cerebrovascular disease, and lower respiratory infections are the leading causes of death (Table 2).

Mortality – adults aged 60+

Rank	Cause	Deaths (000)
1	Ischaemic heart disease	5825
2	Cerebrovascular disease	4689
3	Chronic obstructive pulmonary disease	2399
4	Lower respiratory infections	1396
5	Trachea, bronchus, lung cancers	928
6	Diabetes mellitus	754
7	Hypertensive heart disease	735
8	Stomach cancer	605
9	Tuberculosis	495
10	Colon and rectum cancers	477

Disease burden – adults aged 60+

Rank	Cause	DALYs (000)
1	Ischaemic heart disease	31 481
2	Cerebrovascular disease	29 595
3	Chronic obstructive pulmonary disease	14 380
4	Alzheimer and other dementias	8 569
5	Cataracts	7 384
6	Lower respiratory infections	6 597
7	Hearing loss, adult onset	6 548
8	Trachea, bronchus, lung cancers	5 952
9	Diabetes mellitus	5 882
10	Vision disorders, age-related and other	4 766

Table 2: Ranked leading causes of mortality and disease burden of adults aged 60+.

Many studies show that women have longer life expectancies than men, but they seem to suffer more from chronic illnesses (such as heart disease, stroke, cervical cancer, osteoarthritis, etc.). WHO (2007) has a conclusive study showing the prevalence of different diseases in older women (Table 3).

Diseases	Descriptions
Heart disease & stroke	- There are significant causes of death and disability in women - Women tend to present with different symptoms than men
Cancer	- Compared to men, women face 2 more kinds of cancer (1. cervical cancer (It kills 274,000 women every year) and 2. breast cancer (Lifetime risk in most developed countries is about 1 in 10)) - Some cancers are specific to women due to gender-related life style - e.g: Lung cancer has increased in women over the past 30 years in most developed countries; That is due to increase in smoking and gender-related roles in the household - Stomach, Liver cancer are major killers of women in developing countries
Osteoarthritis	- At age 60-90, osteoarthritis is 3 times more common in women than men due to the loss of bone density at menopause - Hormonal changes in women take place at the time of menopause, with more sedentary lifestyles and poorer nutrition
Blind	- More older women than older men are blind because women live longer but with restricted access to treatment - Up to two-thirds of the world's 40 million blind people may be women - Women make less use of eye-care services particularly for cataract repair surgery than men - Women are primary care givers for children so they are more often exposed to trachoma, an infection which leads to blindness
Mental illness	- In some cases, women suffer mental illness because they have less acknowledgement for their work, fewer opportunities in education and employment, lower income and greater risk of domestic violence compared to men
Depression and anxiety	- Women are more prone to depression and anxiety
Alzheimer's disease	- The prevalence is higher among women because they live longer - Each additional unit of pathology increased the odds of clinical AD nearly three-fold in men compared with more than 20-fold in women - Women lack some protective factor, such as the estrogen deficiency of post-menopausal women
Incontinence	- Two to third times higher among older women that among older men
HIV/ AIDS	- Ageing women remain at risk for HIV/ ALDS and other sexually transmitted infection - Once infected, women face a disproportionate burden of sequelae, including AIDS and cervical cancer

Table 3: Chronic Diseases of Older Women.
Source: World Health Organization (2007).

Besides, a major challenge to the region will be the huge number of older persons, mostly women, with dementia (Graham et al., 1997; Zhang, 2006). It was estimated that, in 2000, 46% of the world's 25.5 million demented persons aged 65+ lived in Asia, and 40% of the Asian demented population was in China alone (Wimo, Winblad, Aguero-Torres, and von Strauss, 2003). Similar to the trend in population ageing, the increase of the demented population will also concentrate in Asia in the next few decades. Dementia is often a condition that gives rise to the need for institutionalization (Magaziner et al., 2000; Woo, Ho, Yu and Lau, 2000) and over 60% of residents in long-term care institutions are demented (Matthews & Dening, 2002). It should be emphasized that institutionalization is not the only option nor the best one. In fact, early institutionalization is associated with mortality for persons with dementia: The earlier the institutionalization, the shorter the survival time, except when the dementia has progressed to a very late stage (McClendon, Smyth, & Neundorfer, 2006). Nevertheless, care in the community is an exceedingly demanding, often round-the-clock, task for the family caregivers, though family care and home living are also what most old people desire in the region.

In developing countries, particularly those in Southeast Asia, the prevalence of communicable diseases, such as respiratory infections and HIV/AIDS, is also high (Figure 3). Preventing communicable diseases among all age groups is important. Older groups are particularly vulnerable to certain forms of infections (pneumonias, bronchitis), as shown in the skewed death rates for older persons in most SARS outbreaks. Unless more efforts are placed in the prevention of chronic diseases, the long-term burden created by the technology-intensive curative end of the medical system is enormous (WHO, 2006b).

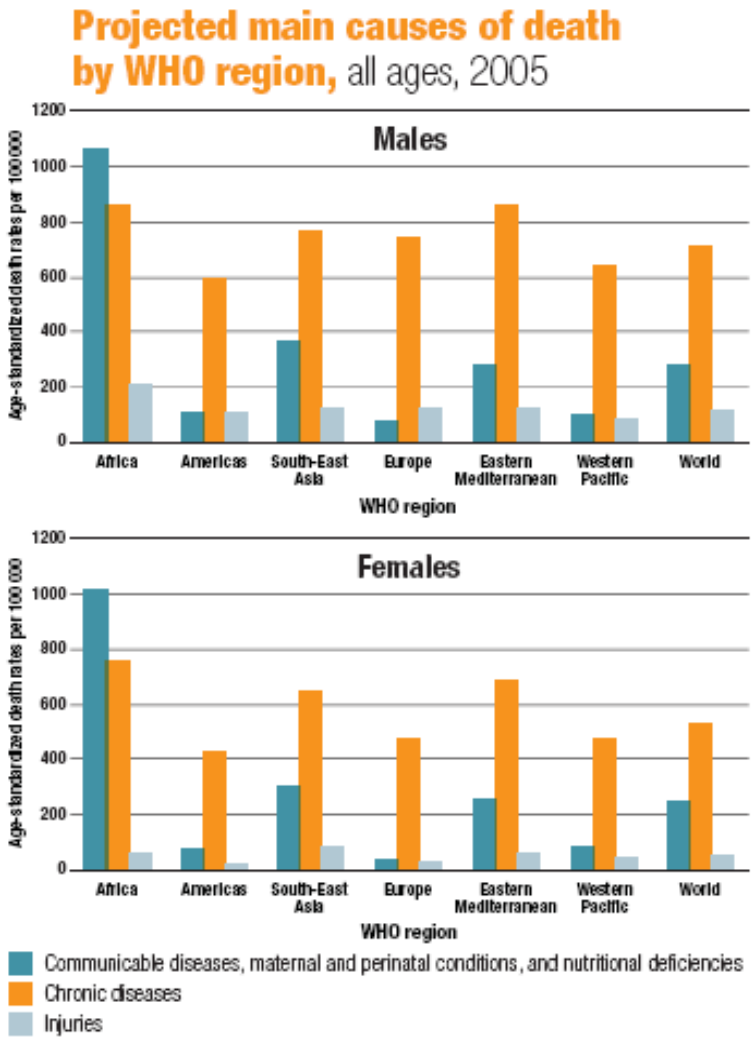

Figure 3: Projected main causes of death by WHO region, all ages, 2005.

In addition, LTC becomes another major challenge in health care for older persons in Asia. As in many developed countries, LTC, apart from providing security for living, is generally developed along two main streams: (a) residential care and (b) home-or community-based care. LTC however is much broader than the institutional bias that has often been attributed to it (Phillips and Chan, 2002a; Phillips, 2000a) and, in this respect, many Asian countries should have the benefit of a tradition of informal care by families and friends to underpin home and community-based LTC as discussed below. There is of course a widespread concern throughout the region that the effects of alleged Westernization may be reducing the ability of families to care for frail older

members (Oh and Warnes, 2001). Under the now widespread directives for "ageing in place" and "community care", older persons are encouraged to live in their homes for as long as possible, assisted with community support services when needs arise. Almost all these programs generally rely on public finance through either general taxation or a LTC budget vote (e.g., Japan). However, program reviews on cost-effectiveness in recent years have revealed that the current modes and delivery of community support services often mismatch the needs of the family and elderly members, or they are too expensive to be tailor-made to specific individual needs. Even worse is that most of these services are provided, though unintentionally, in place of informal care. For these reasons and for older persons' preferences, advanced countries have for some time advocated the bolstering of family care. With the expectation of the future older population being older (and possibly frailer) and more demanding (due mainly to rising income and educational levels), family care or community support services will mean higher-level skills matched with needs, preferably provided on demand, often around the clock. Thus, even those countries wanting to rebuild family care in order to reduce the burden on institutional care have to incorporate a more structured approach, with higher-level caring skills, training and support system for informal caregivers.

Nevertheless, many developing counties in the region still rely largely on families or neighbourhood to provide LTC (e.g., village maintained refuge for destitute older women in India). Others may be lucky to find support from missionaries or charities. The government in many of these countries could at most provide emergency hospital services for free; so older people in these areas have very little to rely on, especially for those who are single, frail, and poor.

In many developed countries, like the USA and UK, their systems in terms of the health care services are not easy to be maintained due to 1) the increasing number of aged people and 2) insufficient labour forces in the markets due to low fertility and the common practice of retirement at age 60 or 65. So no matter what financing models are used, from a highly taxed "welfare state" to a totally individual-responsible insurance system, not one single security-health model could easily be sustained. Asian countries having seen the results of the West may wish to find alternatives in dealing with the impact of population ageing. Thus, models like a share-care system in which the government, community, and the individuals, including their families and friends, contribute to both the costs "in cash" or to the care "in kind" (i.e., services) need to be introduced.

The Making of Best Model for Health Care Services: 3 "As" Criteria

In order to have a better understanding of the health care services in Asia, this paper uses the concept of active ageing proposed by the World Health Organization (WHO) as a framework to further evaluate what makes a better model of health care

services. As mentioned, WHO acknowledges the importance of active ageing, which is considered under three important pillars: (1) Security, (2) Health, and (3) Participation. Security means both environmental and financial aspects, including personal and environmental safety, and means for adequate daily living. Health takes a life course perspective emphasizing healthy living at the earliest age to avoid health risks at old age. Participation covers a broad scope including life-long learning, volunteering, and gainful employment. Each pillar has a key note on partnership for individual and state responsibilities, acknowledging that the government has a key role to provide a conducive environment for the individual's greatest achievements in each pillar. These three pillars are inter-related and require inter-sectoral actions for their implementation, thus forming a coherent framework for a life course policy making in achieving graceful old age. Simply, a person should have a good old age if he/she is assured of, via his own means or otherwise, a good living and a healthy body, so that he/she could still participate in all activities he/she so chooses to continue after retirement. Creation of a healthy environment for individuals to age actively is therefore a pre-requisite. Thus, WHO has launched healthy cities schemes in different countries in order to promote healthy living and healthy ageing (Awofeso, 2003). These directions provide a basic framework for reviewing and building models of the health care services.

In referring to a more generic understanding of health care services, the popular notion of a three-tiers framework seems equally applicable to all types of society: i.e. primary-preventive, secondary-curative, and tertiary-rehabilitative services. Societies differ only in the proportion of resources put into the different tiers.

Primary health services include those provided in the community and generally accessible by potential patients. In terms of illness prevention, primary prevention facilities refer to a situation where heath can be promoted and therefore illnesses are prevented. The range of services include health promotion such as healthy eating, home safety, healthy life style, health screening, and avoidance of health hazards like smoking. Evidently good primary care involves good community education programmes for individuals to acquire basic health care knowledge and skills, so that mild ailments (e.g., minor cuts) and health promotion (e.g., exercises for 30 minutes each day) could be a self-managed activity. Primary health care too incorporates the active participation of the individuals in taking responsibilities for keeping healthy that includes the practice of a healthy and active life style (Table 4). With the high illiteracy rates and poor coverage of health education programmes in under-developed and developing areas in the Asia Pacific (including remote villages of developing economies like India and China), primary care facilities and services appear to be most appropriate.

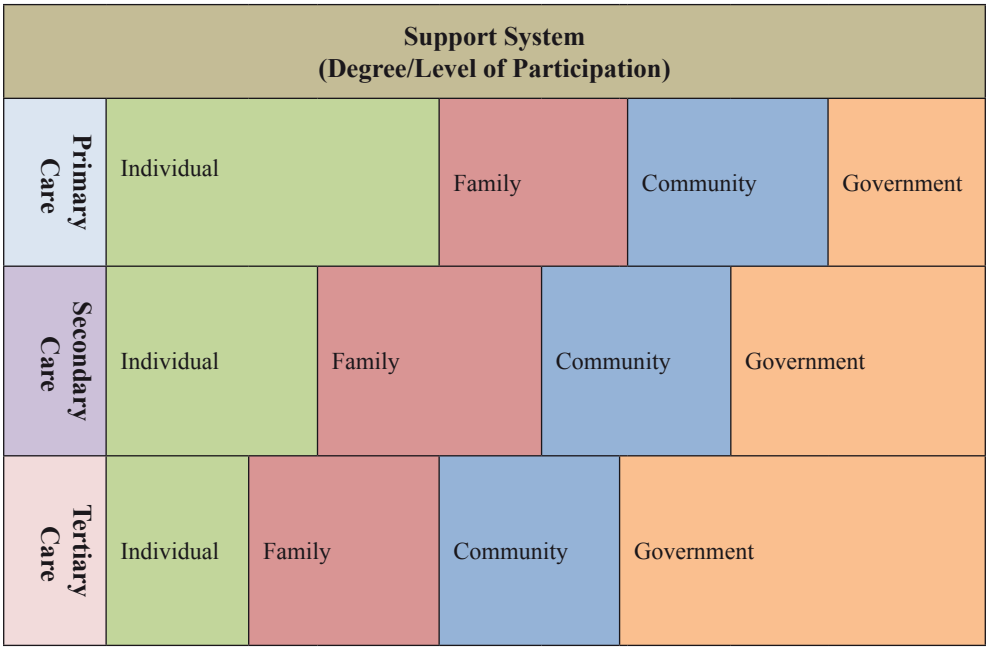

Table 4: Degree/Level of participation at all levels in ideal health care system.
Final quote from WHO (2007)*: "Living longer is both an achievement and a perpetual challenge. Investing in health and promoting it throughout the life span is the only way to ensure that more people will reach old age in good health and capable of contributing to society intellectually, spiritually and physically."*

Secondary health care services include clinics and other facility-based services providing somewhat higher quasi-hospital services targeting at curing an unhealthy condition such as a disease. It also means a speedy recovery from the ailment and avoidance of hospital admissions. In realizing this, a country would need good curative support networks such as adequate number of clinics, hospitals, and medical practitioners, so that illnesses can be dealt with in community for as far as possible without the need for hospitalization; and if hospitalization is needed, the period can be made as short as possible. As said, most Asia Pacific countries are not rich enough to have a fully built curative infrastructure for secondary health services. In many parts, these remain highly priced items only for those who live in cities and can afford to pay.

Tertiary/quaternary hospital services provide increasingly specialized ranges of general and specialist medical and surgical care (Phillips, 1990). Tertiary prevention means essentially facilities and services provided to aid returning to normal living and to avoid readmissions. This involves provision of good discharge planning, transitional care, rehabilitation services, and after-care support services for family care givers. Many poor Asia Pacific countries has concentrated their limited resources in curative care as a way to take life saving cases as the priority in health care provision; as a consequence, rehabilitative care is not provided to those who could return to normal

community living. For instance, many people having one of their lower limbs amputated can never walk again despite being given a walking aid.

While the above effectively describes the components of a health care system, the delivery of these needs people. These people or workers (human services normally consume 80%+ of the total resources available) are presently classified into just two categories: formal care givers who are paid to do the work and therefore are expected to be proficient at the levels they are geared for; informal care givers are people working on the job for no specific rewards—these include volunteers, neighbours, friends, and family members. Naturally a formal care system such as the health services would employ formal care givers including all ranks from the highly qualified medical and paramedical professionals (e.g., doctors, nurses, occupational therapists etc.) to personal care workers (e.g., home helpers, elder sitters or attendants)—supplies of these people are in grave shortage and are driving up the costs of health care.

Though it would seem sensible to use informal care givers, most formal services would rather employ formal care givers to do the jobs. As informal care givers are viewed as do-gooders or merely making their contribution as family members, care provided by these people is seen as very basic and non-professional. However, in reality these people could be trained to be highly skilled (e.g., capable of diabetes injection, psychosocial skills in caring for demented parents). Most of all, informal care givers, for their commitments to care, are reliable and self-motivated in providing care. Care givers have been seen as self-sufficient informal care providers and have never been acknowledged as a major work force in family and community care. As a result, support to care givers and other issues relating to short and long-term care givers are seldom discussed (e.g., care giver's skills recognition, training, care burdens). Research shows that the burden of care givers can be enormous, and often results in depression when providing care is not an option (e.g., care for a spouse). Likewise, providing education and training to care givers has been shown to be the most effective way to reduce distress and to build up a quality reserved labour force for health and social care, as informal care givers are mainly middle-aged women who are ready to go back to paid work or to continue to volunteer for other frail ones once their caring dues are over (e.g., parents have died). The Asian tradition is that members of the family should all come in and take care of the relatives, especially their elders, and in particular at times of need (e.g., illness). Although such a tradition is fading in more developed economies, many still have this embedded into the culture of their daily living, and informal care giving is frequently found in cities and is often the main source of care in rural villages.

With both the framework offered in appraising suitable health care services and reality situations (e.g., mostly developing economies with less trained care givers) for the Asia Pacific, we shall first briefly examine a range of existing health services systems in the region, then a tentative conclusion will be drawn for the best possible model for the region to move forward. In doing so, the three quality criteria adopted for public

services (Department of Health, 1998) will be addressed: Availability, Accessibility, Affordability (the 3 "As").

The First "A"—Availability

This is the basic fundamental issue of whether the needs are met adequately in quantity and in quality. It is a matter of whether needs have been accurately assessed, and if services are designed to fit needs. The main problem for the region, however, is its extremities in service provision. Some countries are well-developed in health services and its delivery system, while some are facing severe basic life threats such as hunger, thirst, wars, and natural disasters. It is nonsensical to even talk about health care system with countries in such a level of destitution. Nonetheless the basic notion is to have a range of service types for every body's needs; when the type needed is available, then accessibility and affordability come into consideration. Hence, it is often a state initiative to make sure of availability, though it is very hard in poorer countries, as a new health service is made available first in the private market (e.g., obstetrics and baby delivery in hospitals or clinics).

The Second "A" —Accessibility

If health services are available, there is the concern of whether it is of easy access for the needy. For instance, older people needing care for HIV/AIDS in the region tend to be in rural areas far away from cities where appropriate services are available (such as grandparents looking after their HIV-infected grandchildren in India and in Cambodia). In some instances, it may simply be due to cultural practices that women shy away from seeking help even when they notice an ailment (e.g., women in Gezhangla Village, Yunnan, China, when they noted frequent bleeding and pain in vagina, would quietly move away from the village and never return, and no one will ask any questions—because they know she will die). In addition to geographic locations and obvious language barriers, the biggest challenge in the region lies in the users' suspicion of the services, which may appear to counter their cultural preference for self-reliance. Some countries, especially those in the early stage of development, may unintentionally put bureaucratic or professional barriers against meeting needs, e.g., women must be seen by a female healer. It is also worth noting that the three "As" refer to the formal health care systems managed or/and regulated by governments, as there are many informal and private health service systems in the Asia Pacific e.g., alternative medicines including herbal and tribal medicines, and traditional remedies.

The Third "A" —Affordability

The accelerating costs in health services are of grave concern to all countries. The Asia Pacific has been badly hit by the economic crises and is experiencing the worst reces-

sion in decades, and this has made countries wanting to develop a better care system rather cautious. There is a notable consensus in the region to enable the caring function of the traditional Asian families, partly to save costs and partly to align with the traditional virtue that family care is the best and a prestigious way to care. Such an intention may be notable, but it could easily lead to unintended consequences. For instance, family care includes paying the necessary expenses for care, and these items can be expensive and family or users may not be able to afford them. This is particularly true for new family types in the 21st century, which range from multi-generations (e.g., the 4 (older parents)-two (the couple)-one (just one child) with just a husband taking care of six family members) to single parenthood. As for the states and governments, meeting greater demands with less revenue (i.e., shrinking labour participation rate) is again making all-welfare services unaffordable. So balancing family care versus public services, and public maintenance versus individual's capability to pay, are emerging issues in affordability. Thus, affordability not only refers to individuals but to the state's ability to pay as well.

Examinations on Health Care Systems in Meeting the 3 "As" (3 dimensions cum 4 tiers—individual, family, community, and government)

Generally speaking, Western countries spend relatively more on health care; for example, the total health expenditure in the United States is 15.3%, Switzerland 11.3%, and Canada 10%, given people in these countries also pay relatively high taxes (World Health Statistics, 2008). Nevertheless, their basic health care systems, in meeting the the "As", were quite comprehensive when compared to the Asian ones. However, they have now created a problem of sustainability as the ageing population has rapidly increased with the same rate of decline in tax revenue. In searching for a sustainable health care system, we have selected three different health care models from different economies for further examination. The selected countries share not only similar trends on ageing (refer to Table 1), but also share similar Asian values that family and friends play an important role in basic health and social care.(Table 5).

Countries	GDP (Health Care, 2006)	Health Care Services (Formal Care)			Informal care	3As		
		Primary	*Secondary*	*Tertiary*		*Accessibility*	*Availability*	*Affordability*
Developed Model								
1. Japan	7.9%*	Less resourced	moderately resourced	mostly resourced	High	High	High	medium with national & private insurance
2. Singapore	3.4%*	Increasingly resourced	moderately Resourced	mostly resourced	High	High	High	High with CPF
3. Hong Kong	5.1%**	least resourced	mostly resourced	moderately resourced	High	High	medium	High with tax revenue
Developing Model								
4. China	4.5%*	Mostly emphasized	some resources	Least re-sourced	High	Low in rural areas	Low in rural areas	High with 3-tiers subsidies
5. Thailand	3.5%*	Mostly emphasized	some resources	least re-sourced	High	Low in rural areas	Low in rural areas	low
6. India	4.9%*	Mostly emphasized	some resources	least re-sourced	High	Low in rural areas	Low in rural areas	Low, almost all relied on individuals

Table 5: Formal Health Care models in selected countries.
*World Health Statistics 2008 http://www.fhb.gov.hk/statistics/en/dha/dha_summary_report.htm#A.

Developed Model: Health care in Japan, Singapore, and Hong Kong

Japan, Singapore and Hong Kong are considered to be fairly advanced in their economies and have followed different Western models of health care services. Japan used 7.9% GDP on its health care system, which is the highest among the selected countries. With its expenditures in secondary and tertiary care increasing by 300% from 1983 to 2005; the health care system in Japan is highly regulated by the government. It started with primarily a private insurance model (similar to the US's) and since 2000 has brought in a social insurance model, in which the program is supported by contributions from the government and employees (only those aged 40+); service providers are paid directly by insurers (i.e., the third payer system) and benefits are typically in kind (e.g., home and nursing care). The mandatory insurance for all has ensured health services are affordable for all citizens, though service (availability) covered only the essential types. Singapore and Hong Kong both started with a British-European model with heavy resources put into secondary-curative services, and was almost all financed with tax revenue. Singapore has taken a different approach since its independence and the start-up of the Central Provident Fund (CPF); individual health care services are now mainly financed by the CPF individual accounts; and a lot more emphasis has been shifted to health promotion and education (e.g., personal cleanliness and healthy eating in schools). Singapore is fuelled by a multi-layered health care financing system, mainly with varying levels of cost-sharing and subsidies in a public-private mix of health services (Dong, 2006). Therefore, it only uses 3.4% GDP for its health care expenditures. However, it is expected that a sharp increase will be evident as ageing becomes more apparent. The government has instituted both a long-term care contribution for the CPF and an extension of retirement age to 67. Such measures are to safeguard the sustainability of the health and social care finances, as well as to allow a decent life for every older citizen in Singapore. In addition to this, the government is advocating stronger support from family and neighbours to help older persons to live at home with assisted living facilities (e.g., wheelchair accessible toilets). Hong Kong has long been financing a one-for-all health service for its residents, including a fair amount of primary health services provided mainly by the Department of Health (DH), with secondary services comprising clinics and hospitals by the Hospital Authority (HA), and some tertiary services by both DH, HA, and Social Welfare Department. It has been incredibly successful that all these are almost free to everyone at the point of entry (i.e., users only charged a small registration fees for clinics and hospital stay). Although health care uses only 5.1% of GDP, and Hong Kong has a low income and profit tax rates at about 15%, the ageing population puts enormous pressure on the system, making the government actively seek reforms to enable its longer term sustainability.

Japan (along with Korea and Israel) is among the few countries in the region to have dedicated policies or legislation on LTC (Lee, 2004; Ministry of Health, Labor

and Welfare, n.d.; Schmid, 2005). Without the support of home-or-community-based LTC, the rising demand of institutional care due to the ever-growing ageing population will likely overwhelm even the most affluent countries. The policy directions on health care in these two countries are to "compress the morbidity" to the final year of life and to encourage care in the community by family and neighbours, all of which has made health services more all rounded, and accessible to older persons with different health and care needs.

To make the service available and accessible to older citizens, the Japanese, Hong Kong, and Singaporean governments have ensured reasonably fair and equitable access to the health and social care system for their citizens, from young to old, and from rural to urban districts. The government guarantees most of the health care services so that people can enjoy their retirement lives and spend much more freely on travelling packages and other activities to keep the elderly and the economy active. Over the years, health service expenditure has increased in parallel with the aged population. Around 80% of social security expenditure was spent on health service. The increase in budgets was largely for dealing with long term care and chronic illnesses—an inevitable result coming with longevity. The increased dependency of older persons and their families on state provision is becoming a heavy burden for public expenditure: Japan has reformed its health care financing model by bringing in LTC insurance, and encouraging families to contribute their care in kind; Singapore has been promoting family care all along including enacting a law to secure children's financial contributions to older parents; as for Hong Kong, it is in the process of reforming from a neo-British welfare model to one that anchors on family and neighbourhood care. Achievements of all these strategies are yet to be seen.

Developing Model: Health care in India, China, and Thailand

India, China, and Thailand are developing countries with limited budgets for health care, especially in secondary and tertiary care. According to the World Health Statistics 2008, the health expenditure of Thailand (3.5%), China (4.5%), and India (4.9%) are relatively low when compared to others' in the region. Almost by default, they have put lots of efforts in primary health care; for example, nearly 60% is spent on primary health care (curative, preventive, and promotional)[1] in India.

The accessibility of health care services in India is low in rural areas (Table 6). Although India has a large public health system (sub-centres, primary health centres, and community health centres were set up to provide primary health care services in

[1] James Heitzman and Robert L. Worden, editors. *India: A Country Study*. Washington: GPO for the Library of Congress, 1995.

rural areas), the facilities are far away from patients' homes. A survey has found that less than 50% of villages' women and children could access any health facilities.

Percent Distribution of ever-married rural women 15-49 by distance from the nearest health facility India, 1998-99

Distance	PHC	Sub-Center	Hospital	Dispensary/Clinic	Any Health Facility
Within Village	13.1	33	9.7	28.3	47.4
<5 km	28.4	39.7	25	32.4	38.9
5-9 km	29.2	16.3	25.1	17.4	9.7
10+ km	28.2	9.6	40	21.7	3.9

Table 6: Accessibility to Health Care Service in India.

Apart from the low accessibility of health care services, the low availability of health care facilities is another concern for India's health care system. Even though NRHM (National Rural Health Mission) has planned to upgrade and maintain primary medical facilities, the current beds to population ratio (0.7 beds per 1,000 people) is far from the global average of 2.6. Also, primary level health services are lacking in urban areas, while secondary and tertiary levels services are concentrated. More importantly, India faces the problem of medical workforce shortage.

The financial burden of primary health care per household is low; however, it is quite high in secondary and tertiary health care services, and thus the affordability of health services depends on individuals' choices of services. For primary health care, the Department of Family Welfare has provided 100% central assistance to all sub-centres in India since April 2002 in terms of salaries of ANM (Auxiliary Nurse Midwife) and LHV (Lady Health Visitor) and rent of buildings. People seeking primary health care will not be charged. And with the launch of Rashtriya Swasthya Bima Yojana in 2008, the government is able to provide initiated health insurance for below-poverty-line families to ensure financial accessibility to health care services.

For secondary and tertiary health services, it is noted that public-private partnerships were introduced. However, privatization of health care might only benefit the middle and upper class, but not at grassroot level.

The health care system in China, a country that was once regarded as exemplary of low-income agrarian societies but now most powerful on every aspect in the 21st century, has degenerated considerably in terms of access since the early 1980s, at the same time as costs have soared (Kaneda, 2006). The health care system in China has a three-level (central government, local government, and work unit) and four-party (central government, local government, employer, and worker) co-payment mechanism for health care. The cost of treatment is shared each time. However, the government hospital and clinic system is severely under-funded by the government; therefore, effective access is highly inequitable. Table 7 shows the Chinese government's spending on health service over the last decade. The percentage of social security expenditure on

health indicated a decline, while the proportion on health services spending stayed high with around 55% of social security expenditure spent on this category. The urban-rural disparity is evident too. City residents could have most of the basic health services covered (even by their work units after retirement on a reimbursement basis), but rural farmers have almost nothing. The economy of China has developed so fast that alongside this, health care service types are also developing according to the market demands. Service types now cover almost everything from essential life-saving surgeries to minor cosmetic modifications. These are again widely available in cities only for those who can pay. Because of the sheer number of the aged in China (estimated to be 200 million), China is actively confronting the health and social care provision issue for its older people beyond 2050, and evidently efforts are in drawing in family and neighbours as part of the care-giving work force, as well as ensuring that retirement planning is becoming not just a task for the government but the individuals as well. The government has made health care reforms and evening of the urban-rural differences the priorities of the Communist Party's tasks for the coming five years (see the 12th 5 Years Plan of the Communist Party's Congress).

Year	Per capita government expenditure on health	Social security expenditure on health
	(per capita in USD)	Percentage
1995	46	64.2
1996	50	62.1
1997	56	60.4
1998	61	55.8
1999	67	54.2
2000	70	57.2
2001	70	55.1
2002	82	54.8
2003	92	53.4
2004	106	55.2
2005	122	54.1
2006	144	54.1

Table 7: Government Spending on Health Care in China from 1995 to 2005.

Health services in Thailand have been using the "all for health" approach, which marks a feasible approach for a state lacking in budgets for health care, having a large population to care for, and yet wanting to move forward for a better health. Precisely, the health care mechanism in Thailand is divided into five levels: self-care at family level, primary health care level, primary care level, secondary care level, and tertiary care level. More details are provided in Table 8.

Health Services	Components of each level	Services Provider(s)
Self Care at Family Level		Self care by individual and family
Primary health care Level		Village volunteers (VHVs) or other non-government volunteers
Primary Care Level	(1) Community Health Post (2) Health Centers (3) Health Centres of Municipalities, Outpatient Departments of Public and Private Hospitals at All Levels, and Private Clinics	Mainly Government sectors, private sectors limited involvement
Secondary Care Level	(1) Community hospitals (2) General or regional hospitals and other large public hospitals (3) Private hospitals	Both Government sectors and Private sectors
Tertiary Care Level	(1) General hospitals (2) Regional hospitals (3) University hospitals (4) Large private hospitals	Private sectors rather than public sector invest in this level

Table 8: Overview of Health Care Mechanism in Thailand.
Source: Thailand Health Profile 2005-2007, Ministry of Public Health, Thailand.

The accessibility of the Thai health care system has markedly increased under the universal coverage of health care policy, though only basic health services are targeted. Since 2002, the government has provided a holistic primary health care system, with the vision to provide and guarantee full access to health care service to all citizens. Moreover, the coverage of health security had risen to 96.0% by 2006. However, the obvious rural-urban divide in Thailand (only 33% of the population lives in urban area) makes the implementation difficult since people living in urban areas enjoy easier access to secondary and tertiary health care as hospitals and specialized medical facilities are mainly located at provincial cities or large district towns. Geographical location and transportation might hinder the building of infrastructure and delivery of services in rural areas.

With respect to the affordability of the health care system, the Thai government has endeavoured to expand health insurance to cover all people. Until 2006, 96% of the population in Thailand was under national health insurance schemes. There are

three different health insurance schemes provided by the government, namely universal health care, civil servants medical services, and social security. The people who are covered by universal health care only have to pay 30 baht per visit (i.e., known as the 30-Baht Scheme). Though again, services are limited to the most crucial and basic ones. For example, hospital beds are rather limited. Thailand had only an estimated average of 2.1 beds per 1,000 people, which is a bit below the global average of 2.6 beds per 1000 population. Additionally, higher levels of health care facilities are mostly found in urban areas, and users are expected to pay.

Healthcare indicators: Thailand

	2005[a]	2006[a]	2007[a]	2008[a]	2009[b]	2010[c]	2011[c]	2012[c]	2013[c]	2014[c]
Life expectancy, average (years)	72.0	72.2	72.5	72.8	73.1	73.4	73.6	73.8	74.1	74.3
Life expectancy, male (years)	69.7	70.0	70.2	70.5	70.8	71.0	71.2	71.5	71.7	71.9
Life expectancy, female (years)	74.4	74.7	75.0	75.3	75.5	75.8	76.1	76.3	76.6	76.8
Infant mortality rate (per 1,000 live births)	20.2	19.5	18.9	18.2	17.6	17.1	16.5	16.0	15.5	15.1
Healthcare spending (Bt bn)	248.0	274.0	281.0	301.0	285.0	299.0	319.0	338.0	360.0	383.0
Healthcare spending (% of GDP)	3.5	3.5	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Healthcare spending (US$ m)	6,172.0	7,245.0	8,151.0	9,028.0	8,300.0	9,046.0	9,667.0	10,358.0	11,107.0	11,891.0
Healthcare spending (US$ per head)	95.0	111.0	124.0	136.0	124.0	134.0	142.0	151.0	160.0	170.0
Healthcare (consumer expenditure; US$ m)	6,164.0	7,113.0	8,191.0	9,360.0	8,973.0	9,732.0	10,408.0	11,253.0	12,202.0	13,190.0
Doctors (per 1,000 people)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Hospital beds (per 1,000 people)	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1

[a] Actual [b] Economist Intelligence Unit estimates [c] Economist Intelligence Unit forecasts
Source: Economist Intelligence Unit

Table 9: Health Indicators of Thailand.

Way Forward for a Model of Health Care Services for the Asia Pacific

It is evident that with the experiences of these countries, an all-government public welfare model of curative health care will not suffice in the Asia Pacific region, partly due to the lack of wealth in most countries in the region to cover the huge number of older people, and partly because of the construction and maintenance costs of the secondary health care outfits. Noting that the expensive parts of the health service budgets are in engaging professional workers, all selected countries have one way or the other adopted a rather unified approach in utilizing people-resources by bringing in or strengthening the care-giving roles of families and neighbours. It is evident too, that accessibility, availability, and affordability, even for basic services, will not be effectively provided if a strong primary health care system is not in place—this is particularly true for rural areas.

In countries like Japan and Hong Kong where health care services are already modelled after the Western types with curative-secondary services as the main arm, it is difficult to revamp the whole outfits including the medical and paramedical profession-

al structures. But these countries are gradually shifting their resources from secondary to more primary types of services, so that individual capabilities and responsibilities in their own health can be strengthened, as well as to nurture their contribution to caring for other older people. Recent attempts in this direction is promising, e.g., Japan, Hong Kong, Singapore, as family and traditional neighbourhood helping values are still present. As for developing economies like India and Thailand, they do not have any other option other than to adopt a primary model for both their rural and city residents. Health promotion and illness prevention are obviously saving a lot for remedial health care services, and these are inevitable strategies when individuals are poor and cannot pay for the expensive curative and rehabilitative services.

An effective means to reduce costs in health care too is to enable individuals and their families to perform simple caring or nursing tasks. In all these countries, step-down trainings (i.e., skilled professional people teaching family members caring skills like wound cleansing, lifting patients from bed, and diabetic injections) are being done to enable older persons to care for themselves at home or with the support of their family members. These measures save a lot of resources and ease the shortage of caring professionals worldwide. If all people are taught with such basic health care skills, ageing in place will be more of a reality for the older persons.

Could governments then look to a "national step-down training programme for primary health care services" as a solution for population ageing? The answer is no. Again, as experienced by the selected countries, family sizes are shrinking and people are living longer. In Japan and Hong Kong, the 8-4-2-1 family structure is emerging (i.e., a couple with four parents, eight grandparents and one child); thus the family can no longer handle the caring duties alone. The government will have to come in by early-preparing an individual for late life living (i.e., save health early from childhood, save money early from the first job, and save more friends (young ones too) as one goes along—as one will need a good neighbour to help with the daily routines when old). Of course, when one gets real old, residential care becomes inevitable.

So taking all three "As" into consideration, a health care service model which is primary in focus, with shared efforts from individual, family, community, and government, may be the final answer for creating the best health care model in Asia.

Conclusion

On examining the health care systems of different societies/countries, the Asia Pacific countries—as seen in the examples of Japan, Singapore, Hong Kong, Thailand, India, and China—have largely followed the footsteps of developed countries, and hence are facing difficulties similar to what have been experienced in the developed countries. However, the challenge for Asia Pacific countries is that it opens up all possibilities for a better, yet cheaper health service. This paper has provided an overview of population ageing in Asia and its consequences on the health profile and needs of the population;

discussed the priorities on health care in Asia, based on WHO directives, and the criteria (i.e., three "As") for health care system; as well as examined the health care systems and their provisions in Japan, Hong Kong, and Singapore (developed), and Thailand, China, and India (developing).

As we know, living longer offers unprecedented opportunities for fulfilling experiences in lives, but it also presents individual and societal challenges related to the quality of life in old age, including independence, social interaction, health, finance, and community involvement. In order to respond to these challenges, we, individuals, family, community, and government should jointly create a healthy living world, not only starting with ourselves to have better self-health management, but also give support within family and neighbourhood. Only as the last resort do we seek support from government (e.g., institutional care). Such policy directives are also consistent with Asian family and community values that care is the best from willing family members and neighbours, and thus governments should do their best to maintain this tradition.

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Demographic Change in Europe: Consequences for Policies on the Family, Health, and Pensions

Noël Bonneuil[1]

1. Introduction

The early 21st century sees Europe on the brink of a deadlock created by its own success in postponing age at death and in satisfying material aspirations, and for which a solution is unlikely in the foreseeable future. How can European societies use their technological, institutional, and economic resources to satisfy the demographic demands of smaller families, longer lives, and costlier care?

The longevity revolution is associated with a predicted collapse of the family as a social regulator in individuals' lives. Death that occurs progressively later in the family's life cycle loosens the bonds between its members. Individuals enjoy greater freedom but must expect to experience periods of solitary living as a result of the lengthening of life and the increasing risk of divorce and widowhood. A French survey of June 2010 shows that four million people reported having fewer than three social contacts per year, and some respondents were only in their 40s. The state must intervene in this context of defamilialization and increasing individualism to ensure the financing of pensions and social protection.

To avert the impoverishment predicted for the system, states must find ways of simultaneously paying for pensions, keeping populations in good health, especially the elderly whose medical costs rise sharply with age, while also preserving the future represented by young people and thus supporting families. Is there any chance of success, or do workable policies amount merely to patching up a situation that is hopeless given the magnitude of the approaching tidal wave of elderly people?

Rather than referring to broad statements of policy principles—everyone is in favour of increasing wealth, health, quality of life, and longevity—I shall present pragmatic measures taken by European governments under the pressure of a dysfunctional economy and destabilizing demographic constraints and perspectives.

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2. The Legacy of Age Structures

The profound transformation of its demographic behaviour in the 20th century has placed Europe in a novel historical situation in the 21st century. The large proportion of old people, expanding sharply from 2005 onwards as the baby-boomers born after 1945 enter retirement, results from a three-fold phenomenon: one, the abruptness of the onset (chiefly in 1946) and end (in the mid-1970s) of the baby boom is a source of sharp variations in the age pyramids of most European countries; second, the chronic regime of sub-replacement fertility from the 1970s onwards in North and West Europe (except Ireland) is responsible for the persistent scarcity of young and working-age people compared with older ages; and third, the constant improvement of survival after age 60 (Table 1) further distorts the age pyramid by increasing the relative size of the elderly groups. The demographic burden is forecast to peak after 2020, but the increase in social security contributions and the political unrest surrounding the raising of the retirement age offer a foretaste of the social and economic crisis to come.

Country	life expectancy 2007				healthy life expectancy at 65		Total fertility rate 2008
	at birth		at 65				
	women	men	women	men	women	men	
Austria	83.1	77.4	21.0	17.5	7.7	7.3	1.41
Belgium	82.6	77.1	21.0	17.3	10.3	10.1	1.82*
Bulgaria	76.7	69.5	16.4	13.3	.	.	1.48
Croatia	79.3	72.3	17.7	14.0			1.46
Cyprus	82.2	77.9	19.6	17.4	7.3	8.9	1.46
Czech Republic	80.2	73.8	18.5	15.1	8.3	8.0	1.50
Denmark	80.6	76.2	19.2	16.5	14.3	13.1	1.89
Estonia	78.8	67.2	18.5	13.1	4.1	3.5	1.65
Finland	83.1	76.0	21.3	17.0	8.8	7.8	1.85
France	84.8	77.6	23.0	18.4	9.9	9.4	2.00
Germany	82.7	77.4	20.7	17.4	7.6	7.7	1.38
Greece	81.8	77.1	19.4	17.4	9.4	9.8	1.51
Hungary	77.8	69.4	17.8	13.7	5.8	5.3	1.35
Iceland	83.4	79.6	21.0	18.4	16.5	15.7	2.15
Ireland	82.1	77.4	20.1	17.1	10.4	9.6	2.10
Italy	84.2	78.7	21.8	18.0	7.3	7.9	1.37*
Latvia	76.5	65.8	17.2	12.8	4.3	5.1	1.44
Lithuania	77.2	64.9	17.9	12.9	5.4	5.2	1.47
Luxembourg	82.2	76.7	20.3	16.4	10.7	9.0	1.61
Malta	82.2	77.5	20.3	16.7	11.3	10.4	1.44
Netherlands	82.5	78.1	20.7	17.1	12.1	11.2	1.77
Norway	82.9	78.3	20.8	17.5	13.1	12.2	1.96
Poland	79.8	71.0	19.0	14.6	7.0	6.5	1.39
Portugal	82.2	75.9	20.2	16.8	5.3	6.8	1.37
Romania	76.9	69.7	16.9	13.9	7.7	7.6	1.35
Slovak Rep.	78.4	70.6	17.5	13.6	4.1	4.1	1.32
Slovenia	82.0	74.7	20.2	15.9	9.9	9.0	1.53
Spain	84.3	77.8	22.0	17.8	10.0	10.3	1.46
Sweden	83.1	79.0	20.8	17.9	13.8	12.8	1.91

Country	life expectancy 2007				healthy life expectancy at 65		Total fertility rate 2008
	at birth		at 65				
	women	men	women	men	women	men	
Switzerland	84.4	79.5	22.2	18.6			1.48
United Kingdom	81.9	77.7	20.2	17.5	11.7	10.4	1.90*

*: value in 2007.
Table 1: Indicators of life expectancy and fertility in Europe.
Source: Eurostat, 2009.

The facts are well known. The mortality decline that began in mid-18th century Europe made possible the fertility decline that began almost simultaneously in France (Bonneuil, 1997) and spread to the whole of Europe in the late 19th century: this was the demographic transition, a phenomenon first identified by Adolphe Landry in 1934 and that was the source of population growth. Before World War II, Europe already experienced demographic stagnation, with fertility at below replacement level, a situation that automatically increases the proportion of old people in the population. For low fertility, rather than low mortality, is the determinant of age structures containing more old people. Alfred Sauvy in France denounced the ageing of European societies and called for higher fertility and pronatalist policies. The baby boom that began in the early 1940s in the Scandinavian countries and in 1946 in the rest of Europe produced large cohorts who successively outgrew the capacities of schools, universities, and the labour market. From 1970 to the late 2000s, old and young age groups were relatively small. This was the period when generous pay-as-you-go pension benefits and social protection were introduced, and when early retirement, before the legal retirement age, was common. But these policies and practices are unsustainable now that the situation is reversed and ratios of pensioners to persons of working age are increasing fast. In 2009, one in five Europeans was aged 60 or over; the UN forecasts this proportion will reach 34.5% in 2050, with the population aged 80 and older multiplied by 2.6. In 2050, the over-75s will be three times as numerous, and the over-85s four times as numerous, as they are today. In Europe, the ratio of working-age persons to pensioners will fall from 4:1 in 2007 to 2:1 in 2050.[2] In France for example, the over-75s will represent 18% of the overall population, the over-85s, 7.5%. In Europe in 2009, the proportion of GDP spent on social welfare is highest in France (31.1%), Sweden, and Belgium (30%), and lowest (15%) in the Baltic countries, Romania, and Bulgaria (Table 2). On average, total welfare spending was 26.9% of GDP in Europe (Insee, 2009). Care for the elderly is already the largest single item of social protection expenditure in EU-27. In 2006, on average, 46.2% of social contributions were allocated to the elderly, 29.2% to healthcare, 7.7% to disability, 8.0% to family and childcare, 5.6% to unemployment, and 3.6% to housing and social exclusion. The financial and care/time transfers, which are large

[2] Bericht über die demografische Älterung 2009, http://europa.eu/legislation summaries/employment and social policy/disability and old age/c11308 de.htm.

in Europe compared to other continents, will shift further from younger people to the elderly, whether in the form of payments, co-residence, or healthcare, even if some elderly do help at the household level through other transfers. The ratio of the population aged 65 and over to that aged 15-64, the so-called dependency ratio, presented in Table 3, will rise inexorably everywhere. The socio-economic construction of pay-as-you-go pensions and social security rests on the principle that each generation ought to be better off by taking part in the "social contract." But this "satisficing" strategy is going to be a losing strategy for today's younger generations, who face the prospect of contributing more than they will receive when they in turn are old. When will people of working age cease to accept the implicit "social contract" and reject the costly burden of supporting their elderly?

Country	Number of years spent in education		Proportion single		2005 social spending (percentage of net national income)
	women 25-34	men 25-34	1981	2002	
Austria	12.3	12.4	26.00	32.00	32.10
Belgium	12.8	12.4	23.00	32.00	31.00
Czech Republic	12.8	12.6			25.50
Denmark	13.6	13.6	29.00	37.00	31.50
Estonia	13.5	12.5			30.50
France	13.1	12.8	24.00	30.00	33.20
Germany	13.5	13.6	30.00	37.00	31.10
Greece	12.6	11.9	15.00	20.00	23.60
Hungary	12.4	12.1			28.40
Iceland	12.6	10.1			19.90
Ireland	14.5	14.0	17.00	20.00	22.50
Italy	11.7	11.2	18.00	24.00	29.70
Luxembourg	14.1	14.2			32.20
Netherlands	12.5	12.0	21.00	34.00	24.30
Norway	14.7	14.2			24.60
Poland	12.9	12.2			25.10
Portugal	10.3	9.3	13.00	17.00	28.20
Spain	12.5	11.9	10.00	13.00	25.50
Sweden	13.6	13.1	33.00	46.00	33.60
Switzerland	13.0	13.7		32.00	22.20
United Kingdom	12.9	13.0	22.00	31.00	23.30

Table 2: Indicators of education, single-household, and social spending, Europe.
Source: OECD and Eurostat, 2009.

Ageing places new demands on habitat, urbanization, public space, and health capacities. The mutation of the age-health structure requires a redeployment of healthcare, medical specialties, pharmaceutical and medical research. With unchanged prevalence, the number of frail and disabled elderly people will increase dramatically. The increasingly frequent pathologies to be treated become depression, hypertension, tumours, back pain, diabetes, bronchial asthma, coronary heart disease, obesity, and tobacco addiction. Trained staff, nursing personnel, and physicians specialized in gerontology are needed (Nicholas and Smith, 2006). In Europe in 2009, tobacco is estimated to

cause 25% of cancer deaths, representing 15% of total deaths (*Direction générale de la santé et des consommateurs*, France). Europe is experiencing an alarming increase in overweight and obesity, principally among children, who grow up into obese adults. Obesity increases the risk of contracting coronary heart disease, type 2 diabetes, and certain cancers. In 2009, close to half the European population is overweight, with the proportion reaching 61% in UK and 59.7% in Germany. Only Italy and France report below 40% of their populations to be overweight (Eurostat, 2009).

Country	Dependency ratio (population aged 65+ to that aged 15-64)		Exit age from the labor force 2002-07, Men	Risk of poverty, in percent	Long term care in percentage of GNP, 2007
	2008	2050			
Austria	0.25	0.52	58.90	15.00	1.28*
Belgium	0.26	0.48	59.60	21.00	1.66
Bulgaria	0.25			34.00	0.02
Croatia	0.26				
Cyprus	0.18			49.00	0.15
Czech Republic	0.20	0.60	62.20	7.00	0.26
Denmark	0.24	0.48	63.50	18.00	2.00
Estonia	0.25			39.00	0.20
Finland	0.25	0.54	60.20	23.00	0.94
France	0.25	0.51	58.70	11.00	1.16
Germany	0.30	0.61	62.10	15.00	1.25
Greece	0.28	0.64	62.40	22.00	
Hungary	0.24	0.50	59.70	4.00	0.22
Iceland	0.17	0.38	68.90	15.00	1.87*
Ireland	0.16	0.45	65.60	21.00	
Italy	0.30	0.66	60.80	21.00	
Latvia	0.25		51.00		0.22*
Lithuania	0.23			29.00	0.34
Luxembourg	0.21	0.42	59.20		1.32**
Malta	0.19			22.00	
Netherlands	0.22	0.43	61.60	10.00	1.20
Norway	0.22	0.43	64.20	15.00	
Poland	0.19	0.61	61.40	12.00	0.38
Portugal	0.23	0.63	66.60	22.00	
Romania	0.21			26.00	0.03
Slovak Rep.	0.17	0.57	59.30	10.00	
Slovenia	0.23			21.00	0.63
Spain	0.24	0.64	61.40	28.00	0.74
Sweden	0.27	0.44	65.70	16.00	0.70
Switzerland	0.24	0.50	65.20		2.06
United Kingdom	0.24	0.47	63.20	30.00	

Table 3: Indicators linked to pensions and health care in Europe.
*: 2006.
**: 2005.
Source: OECD and Eurostat, 2009.

Dependency is a particular case of healthcare need due to its extremely high cost. Dependency concerns the need for help in performing one or several basic acts of daily life, as well as the loss of cognitive or intellectual abilities, as in the case of Alzheimer's disease. Men and women are not equal in the face of death or dependency: women survive longer but are more subject to disability than men (Arber and Cooper, 1999; Börsch-Supan, et al., 2005; Avendano and Mackenbach, 2008). A dependent person needs constant and often physically demanding care and supervision. When one member of the family becomes dependent, other members are usually the first to provide care. In 2004 France, 38% of adults were or had been care-givers, 16% cared for a dependent person every day, and 78% admitted that this situation was hard to sustain psychologically, with feelings of urgency and disarray reinforced by the fact that the duration of old-age dependency, contrary to childcare, is hard to predict. Of these care-givers, 40% called on professionals for help, 33% were the dependent person's children, and their average age was 51. Care-givers themselves are at risk of illness or accident, raising the question of who will then care for their dependent persons?

Demographic data and projections show that dependent people will be increasingly numerous: the estimate for the growth in the dependent population between now and 2040 is 60%, faster than that in the population aged 50-80. In 2009, for individuals aged over 65, the probability of being heavily dependent in the future is 30% for a man and 45% for a woman. The existing public facilities and the cost of dependency show that resources will be in short supply; long-term care services are already unable to satisfy an increasing demand (Pavolini and Ranci, 2008). Meanwhile, family care-givers are unprepared; their roles as care-givers have adverse consequences for their own working lives, and there is an expectation that public support will be available if needed.

In 2005, the budget for dependent persons was 1% of the GDP in France, 2.5% in Sweden, and 0.1% in Greece, Estonia, Belgium, Bulgaria, and Romania. Long-term care expenditure (Table 3) is projected to increase by 168% in Germany, by 149% in Spain, and by 138% in Italy between 2000 and 2050 (Comas-Herrera et al., 2003). In 2004, a person in total dependence cost 3600 euros per month, and someone in partial dependence 1600 euros per month. These costs are supposed to be met from pensions and social allowances (such as the *Allocation Personnalisée d'Autonomie* or APA in France), but 50% of pensioners have monthly pensions of less than 1000 euros (2004), and 70% less than 1700 euros, and the maximum monthly allowance from APA is 1200 Euros for total dependence, and 500 euros for partial dependence. Most people, therefore, cannot afford dependency care, unless supported by their families.

But the family has become a more fragile institution. Nuptiality rates are low, while the mean age at first marriage, the number of childless women, and the proportion of divorced people are all increasing,[3] thus further reducing the capacity to provide care

[3] 42 divorces for 100 marriages in EU-27 or, in annual rate, two divorces for 1000 people per year (Eurostat, 2009).

for elderly relatives (von Kondratowitz et al., 2002; Nicholas and Smith, 2006; Kohli et al., 2008). The family is in danger of losing its role as a source of social cohesion (Kohli et al., 2008).

The increasing wish of older people to live in their own homes has the consequence of increasing the number of people living alone (Table 2), in particular women who live longer (Attias-Donfut and Ogg, 2009). Among those aged 80 and above in 2004 and still married, 8% of men and 19% of women underwent a change in marital status, all of them into widowhood (Kohli et al., 2008). Social protection helps people to achieve some independence from the familial group, but the elderly living alone have different needs from the elderly living in other types of household (Albuquerque, 2009), notably in respect of healthcare. South Europe has traditionally been a region where people relied more on the family than on the state (Wall et al., 2001), but this is changing fast. Generally, will the family resist the welfare state expansion (Kohli et al., 2008) and keep a central role for individuals, for the elderly in particular?

Co-residence among adult family generations has declined sharply (Kohli et al., 2008; Blome et al., 2009). In 2008, among Europeans aged 80 or more with at least one living child, 53% lived in the neighbourhood less than 1 km away from a child (Kohli et al., 2008), and 84% had a child living no more than 25 km away. Geographical proximity thus remains high, and while it may be assumed that some parental support needs are met, evidence on this remains sparse. Meanwhile, South Europe (Spain and Italy more so than Greece) and Poland, with a "strong family" pattern, contrast with the "weak family" pattern in the North, increasingly including the Czech Republic. The North-South gradient is reflected in the rates of co-residence and frequency of contacts among adult family generations. The other continental countries lie in-between (Kohli et al., 2008).

Young and old are competing for the same financial and care/time resources (Blome et al., 2009), from both the state and the family, although inter-generational transfers do go some way to attenuate rivalries. The middle generation finds itself with a double burden of children and parents/grand-parents. In this so-called "beanpole" family pattern, more generations cohabit the same temporal space but there are few (or fewer) members in each generation (Saraceno, 2010). The situation can only worsen in the future (Nicholas and Smith, 2006). The young active will soon realize that demanding resources for education and development implies cutting spending on the elderly. But the elderly, numerically strong and backed by the ideology of the welfare state, are likely to vote themselves larger benefits. The development of an economy based on the needs of an ageing population may not ensure adequate levels of economic activity, while younger people entering the labour market may be reluctant to take the jobs thus created. There is a danger of insolvency in all sectors of the economy, of discontenting the young, the elderly, and the active, and of running out of money for productive investment. Europeans may now have to foot the bill for 30 years of economic recession

and low fertility. People will wake up to the bewildering realization that the welfare states have ruined the subfertile continent.

3. Policy Responses

3.1 Family Policies

France pioneered pronatalist policies; other countries such as those of Scandinavia developed familialist policies, and others such as Germany have based policies on the expectation that women, in particular married women with children, would withdraw from the labour market permanently or at least temporarily (this is the male bread-winner model). Data show the efficacy of measures based on the organization of women's time, such as the introduction of affordable childcare facilities and a more flexible relationship between family and work (this is the case in France, in the Scandinavian countries, and in the Netherlands). In France, which ranks second for fertility behind Ireland, 83.6% of women aged 25-49 with children are in employment (Insee, 2009). So, female labour market participation is not necessarily incompatible with fertility, especially when public childcare services are well-developed, as is the case in France for example, but not in Germany (Klammer and Letablier, 2007).

Policies, notably in Germany, attempt to encourage childbearing among better-educated women, who are more likely than others to remain childless. In France, the work-life balance has been a major issue in family policy over recent decades, focusing on public support for childcare facilities, on fathers' share of family responsibilities, and on parental leave. A paternity leave was introduced in 2002 and the childcare package reorganized in 2003 (Klammer and Letablier, 2007).

The rise of single-parent families has pushed the issue of support for parenthood higher up the policy agenda, with initiatives for infantcare in partnership with employers and maternity hospitals. An increase in the number of day nurseries, family-oriented tax allowances and benefits, adequate housing, and switching to part-time or home working, can favour fertility. This expansion of public childcare infrastructure has been neglected in Germany compared to other European countries (Klammer and Letablier, 2007), but the situation is changing. Since September 2009 in France, for example, the childcare allowance (Prestation d'accueil du jeune enfant) has increased by 10% for families working with atypical time schedules. Developing public childcare services has been and remains a priority for the French government.

3.2 Pension Policies

The effective age at retirement is still low in Europe: in 2002-07, only 58.7 years in France, though it already stands at 63.2 in the UK, 62.4 in Greece, 62.1 in Germany, 61.4 in Spain, and 60.8 in Italy. Policy makers must constantly arbitrate between the efficiency of reform and its social acceptability, and the people being asked to work

longer, who are also numerous, with a strong electoral potential. For example, in the 1980s**,** when fertility was already low and the imminent arrival of the baby-boomers at retirement had long been common knowledge, France lowered the minimum age for retirement, and later, in contrast to the rest of the world, fixed the working week at 35 hours. France also lets people exit the labour market before legal retirement age (Table 3), while delaying entry into it by prolonged education (Table 2). In 2010, the French government risks a social explosion with its move to raise the retirement age gradually to 62 between July 2011 and 2018. Spain wishes to raise the legal age for retirement on a full pension from 65 to 67 years, and Germany plans to do this between now and 2029. The Czech Republic, Greece, and Hungary have announced that the normal pension age will rise to 65. Typical of former communist countries, Bulgaria launched a reform to turn an entirely state regime into a private insurance system, but the informal economy provides little scope for pension contributions and the reform is not progressing, as Prime Minister Boyko Borissov acknowledged in a conference held in Sofia in March 2010 bringing together representatives of the state, trade unions, and management. The strategic plan "Europe 2020" launched on July 7, 2010, is based on a Green Paper (Rehn et al., 2010), a joint initiative of Commissioners Làszlo Andor (Employment, social affairs and inclusion), Michel Barnier (Internal market and services) and Olli Rehn (Economic and monetary affairs). The main recommendation is to develop pension funds (as opposed to pay-as-you-go pensions) and raise the retirement age across Europe. In addition to raising retirement age, debate still focuses on the introduction of additional pension insurance rather than reliance on the pay-as-you-go system (Nicholas and Smith, 2006), despite the unpopularity of pension funds after the financial crisis of 2008 and scandals such as Madoff.

The 2001 European Council in Stockholm advocated a policy favouring a longer working life, training procedures throughout the working life, and better conditions at work. Very little is in fact done to develop senior employment and encourage the economic independence of the elderly. Most politicians and trade unions have fought to have people retire as early as possible, in line with the prevailing ideology of idleness for the elderly. However, except for those who no longer have the necessary force, the majority could work. The question of senior employment is somewhat taboo, and very few opportunities are open to elderly people who wish to remain economically active. In France, an "employment-pension" procedure allows retirees to work in exchange for the suspension of part of their pensions, but because they can no longer increase their future pension entitlements, the incentive is weak. The belief that the old will take work from the young is deeply rooted, so that employment of older people is considered not as a right but as a privilege. An equitable and sustainable society would help everyone who wanted to work to find employment. Policy could seek to re-define the kind of employment available to older people so that they would not prevent the younger from being hired or getting promotion. They could take jobs with limited responsibil-

ity, moderate wages, and reduced work hours. This theme is seldom addressed in the media, which prefer to project a sentimental vision of idle old age.

3.3 Health Policies

Many European countries have adopted innovative policies to achieve a better balance between the need to expand social care and the imperative of curbing public spending (Pavolini and Ranci, 2008). These policies combine monetary transfers to families and the provision of in-kind services, as well as introducing funding measures designed to encourage care-giving through families.

Since the 1980s, most European countries have developed policies to curb health spending, beginning with the UK and the Netherlands, where the substitution of a liberal for a social ideology paved the way for a competitive market and private health insurance. Regulatory mechanisms typically combine government control, contractual supply arrangements (mostly between social security funds and health professionals), and a competitive market for healthcare. These mechanisms are torn between the need to curb spending and the demands of medical ethics and the right to healthcare. Concerning tobacco addiction for example, more and more EU countries have limited or prohibited smoking in public and in the work place. The European Commission has developed an anti-tobacco policy based on legislative measures and support for smoking prevention and cessation. Smoking bans have been implemented in several European countries—Spain, France, Italy, Ireland, and Norway, for example—resulting in high rates of quitting smoking (Braverman et al. 2007; Hairi et al., 2008). Waste is often linked to the absence of control procedures. In France, Professor Claude Béraud denounced the 15 billion euros (1992) lost through unnecessary treatment, malpractice, and fraud (Nys, 2006). Since 1975, several reforms have attempted to tackle the chronic deficits of the national health systems by curbing spending, reducing reimbursement levels through co-payment (France, Belgium, Germany, Portugal, Spain, Italy, and Greece), limiting healthcare supply, controlling hospitals (amalgamating small establishments[4] and operating a *numerus clausus* for entry to the medical professions), and regulating medicine, physicians' fees, and ambulatory care expenditures. However, making patients pay more may exclude the poorest from access to care. In the UK, hospitals that became self-administering can refuse expensive treatment if they believe patients are unable to pay. Only Denmark has not adopted the liberalization of healthcare insurance (Nys, 2006).

Social policies must take into account the increasing numbers of people living alone (Cliquet, 2002) as well as the rise of various forms of co-residence, increasing longevity, the deceleration of mortality for the older old, and the low social involvement of the elderly.

[4] France, for example, decided to close 54 hospitals in July 2010 that performed fewer than 1500 operations per year.

Longevity may be accompanied by senility, which induces high long-term care needs and expenditures. Improving the health status of the elderly is a key variable in strategies for preserving economic solvency. The WHO (2006) recommends "healthy ageing" to reduce the financial burden of dependent people and to enable older people to participate in society (Sirven and Debrand, 2008).

Proposals have included ideas such as financial incentives for family doctors who join healthcare plans, regularly use early diagnostic measures, and participate in health promotion programs, and for companies that promote preventive healthcare programs (Nicholas and Smith, 2006). All programs designed to train professional and support staff to respond to care demand are premised on the dramatic increase in needs in the near future and the equally dramatic rise in costs (Nicholas and Smith, 2006; Starfield and Shi, 2002). In the case of depression for example, a frequent illness among the elderly, a policy-based perspective is to promote social involvement (Abu-Raya, 2006; Sirven and Debrand, 2008).

A gerontological prevention policy, encompassing information and evaluation, implementation of services and equipments, devices (prostheses, orthoses) and improved organization of habitat (home automation) is being implemented (in France the "*Vivre chez soi*" [live at home] program from the secretary of state for the elderly). Abuse of the elderly is a crime that concerns all European countries. In France, a network (*Allô Maltraitance des Personnes âgées ou handicapées* [abuse of the elderly helpline]) has been set up to receive complaints about financial and physical abuse of the elderly. Public services are in charge of finding places for the dependent elderly either to alleviate their solitude or when the family can no longer care for them. Dependency is cared for by specialized institutions (*maisons d'accueil pour personnes âgées dépendantes* (MAPAD) in France), which complete the work of residential and nursing homes. The MAPAD include psycho-gerontological units, specialized in treating sufferers from Alzheimer's disease. There are also intermediary formulas between private households and institutions, in the form of collective and sheltered housing (Saraceno, 2010). In Denmark, municipalities have a legal responsibility to provide services free of charge to all people above a given dependency threshold. The principle behind all these policies is partly to reduce dependency, which usually arises after 85 years of age, and thus limit lengths of stay in hospitals, but also to stimulate an economy based on the needs of the ageing population for goods and services, in partnership with the private sector. Longevity also generates increased demand for pharmaceutical research and biomedical technology.

An emphasis is put on modifying the housing of the elderly (in France, for example, *Diagnostic autonomie-habitat*). Among people aged 65 and over, falls at home account for 80% of daily-life accidents. The policy advocated by the French government is to carry out work in an elderly individual's home, such as installing a ground-floor shower and anti-skid floor surfaces, while the person is still in good health. This assumes ac-

cess to credit, but when a 75-year-old asks for a loan to re-organize the inside of his or her home, the banker raises the cost of insurance and the work in the individual's home becomes prohibitively expensive. The government has also declared its willingness to help the elderly acquire high-speed internet connections at low cost, and in general, to improve communication and information for the elderly (at the European level, Decision 742/2008/EG of the European Parliament and the Council, 9 July 2008). Working for the 65-and-over population also creates opportunities for the younger generations; investing in expanding ageing-related sectors means help for high-tech firms. Muriel Boulmier, president of a work group entitled "Demographic evolutions and ageing" advocates developing flexible prevention networks, especially in rural areas, organizing early diagnosis, and evaluating domestic risks. She also proposes creation of a quality standard for professional interventions to guarantee the efficiency of public support, and the transfer of tax credits from the elderly to their descendants or the kin who finance the work for maintaining the elderly at home. Other directions examined by her group include the arranging of life-annuities and life insurance, organizing micro-credit to adapt the dwellings of elderly people, changing the rules for co-ownership to facilitate safety improvements in collective areas for old people, and organizing a mutual aid contract between elderly and young people, public and private landlords, and central and local government. She calls for a European manifesto for habitat and ageing in Europe for 2012, which will be the "year of active ageing and inter-generational solidarity."

Housing, especially in old urban centres, must be adapted and architects encouraged to design housing suitable for all ages. The objective is to have dependent persons, who would usually be in residential care, cared for at home through a cooperative arrangement between formal and informal care-givers. Since the 1980s, the UK has moved away from residential care and towards home care. This pattern is already widespread in Finland (Rostgaard, 2002). Jobs linked to these new needs must be valorised, and the qualification and professionalisation of home care services will contribute to maintaining the elderly in their own homes. Denmark has developed systematic coordination between the healthcare, social support, transportation, and housing sectors. Portugal, since its 2006 National Action Plan, and Spain, since its 2006 law on dependency, have shifted from supporting familialism to a provision system similar to the French and Dutch schemes (Saraceno, 2010). East European countries are also changing rapidly, by substituting home care and day care for institutionalization (European Commission, 2008), but coverage in these countries is low and families remain the main providers of care. In Germany, access to support became universal in 1995 with the introduction of the insurance scheme for long-term care, but the minimum dependency threshold is high (Rauch, 2007; Saraceno, 2010). In Italy and some of the East European countries, the main support policy for disabled adults and frail elderly is the dependency allowance. Dependency allowance covers only a fraction of the cost of residential care, so

people must contribute according to their income. Most countries have introduced paid or unpaid leave for cases of family emergency or for assisting a disabled family member (Saraceno, 2010).

4. Conclusion

The century-long revolution of longevity and low fertility in Europe was articulated on the desire to manage the destiny of the family, satisfying aspirations to maintain and improve social status and wealth. The continuous raising of age at death marks the final stage in the movement away from the natural, unrestrained behaviour of the old demographic regime. This movement has contributed to the liberation of women by making possible the avoidance of repeated pregnancies while bringing unprecedented opportunities for hedonism.

When writing his *Essay on the Principles of Population* in 1798, Malthus raised the problem of the disparity between a linear growth of resources and the exponential population growth of the poor. For him, any gain in income is wiped out by unrestrained demographic growth. The escape from the Malthusian trap was made possible by the competitive growth of technology and industry, and, after the interlude of the great European migrations to America, by the fertility decline. In our day Europe has finally acceded to the fruits of the secular struggle against mortality and of liberation from childbearing and agrarian work. Yet Europe is also in the front line of a new struggle between populations and resources: its societies must manage a surge in the elderly population that threatens to cause the collapse of the entire system of social and health protection by the demands it places upon the younger generations in terms of expenditure, time, and investment. It is an irony of History that whereas Malthus saw poverty in 18th-century England as the mechanical consequence of unrestrained fertility, poverty in the 21st-century stems, on the contrary, from the relative scarcity of children. The ambition of Europeans has been to escape from starvation and deprivation, and gain access to wealth, peace, and freedom. Despite past tragedies, these wishes have been fulfilled. The question that now arises is whether or not this success was merely a parenthesis, and whether it has engendered its own contradiction. Can Europeans reconcile their aspirations to longevity and sustained consumption with mastery of the new demographic deal?

Europe has no choice: radical policy proposals are urgently needed if its system of pensions and social protection is to be saved. Reform for Europe is not an option but an obligation. Systems usually evolve under constraint, and in this case it is the forecast deficit of dizzying proportions and the prospect of bankruptcy. Technological innovation, behaviour changes such as healthier eating and lifestyles, and better social contact, will not avert the wholesale recasting of the redistribution system made necessary by the failure of families to support their elderly. Families are themselves experiencing a new era, where they are more fragile than ever, threatened by separation

and divorce, where more and more children grow up with one parent, and where more people live alone, especially in old age. None of the policy measures to date in favour of family, health, and pensions is commensurate with the scale of the demographic challenge facing Europe; instead they merely put off finding a solution for the short term, maintaining a precarious balance to avert a slide into economic bankruptcy and social unrest.

History is full of unintended consequences of human actions. The growing burden of retirement pensions and long-term care was readily predictable, but little was done about it. The large baby-boomer generations have instead lived with little concern for their old age, relying on pay-as-you-go pensions, even though politicians have long known that benefits could not be paid indefinitely (for example, in France, Michel Rocard, 1991). Preparing a sustainable future for children and grandchildren has been their least concern.

Understanding is one thing; getting people to accept a reduction in the privileges of their age-group is another, as was clear when two million people demonstrated in France in June 2010 against the raising of the minimum retirement age. Part of the population denies the change of era. Policies differ from one country to another, but all come down to the same thing: taking more from the working population, giving less to pensioners. Most people are driven by selfishness rather than by solidarity and empathy with future generations, a collective attitude which does not preclude money or care/time transfers within families from the old to the active and vice versa; the cult of leisure, the aversion for work, the demand for ever-higher standards and efficiency from the health system, are stronger than common interest.

Will Europe, the world pioneer of population ageing, fall victim to its success and be reduced to bankruptcy and psychological exhaustion by the scale of the demographic burden it must now assume? The fear of death and the pursuit of individual satisfaction have been effective survival strategies in the past; but this success is perhaps turning into an intractable inter-generational conflict. Will Europeans prefer to go on accumulating debts for their children to pay; or will they mobilize all their forces, young and old, their technology, their institutions, their economies, to transform their future from a perspective of decrepitude into hope for a new way of living a long life? It may be thought that the tidal wave of the elderly will disappear when the baby-boomers die off in the 2040s. But it is only the abruptness of the phenomenon that will be smoothed. The persistence of below-replacement fertility will continue to shape age structures, giving a high proportion of old people, whose presence will in turn shape European economies and societies for many years to come.

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COUNTRY ARTICLES

Challenges and Prospect for Japan's Ageing Population: No Easy Choices

Lam Peng Er

Introduction

Japan is facing a looming demographic and fiscal crisis which cannot be resolved easily.[1] Indeed, Japan has the most rapid and serious ageing problem in the world due to declining fertility rates coupled with rising longevity (See Appendix One).[2] By 2007, 21.5 percent of the Japanese population was over 65 years old; by 2055, it is projected to be 40.5 percent.[3] The average life expectancy for Japanese women and men in 2009 was 86.44 and 79.59 years, respectively—the highest in the world;[4] it is projected to increase to 90 and 84 years by 2055.[5] Japan's total fertility rate (TFR) dipped from 2.13 in 1970 to 1.37 in 2009 (way below the replacement rate of 2.1).[6] And it is anticipated

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* This article borrows heavily from two articles of mine: "Declining Fertility Rate in Japan: An Ageing Crisis Ahead", *East Asia: An International Quarterly*, Vol.26, No.3, 2009 and "Internationalization and immigration: coping with the ageing population problem in Japan", *East Asian Policy*, Vol.1, No.3, 2009. Both articles were written before the DPJ ended the Liberal Democratic Party (LDP) rule of 54 years between 1955 and 2009. This updated article for the KAS includes new material on the DPJ government's policy towards the ageing problem, and latest demographic statistics.

1 Paul Hewitt writes: "[T]he excess of social security outlays over contributions already accounts for almost a quarter of the 2002 budget of 8.6 percent of GDP. The Ministry of Health, Labor and Welfare, meanwhile estimates that age-related spending will grow by 2.5 percent of GDP by 2010, and 10 percent by 2025". See Paul S. Hewitt, "The Grey Roots of Japan's Crisis", in Woodrow Wilson Center, *Asia Program Special Report*, No.107, January 2003, p.6.

2 See Floria Coulmas, *Population Decline and Aging in Japan: The Social Consequences* (London: Routledge, 2007). See Paul S. Hewitt, "The Grey Roots of Japan's Crisis", in Woodrow Wilson Center, *Asia Program Special Report*, No.107, January 2003, p.4.

3 Ryuichi Kaneko *et.al*., "Population projections for Japan: 2006-2055: Outline of results, methods, and assumptions", *Japanese Journal of Population*, Vol.6, No.1, March 2008, p.84.

4 "Japan women's life expectancy still the longest", *Japan Times*, 27 July 2010.

5 *2008 White Paper on Ageing Society*.

6 Statistical Bureau, Ministry of Internal Affairs and Communications, *2008 Statistical Handbook of Japan*, p.8. See also "Fertility rate stays flat at 1.37", *Asahi Shimbun*, 3 June 2010. TFR represents the number of children that would be born to a female if she were to live to the end of her child bearing years in accordance with current age-specific fertility rates.

to dip further in the years ahead. According to one projection, the country will shrink from 127.77 million in 2007 to 95.15 million in 2050.[7]

The Japanese GDP will concomitantly shrink with its population decline and its GDP is likely to be overtaken by the Chinese GDP by end 2010. Fewer young workers to support more old retirees will place an increasing strain on Japan's pension and health systems, and fiscal solvency. The diminution of its GDP and population size will, in the long run, also have implications for Japan's place in the world. The loss of economic dynamism and power, youthful vigour in its manufacturing workforce, and the means to provide substantial ODA (Official Developmental Assistance) abroad to poorer countries will mean that Japan is becoming an upper-middle power in the international system rather than an economic superpower for the rest of the 21st century.

I argue that there are no easy choices for the Japanese state and society to address the ageing problem and looming fiscal crisis. Conceivably, the ruling Democratic Party of Japan (DPJ) can seek to raise taxes but it is highly unpopular among voters especially if proposals to raise and spend tax revenues are not clearly thought out. The state can also offer financial incentives for married women to have more children and pay for more childcare facilities but this will aggravate the impending fiscal crisis. (Japan's public debt is already nearing 200 percent of its GDP.) Moreover, married women may also choose not to have more children because of individual lifestyle considerations. A possible solution to the ageing problem is to promote wide-scale immigration and permit larger numbers of foreigners who are not Japanese descendants to work and pay taxes in Japan. But the Japanese state and society appear to prefer lower or no economic growth for the sake of social order in a nation which is relatively homogenous in its ethnic composition rather than to swing its doors wide open to non-Japanese immigrants who are perceived to potentially disrupt the country's social and cultural harmony.

This article will first elaborate on the ageing problem in Japan, especially the trend of fewer young workers to support more retirees. Following that will be a discussion on the policies of the Japanese state and politics of the ruling DPJ to address the ageing problem. Next will be an analysis of the social, cultural, and corporate impediments to higher TFR. The article will then examine why Japan is reluctant to embrace massive immigration to address the ageing problem. The article will conclude by reiterating that Japanese state and society are not prepared to make hard choices to address the ageing problem, and that the country will be gripped by this "slow motion" crisis which appears intractable politically, economically, and socially. Despite the allure of its "cool" culture (which includes popular manga, refined aesthetics, and wonderful cuisine), Japan is heading for national decline against the backdrop of a rising China due to the intertwined problems of political gridlock (due to a split parliament), low TFR, economic stagnation, and xenophobia to widespread immigration.

[7] Estimates by the Health, Labor and Welfare Ministry. *Japan Times*, 28 January 2007.

The Ageing Crisis: Fewer Younger Workers to Support More Pensioners

The pension system in Japan obliges the present generation of workers to contribute to a common pool which pays for the benefits of the retirees. This was not a problem during Japan's high-growth era when there was a broad-based pyramid of young and productive workers supporting the old. But since the bursting of its "bubble" economy in 1991, the nation has been mired in economic stagnation for two decades. Against the backdrop of a stagnant economy, social security costs (especially pensions and medical care) will rise when there are proportionately more old people in retirement and tax revenue will shrink with fewer younger people at work.[8] Japanese economic growth is dependent on exports especially to the burgeoning Chinese market in an era when the American and European financial system and economies are in trouble, triggered by the US-led sub-prime housing crisis in 2008-2009. Arguably, the Japanese economy needs to depend more on domestic demand, especially domestic consumption, but Japan's ageing population is cutting back on spending, in part, due to widespread distrust of the pension system.[9]

In 2000, the aged dependents ratio (number of working people divided by aged dependents) was 3.9 active workers supporting a person 65 and above (Appendix Two). By 2010, there will be fewer than three workers supporting a retiree; by 2025, the

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[8] The *Yomiuri Shimbun* commented on the priority areas of the 2009 budget: "Those priority policy matters will include easing the worsening doctor shortage, addressing the declining birthrate and the aging of society…The problem lies in handling pending issues that were shelved in the guidelines. Among the most difficult one is the increase in the government's burden resulting from raising the share of the basic pension payment it shoulders from the current level of little more than one-third to 50 percent, starting in fiscal 2009". "Fiscal 2009 budget rules fail to address pensions", *Yomiuri Shimbun*, 29 July 2009.
The Statistical Bureau noted: "Total expenditure on social security benefits is increasing annually, thus making a review of benefits and burdens an urgent issue in order to ensure that the social security system is sustainable over the long term. In fiscal 2005, social security benefit expenditures totaled 87.9 trillion yen (up 2.3 percent from the previous fiscal year), a figure which amounted to 688,100 yen per person. The proportion of Japan's social security expenditure to national income registered 23.9 percent. Benefits for the aged accounted for approximately 70 percent of total social security benefit expenditures". *Statistical Bureau Handbook of Japan 2008*, p.2.

[9] According to the media: " 'Japan is so dependent on exports that when overseas markets slow down, Japan's economy teeters on collapse', said Hideo Kumano, an economist at the Dai-ichi Life research Institute. 'On the surface, Japan looked like it had recovered from its Lost Decade of the 1990s, but Japan in fact entered a second Lost Decade—that of lost consumption'. … Japan's aging population is not helping consumption. Businesses had hoped that baby boomers—the generation that reaped the benefits of Japan's postwar breakneck economic growth—would splurge their lifetime savings upon retirement, which began en masse in 2007. But that has not happened at the scale that companies had hoped. Economists blame this slow spending on widespread distrust of Japan's pension system, which is buckling under the weight of one of the world's most rapidly aging societies". See "When consumers cut back: A lesson from Japan", *International Herald Tribune*, 22 February 2009.

estimated ratio is two workers for every aged dependent member.[10] There is also the concern that a higher proportion of older workers may result in a loss of vitality for the corporation and nation.[11]

If this trend of fewer younger workers supporting more retirees were to persist, Japan will be confronted increasingly by economic and ageing-related political problems. With a smaller population base and a bigger percentage of retirees, Japan's GDP will decline concomitantly unless there is a significant rise in productivity.[12] According to the Health and Labor Ministry, the number of centenarians has more than doubled over the past six years to about 36,000. This number is anticipated to rise sharply to nearly one million by 2050.[13] Ironically, their caregivers are often their children in their late seventies, some of whom may require assistance themselves.

In 2006, the percentage of Japanese workers in the manufacturing sector was 18.7 percent (See Appendix Three). The contribution of manufacturing to Japan's GDP was fairly constant in the past decade and a half: 22.4 percent in 1993; 22.9 percent in 2003; and approximately 23 percent in 2006.[14] In this regard, the country has been quite successful thus far in maintaining manufacturing as the key component and dynamo of its economy. But as its ageing problem accelerates, Japan will face difficulties in maintaining its substantial manufacturing base which underpins its export-led growth and status as an economic giant.

Unless Japan is prepared to accept skilled foreign workers and young migrants in significant numbers, its industrial base will gradually shrink because the manufacturing sector requires workers who are predominantly not old. Simply put, Japan faces the spectre of an ageing workforce inadequate to man its factories. The Manufacturing Industries Bureau, Ministry of Economy, Trade and Industry of Japan notes: "Manufacturing is the main driving force of Japan's economic growth, as it accounts for approximately 20% of GDP, and approximately 90% of R&D investment of all private companies. In the meantime, the sector is facing major structural changes such as the development of the international specialization brought on by globalization, increases

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[10] Chikako Usui, "Japan's Aging Dilemma?", in Woodrow Wilson Center, *Asia Program Special Report*, No.107, January 2003, p.16.

[11] David Horlacher writes: "As public policies lengthen the working lives of the elderly, the career opportunities for young people are diminished. The creativity, energy and vitality that young people bring to the workplace may be reduced or lost altogether". David. E. Horlacher, "Aging in Japan: Causes and Consequences: Part III—the Elderly", International Institute for Applied Systems Analysis, January 2002, p.1.

[12] Jackson and Nakshima write: "Even if Japan were to raise the retirement age into the mid-seventies, it wouldn't be enough to keep the labor force from shrinking and economic growth from slowing. Higher levels of immigration would certainly help. But it is doubtful that Japan will be willing to accept the social and cultural changes that large scale immigration would bring". Richard Jackson and Keisuke Nakashima, "Meeting Japan's Ageing Challenge", Keizai Koho Center, *Japan Economic Currents*, No.69, March 2008, p.9.

[13] "Japan's over-70 population hits record high", *Daily Yomiuri Online*, 14 September 2008.

[14] Asahi Shimbun, *Japan Almanac 2006*, p.102 and *Statistical Handbook of Japan 2008*, "Economy", p.9.

in both environmental and resource constraints, and the rapid progress of declining birth rates and an aging population".[15]

State Policies, Ruling DPJ's Manifesto and the Ageing Dilemma

The Cabinet Office's Gender Equality Bureau spearheads policies to make it more attractive for women to have a better life balance between career and childbirth. In 1999, the state promulgated a Basic Law on Gender Equality to set the legal framework and norms to encourage working women to have more children but it is essentially a toothless law. There is neither compulsion nor penalties against corporations which do not abide by the norms of gender equality.[16] The Gender Equality Bureau's Annual White Paper tracks the progress of Japanese women in various sectors such as politics, administration, and business, and also exhorts companies and men to support the participation of women in all areas of state and society. But social norms indicate otherwise. According to the 2008 White Paper's survey, the percentage of Japanese men and women who rejected the statement "husband should work outside while the wife protects the home" were only 46.2 percent and 56.9 percent respectively—considerably lower than those in the US, Germany, and Sweden (Appendix Four).[17]

The 2008 White Paper on Gender Equality also revealed the negligible role of Japanese men in child rearing, which may discourage some women from marrying. Japanese men spend an average of only thirty minutes each day to assist in childcare below five years old—comparatively low by international standards (Appendix Five). There is little the government can do beyond the exhortations to treat women fairly and create a more conducive environment for a lifestyle balance between career and child rearing. Husbands are expected to spend long hours at their workplaces and not take paternity leave even though it is granted by law. Female childcare leave utilization rate in Japan was 72.3 percent for women in 2005 but only 0.5 percent for their husbands.[18]

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[15] Manufacturing Industries Bureau, "Manufacturing industries: Our socioeconomic foundation". <http://www.meti.go.jp/english/aboutmeti/data/aOriganizatione/2007/05_manufacturing_in...> (Accessed: 16 December 2008).

[16] The Japanese parliament passed an Equal Employment Opportunity Law in 1986 but it was also toothless. Yuki Huen writes: "The Basic Law for a Gender-Equal Society and the Measures taken by the government so far still fall short from enforcing gender equality and do not affirm equality as a human right". See Yuki W. P. Huen, "Policy Response to Declining Birth Rate in Japan: Formation of a "Gender-Equal" Society, *East Asia: An International Quarterly*, October 2007, p.365.

[17] Naikakufu Danjo Kyodo Sankaku Kyoku [Cabinet Office's Gender Equality Bureau], *Danjo kyodo sankaku shakai no jitsugen o mezashite* [Aiming to realize a society of gender cooperative participation], *2008 White Paper*.

[18] Cabinet Office, *White Paper on Gender Equality 2007*, p.16.

Therefore, the impediment to Japanese women producing more babies is neither a lack of governmental interest nor legislation for paternal and maternal leave, but the corporate and social norms which make it difficult for women to keep their career on track after childbirth, and for husbands to support their wives in child rearing.[19] The Annual White Papers of the Ministry of Health and Labor also stress the importance of building more childcare centres to assist working mothers.[20] The media reported: "One key for the nation amid the declining birthrate is to secure a larger female work force without discouraging women from having children. But this is difficult without sufficient access to childcare facilities. Statistics show that about 260,000 children are potentially waiting to enter such nurseries in Tokyo and surrounding areas, with nearly 1 million children waiting nationwide".[21] However, such facilities require public subsidies and building more childcare centres will worsen the fiscal deficit of the state.

When the DPJ was in the opposition, it proposed various measures to boost the birthrate of the nation. Hoping to displace the LDP in the August 2009 Lower House Election, a key feature of the opposition party's manifesto is the proposal that a DPJ-led government will provide a per capita child allowance of 26,000 yen per month until the child graduates from junior high school as an incentive for families to produce babies.[22] Other proposals include more childcare centres in metropolitan Japan. According to the media, the DPJ "will need to rake in annual revenue of 5.3 trillion yen to enable it to distribute the 26,000 yen a month per child it promised to give households with children of middle school age or younger".[23]

But barely a year in office, the new DPJ government backpedalled and disbursed only 13,000 yen per month for each child because there was not enough money in the state coffers for this welfare program. It is also uncertain whether Japan can afford to continue disbursing 13,000 yen per month for every child in the years ahead without sinking deeper and deeper into the red. The DPJ government then proposed to channel the other half of the original 26,000 yen into childcare centres rather than directly into the hands of parents but it is doubtful whether there is any money in the exchequer to do this without a hefty tax hike.

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[19] Yuki Huen notes: "Delaying marriage and reluctance to have babies has been understood as women's resistance to the unfriendly social policy for them to harmonize work and family life". See Yuki W. P. Huen, "Policy Response to Declining Birth Rate in Japan: Formation of a "Gender-Equal" Society, *East Asia: An International Quarterly*, October 2007, p.365.

[20] See, for example, *Kosei Rodo Hakusho* 2007 [Ministry of Health and Labor White Paper 2007], chapter 2, "shokoka no nagare o kaeru tame no saranaru tsugi seidai ikusei shien taisaku no tenkai". [The development of counter measures to support the nurturing of the next generation and the changing of the trend of fewer children].

[21] "Allergy to reform may be Japan's Achilles' heel", *Nikkei Weekly*, 13 October 2008.

[22] Democratic Party of Japan, "Manifesto: The Democratic Party of Japan's Platform for Government—Putting People's Lives First", 2007, p.10.

[23] See editorial, "DPJ must ensure it can pay for its tax policy", *Daily Yomiuri Online*, 7 September 2009. See also editorial, "Use child-rearing funds wisely", *Japan Times*, 31 May 2010.

Just before the July 2010 Upper House Election, Prime Minister Kan Naoto floated the trial balloon of hiking the consumption tax from five to ten percent to reduce the yawning fiscal deficit and presumably to pay for the DPJ's welfare programs, including financial incentives to parents for child rearing and more childcare facilities. Although the Japanese public is resigned to the fact that a tax hike is unavoidable, it was livid with Kan for not thinking through his proposal carefully. Not only did Kan fail to articulate it properly to the voters but he flip-flopped over the issue during the election campaign. The Japanese voters, already unhappy with the bumbling governance of the DPJ government, delivered a stinging rebuke to Kan by relegating the DPJ to defeat in that election. As a consequence, Japan is confronted by a "split parliament" in which the ruling DPJ is in control of the Lower House while the opposition is in control of the Upper House. This split parliament will result in political gridlock and it will be an uphill task for the ruling DPJ to hike the consumption tax to pay for its welfare policies (including financial assistance to every child) and to ensure the solvency of the pension system.

Social, Cultural and Corporate Impediments to Higher TFR

The Japanese government may exhort, build more childcare centres, provide more financial and material incentives for women to have babies, and legislate benefits for maternity but to little avail.[24] This is, in part, due to unsupportive societal and corporate attitudes towards gender equality at work and home. Japanese corporations have a dual track employment system: one track rewards staff (mostly men) towards lifetime employment and training for management; another (especially for women even if they are university graduates) to perform routine office work, and females are expected to leave after giving birth to care for their babies.[25]

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[24] Takashi Oshio argues: "Among the measures commonly proposed to reverse the decline in the number of children are hiking the allowance for children, improving child-care centers and increasing the allowances for childbirth and child care. These are all means of providing support to married couples. … It can be persuasively argued, however, that the main causes of the falling number of children are to be found before marriage, not after it. If the trend toward men and women marrying later or remaining single is the chief culprit, measures to assist existing couples can have only an indirect effect". See Takashi Oshio, "The Declining Birthrate in Japan", Keizai Koho Center, *Currents*, No.69, March 2008, p.2.

[25] The *Washington Post* compared Japan with the US: "Like many other East Asian economies with a shrinking workforce, Japan desperately needs women to marry and have children while also continuing to work. But only about a third of women in Japan remain in the workforce after having a child, compared with about two-thirds of women in the United States". "Japanese women shy from dual mommy role", *Washington Post*, 28 August 2008. The *Japan Times* reports: "According to an estimate by Japan Research Institute, the nation will have a shortage of about 3.9 million workers in 2015 as the population continues to shrink, and will need 880,000 more working women than there were in 2005 to keep growth at around 2 percent". See "Women expect to keep working, excel", *Japan Times*, 4 January 2007.

The social contract in Japan is men in established companies are entitled to the security of lifetime employment in exchange for their loyalty and commitment (including overtime work) to their employers while housewives look after their children.[26] But this social contract is fraying: since the bursting of the bubble economy in 1991, lifetime employment has eroded and young men who lack stable jobs are postponing or even not marrying due to financial uncertainty.

The values of Japanese women have also changed, notwithstanding the attempts of the government to persuade them to produce more babies. As women attain higher levels of education, their expectations of life and marriage also rise concomitantly.[27] The more educated a woman is, the later she marries and has a child. The mean age of first marriage for Japanese women in 2007 was 28.3 years old, up from 24.2 in 1970 (Appendix Six).[28]

Moreover, marriage is now just one possible lifestyle choice for women.[29] Career women today do not necessarily need a husband for their survival and comfort. The Japanese media and sociologists have coined the term "parasite single" to label working adults, especially single women, who have a decent salary and a great consumer lifestyle by staying rent-free with their parents. Women today are no longer under compulsion to marry at all cost. More than 30 percent of Japanese women over 30 years old remain unmarried.[30] Presumably, some cannot find a spouse who can match their expectations; others do not find the life of a housewife raising babies with an absentee husband (whose life and soul are pledged to the corporation) to be an attractive lifestyle choice.

Thus, the value system of many Japanese women concerning work, marriage and childbirth has changed considerably while Japanese corporations and men have not.

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[26] Leonard Schoppa argues that the traditional system of lifetime employment for the men and staying at home to care for the children for the women is fraying and that both firms and women are "racing for the exits" because of "cost" notwithstanding exhortations by the state to improve birthrates. See *Race for the Exits: The Unraveling of Japan's System of Social Protection* (Ithaca: Cornell University Press, 2008).

[27] Takashi Oshio explains: "Japanese women are strongly inclined to reject prospective marriage partners without equal or higher levels of education, and as they acquire advanced education, it becomes harder for them to find a suitable partner". Takashi Oshio, "The Declining Birthrate in Japan", Keizai Koho Center, *Currents*, No.69, 2008, p.4.

[28] Statistical Bureau, Ministry of Internal Affairs and Communications, *2008 Statistical Handbook of Japan*, p.9.

[29] See Kumiko Fujimura-Fanselow and Atshuko Kameda, *New Feminist perspectives on the Past, Present and Future* (Feminist Press, 1995).

[30] "Husbands wanted", NHK World TV, 18 October 2008.

The 2002 White Paper on Gender Equality writes: "Approximately half of Japanese women in their late 20s, the age group that used to enjoy the highest birthrate, remained unmarried". See 2002 White Paper on Gender Equality, p.1.

The proportion of Japanese men who have never married by age 50 was 2 percent in 1970 but climbed to 25 percent in 2000; it was 3 percent for women in 1970 and 19 percent by 2000. See Robert D. Retherford and Naohiro Ogawa, "Japan's Baby Bust: Causes, Implications and Policy Responses" in Fred R. Harris (ed.), The *Baby Bust: Who will do the work? Who will pay the taxes?* (Rowman & Littlefield, 2006), p.8.

That the birthrate of the nation is falling is not surprising given the fact that the values of male-dominated traditional corporations and younger women are out of sync. However, one cultural pattern among modern Japanese women persists: unlike their counterparts in the US and Europe, very few babies are born out of wedlock.[31] In this regard, babies from unmarried mothers will not be a boost to the low birth rate in Japan. The solution to Japan's ageing crisis appears quite straightforward but difficult to implement: boost the immigration of young workers; state, society and corporations must be more supportive of working mothers; significantly increase the participation of women and the elderly in the workforce; reform the pension system and raise the consumption tax to pay for social security benefits.

Arguably, key impediments to addressing the ageing problem include electoral politics which avoid making hard decisions painful to voters (especially the hiking of the consumption tax), and even more insidious, the norms of Japanese corporations and patriarchal society which discourage women from marrying and producing babies while holding onto a career and aspirations of their own. Japan is faced with an intractable problem: a shrinking population coupled with more retirees (including centenarians) and by extension—relative economic decline and possibly an erosion of influence in international affairs in the long run. And yet, the country remains reluctant to accept the mass immigration of foreigners who do not have Japanese ancestry.

Rejecting Mass Immigration of Foreigners

Japan's immigration policy is steadfast on no mass immigration to dilute Japanese ethnic and cultural homogeneity; acceptance of Japanese descendants from Latin America as migrants based on blood ties; and more Asian healthcare workers for the aged but only on a temporary basis.[32] Though the number of foreigners in Japan has increased, they constitute only a small percentage of the total resident population of the country (Appendixes Seven and Eight).

Japan adopts the "blood principle" (*jus sanguinis*) instead of the "birthplace principle" (*jus soli*) in determining citizenship. According to the Ministry of Justice, the Nationality Act has been amended so that from 1 January 2009 a person whose paternity has been acknowledged by his or her father who is a Japanese national is able to acquire citizenship by filing a notification, even if that person's parents are not married to each other.[33] While marriage is no longer a pre-requisite, the blood principle

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[31] The *Washington Post* reported: "It is also exceedingly rare for women here (Japan) to have children outside marriage (less than 2 percent of all births).The cultural taboo against single parenthood is far stronger than in the United States where about 37 percent of births are outside wedlock". "Japanese women shy from dual mommy role", *Washington Post*, 28 August 2008.

[32] For a good discussion on immigration and ageing in Japan, see Atsushi Kondo, "Development of Immigration Policy in Japan", *Asia and Pacific Migration Journal*, Vol.11, No.4, 2002, pp.3-4, 13-14.

[33] Ministry of Justice, "Criteria Changes to Acquisition of Japanese Nationality". <http://www.moj.go.jp> (6 January 2009).

still holds in the latest amendment. If blood ties are a criterion for citizenship, then it is a barrier for foreigners (except *Nikkeijin*) to migrate and adopt Japanese nationality. Immigrants enter only as short-term residents and may be granted permanent residency (but not citizenship) only after ten years of "best behaviour".[34]

Japan is arguably still culturally insular and ethnically homogenous, with no history of mass immigration. Okinawans and Ainu, who are indigenous people with distinct cultures, comprise only a very small percentage of Japan's total population.

Today, the Japanese state and society are avoiding (or postponing) the painful choice and public policy trade-off: more young migrants to join its labour force but at the risk of social instability and alienation among ethnic minorities due to a lack of assimilation. Presumably, many Japanese are willing to accept the trade-off: a little less affluence for greater social stability and predictability without mass scale immigration. Perhaps, the lukewarm response to boosting immigration from non-*Nikkeijin* may, in part, be due to the perception that the ageing of Japan is a gradual process and indeed a perennial problem, but not necessarily an imminent national catastrophe which demands an immediate response, including immigration from non-traditional sources.

Japan has sought to increase the migration of Japanese descendants (*Nikkeijin*) from Latin America, especially Brazil and Peru, back to the land of their ancestors.[35] Tokyo has succeeded in attracting around 300,000 Brazilian *Nikkei* to work in the country but at least two problems are encountered.[36] First, the supply of more *Nikkeijin* is tight and is therefore not a panacea to boost the population of Japan. Second, many *Nikkeijin* are culturally Latinos and do face difficulties fitting into mainstream Japanese life because of cultural, linguistic, and social barriers.

Logically, if the Japanese state and society are prepared to substantially increase immigration beyond *Nikkeijin*, the problem of ageing will be significantly mitigated. As stated earlier, the infusion of young and skilled migrants into the labour force will stimulate economic growth, provide additional tax revenue for the state, and broaden the base of young people supporting an increasing number of old folks.

But the myth of racial homogeneity, and the fear that migrants will not fit into Japanese society and may even be crime-prone, make this option a non-starter in the near

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[34] "Japanese immigration: Don't bring me your huddled masses", *Economist*, 30 December 2008.

[35] Tanimura wrote: "Most of the Brazilian Nikkeijin work in a 3-K job—Kiken (danger), Kitanai (dirty) and Kitsui (difficult) —these are the jobs that Japanese workers typically try to avoid. This implies that the Brazilian Nikkeijin can fill the labor shortage in the 3-K labor market". See Chieko Tanimura, "Immigration of Nikkeijin to Ease the Japanese Aging Crisis", Vancouver Center for Excellence, Research on Immigration and Integration in the Metropolis, Department of Economics, Simon Fraser University, May 2000, p.25.
Tanimura also noted that there are "approximately 1.3 million Nikkeijin living in Brazil, and that there were 222,217 Brazilians living in Japan in 1998". *Ibid.*, p.24.

[36] "More than 300,000 immigrant Brazilians of Japanese descent has been a boon for Japan's automotive and electronics factories, where many of them work". See "Ageing Japan now considers immigration", *Business Times* (Singapore), 8 August 2008.

future. Conceivably, Japan does not wish to have social problems and violent riots similar to those by Turkish and Kurdish minorities in Germany, and Algerian descendants in France. That frustrated migrants in Germany and France did engage in sporadic riots and violence will presumably vindicate the perception that immigrants who cannot speak Japanese or understand the nation's customs may disrupt the harmony of their homogenous society.

In this regard, Japan is still a relatively closed society in a globalizing world and this is a fundamental reason why it is unlikely to solve its ageing problem. Unlike countries such as the US, Australia, Canada, and Singapore, Japan does not have the tradition of being a mass immigrant nation. Presently, Japan cannot even embrace the second and third generations of Korean immigrants (many of whom speak only Japanese and are culturally assimilated to their domiciled home) as citizens unless they change their Korean names to Japanese ones.[37] Conceivably, China can be a good source of immigration especially when the cultural distance is arguably narrower between the two neighbouring countries than between Japan and Brazil. But possibly given the historical problems between Japan and China, the proposal that the mainland can be a major source of immigration is not featured in the Japanese public discourse on the problems of ageing.

A United Nations Population Division study claimed: "According to the medium variant projection of the United Nations 1998 Revision, the population of Japan would reach a maximum in 2005 at 127.5 million. If Japan wishes to keep the size of population at the level attained in the year 2005, the country would need 17 million net immigrants up to the year 2050, or an average of 381,000 immigrants per year between 2005 and 2050. By 2050, the immigrants and their descendants would total 22.5 million and comprise 17.7 percent of the total population of the country".[38]

But the Japanese state and society prefer other less controversial and drastic approaches than the expediency and uncertainty of rapid mass immigration. Apparently, between the trade-offs of social stability and economic growth, there is a tacit understanding in mainstream Japan that it will opt for the former. Simply put, the UN proposal of 17 million immigrants is politically, culturally, and socially impossible for the country to adopt.

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[37] As stated earlier, Japan's citizenship is based on the bloodline principle and not the birthplace principle. However, there are exceptions to this rule. It is possible for ethnic Koreans who were born and grew up in Japan to be naturalized. Nevertheless, ethnic Koreans wishing to become citizens must adopt Japanese names. In this regard, many second- and third-generation Koreans in Japan are not willing to give up their Korean cultural identity. There is an estimated 400,000 ethnic Koreans domiciled in Japan.

[38] United Nations Population Division, "Japan", *Replacement Migration: Is it a Solution to Declining and Ageing Population?",* 2000, p.49.

Proposals and Impediments to Foreign Workers and Immigrants

In 2008, minority voices, including then Liberal Democratic Party (LDP) secretary general Nakagawa Hidenao and likeminded lawmakers, proposed that Japan accept 10 million migrants over the next 50 years and increase the number of foreign students from 130,000 at present to one million by 2025.[39] Nakagawa also advocated for some of these migrants to become naturalized Japanese and for whole families of migrants to be admitted.[40]

While 10 million may seem radical at first sight, it is actually not: they are to be spread over half a century. Moreover, 10 million is only 7.4 percent of Japan's present population—a percentage considerably lower than the US's and Germany's. Even though the Nakagawa proposal was really not that revolutionary, it was basically ignored by the Japanese state and society despite some media coverage.

The influential Nippon Keidanren (Japan Business Federation), a major supporter and financial donor to the then ruling LDP, also advocated an increase in immigrant labour to offset the nation's shrinking domestic work force but did not specify the actual numbers to be welcomed.[41] Tokyo has also sought to employ Filipino and Indonesian nurses as temporary workers to mitigate the labour shortage in hospitals and nursing homes. In Japan's bilateral FTA (Free Trade Agreements) negotiations with the Philippines and Indonesia, the two Southeast Asian countries apparently pressed for access to the Japanese nursing sector. To Tokyo, it was also important to clinch bilateral FTAs with these countries against the strategic and competitive backdrop of China forging an FTA with Southeast Asia.

In 2008, Japan recruited a first batch of 208 Indonesian nurses. Unfortunately, these nurses must pass stringent language and professional tests within three years before they are allowed a longer stay and not many are expected to clear these daunting hurdles. Japan is facing a shortfall of more than 40,000 workers in the healthcare sector and a few hundred nurses from Southeast Asia is merely the proverbial drop in the

[39] "Let 10% of Japan be foreigners: Nakagawa", *Japan Times*, 13 June 2008 and "Radical immigration plan under discussion", *Japan Times*, 19 June 2008.

[40] The brain of the Nakagawa Plan is actually Sakanaka Hidenori, a former Tokyo immigration chief and now head of the Japan Immigration Policy Institute, who envisages a multicultural Japan.

[41] See "Keidanren: Immigrant worker influx vital to halt labor shortage", *Japan Times*, 15 October 2008.

ocean.[42] The media reported that only three foreign nurses (two Indonesians and one Filipino) out of 254 passed the Japanese nursing exam in March 2010. Foreign Minister Okada Katsuya commented on the abysmal passing rate: "It is certain that issues like Chinese characters (as part of the Japanese language) have been a serious problem".[43] However, it is certain that Japan's nursing exam is unduly difficult for foreigners.

Nevertheless, the introduction of a small number of foreign healthcare workers has alarmed the 600,000-strong Japanese Nursing Association (JNA).[44] This powerful lobby group is afraid that foreign nurses will compete with them and depress their wages. The Japanese government, therefore, is moving gingerly not to upset the nursing interest group by accepting only small numbers of foreign nurses, which will inevitably not meet the nursing shortage in the nation. The grudging acceptance of temporary nurses from abroad out of sheer necessity rather than a change of mentality to warmly welcome foreigners at the workplace suggests that Japan is still a parochial country.

It appears that Japan is unlikely to resolve its dilemma of immigration in the near future: how to accept a large number of foreign migrants to boost its labour force without diluting and destabilizing Japanese society? Perhaps one approach to this dilemma is to make a distinction between short-term temporary workers and permanent migrants. Given its rapidly ageing society, Japan will have no choice but to gradually increase the number of Filipino and Indonesian nurses and other workers, notwithstanding opposition from narrow interest groups. But they would probably be granted only short-term contracts and are not expected to raise their families in Japan and become permanently assimilated into Japanese society.

Another dilemma is the implication of rapid ageing for the industrial base, which has hitherto underpinned Japan's status as an economic superpower. Will it devise a dual track employment system for temporary foreign workers and permanent Japanese workers at the factories? Are they able to recruit temporary foreign workers in sufficient numbers? Will the labour unions oppose tooth and nail the massive influx of foreign workers, which may depress their wages? Unless and until Japanese state, society and business organizations are prepared for the large scale recruitment of temporary foreign workers (let alone permanent residence), Japan's vaunted manufacturing sector is poised to shrink. The labour unions are likely to oppose an open immigration

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[42] The media pointed out: "The shortage of nurses in Japan is estimated to be 40,000, though this is a bare minimum. Given the gruelling work schedules and the high turnover of nursing staff in Japan, the actual figure would probably be at least three times that under normal conditions. … [A] few thousand non-native carers in Japan, where approximately 1.3 million nurses are in employment, is a drop in the ocean". See "Is aging Japan really ready for all the non-Japanese carers it needs?", *Japan Times*, 1 June 2008.

[43] "Only one Pinoy, 2 Indonesian nurses pass Japan test" in ABS-CBN News, 26 March 2010. See also "Indonesian nurses struggle to pass Japanese exams", *Japan Times*, 18 June 2010.

[44] "Japanese nurses blocking skilled help from overseas", *Japan Times*, 1 September 2008.

policy and greater competition, to protect the jobs and wages of its Japanese workers in the midst of a stagnant economy. The unions are important backers of the ruling DPJ and the parochial interests of these unions will therefore not be ignored. Japanese workers have the vote; foreign workers do not. The electoral logic is that Japanese interest groups and workers are unlikely to support any political parties which advocate mass immigration and threaten their socio-economic interests.[45] A consequence of this electoral logic is that the country's ageing problem will not be solved even though all workers too will eventually face the problems of retirement, pension funds, and ageing.

The Western media has also reported on a dark side of certain Japanese industries which exploit cheap foreign labour. Apparently, at least 190,000 migrant workers under the auspices of a Japanese government-approved "foreign trainee" program (which in theory provides technical training) have been exploited.[46] These migrants are from Asia in their late teens to early thirties who toil in Japanese factories and farms for low pay and long hours. The same report noted: "Critics say the foreign workers have become an exploited source of cheap labour in a country with one of the world's most rapidly ageing populations and lowest birthrates. All but closed to immigration, Japan faces an acute labour shortage, especially for jobs on hard-scrabble farms or in small, family-run factories".[47]

Conclusion

The ageing problem for Japanese state and society is a multi-faceted one with no easy choices and solutions. Unless there is a fundamental shift in gender relations (more opportunities for working women with children, and men to play a more helpful role in the household), a significant tax hike to pay for pensions, healthcare for the old, and subsidies for children (which is politically difficult to implement), and an open door policy for foreign temporary workers and wide-scale immigration of permanent residents, this ageing problem in Japan will remain unresolved. While Japan has adopted stop-gap measures like employing temporary nurses from the Philippines and Indonesia and other young Asian workers under the guise of 'technical training" under an international aid program, these are no panacea to its ageing problem. It appears that

[45] There is the tendency for workers in Japan, as in the West, to oppose immigration if it threatens to depress their wages by increasing the labour supply. Besides this economic logic, there is arguably the *sakoku* mentality which may border on xenophobia. Most workers especially those who enjoy lifetime employment (about two thirds of the workforce) consider themselves middle class but it does not mean that they are necessarily liberal in their attitudes towards mass immigration to Japan.

[46] "In Japan for training, but finding exploitation", *International Herald Tribune*, 21 July 2010.

[47] Ibid.

Japan is hunkering down to the loss of its number two position in the global economic pecking order as a price to pay to avoid wide scale immigration, deemed to disrupt its political, social, cultural, and ethnic harmony. Presumably, Japanese politics in the years ahead will be occasionally seared by hot button issues like pension reforms and the doubling of its consumption tax. But it is doubtful whether the ruling DPJ and the opposition parties are willing to disrupt the domestic peace and harmony by advocating wide-scale immigration which will transform mono-ethnic Japan into a multi-cultural, diverse and open society.

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Appendix One

Trends: Japan's Population, Longevity and Total Fertility Rate

Year	Population	Over 65 years	Life expectancy		TFR
	(million)	(%)	Male	Female	
1950	84.16	4.9	59.57	62.97	3.65
1960	94.30	5.7	65.32	70.19	2.00
1970	104.67	7.1	69.31	74.66	2.13
1980	117.06	9.1	73.35	78.76	1.75
1990	123.61	12.0	75.92	81.90	1.54
2000	126.93	17.3	77.72	84.60	1.36
2010	127.17	23.1	79.51	86.41	1.218
2015	125.43	26.9	80.22	87.08	1.217
2020	122.76	29.2	80.85	87.68	1.228
2025	119.27	30.5	81.39	88.19	1.234
2030	115.22	31.8	81.88	88.66	1.238
2035	110.67	33.7	82.31	89.06	1.245
2040	105.69	36.5	82.71	89.43	1.251
2045	100.44	38.2	83.05	89.77	1.256
2050	95.15	39.6	83.37	90.07	1.260
2055	89.93	40.5	83.67	90.34	1.264

Sources: Statistical Bureau, Ministry of Internal Affairs and Communications, *2008 Statistical Handbook of Japan*; *Korei shakai hakusho* [White Paper on Ageing Society] 2008 and *National Institute of Population and Social Security Research* (NIPSSR) in Japan.
Note: NIPSSR's projections are based on medium-variant fertility.

Appendix Two

Japan's Aged Dependency Ratio

Age	2000	2010	2015	2025
0-14	14.6%	13.4%	12.8%	11.6%
15-64	68.1	64.1	61.2	59.7
65+	17.4	22.5	26.0	28.7
Aged Dependency ratio	3.92	2.84	2.36	2.06

Source: National Institute of Population and Social Security Research 2002. Aged dependency ratio was tabulated by Chikako Usui, "Japan's Aging Dilemma?", in Woodrow Wilson Center, *Asia Program Special Report*, No.107, January 2003, p.17.

Appendix Three

Working population engaged in Manufacturing in G7 Countries

	Percentage
Germany (2006)	21.9%
Italy (2006)	21.0
Japan (2006)	**18.7**
France (2005)	16.6
UK (2005)	13.2
US (2006)	11.3
Canada (2006)	6.5

Source: *Sekai Kokusei Zuei 2008/ 09* (World Data Book), pp.109-111.

Appendix Four

Attitudes to a gendered society:

Husbands should work outside while wives protect the home

Countries	**Men**		**Women**	
	Yes	**No**	**Yes**	**No**
Sweden	8.9%	88.2%	4.0%	88.2%
America	21.7	76.8	18.1	81.0
Germany	24.4	73.9	14.5	85.0
Japan	50.9	46.2	39.8	56.9

Source: *2008 White Paper: Aiming to realize a society of gender cooperative participation*.

Appendix Five

Men who help: Childcare and House Work

(Hours per Day)

Countries	**Childcare (below 6 years old)**	**Housework**	**Total hours**
Canada	1.5 hours	2.4 hours	3.9 hours
Sweden	1.2	2.5	3.7
Germany	1.0	2.5	3.5
England	1.5	1.6	3.1
US	0.6	2.0	2.6
Japan	0.5	0.4	0.9

Source: *2008 White Paper: Aiming to realize a society of gender cooperative participation*.

Appendix Six

Rising Trends of Unmarried Japanese women

Age	1991	1996	2001	2005
25-29	40.2%	48.0%	54.0%	59.9%
30-34	13.9	19.7	26.6	32.6
35-39	7.5	10.0	13.8	18.6
40-44	5.8	6.7	8.6	12.2

Source: The 2005 Ministry of Public Management, Home Affairs, Post and Telecommunications National Survey in *Sogo tokei nenpo: shoko korei shakai 2009* (Annual Report of the Aging Society with Fewer Children 2009), p.21.

Appendix Seven

Total number of foreigners registered in Japan (December 2006)

Koreans	598,219	28.7%
Chinese	560,741	26.9
Brazil	312,979	15.0
Philippines	193,488	9.3
Peru	58,721	2.8
US	51,321	2.5
Others	309,450	14.8
Total	2,084,919	100.0

Source: Japan Ministry of Justice, Immigration Bureau.

Appendix Eight

Foreigners registered in Japan as percentage of total population

	Total number of foreigners	% of population
1982	802,477	0.68
1987	884,025	0.72
1992	1,281,644	1.03
1997	1,482,707	1.18
2002	1,851,758	1.45
2003	1,915,030	1.50
2004	1,973,747	1.55
2005	2,011,555	1.57
2006	2,084,919	1.63

Source: Japan Ministry of Justice, Immigration Bureau.

Problems and Implications of Korea's Ageing Population

Andrew Eungi Kim

Introduction

According to "An Aging World: 2008", a report by the National Institute on Aging (NIA), the number of people worldwide aged 65 and older was estimated at 506 million as of mid-2008; by 2040, that number will reach 1.3 billion (Kinsella and He, 2008). While the ageing of the population is a worldwide phenomenon, South Korea (henceforth Korea) is believed to be the most rapidly ageing society in the world. As of July 2008, the number of elderly reached the five million mark or 10.4 percent of the total population of 48 million and the proportion of elderly is expected to reach 20 percent by 2026. Given the seriousness of the negative economic implications of the rapidly ageing population, the problem of ageing has become a very important issue in Korea in recent years.

The problem of ageing as an issue in Korea comes rather as a surprise, because the country implemented one of the most successful family planning programs in world history from the 1960s to as late as the mid-1990s. In the 1960s, Korea's population grew at an annual rate of 2.8 percent, and until the mid-1970s, the fertility rate of Korea was above 4.5. However, the government, which launched its industrialization drive in the early 1960s, believed that the success or failure of its economic plans depended on control of the explosive population growth. In fact, the government believed that population control was a precondition of economic development. A national family planning program was thus launched and it reduced the fertility rate to below the replacement level of 2.1 by the early 1980s. The successful family planning drew much attention from the world at the time as a model for other developing countries to emulate. Now, Korea is receiving world attention as a country which is suffering from a rapid ageing of the population, which may be a side effect of the successful family planning campaign.

The ageing of the population poses many socio-economic problems, namely declining labour supply, lower labour productivity, declining savings rate, waning investment, weakened government finances, and higher public spending for the elderly, all of which can seriously undermine the country's potential for economic growth (Eun,

2008; Choi, 2004; Choi, 2005; Lee, 1999). That is why the issue has recently become an important policy agenda for the Korean government, which has been implementing various measures to address the problem, including campaigns to encourage Korean parents to have more children. The question is: What are the factors making Korea the most rapidly ageing society in the world? What are the social and economic impacts of such change? What are the implications? Despite the importance of these questions, there has been to date limited scholarly attention paid to these issues. To redress this problem, this paper examines the factors which are causing the rapid ageing of the population in Korea. In this regard, the paper discusses the country's longer life expectancy at birth and record-low fertility rate. The paper also examines the social and economic impacts of the ageing population and discusses their implications.

Korea's Ageing Population: Trends And Causes

Korea became an "ageing society" in 2000, whereby seven percent of the population comprised the elderly (those 65 years old or older). If the current population trends continue, the country will make the transition to an "aged society" in 2018, in which 14 percent of the population will consist of the elderly. Korea will then become a "super-aged society" by 2026, when the elderly will make up 20 percent of the population. Other forecasts are as startling: the ratio of the elderly in the total population in Korea is expected to rise to 15.7 percent in 2020, 24.1 percent in 2030, 32.0 percent in 2040, and 37.3 percent in 2050, the highest in the world (*Korea Times,* 2005).[1] What is remarkable about the Korean situation is that while economically advanced nations took decades to shift from an ageing society to an aged society, it will take Korea only 18 years to make the transition. It took France 115 years (1864-1979) to make the transition, Sweden 85 years (1887-1972), and England 45 years (1930-1975) (see Table 1).

	Percentage of Population 65 Years Old and Over			Years Took for Transitions	
	7%	14%	20%	7% to 14%	14% to 20%
Korea	2000	2019	2026	18	8
Japan	1970	1994	2006	24	12
Germany	1932	1972	2012	40	40
Italy	1927	1988	2007	61	19
USA	1942	2013	2028	71	15
Sweden	1887	1972	2012	85	40
France	1864	1979	2020	115	41

Table 1: Aging of the Population: International Comparison.
Source: (Choi, 2004:87).

[1] According to the United Nations, by 2050 the ratio of the elderly population in Japan, which currently has the highest ratio in the world, will fall to the second highest level in the world with 36.5 per cent in 2050, followed by Spain (35 percent), Italy (34.4 percent) and the Netherlands (33.2 percent).

Korea's 18-year mark will break the world record of 26 years held by Japan (1970-1996). Also, Korea is expected to take just eight years to make a transition from an aged society to a super-aged society, again beating the world record set by the Japanese, which took 12 years to make the transition. All of these point to the fact that Korea is now one of the most rapidly ageing societies in the world, if not the most rapidly ageing. In fact, the country is reportedly edging toward an "aged society" at a rate nearly twice as fast as the global community's. And in reference to the dire economic and social impacts it will have on Korean society, demographers resort to using the term "agequake."

One noteworthy characteristic of an ageing society is that there is also a sharp increase in the "oldest olds," i.e., those aged 80 and over. Korea is no exception. If the current population trends continue, the proportion of the oldest olds in the total population is expected to rise from the current 1.9 percent to 5.3 percent in 2030 and 14.5 percent in 2050 (Eun, 2008:10). It goes without saying that such a change will entail exorbitant costs in medical care and other support programs for the elderly. The rapid ageing of the population compounded by the rising number of the oldest olds further means that the median age of the Korean population will increase sharply. In 1960, that figure was just 19 years, but it will double to 38 years in 2010. The median age of the Korean population in the near future looks very worrisome: it is expected to reach 43.8 years in 2020, 49 years in 2030, 53.4 years in 2040, and 56.7 years in 2050 (See Table 2; Eun, 2008:10). It is not far-fetched to say that by 2050, those who are regarded as young will be in their 40s and 50s. Another way of gauging the rapid ageing of Korea is to look at the trend of the ageing index, which is the number of elderly per 100 individuals aged 14 or younger. The ageing index in 2009 was 63.5, going over the 60 mark for the first time. The 2009 figure represents nearly an eight-fold increase from the 1955 figure of 8. The ageing index in 2010 will be 67.7, but will rise to 125.9 in 2020, 213.8 in 2030, 314.8 in 2040, and 429.3 in 2050.

	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050
Total-age dependency ratio	82.6	83.9	60.7	44.3	39.5	37.2	38.9	55.4	74.7	88.8
Child dependency ratio	77.3	78.2	54.6	36.9	29.4	22.2	17.2	17.7	18.0	16.8
Elderly dependency ratio	5.3	5.7	6.1	7.4	10.1	15.0	21.7	37.7	56.7	72.0
Aging index	6.9	7.2	11.2	20.0	34.3	67.7	125.9	213.8	314.8	429.3
Median age	19.0	18.5	21.8	27.0	31.8	38.0	43.8	49.0	53.4	56.7

Table 2. Median Age and Aging Index in Korea, 1960-2050.
Source: Korea National Statistical Office (Cited from Eun, 2008:11).

The reasons for the rapid ageing of the Korean population are the country's increasing life expectancy at birth and an alarmingly low fertility rate (the number of children a woman has in her lifetime). Due to significant improvements in health care and nutrition, life expectancy at birth in Korea rose by more than ten years in the last two decades, jumping from 67.14 years in 1983 to 72.83 in 1993 and 77.46 in 2003 (see Table 3). As of 2010, life expectancy at birth in Korea stands at 79.4 years (82.5 years for females and 75.9 years for males).

	1965	1970	1975	1980	1985	1990	1996	2000	2005	2001
Overall	55.2	57.6	60.9	64.6	66.8	69.8	72.7	74.4	77.5	79.4
Male	53.5	55.9	58.2	60.7	62.7	65.7	68.7	70.5	73.9	75.9
Female	56.8	59.3	63.7	68.7	71.0	73.9	76.6	78.2	80.9	82.5

Table 3. Life Expectancy at Birth in Korea.
(Source: Korea National Statistical Office, 2010).

A more significant reason for the rapid ageing of the Korean population is a record-low fertility rate. Korea's total fertility rate was 1.08 in 2005, which was one of the lowest, if not the lowest, in the world (See Table 4). The fertility rate in Korea since then has not changed much, attaining the rate of 1.12 in 2006, 1.25 in 2007, 1.19 in 2008, and 1.15 in 2009 (See Figure 1). There are other indicators showing that Korea's fertility rate has fallen to a "dangerous" level. For example, the decline of Korea's fertility rate from 1.47 in 2000 to 1.17 in 2002 stands as the largest two-year drop on record in the world. Also, Korea took just 16 years for its fertility rate to drop from the replacement level of 2.1 in 1983—to reproduce itself, a society's women must each bear 2.1 children—to 1.42 in 1999. Other countries took much longer (e.g., Japan 30 years, Netherlands 29 years). It is believed that it is almost impossible to raise the birthrate once it falls below the 1.5 level. If the low birthrate persists, the Korea National Statistical Office (2001) expects the nation's total population to drop to 42.35 million in 2050 from the current 48 million.

	1970	1975	1980	1985	1990	1995	2000	2001	2002	2003	2004	2005
Korea	4.53	3.47	*2.83*	1.67	1.59	1.65	1.47	1.30	1.17	1.19	1.16	1.08
Japan	2.13	1.91	*1.75*	1.76	1.54	1.42	1.36	1.33	1.32	1.38	1.38	1.30
USA	2.46	1.80	*1.84*	1.84	2.08	2.02	2.13	2.03	2.01	2.07	2.07	2.00
France	2.47	1.96	*1.99*	1.83	1.78	1.71	1.88	1.84	1.89	1.89	1.90	1.90
Germany	2.03	1.48	*1.56*	1.37	1.45	1.25	1.38	1.35	1.31	1.34	1.37	1.30
U.K.	2.43	1.81	*1.89*	1.80	1.85	1.71	1.64	1.63	1.64	1.71	1.74	1.70

Table 4. Total Fertility Rate: International Comparison.
Source: UN, 2001; Population Reference Bureau, 2006).

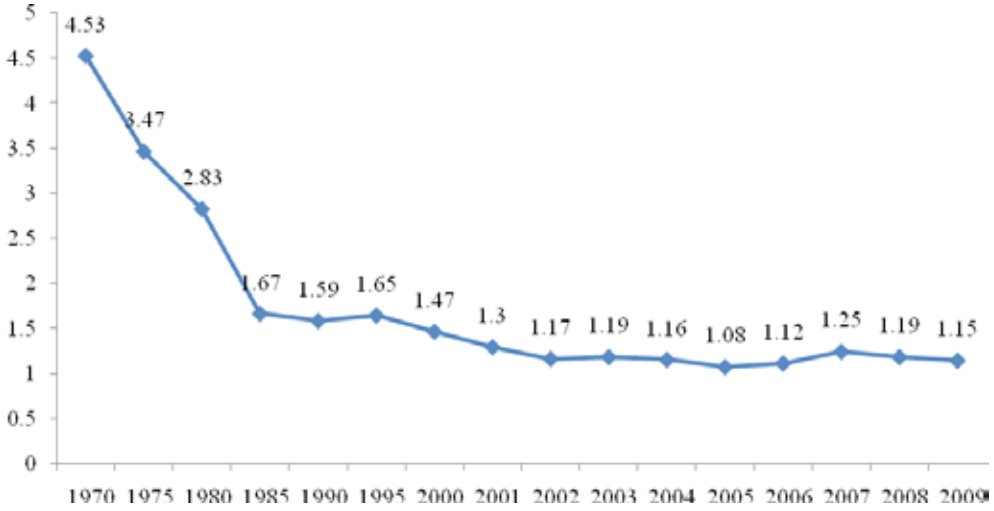

Figure 1. Fertility Rate.
(Source: Korea National Statistical Office, 2007).

As mentioned above, the key reason for Korea's rapidly ageing population is the low fertility rate and it is worth discussing here the cultural and social causes which are contributing to the record-low fertility rate in the country. First, people are getting married at an older age due to longer schooling and working. As of 2009, the age at first marriage was 31.6 for men and 28.7 for women, both of which were the highest ever. For comparison, the age at first marriage was 27.8 for men and 24.8 for women in 1990, meaning that the figure for each gender rose by nearly four years in just two decades. The age at first marriage has been rising ever since such data have been compiled since 1970. Between men and women, changes in the latter are more striking, as they have become more career-oriented and more interested in pursuing activities and goals for self-actualization. Second, a growing number of people are staying unmarried for various reasons, e.g., growing individualism, disillusionment with the institution of marriage, lack of financial resources (for example, one needs a large sum of money for a down payment on a house for either a two-year lease or purchase), etc. Accordingly, the proportion of those in their 30s who are not married increased from 13.4 percent in 2000 to 21 percent in 2005. The ratio for women nearly doubled during the same period: for 30-34 year old women, the ratio jumped from 10.5 percent to 19 percent, while there was an increase from 4.1 percent to 7.6 percent for 35-39 year old women (Korea National Statistical Office, 2009). Third, high childcare costs and the lack of affordable childcare facilities. Fourth, high education costs (Korea's per capita private spending on education is the highest in the world, higher than even the United States). Fifth, the stress of raising children, particularly due to education frenzy. Sixth, high living costs. A change in people's aspirations concerning personal financial rewards and standards

of living, which together with the cost of raising children, have made large families too expensive. A noteworthy fact about the relationship between the low fertility rate and high living costs is that Korean women with higher levels of educational attainment, hence higher socio-economic class, actually have a higher fertility rate (around 1.5 for women with college education and less than 1 for those with elementary education). This is at odds with a universal trend which shows that educational attainment is negatively correlated with fertility rate, meaning that the higher the educational attainment, the lower the fertility rate. Seventh, because of some of the problems mentioned above, namely high childcare and education costs and the stress of raising children, there has been an increase in the unwillingness of married women to have children. According to a survey by the Korea Institute for Health and Social Affairs in 2006, the proportion of married women who believe that they must have children was only 53.8 percent, a significant drop from the results of similar surveys in 1991 (90.3 percent), 1997 (73.7 percent), and 2003 (54.5 percent) (*Kukminilbo*, 2007). Eighth, high divorce rates. Korea boasts one of the world's highest divorce rates, as indicated by the following: the divorce rate jumped by 10 times in the last 30 years; and the ratio of divorces to marriages rose sharply from 11.9 percent in 1990 to 31.9 percent in 1999 and as high as 54.8 percent in 2003.

Lastly, an important factor which has contributed to the country's low fertility rate, and hence the ageing of the population, is a high rate of abortions. Because of Koreans' strong son preference, there had been a large number of sex-selective abortions, even though the practice of abortions has been made illegal. The following data (Table 5) on the sex ratio at birth (the number of male births per 100 female births) show the seriousness of sex imbalance in Korea which, in turn, indicates the extent of abortions (normal sex ratio at birth is around 105).

Year	Sex Ratio
1987	108.8
1988	113.3
1989	111.7
1990	116.5
1991	112.4
1992	113.6
1993	115.3
1994	115.2
1995	113.2
1996	111.6
1997	108.2
1998	110.1
1999	109.6
2000	110.2
2001	109.0
2002	110.0
2003	108.7
2004	108.2
2005	107.7
2006	107.4

Table 5. Sex Ratio at Birth.
Source: Korea National Statistical Office, 2007.

The data are even more startling for the birth-order-specific sex ratios: the sex ratio at birth for the family's third- and fourth-born children has hovered between 130 and 140 in Korea (see Park and Cho, 1995). It goes without saying that such skewed sex ratio at birth has been obtained through sex-selective abortions. The proportion of married women aged 20-44 years old who have had at least one induced abortion has been markedly high: 39 percent in 1976; 48 percent in 1979; 53 percent in 1985; 52 percent in 1988; 54 percent in 1991; 49 percent in 1994; 44 percent in 1997; 39 percent in 2000; and 40 percent in 2003 (Korea Institute for Health and Social Affairs, 1976-2003).[2]

If the low birthrate persists, Korea's population growth rate will be -0.02% in 2020, which will mark the first time in which the country will experience negative population growth since 1950. By 2030, the rate will fall even further to -0.25%, making Korea's rate the fourth largest population decline after Japan, Russia, and Germany. Moreover, it has been predicted that if the low birthrate persists, Korea's total population will drop from the current 48.29 million to 42.35 million in 2050. A UN report says that with the current population trends, Korea's population will drop to a mere 5 million in 2200 and could become "extinct" by 2800.

Ageing Korea: Economic And Social Problems

The rapid ageing of the population portends many economic and social problems in Korea. First, the ratio of economically active population (15-64 year olds) in Korea will soon decline. The ratio, which was 61.4 per cent in 2003, will rise to 62.7 percent in 2010 and then rise by an annual rate of 0.13 per cent to reach its peak at 64.01 percent in 2020 (Korea Labor Institute, 2005). However, the proportion of the working-age population is expected to fall thereafter to as low as 53.7 percent of the total population by 2050 (*Dongailbo*, 2005). What this presages is a declining labour supply, and hence weakening the country's potential economic growth. Assuming that Korea's economic growth potential will average 4.5 percent and that there will be an annual 1.51 percent increase in demand for labour during the next 15 years, demand will surpass supply in

[2] What all of these indicates is that the number of extra males has been accruing over the years in Korea, especially between 1988 and 1996. As a consequence, Korea is expected to face a serious "marriage squeeze", i.e., shortage of brides. For example, the sex ratio of men and women in their most "suitable" years for marriage—i.e., 26-30 year old males and 24-28 year old females—is expected to be 118.9 in 2010, 122.3 in 2011 and 2012, 120.0 in 2013, 112.0 in 2020 and 116 in 2030 (National Statistical Office, 2001). What this means is that hundreds of thousands of males in their teens and early 20s as of 2000 will not be able to find Korean wives when they reach their marrying ages, meaning that intermarriages will increase even more. And Korea is not alone when it comes to a bride shortage. Studies have found that other Asian countries with strong son preference will also face serious bride shortage. For example, China's sex ratio at birth in 2005 was 118 and it is believed that there are up to 30 million extra men in China (the number of extra males in India may be in the same range). When these males reach their marriageable age in 2020 and cannot find wives, many social problems can arise (see Hudson and Den Boer, 2005).

the labour market from about 2010, resulting in a shortage of 586,000 workers in 2015 and 1.23 million in 2020 (Korea Labor Institute, 2005). An estimate by the Bank of Korea (2006) is even higher—it forecasts that the country will face a shortage of up to 4.8 million workers in 2020.

The declining labour supply forebodes trouble for the Korean economy. Whether it is real estate or consumer spending, economic growth and population have always been closely linked. In fact, one of the biggest factors of Korea's remarkable economic development in the last forty years was a large young cohort who provided a sizeable pool of potential labourers (Lee, 1999:82-85). According to the Korea Development Institute, if Korea maintains a fertility rate of 1.19, the potential economic growth rate will drop from the current five percent to just below three percent in 2020, to 1.6 percent in 2030, and 0.7 percent in 2040 (*Shinyonggyeongje*, 2009). These figures are based on the assumption that there will be no appreciable increase in the level of productivity (in general, ageing of the population leads to the decline of both labour supply and labour productivity). So, if the ageing population is not redressed through higher birth-rate or labour importation or both, it is inevitable that Korea will enter an extended period of low economic growth. Economically advanced countries have experienced the same problem, at least temporarily, but it will be more serious for Korea because the pace at which the country is ageing is unprecedented in world history. Michio Morishima, who wrote *Why has Japan Succeeded?*, argues that the basis of any society is its population, implying that population is a key determinant of the status of the economy of a given society. Accordingly, some scholars have argued that East Asia's rapid economic development during 1965-1990 was largely due to a certain feature of the region's population structure, namely the upsurge in its working-age population (Bloom and Williamson, 1998). It is also argued that once a country enters the "aged phase", i.e., a decline in the economically active population, economic growth rates will fall. And Korea's case may be a proof of that theory.

Longer life expectancy at birth coupled with the declining number of the economically active population means that workers will be more burdened with the cost of taking care of the elderly. Indeed, if this labour shortage is not redressed through labour importation, the ratio of workers to retirees will drop from 8 per 1 in 2005 to 4 per 1 in 2020, and 1.4 in 2050 (see Figure 2). This means that the number of workers burdened with the subsidization of the welfare of each elderly will drop from eight in 2005 to practically one in 2050. This also implies that the economically active population will be required to pay more into the pension fund and yet receive less later, as there will be a significantly higher number of retirees in the future.

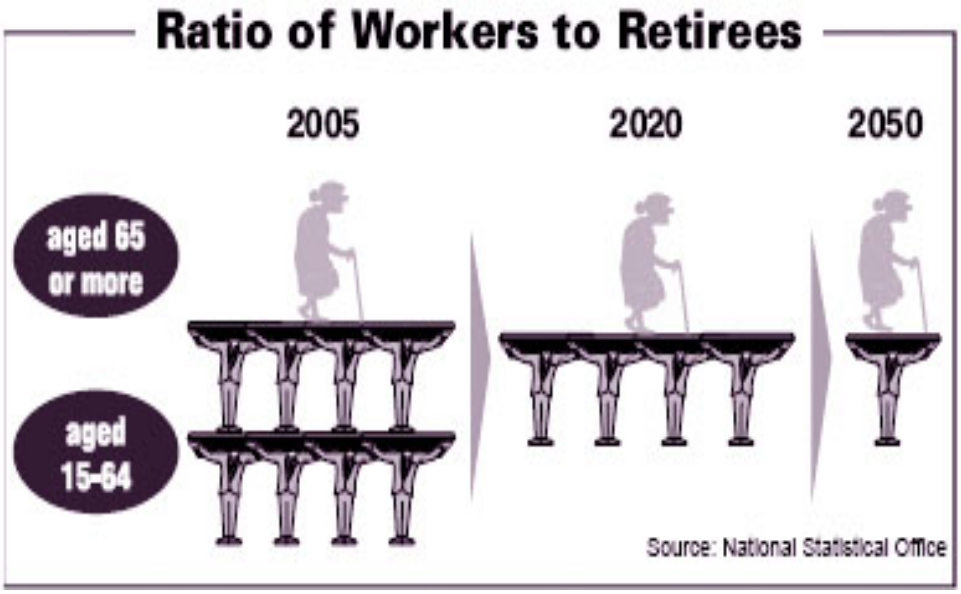

Figure 2.

In addition to acute labour shortage, the low birth-rate, which is intimately linked with the ageing population in Korea, poses other economic problems. The ageing population will lead to declining savings rate, which will mean that less capital is available for the economy. While people are working, there is a greater tendency to save money in order to prepare for old age, but the elderly tend to spend rather than save: "Overall savings tend to decrease as a society becomes older, thus contributing to a slump in investment as a result of a contraction in available resources, which in turn will dampen potential economic growth" (Choi, 2005:128). Declining tax revenues for the government is also a significant problem. The IMF estimates that for every one percent increase in the elderly population, there will be a 0.46% deterioration in fiscal balance. A growing budget for the overall welfare of the elderly involves more costs in medical care along with increasing pension payouts, which means trouble for government finances. Indeed, the government expenditure on the elderly in Korea is expected to soar from two percent of the GDP in 2002 to 8.5 percent in 2050. Regarding the pension, if the "low burden-high return" structure continues, the insurance premiums of the future working-age population will rise by 30 percent and 40 percent in 2050 and 2070, respectively (Choi, 2005:128). Also, unless pension reforms are implemented, the system is projected to incur a deficit from 2034 and be completely depleted by 2047 (Choi, 2005:131). And when government finances worsen, other economic problems arise. If public spending on the elderly increases, the only way to address this problem is to increase taxation, increase premium on medical insurance, and increase pension contributions. When this

happens, workers' motivation will seriously weaken and their spending will decline. Some may opt to migrate to countries which have lower tax rates.

With the rapid ageing of the population, another social change has been the rise in the number of the elderly poor who live alone.[3] The number of elderly-only households totalled over 830,000 in 2006, but increased to around 880,000 in 2007, 930,000 in 2008, and 980,000 in 2009 (Hangukilbo, 2010). As of July 2010, the number of elderly who live alone reached 1.04 million, marking the first time such a number totalled over the one million mark. The reason for the sharp increase in the number of such elderly households is that the rapid ageing of the population was coupled with a swift transition from extended families to nuclear families from the 1960s onwards, when Korea began undergoing rapid industrialization, modernization, and urbanization. The fact that many elderly were left behind in the countryside during these processes has also contributed to the rapid rise of elderly-only households. A major problem with these elderly who live alone is that a large number of them live under the poverty line (Park, 2003). A study by the Ministry of Health and Welfare shows that the average monthly income of the elderly who live alone was only 254,000 won or just over $200 (at an exchange rate of 1,200 won per $1US), although 24.2 percent of them earned only 100,000 won a month (Hangukilbo, 2010). Because of such economic difficulty, the study finds that more than 16 percent of these elderly still remain economically active. Actually, the elderly in general are more vulnerable to poverty than most other age groups. As is the case elsewhere, a disproportionate number of elderly in Korea live under the poverty line. As of 2008, the poverty rate of the elderly in Korea was 48.6 percent, the highest among the member countries of the Organization for Economic Cooperation and Development (OECD) (Hankyoreh, 2010).

One of the key reasons for the high poverty rate of senior citizens in Korea is the cultural norm which allows them to financially depend on their children. In Korea it is customary for parents to spend a large share of their earnings on their children without saving money for their own old age, believing that their children would financially support them after retirement. When such support cannot be secured, they are left with insufficient money to live their old age comfortably. Some resort to earning a living even after retirement by taking up menial jobs, while others have to rely solely upon their children for the rest of their lives. Another reason for the high poverty rate for the elderly in Korea is the country's relatively early retirement age. The mandatory retirement age for Korean firms is predominantly 55, the time when family expenditures can run very high, especially when their children marry. This means that Korean workers are employed for about ten years less than their counterparts in the West. This early

[3] Other changes include the increasing ratio of elderly females to males, which is due to the extended longevity of women. Also, the proportion of the elderly population in rural areas is more than twice the proportion of that in urban areas, which is a result of a massive migration of younger generations from rural areas to urban areas from the 1960s to the 1980s.

retirement coupled with limited employment opportunities for the elderly leave them vulnerable to financial instability in their late ages. Indeed, given the fact that the average retirement age of Korean employees is 53 and that the average life expectancy at birth is about 80 years, Korean elderly rely on their children financially for nearly 30 years.

Another problem facing the Korean elderly, as is the case elsewhere, is ill-health. Most of the elderly have at least one chronic condition and many are afflicted with multiple conditions. The most common ailments among the elderly include diabetes, visual impairments, hearing impairments, cardiovascular disease, and cancer, all of which are diseases that can be treated but not cured. The elderly also suffer from the so-called "diseases of old age" that usually occur only among seniors, including Alzheimer's disease and degenerative arthritis. Elderly people see physicians more frequently and spend a larger proportion of their income on prescribed drugs. Accordingly, health care expenses for the increasing elderly population have been rising steadily every year: in 2002, 19.3 percent of total health care expenditures was used for the elderly, but the rate increased to 21.3 percent in 2003, 24.4 percent in 2005, and 28.2 percent in 2007 (Korea National Statistical Office, 2008). One of the key reasons for such increases in health care expenditures is that Korean seniors consider health problems as their biggest concern. A survey of Korean elderly has shown that a higher proportion of the respondents chose health problems as their biggest concern (Korea National Statistical Office, 2007). While only about 50 percent of the respondents picked economic difficulties as their most important concern, more than 60 percent of the respondents aged between 60-69 years and more than 73 percent of those in the 70-79 and 80-89 age brackets chose health problems as the most pressing concern.

The loss of social roles at a relatively earlier age is also a problem for Korean elderly. An earlier retirement leaves them with a long period of later life without any meaningful social role. Age-appropriate roles are prescribed by social norms, but contemporary Korean society, caught in the whirlwind of rapid social change, has not been able to develop new values that redefine the roles of the elderly. Also, the extant rigid age-specific norms have hindered the development of new roles or activities for the elderly. The lack of leisure programs and activities is also a problem for Korean elderly. A majority of Korean seniors engage in such simple informal activities as watching TV, listening to the radio, doing housework, visiting friends, and playing cards or chess. Thus the loss of meaningful social roles and the difficulty in engaging in leisure activities have become major problems of ageing in Korea.

The high rates of poverty, ill-health, and profound sense of rolelessness are intimately linked to the suicide rate of the Korean elderly, highest among the OECD countries. In 2009, there were 14,579 suicides, out of which 4,614 suicides were committed by the elderly (61 years or older), representing nearly a two-fold increase from the total of 2,329 in 2000. The rate of elderly suicide has jumped more than four times

in the last ten years and has been rising steadily over the years, increasing from 4,006 in 2006 to 4,351 in 2007, and 4,365 in 2008. The 2008 figure represents a suicide rate of 112.9 per 100,000 population, more than five times the rate of 22.6 for the 20-29 age group. A comparison with the figures for the OECD countries is very revealing. The suicide rate for the 65-74 age group for the OECD countries in 2005 was 16.3 per 100,000 population; while the rate for those aged 75 or older was 19.3. For Korea, however, the rates for the same age groups were 81.8 and 160.4, respectively. The suicide rate for those aged 75 or older was thus 8.3 times higher than the OECD average and about 20 times higher than that of Ireland, a country with a similar elderly ratio in the population.

Implications Of Korea's Ageing Population

The rapid ageing of the population and its attendant socio-economic problems have many implications for Korea, which has to find the means to countervail potentially destabilizing changes. First, it has to consider ways to increase the level of the economically active population. One way to do this is to increase the economic participation rate of women, which has hovered just around 50 percent in the last decade. The relatively low economic participation rate of women with college education has been especially problematic. As of 2009, for example, only 57 percent of women with a college degree worked in Korea, while the figure for the United States was 81 percent. It also makes sense to increase productivity through improved education. Firms should actively implement various re-education programs for workers approaching the retirement age to continue working.

Extending the retirement age or getting rid of the retirement age altogether may also be a solution. This is a very sensitive issue, because there has been much greater emphasis on job creation for young adults in Korean society. Nonetheless, more attention should be paid to creating more employment opportunities for the elderly and implementing employment assistance for them.

Another way to address the problem of declining labour supply is to import more foreign labourers. Labour importation, which to date has been largely prompted by Koreans' aversion to low-paying manual jobs, will be needed due to an actual labour shortage (Kim, 2004; Seol, 1999; Lee, 1997). As Korea increasingly shifts to a service economy, the need for migrant workers is likely to actually increase, as evidenced by the patterns set by the West. It is not too far-fetched to argue that the continuing shortage will galvanize the Korean government to grant permanent resident status to migrant workers to secure a stable supply of (cheap) labour and to even bring in immigrants in the near future. And the availability of a large pool of migrants—due to the continuing wage differentials and differences in living standards among developed and developing countries as well as other push and pull factors—coupled with the Korean

government's wish to mobilize and exploit cheap workforce from abroad will facilitate constant flows of migrants into Korea.

In addition to increasing the working population, the Korean government should direct more resources for expanding social services for the elderly, meaning that it needs to earmark more of its budget for them. Until now, government support for the elderly has remained at a negligible level, but for the wellbeing of the elderly, guaranteeing them enough income for their basic livelihood is a minimal condition. However, the government has not been able, and has not had the will, to find a budget for this, because it has long emphasized family responsibility for supporting the elderly. It is increasingly being argued that the government should assume more responsibilities and burdens of supporting the elderly in Korea and that the family and the state should share complementary responsibility in caring for the elderly.

The government should not delay the work of pension reform. As mentioned above, the current "low cost-high return" pension system will go bankrupt in the not so distant future.

Conclusions

The ageing of the population in Korea has been explosive, to say the least, and this paper has examined various factors that are contributing to the process. The paper illuminated how the rise in life expectancy at birth, which rose by more than ten years in the last two decades, and the record-low fertility rate, which has hovered around 1.1 since 2005, has made Korea the most rapidly ageing society in the world. The rapidly ageing population poses many challenges. On a personal level, elderly Koreans have to learn to cope with their unexpectedly longer lives, prompting them to explore ways to better spend their leisure time. Because the welfare of the elderly is still largely dependent on their families, the latter are more burdened with supporting ageing parents who are living longer. As for the society, it has to find ways to cope with a rapidly declining economically active population and attendant economic problems, economically support a rapidly growing number of seniors, and spend more money on medical care for the elderly. Also, given the fact that a country's potential economic growth is largely determined by labour input, capital input, and productivity, Korea's ageing population will mean declines in all these aspects.

There are a number of measures the Korean government should urgently undertake to meet the challenges of the rapidly ageing population. First, the decline in productive labour force should be offset by increasing the number of working women, especially those with college education, and by creating more employment opportunities for the elderly. The government should also seriously consider extending the retirement age. Labour shortage can be further addressed by allowing the inflow of more migrant workers, granting permanent resident status to migrant workers to secure a stable supply of (cheap) labour, and bringing in immigrants. Second, the Korean elderly face

many difficulties, but the social welfare system for the elderly in Korea is inadequate. Needless to say, more budgets should be secured to meet their needs. And the responsibility of caring for the elderly should be shared between the family and the state. Lastly, pension reforms must be carried out to ensure the fiscal viability of the income guarantee systems.

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The Greying of Singapore's Population: Prospects and Challenges

Yap Mui Teng and Kang Soon Hock

Introduction

Singapore's population of elderly, defined as those aged 65 and older, comprised 9 percent of the total resident[1] population in mid-2010 (Singapore Department of Statistics [DOS] 2010: 4). The median age of the population was 37.4 years (ibid.). Singapore has the oldest population in Southeast Asia/the Association of Southeast Asian Nations (ASEAN) region, and is next only to Japan and Hong Kong SAR in the East Asian region (United Nations Department of Economic and Social Affairs [UNDESA] 2009: 65). Moreover, while Japan took about 26 years to double its elderly population from 7 to 14 percent of the population, the speed of ageing in Singapore is projected to be faster at only 19 years (Kinsella and Phillips 2005). According to DOS projections, about one in five of Singapore's population will be elderly in 2030, a mere two decades from now. At that time, the number of elderly is expected to reach 900,000, nearly three times its present size.

In the more developed countries, the greying of the population is putting pressure on existing social institutions. For example, many of their social security systems are under tremendous pressure as fewer contributors are expected to pay for the retirement benefits of a growing elderly population who are also living longer. Other areas of concern include healthcare costs and health services delivery (UNDESA 2002: 1). In Asia, families continue to be the main providers for their elderly relatives; however, this is increasingly being threatened as fertility levels decline and family sizes become smaller. There is nonetheless a positive side to this demographic development, particularly for the more developed Asian countries. The elderly of the future will be better educated and are expected to have more spending power than the current generation. This could translate into greater demand for goods and services catering to senior citizens (Hedrick-Wong and MasterCard 2007). This is in contrast to predictions

[1] In Singapore, the term "resident population" refers to the population of citizens and permanent residents; it excludes non-citizen, non-PR foreigners. All statistics presented in this paper pertain only to the resident population.

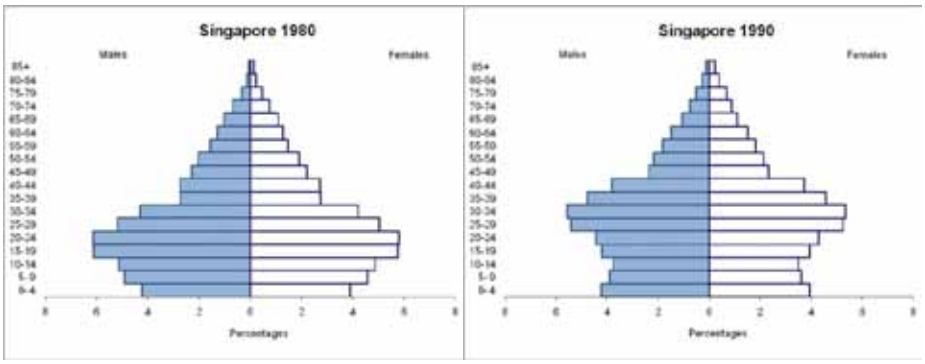
of economic decline and lower standards of living as populations age (Hagemann and Nicoletti 1989; Visco 2001).

In Singapore, the challenges and prospects of the greying of the population have been discussed extensively and acted on, particularly at the policy level. The discussion on the ageing population began officially in 1982 when the government first set up a high level inter-ministerial committee to look into "the problems of the aged". This discussion has continued over the last 30 years, with periodical reviews conducted under various inter-ministerial committees. The main policy direction adopted that has been constant throughout is that the elderly should be independent and continue living in the community for as long as possible; the family should be the first line of support; and where needed, they will be supported by services in the community. Institutionalisation should be a last resort. Singapore started planning for the greying of its population rather early, well before it became an aged population. Its accomplishments to-date remains a work in progress and can be expected to continue to evolve as the country responds to the growing numbers of elderly in the next two decades.

Singapore is now at an important turning point. The number and proportion of the elderly are projected to rise sharply in the next decades as the large cohorts of babies born in the post-World War II period are reaching old age. This essay reviews the greying of Singapore's population over the past 40 years and looks at projections into the future. It also looks at the changing profiles of the elderly and their expectations and aspirations. This is followed by a discussion of Singapore's policy response.

Population Ageing in Singapore

As elsewhere, population ageing in Singapore is influenced by changes in fertility, mortality, and migration. These processes have shaped the age-sex structure of Singapore's population, which has shifted from one of a typical pyramid to what has been called a "beehive" shape (Figure 1).



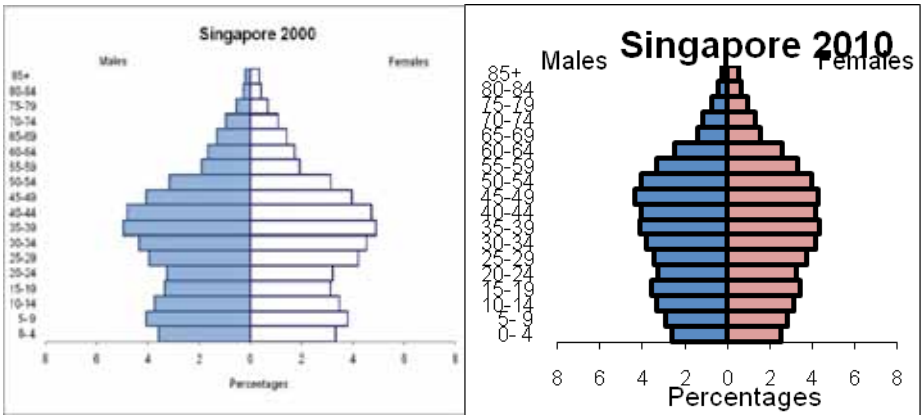


Figure 1: Age-sex Structure of the Singapore Population, 1980-2010.
Source: Report on the State of the Elderly 2009 Release 1, MCYS (based on Census 1980, 1990 and 2010), and Census of Population 2010 Advance Census Release, DOS.

Singapore's Total Fertility Rate (TFR) declined from a high of 6.56 births per woman at the peak of the post-World War II baby boom in 1957 to below 1.3 births per woman for much of the decade of the 2000s (DOS 2009: 11, National Population Secretariat [NPS] 2010; Saw 2007: 155; Yap 2009). In fact, the TFR has been below the replacement level of 2.1 births per woman since 1977. This has resulted in a decline in the proportion of the young, aged 0-14 years, while the proportion of the elderly aged 65 and older has risen (Table 1). The number and proportion of the population in the middle age band, 15-64 years, typically referred to as the working age population, has continued to grow in spite of continued below-replacement level fertility mainly as the result of immigration. A growing number of these have obtained permanent resident status and even citizenship in Singapore and are included in the resident population. This has had the effect of slowing the rate of ageing of the population. The figures presented in Table 1 further exclude a growing number of foreigners who are living, working or studying in Singapore on various work and student passes. These number 1.3 million or one quarter of the resident population in 2010. Foreigners employed on work passes form about one third of the Singapore workforce.

Age	1970	1980	1990	2000	2010
0-14	39.1	27.6	23.0	21.9	17.4
15-64	57.5	67.5	71.0	70.9	73.7
65 and Over	3.4	4.9	6.0	7.2	9.0
Total	100.0	100.0	100.0	100.0	100.0
Number ('000)	2,013.6	2,282.1	2,735.9	3,273.4	3,771.7

Table 1: Population by Broad Age Bands, 1970-2010 (%).
Source: Population Trends 2009, DOS and Census of Population 2010 Advance Census Release, DOS.

Not only has the elderly proportion grown but the elderly, as a group, are themselves getting older. The oldest-old, aged 80 and over, have become a larger proportion of the elderly population. This segment has also been growing more rapidly than the elderly population and the overall resident population, due to increased longevity. As women live longer than men, this has contributed to the feminisation of the aged population (and indeed the overall population). As will be shown below, sex ratios in the oldest age groups are skewed in favour of women. As these are also more likely to be widowed, this has implications for care arrangements (Department of Economic and Social Affairs 2009: ix).

Demographers have devised various summary indicators to describe and compare age structures of the population over time and across geographical locations. These demographic indicators for Singapore and their trends over time are examined below.

The Ageing Index refers the ratio of elderly aged 65 and over to the young aged 0-14 years. Whereas there were only 8.7 elderly per 100 youths in 1970, this figure has risen steadily to 33 in 2000 and 52 in 2010. In other words, whereas there were more than 11 children to each elderly in 1970, this ratio has declined to fewer than two per elderly in 2010. This figure may be expected to decline further as low fertility continues.

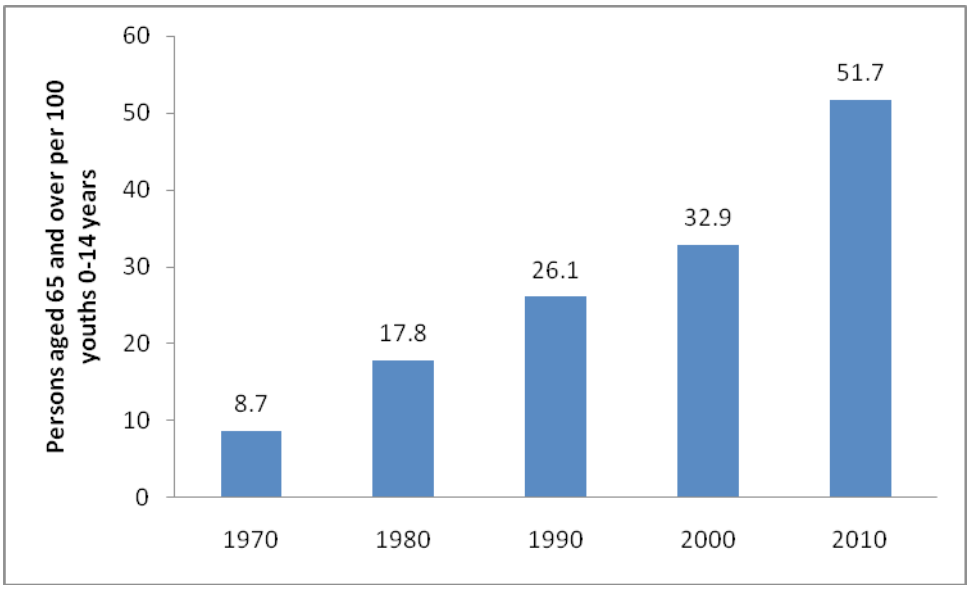


Figure 2: Ageing Index.
Source: Report on the State of the Elderly 2009 Release 1, MCYS (based on Census 1970, 1980, 1990, and 2000) and Census of Population 2010 Advance Census Release, DOS.

Changes to the dependency and support ratios further illustrate the implications of the demographic trends in Singapore. These refer to the ratios of persons in the three broad age bands shown in Table 1. Both the young and the old are assumed to be dependent even though in reality some of the young people and the elderly may be working, while

others in the working ages may in fact not work. These are different from the economic dependency ratio, which takes into consideration actual labour force participation. However, the demographic dependency ratios are less data intensive and more easily computed, and they are useful for comparative purposes.

As Table 2 shows, the Total Dependency Ratio or the ratio of both young and old to the working age population has declined from 73.9 in 1970 to 41.1 in 2000 and 35.7 in 2010. This development is a result of fertility decline and smaller numbers of babies born, and hence a lower Young Dependency Ratio. The Old Dependency Ratio, or the ratio of the old to the working age population, has been rising but this has not been large enough to offset the decline in the Young Dependency Ratio. The trends observed have also been helped by immigration which, as mentioned, added to the working age population despite the persistent low, below-replacement fertility level.

	1970	1980	1990	2000	2010
Total Dependency Ratio	73.9	48.2	40.8	41.1	35.7
Young Dependency Ratio	68.1	41.0	32.3	30.9	23.5
Old Dependency Ratio	5.9	7.3	8.5	10.1	12.2
Old-Age Support Ratio	17.0	13.8	11.8	9.9	8.2

Table 2: Dependency and Support Ratios.
Source: Report on the State of the Elderly 2009 Release 1, MCYS (based on Census 1970, 1980, 1990 and 2000) and Census of Population 2010 Advance Census Release, DOS.

The Old Age Support Ratio is the inverse of the Old Dependency Ratio. It measures the number of working age population available to support each elderly. As Table 2 also shows, this figure has fallen from 17 per elderly in 1970 to only 8 in 2010.

Going forward, the elderly population in Singapore is expected to rise sharply over the next two decades as the large post-World War II baby boom cohorts enter old age. Official projections show the proportion aged 65 and older to rise to 18.7 percent in 2030. In that year, the elderly are expected to exceed the number of the young. More importantly, the working age population is projected to decline to only about two-thirds from the current 74%. The Old Dependency Ratio is projected to reach 20.6 per 100 persons of working ages. Projections prepared by the Institute of Policy Studies (IPS) suggest that the proportion in the working ages will not return to the present level even with a very high level of net-immigration of about 100,000 annually from 2005 onwards if the TFR remains at current ultra-low levels (Yap and Shantakumar, forthcoming). A higher level of immigration reduces the Old Dependency Ratio but this could come at a cost if social cohesion is affected by the presence of an extremely large pool of foreigners in the country (Kang et al., forthcoming).

The Elderly in Singapore

The demographic trends point to a huge potential burden of support in purely numerical terms. Politically, this could portend inter-generational conflicts if more resources get allocated to the old at the expense of the young (Silverstein, Parrott, Angelelli and Cook 2000: 218-2). The outcome is likely to depend also on the characteristics of the elderly, their expectations and aspirations as well as the response made. This section examines the profile of Singapore's current and future elderly.

Current Elderly

The majority of Singapore's current elderly may be considered to be the young-old, aged below 75 years (Table 3). As to be expected, there are proportionately more women than men.

Age Group	Total	Males	Females	Sex Ratio (males per 100 females)
65 - 69	33.0	35.6	30.8	91.6
70 - 74	27.4	28.7	26.3	86.2
75 - 79	19.3	18.9	19.6	76.3
80 - 84	11.8	10.4	12.9	63.9
85 and over	8.6	6.4	10.4	49.0
Total	100.0	100.0	100.0	-
Number	338,387	149,576	188,811	79.2

Table 3: Age Composition (%) and Sex Ratios.
Source: Census of Population 2010 Advance Census Release, DOS.

Singapore's current elderly have very low educational attainment (Table 4). The General Household Survey (GHS) 2005, Singapore's mid-decade mini-census, showed that more than four-fifths had below secondary education, far higher than the proportion in the general resident population. Many of these elderly, particularly the very old, had been economic migrants in their younger years seeking a better life for themselves and their poverty-stricken families back in their homeland or were brought to Singapore as indentured labour to work on infrastructure development in the island.

Age Group	Total	Below Secondary	Secondary	Post Secondary	University
65 and Over	100.0	85.8	6.9	5.0	2.3
65 - 69	100.0	79.8	9.5	7.4	3.3
70 - 74	100.0	87.4	5.9	4.4	2.2
75 and Over	100.0	90.7	4.9	3.1	1.4

Table 4: Educational Attainment by Age (%).
Source: Report on the State of the Elderly 2009, MCYS (based on General Household Survey 2005, DOS).
Note: Data refer to non-student residents only.

As well, there are gender differences in educational attainment that could affect their respective need for support. Ninety percent of female elderly in the GHS 2005 reported below secondary qualifications compared to 80 percent of males. Correspondingly, only minuscule proportions of elderly females reported secondary or higher educational attainment. These differences are likely to have had an impact on their life-time employment and earnings. In particular, this also means that females are less likely to have savings for retirement as compared to their male counterparts. This difference is especially significant in Singapore where the main formal institution for old age financial security is mandatory saving under the Central Provident Fund scheme.

In terms of their family status, almost all of Singapore's current elderly have ever married (Table 5). This has implications for old age support, in particular the availability of family members as informal caregivers and providers. While the majority of elderly males are likely to have a surviving spouse to act as caregiver, the majority of elderly females are widowed. Widowhood is especially prevalent among the oldest females who are also more likely to require care and support because of their poorer health and financial status (see MCYS 2006).

Age Group	Total	Single	Married	Widowed	Divorced/ Separated
65 & Over	100.0	3.9	60.1	33.8	2.2
65 – 69	100.0	5.3	72.8	19.0	2.9
70 – 74	100.0	3.9	62.7	31.0	2.4
75 & Over	100.0	2.4	45.6	50.6	1.4

Table 5: Marital Status by Age (%).
Source: Report on the State of the Elderly 2009, MCYS (based on General Household Survey 2005, DOS).

Marital status also correlates strongly with the availability of children as caregivers and providers as childbearing typically takes within the context of marriage in Singapore. Singapore's current elderly are fortunate in this respect. Almost all of the current elderly ever-married women have had at least one child, and in fact, nearly half have had

five or more (Table 6). Indeed children are an important source of financial support for Singapore's current elderly (Table 7).

Age Group	Total	0	1	2	3	4	5 or More
15 and Over	100.0	11.7	18.0	32.9	20.2	7.8	9.4
65 and Over	100.0	1.9	7.0	12.9	16.1	15.7	46.4
65-69	100.0	2.5	7.9	17.2	21.9	18.9	31.6
70 and Over	100.0	1.6	6.5	10.8	13.1	14.1	54.0

Table 6: Number of Children Born by Age (%).
Source: Report on the State of the Elderly 2009, MCYS (based on General Household Survey 2005 Release 1, DOS).
Note: Figures are for ever-married women only.

	65-74 years	75 years & Older
1995		
Total	100.0	100.0
Children	79.0	85.7
Salaries/ Business Income	13.5	3.9
Spouse	1.8	0.9
Others	5.8	9.5
2005		
Total	100.0	100.0
Children	55.8	63.7
Salaries/ Business Income	12.7	3.7
Spouse	4.1	1.6
Personal savings	15.0	10.7
CPF	3.7	1.8
Pension	2.0	2.7
Others	6.7	15.8

Table 7: Main Sources of Financial Support by Age (%).
Source: Report on the State of the Elderly 2009 Release 2, MCYS (based on National Survey of Senior Citizens 2005, MCYS)

Most of Singapore's elderly, moreover, live with their children, with or without their own spouses (Table 8). Although co-residence with children appears to be declining, this proportion remained at nearly 70% in 2005.

Person(s) Elderly Living with	2000	2005
Total	100.0	100.0
Spouse only	13.9	17.4
Spouse and children	36.5	34.9
Children only	37.2	34.5
Alone	6.6	7.7
Other elderly persons	1.2	1.3
Others	4.5	4.1

Table 8: Living Arrangements of Elderly (%).
Source: General Household Survey 2005 Release 2, DOS.

Further insight into the living arrangement of Singapore's elderly may be gleaned from Sample Household Surveys conducted by Singapore's public housing authority, the Housing and Development Board (HDB), which houses more than 80% of the population. As Table 9 shows, the elderly are more likely to be living with their unmarried than married children—in 2008, 68 percent lived with their spouse and/or unmarried children and 14 percent with a married son or daughter. Among those not co-residing with their married children, most had a married child living close by—next door, in the same block, in the same estate or in a nearby estate—in what is known as an "intimacy at a distance" arrangement (Table 10). As Knodel and his colleagues have noted, elderly parents who live in close proximity to their children are more likely to receive material support from their children than those who were not in close proximity (Knodel, Chayovan and Siriboon 1996: 448). Indeed, Singapore's seniors have a healthy relationship with their children, including having meals together, spending leisure time together and providing care services (MCYS 2010).

		1998	2003	2008
Live with Spouse and/or Unmarried Children		74.1	73.3	68.1
Live with Spouse and/or Unmarried Children and Parents and/or Parents-in-law		2.0	5.2	1.4
Live with Married Children		12.7	5.0	13.8
Live Alone		7.9	11.3	10.3
Other Living Arrangements (e.g. with Companion / Friend/ Relatives)		3.3	5.2	6.4
Total	%	100.0	100.0	100.0
	N	138,460	132,094*	172,040*

Table 9: Living Arrangements among Older HDB Residents* (%).
Source: HDB Sample Household Survey 2008, HDB.
*Excludes non-response rate.
*Data are for HDB residents aged 55 and above who have married children.

Location		1998	2003	2008
In the Same Flat		13.8	9.4	14.3
Next Door		1.4	1.9	1.0
In the Same Block		3.1	2.9	2.8
In a Nearby Block		11.3	14.1	12.5
In the Same Estate		10.0	14.3	12.1
In a Nearby Estate		26.1	21.5	20.1
Elsewhere in Singapore		34.3	35.8	36.7
Short-term Stay-in with Children		-	0.1	0.5
No Preference		-	-	-
Total	%	100.0	100.0	100.0
	N	138,460	128,845*	166,355*

Table 10: Physical Location of Nearest Married Child of Older HDB Residents*
Source: HDB Sample Household Survey 2008, HDB.
*Excludes non-response rate.
*Data are for HDB residents aged 55 and above who have married children.

Baby Boomers

The oldest of the baby boomers will soon be joining the ranks of the elderly in 2012 when they reach age 65. By 2030, all of the baby boomers would have reached old age. In light of their numbers, the baby boomer cohort of elderly could have a powerful impact on how the government deals with population ageing issues. They are also expected to be more vocal in expressing their views and wishes.

As with the current generation of the elderly, the baby boomers are not homogenous[2]. There are differences between early and late baby boomers in terms of educational attainment, with the late baby boomers being better educated compared to the early baby boomers. Gender differences remain, although narrowing, and these have implications with regard to their retirement expectations, desired living arrangements, and expectations of support. Males in the baby boomer generation continue to be better educated and are more likely to have been employed in comparison with their female counterparts. They are also more likely to have their own income in their old age. Whereas females expect to rely on their children and siblings, males are significantly less likely to rely on their family members for support. Males are more likely to expect physical care from their children while females are more reliant on children for financial support.

[2] This section draws heavily on Chan and Yap (2009).

The baby boomers are different from the current elderly in their expectations and preferences for their future living arrangements. Overall, they have a higher preference for independent living together with their spouse; they are also less averse to living in retirement villages and nursing homes, with 25 percent of respondents from the study indicating this preference.

Policy Response

As noted earlier, the Singapore government has taken a proactive stance on the ageing of the population. As early as in 1982, the government had convened the Committee on the Problems of the Aged chaired by the then Health Minister, Howe Yoon Chong, to study the effects of population ageing in Singapore. While the public reaction to the report was highly negative owing to its recommendation to raise the withdrawal age for Central Provident Fund savings, many of its recommendations continued to be studied in subsequent committees set up to examine the issues concerning an ageing population. The latter included the Advisory Council on the Aged (1988-1989), the National Advisory Council on the Family and the Aged (NACFA) (1989-1998), and the Inter-Ministerial Committee on the Ageing Population (first set up in 1998 and reconstituted in 2003) and the Committee on Ageing Issues (2004-2006). Separately, an Inter-Ministerial Committee on Health Care for the Elderly (IMCHCE) was convened in 1997 to examine the possible demands placed on the healthcare system in Singapore and its affordability.

Notably, the approach taken has shifted from one of seeing the ageing population as a "problem" to one of challenges and opportunities. The IMC on the Ageing Population proposed that the Successful Ageing framework be adopted. Under this framework, senior citizens are viewed as healthy, active, financially secure, and independent people who are an integral part of their extended families and communities, maintaining a supportive and mutually interdependent relationship with them. The ultimate goal is to foster an inclusive, cohesive, and economically vibrant society with strong intergenerational bonds (Balakrishnan 2005).

Numerous measures have been put in place in line with these objectives. At the individual level, Singaporeans, including the elderly, are encouraged to remain healthy. The elderly have access to subsidised health checks which are made available at the community level. They are also encouraged to remain active, including delaying retirement and participating in familial and other activities. At the familial level, families are incentivised to live in close proximity (though not necessarily in the same residential unit) through grants and public housing policies. Tax payers are granted income tax reliefs for parents, with a higher amount granted to those who are co-residing with their parents than those who are not living together. Parents aged 60 and older who have been neglected financially may resort to the Maintenance of Parents Tribunal to seek support from their children. To promote community services for both the frail and well

elderly, the government has set up funds to support voluntary organisations and groups. These include the Eldercare Fund and the Golden Opportunities! (GO!) Fund. The government also co-funds the development costs of new voluntary welfare organisations. The "many helping hands" approach is adopted in line with the government's overall stance on not becoming a welfare state.

Currently, the Ministerial Committee on Ageing (MCA), a high-level committee comprising of government ministers, oversees the implementation of policies and programmes on ageing. The terms of reference of the MCA are to provide strategic and policy directions to meet the challenges resulting from the ageing of the population and where possible, to seize the opportunities presented by this demographic phenomenon (MCYS 2007). This committee also continues the work of implementing the vision of Successful Ageing. More specifically, the MCA focuses on the following:

(a) Improving employment and financial security.

(b) Enabling ageing-in-place.

(c) Providing holistic and affordable healthcare and eldercare.

(d) Promoting active ageing.

In the area of financial independence for the elderly, the government strongly believes that one way of achieving this is by ensuring that the elderly continue to be active members of the labour force. Further, this is also beneficial to the Singapore economy as the country faces a labour shortage with the declining number of domestic labour force entrants (Gan 2010). Under the proposed re-employment legislation that will come into effect in 2012, employers are obliged to offer their retiring workers re-employment until age 65 in the first instance, and possibly until age 67 in the future (MOM 2010). To support this, the government has already looked into ways to assist employers and employees in their transition by providing guidelines on planning and preparation of re-employment and the re-employment contract. In instances where older workers cannot be rehired, an Employment Assistance Payment (EAP) has been proposed that would pay the affected employee three months' worth of their salary. For the lower 25 percentile of workers this would work out to S$4,500 and S$10,000 for 60 percent of the resident workforce (Gan 2010).

Apart from this, moves have been made to encourage the low-wage older workers to continue to work and to improve their productivity through training (Gan 2010). For the former, this has taken the form of the Workfare Income Supplement (WIS) scheme. The scheme acknowledges that older low-wage workers are more prone to wage stagnation. The WIS has been enhanced recently to provide more cash income to the elderly and to put more money for contribution into their CPF accounts. To complement the WIS scheme, the Workfare Training Scheme, a 3-year training programme, has been introduced. The scheme encourages employers to send their older workers for retrain-

ing by making available a grant to subsidise costs. Older employees are incentivised to attain a targeted level of training and competency.

An annuity scheme, CPF LIFE, has also been introduced (CPFB 2010). This scheme would provide elderly CPF members with a monthly payment for life from their drawdown age, currently at 62, which would eventually rise to 65. By 2013, all CPF members aged 55 with S$40,000 in their retirement account would be automatically enrolled in the scheme. This scheme would complement the re-employment legislation for older workers as part of the government's strategy to ensure that the elderly will be provided for in a sustainable manner as they age.

For those elderly who may have insufficient savings in their CPF funds, in particular the older women who may not have been employed, there is an alternative way to join the CPF LIFE scheme by monetising the remaining lease on their public housing flat (HDB 2010). This capitalises on the high homeownership rate in Singapore and the fact that the majority of Singapore's senior citizen are homeowners, either on their own or jointly with their spouse. The scheme will enable participants to continue to live in their own home and familiar surroundings. Originally meant only for the low-income elderly who own 2-3 room public flats, this scheme is now expanded to include those elderly who have previously owned four-room or bigger apartments (Ibid.).

With regard to healthcare, as the baby boomers join the ranks of the elderly, the growing numbers will increase the need for services even as they are expected to live longer and healthier lives. Another important area of concern is the prevalence of dementia among the elderly population as the old live longer (MOH 2010). Aside from caring for age-related conditions and ensuring the efficient functioning of the healthcare system, another area of concern is healthcare cost and ways of financing this. The current healthcare system has undergone a major revamp in the area of intermediate and long-term care with the setting up of the Integrated Care Services that was later renamed as the Agency for Integrated Care (MOH 2008). Staying healthy through exercises and physical activity and remaining socially engaged is another aspect of ageing that is being promoted with the establishment of the Wellness Programme led by the People's Association.

An important aspect of the Committee on Ageing Issues was the recommendations to encourage ageing-in-place. A number of measures have been introduced as a result of these recommendations. For example, the Housing and Development Board (HDB) has introduced Universal Design features in their new housing projects since 2006. These include locating power sockets and switches at heights accessible to the wheelchair bound and wider internal corridors for wheelchair access as well as setting aside space within the apartment for future accessibility needs of the residents for example grab bars. Further, to aid ageing-in-place, support services have been located in the community to serve the elderly. These include the provision of day-care centres for the elderly and senior activity centres as well as home help services to name but a

few services available to the elderly in the community. To ensure that the elderly living in the community are not isolated, the public transport providers have taken steps to ensure that new public buses are elder-friendly in particular, being low-floor, step free and wheelchair accessible.

The government has also looked into measures to introduce and encourage the concept of active ageing among the elderly in Singapore. One of the major initiatives in line with the recommendations from the Committee on Ageing Issues was the setting up of the Council for Third Age (C3A) in 2007. C3A is responsible for public education and outreach with regard to active ageing. More importantly, it is also responsible for the administering of the Golden Opportunities! (GO!) Fund. The fund provides seed money for projects that encourage active ageing among the elderly for example, creating opportunities for volunteerism among the elderly or provide opportunities for them to broaden their social networks.

One of the immediate prospects present as baby boomers join the 65-and-over population is that there would be more opportunities for businesses. The MasterCard study mentioned earlier estimated that the elderly market in Singapore would grow from US$3.6 billion in 2005 to US$10.5 billion by 2015 in constant 2005 dollars (Hedrick-Wong and MasterCard 2007: 86).

When baby boomers were queried about the types of products and services they would be ready to pay for, senior leisure activities, senior-only travel and senior learning programmes were the most frequently cited (Chan and Yap 2009: 84-85). Nonetheless, it was observed that issues of high cost of services may hamper the opportunities in this sector and should be an important consideration for businesses looking to venture into the sector. In 2008, the Silver Industry Conference and Exhibition (SICEX) on the business opportunities in the ageing industry was co-organised by the government and stakeholders and subsequently, an annual industry fair, the 50+ Expo, has been organised by the Council for Third Age to promote knowledge and awareness of opportunities in available to the silver industry.

With better education, the baby boomer generation may be more vocal on elderly-related issues such as healthcare and financial spending especially given their numbers (Shantakumar 1999: 54-56). Research elsewhere has shown that the elderly as a unified group have a large enough political clout as interest groups (Pratt 1993). In Singapore, this hit home most recently in the aftermath of the collapse of Lehman Brothers financial services company, as many elderly investors who had been affected proceeded to organise themselves into groups seeking compensation from that banks that had sold them the mini-bonds involved (Toh 2008). It is pertinent for the government to consider ways of engaging the coming elderly cohorts through public consultations on issues. Aside from traditional avenues, policy makers and other stakeholders should also consider providing alternative ways of engaging this group and tapping onto their experiences and suggestions.

The schemes presented above are but some of the more recent improvements made to existing programmes that cater to the elderly population in Singapore. These programmes serve one main purpose, that is, to work towards the goal of Successful Ageing as outlined by the Inter-Ministerial Committee on the Ageing Population. More importantly, as pointed out earlier, many of the guiding principles first espoused in the first high-level committee to look into addressing the issues of a rapid ageing population continue to be relevant. Further, over a brief span of three decades, the Singapore government has managed to pick and put in place a concrete plan of action to address the issues concerning population ageing in Singapore. Nonetheless, it should also be noted that over this period, the government stance has remained constant. It maintains that the family is the primary source of support for the elderly and individual self-reliance is important. The community would support the individual if the need arises, with the government as the last resort if the individual and community are unable to assist—more commonly known as the "many helping hands" approach (Mehta 2002).

Conclusion

The greying of the Singapore population is an irrefutable fact. Based on current population estimates, the percentage of elderly in the current population has surpassed the United Nations guidelines with regard to its definition of an aged country (Tay 2003). It is very likely that given further advances in healthcare, even more would live to very old ages. The elderly population of Singapore is not homogenous, as this essay has shown; this is also observed in the coming elderly cohort from the baby boomer generation, those born in 1947 to 1964. This cohort of elderly will be better educated and more vocal compared with the current elderly cohort. Nonetheless, gender differences in terms of educational attainment and labour force participation continue to be observed, although the gaps in these areas are narrowing.

The Singapore government has put in place a comprehensive framework on Successful Ageing that seeks to address the three key areas that have an influence on the ageing population, namely, finance, participation, and health. This policy development has taken place over a span of three decades. A key component in the policy machinery addressing issues concerning population ageing has been the "many helping hands" approach adopted by the government as it works to deal with the challenges of population ageing. This strategy places the family at the centre of the support framework, supported by community and government in varying degrees. The government's primary role in this arrangement centres more on working towards improving the current system to ensure that the support framework assists both the community and the individual/family to cope with the demands of a growing elderly population. This is best seen in the recent measures that have been put into place, which are in line with this philosophy, such as CPF LIFE and the lease buy back scheme to name but a few of the new measures that have been implemented in light of this demographic phenomenon.

Looking ahead into the future, the constantly changing demographic profile of the elderly population in Singapore suggests that we would continue to see many more changes to the policy strategies with regard to the ageing population. However, it is unlikely that the key strategy of relying on the family would diminish. In fact, one possible scenario may be that the government may put in greater efforts to strengthen existing social institutions in the community to further assist the family in the future.

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Consequences of the Demographic Change in Germany

Margret Karsch and Iris Hoßmann

As the population of the Federal Republic of Germany declines, the average age of the Germans increases and more and more people with migration background shape the streetscape. The perception that the structure of the population is significantly changing has long ago left the study rooms of the scientific research centres. The triad "less, older, colourful" has reached a broad public through the media. The evolution has its good and bad sides and both deserve attention. Even more: The demographic evolutions not only require—as do all social changes—ideas and concepts as to how best to deal with them, but also fast and at the same time farsighted actions, since the observations point out grievances and deficiencies which need to be resolved, as well as positives and potentials that should be exploited.

The findings are however very different on a regional level. "Less, older, colourful" applies indeed at federal level, but not in equal measure at federal state level or local level. Hoyerswerda for instance has lost one-third of its population since reunification until 2006; Erding, near Munich, has in contrast increased its population in similar proportions. Women in the area of Fürstenfeldbrück lived seven years longer than in Palatine Pirmasens; men in the area of Starnberg lived eight years longer than in Demmin, Mecklenburg.[1] Different tasks arise here at regional level. The approaches on solving these tasks are therefore varied. The target to maximise living standards and satisfaction for all members of society can only be achieved with different specifications, not only because the needs of each citizen vary from another, but also because every region possesses its own history and develops individually, and cannot be lumped together in a Federal Republic manner. Nevertheless, the Federal Republic has to guarantee basic supply and care.

Thus, what is the triad "Less, older, colourful" based on, which is so often used to summarise the demographic change? Which demographic evolutions on regional level lie behind this triad and which political approaches could contribute to overcome the various associated difficulties and to capitalise on the opportunities?

[1] Cp. Steffen Kröhnert / Franziska Medicus / Reiner Klingholz: The demographic situation of the nation. How sustainable are Germany's regions? Published by: Berlin-Institute for population and research. 3rd Edit., Munich 2007 (2006). p. 9.

Less Potential Parents, Less Children

Even until a few years ago the population figures of Germany was continuously growing.[2] In 2003 about 82.4 million people lived in this country. But the number has since decreased, until 2008 to about 82 million people. The official predictions assume a further shrinking of population, which will eventually speed up due to the decreasing number of potential parents.

The model of the "medium" population threshold of the 12th coordinated population projection concludes that by the year 2050 approximately 12.6 million less people will live in Germany compared to the base year 2008.

This prediction is based on the assumption of an average 1.4 child per woman, a continuous increase in life expectancy as well as a yearly positive migration balance of 100,000 from 2014 onwards. The total fertility rate (TFR) per woman used for this calculation indicates how many children each woman would deliver throughout her life, if the fertility of women from all age groups remains as it was in the base year. In order for a population to remain the same—without immigration and migration and steady life expectancy—the TFR must be at the level of 2.13 (not only at exactly two children, as not all newborn reach the childbearing age).

If we first of all consider only the natural evolution of the population, therefore the birth and death rates, the population decline is due to the lower birth rates. In comparison to the 1960s and 1970s these rates are on a very low level: In 1960 about 1,261,600 children were born, in 2007 it was only about 684,900. This figure represents, indeed for the first time since 1997, a very slight increase of 12,000 births compared to the previous year, but should not be overrated. The present result of 651,000 births for 2009 stands once again below. A change in this trend is not to be expected as the number of potential mothers, i.e., women of childbearing age (the statistic of all 15-44 years old applies), does not reach the level of the 1960s and 1970s. This could be compensated by a higher number of children per woman— this rate however has been consistently low for the past 35 years.

The reason for the decline in births in the past was mainly due to a change in values—towards more individual freedom and self-determination, especially in sexuality. There has been previous periods of decreasing births rates, for instance at the end of the 19th century, when the infant mortality rate dropped and less births resulted therefore in the same number of children. Another factor is that through industrialisation, the differentiation between work in the public or private sector as well as the development of social security systems, children were reckoned to be of less economic value, as their role in contributing to the household and in securing pension was diminished. The two world wars and the great depression of 1930 also resulted in the fertility rate dropping.

[2] The population figures in this contribution are, unless indicated otherwise, all retrieved from the GENESIS-Online database of the German Federal Statistical office, cp. http://www.destatis.de (released on 02.06.2010).

The European-wide cultural change of the 1960s and 1970s has, on the other hand, contributed to a sudden drop in birth rates between 1964 and 1974.

Regional Differences

On a regional level however, differences remain existent, especially between rural areas and cities: The districts of Vechta and Cloppenburg register a continuous surplus of births. Between 1989 and 1999 the birth rates actually increased. The reason for this increase is, besides traditionally high numbers of children on-site, the influx of ethnic German immigrants that disproportionately live in Niedersachsen in these two districts and had above-average numbers of children.[3] In the district of Vechta the average fertility rate per woman was 1.57 in 2008, and in Cloppenburg 1.66. Demmin in Mecklenburg-Vorpommern even registered a rate of 1.70 and replaced Cloppenburg as the nationwide leader.

Until reunification the average fertility rate per woman was higher in East Germany than in West Germany. The change of system however had the fertility rate in the East drop and with 0.77 children per woman in 1994, it reached an all-time low in Germany. The fertility rate then increased again, while slowly dropping in the West. Considering the data of 2008 for the districts and urban cities of Germany, the separation of the country for decades is no longer visible with regard to the average fertility rate per woman: In many West German rural districts the fertility rate has adjusted to average or below average levels, whereas most East German rural districts have caught up. The fact that fertility rates are adjusting between cities and countryside as well as between East and West generally indicate that the improved education of women and their increased professional occupation are progressively changing the perception of family.[4]

However, the mothers in the West are often older than in the East. Births by teenage mothers for instance have increased in the East since reunification, with a level of about six percent. In some economic problem areas of West Germany, this percentage is of similar level; in the average of the Federal Republic of Germany however, it represents only three percent. The number of women becoming mothers between the age of 35 and 39 is in comparison much higher in the West than in the East. Major cities and wealthy regions with a high level of education of women are here on top—in Hamburg and Munich more than one-fifth of the newborns have a mother who is older than 34

[3] Cp. Marie-Luise Glander / Iris Hobmann: Country with perspective. What can be learned from the economic and demographic success of the Oldenburger Münsterland. Published by: Berlin-Institute for population and research. Berlin 2009. p.7.

[4] Steffen Kröhnert / Iris Hoßmann / Reiner Klingholz: Small successes. Even if there was less births in Germany in 2008: The people are getting more children again - especially in East Germany. Published by: Berlin-Institute for population and research. Berlin 2009. p. 4ff.

years. In Potsdam, Dresden, and Berlin this trend is also observable. In the Bavarian city of Starnberg, every third child is already delivered by a mother in her mid- to end thirties; in Frankfurt/Oder in contrast, only every eleventh child.[5]

The number of children does not always corresponds to the number of children wished for by women and men, and childlessness is not always the result of an intentional decision.[6] Apart from medical reasons different factors of one's personal situation play a role—as well as the basic social conditions, of which the importance of children is part of. Women who live in major cities remain more often childless than their female companions in rural areas. Childlessness is highest in the city states, particularly in Hamburg. In West Germany childlessness is even more frequent the higher the level of education of women. According to the micro census, which is the largest annual household survey, the quota of women aged between 40 to 44 (years of births 1964 to 1968) without children across Germany was 21 percent in 2008, for the ones aged 50 to 54 (years of births 1954 to 1958) 16 percent and for the age group of 60 to 64 (years of births 1944 to 1948) it was 12 percent. In the former GDR, childlessness was rare; however, it increased starting from the birth year of 1960. For the birth year of 1965, the childlessness was around 25 percent among the old federal territory and about 12 percent in the new German federal states.

There is, however, almost no difference between East and West when it comes to the desire to have children. For women it is slightly higher in the East than in the West (1.78 against 1.73) and slightly lower for men (1.46 against 1.59).

Compared to other countries, the desire for children is rather small in Germany. However, according to the Population Policy Acceptance Study in 2003, 80 percent of the interrogated aged between 20 and 38 wished to have children or already had children.[7] The fact that wish and reality in the desire to have children diverge from each other occurs however not only in Germany, but is a widespread phenomena across the whole European Union. The quota of childless women aged between 25 and 39 who wish to have a child is especially high in Italy, Greece, and Croatia.[8]

Here lies the potential margin that politics could exploit if it seeks to support its citizens to start families. The compatibility of profession and family is therefore primordial, as higher equity of men and women and the economic pressure for women to

[5] Cp. Steffen Kröhnert / Iris Hoßmann / Reiner Klingholz: Small successes. A.a.O., p. 10ff.

[6] Cp. Sabine Sütterlin / Iris Hoßmann: Unintentionally childless. What can the modern medicine contribute against the lack of children in Germany? Published by: Berlin-Institute for population and research. Berlin 2007. p. 12ff.

[7] Cp. Charlotte Höhn / Dragana Avramov / Irena Kotowka (Hg.): People, Population, Change and Policies. Lessons from the Population Policy Acceptance Study. European Studies of Population, Bd. 16/1 u. 2 Population Policy Acceptance Study. Berlin 2008.

[8] Cp. Steffen Kröhnert / Iris Hoßmann / Reiner Klingholz et al.: The demographic future of Europe. How the regions are developing. Published by: Berlin-Institute for population and research. Munich 2008. p. 239.

participate in the labour market have become increasingly self-evident. The extension of day-nursery places is therefore not enough, especially not if the German Federal Government is conducting it with very little ambition and only aims to provide a place for one-third of the children by 2013. The fiscal system and pension scheme have to be accommodate and support the model of a modern family. This in turn implies that the challenges of gender equity are fulfilled and that discussions and debates about role models takes place.

Less Immigrants, More People with Migration Background

The number of citizens of a country is not only determined by births and deaths, but also by foreign immigration—which is in decline. In the past there was more immigration than emigration, but since the first half of the 1990s the immigration growth has dropped. Since the 1970s the statistics record a deficit of births compared to deaths and since 2003 this natural negative population balance is no longer compensated by migration influx.[9]

About 6.7 million foreigners live in Germany. This equates to 8.2 percent of the population. The quotas however fluctuate heavily depending on the federal state: The highest is reflected in Hamburg with 13.2 percent, the lowest in Thüringen with 1.5 percent. More important than the nationality is the cultural background of the members of the society and their respective migration experience for coexistence in a society. In 2008, 15.6 million people with migration background lived in Germany, which is about 19 percent of the population.

These people however are not evenly spread throughout Germany, as shown by a study of the Berlin-Institute for population and research in 2009—based on the data of the micro census 2005: Hamburg and Baden-Württemberg recorded one-fourth of the population, the highest portion of people, with migration background. In West Germany, Schleswig-Holstein recorded 12 percent and is the region with the least percentage of people with migration background.

In the new federal states it is yet only 5 percent—because of the marginal and very similar history of immigration. This analysis examines Mecklenburg-Vorpommern, Sachsen-Anhalt, Brandenburg, Sachsen, and Thüringen collectively.[10]

The repartition is closely linked to different migration waves. With the exception of Berlin and Hamburg, emigrants constitute in all German federal states the largest

[9] Cp. Federal institute for demographic research: 1973 to 2008. 35 years of socio-demographic research at the BiB. A public activity report. Berlin 2009.

[10] Cp. Franziska Woellert / Steffen Kröhnert / Lilli Sippel / Reiner Klingholz: Unexploited potentials. On the situation of integration in Germany. Published by: Berlin-Institute for population and research. Berlin 2009. p. 516ff.

proportion of people with migration background. In both city states it is people of Turkish origin. Emigrants and people of Turkish origin together represent in some federal states more than 40 percent of all people with migration background—the former more frequently living in the countryside or in smaller cities than other groups of origin, the latter constitute the largest group of people with migration background in the majority of the cities. In post-war decades the Saarland attracted the most foreign workers, originating from Portugal, Spain, Italy, and Greece to work in the heavy industry. In Baden-Württemberg people with cultural roots in former Yugoslavia represent 10 percent; in Bavaria 11 percent of all people are with migration background. Emigrants from the Far East and their children very often live in Hamburg and in the new federal states—in both regions they constitute 10 percent of all people with migration background. In Hamburg the overseas port is probably the determining factor and the former GDR had brought Vietnamese workers into the country—and many of them have stayed since.

Why does it actually make sense to regard people with migration background as groups—and who should be counted as a migrant and over how many generations until he or she is effectively a German? There is a public dispute over this matter. The figures of the OECD however prove without a doubt that at least in Germany much depends on the migration background and that the number of people with migration background is more significant than the sole amount of foreigners, as both groups have to combine elements of different cultures in their life. The social background is in Germany, more than in most other OECD states, still determining the course of education.[11] The level of education determines the factors that strongly influence the integration in the society. A glance into the cultural backgrounds can thereby be helpful in taking measures to improve everybody's cohabitation. Furthermore, the integrating society has to inform itself more extensively on foreign qualifications and recognise them, as even highly qualified individuals stumble over this integration hurdle in Germany.

Besides foreign immigration the growing mobility of the Germans over the countries' borders influences the migration balance. The number of German emigrants in absolute figures has almost tripled compared to the figures of 1970. Emigration is furthermore a West German phenomenon and since the beginning of the 1990s especially young, single men are leaving the country. The number of highly qualified amongst them is greater than in the non-moving population. The consequence of this is: The already perceptible lack of skilled personnel will be further aggravated if Germany does not improve its immigration laws, facilitates and supports immigration as well as improve integration of people already living in Germany. After all, this "brain drain" can only be compensated by a corresponding "brain gain" and through support and further education of the local people.

[11] Cp. www.oecd.org as well as Steffen Kröhnert / Iris Hoßmann / Reiner Klingholz et al.: The demographic future of Europe A.a.O., p. 193.

Less Children + More Elderly People = Increased Average AGE

The population has aged since over 100 years ago. The average age of the Germans is 43.2 years—in comparison, in India it is 24 years. The reasons for demographic ageing in the Federal Republic of Germany are to be found in the increased life expectancy, the ageing of the strong "baby boom generation", which was followed by a smaller generation of potential parents, as well as lower child numbers. In past years decreasing immigration has added to this trend—and since immigrants are often younger it has further increased the average age.

In 2007 the life expectancy for newborn boys was 77.2 years, for newborn girls 82.4 years. The differences are not only biologically founded, but also depend on the life style. Smoking, alcohol consumption, and physical activity are strongly influential factors. Since the 1970s one can observe the differences between East and West Germany: In 1990 the life expectancy for women was 2.3 years higher in the West than in the East, for men it was 3.3 years higher in the West than in the East. However, the East has caught up: For women the difference is now only very marginal with 0.3 years and for men the difference has also shrunk—to 1.3 years. The reasons for this lie in the improved medical supplies and the better income levels after reunification. The gap for elderly and very old people between East and West has also decreased.[12]

There are however also differences within East and West Germany, namely a North-South gradient in the West as well as in the East—girls born in 2008 in Baden-Württemberg can expect to become 83.3 years old. Boys can expect an age of 78.6 years. Girls have therefore a higher life expectancy of 12 months and even boys with 16 months compared to the countries' average.[13] The Saarland registered the lowest life expectancy for both genders, according to the mortality table of 2006/2008.[14] Sachsen is the eastern front-runner in life expectancy for girls; for boys it is Berlin.

The growing number of very old people, which is in principle a pleasing thing, however also means an increase in chronic and psychological diseases, especially cases of dementia. The need for care increases with age: Between 70 and 80 years, only about 10 percent are in need of care, after that the quota increases drastically—until 2030 there will be more than three million people in need of care if the age specific quotas stay consistent. The percentage increases therefore from today's 2.3 percent to 4 percent. In terms of care there are big differences between genders, also because women usually become older than men. In elderly years they live alone more often; men are in

[12] Cp. Federal Institute for demographic research: 1973 to 2008. A.a.O..

[13] Cp. Federal Institute for demographic research: Regional ageing in Germany. Demographic trends and evolutions in the federal states between 1991 to 2004. Wiesbaden 2007. p. 16.

[14] Ebd., p. 17.

contrast taken care of by their spouses. About 60 percent of the 90-year olds are in need of care, for women it is around 75 percent and for men 40 percent.[15]

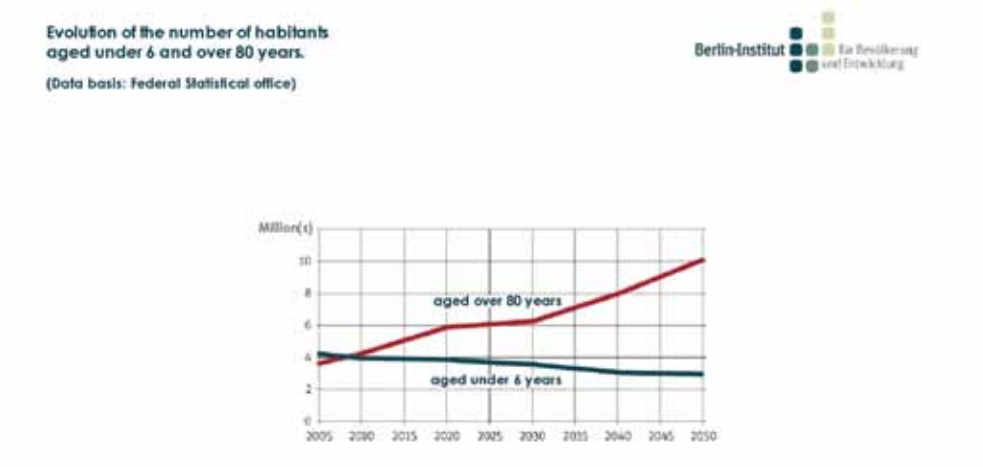

Figure 1: Few babies, many elderly.

While the flock of kids will decrease in the foreseeable future due to low numbers of children and the disappearance of parental age groups, there will be a two-and-a-half-fold increase in the number of very old people. By the year 2050 one person in eight living in Germany shall be over 80 years old.[16]

From 2042 onwards the absolute number of over 74-year olds (very old people) will decrease. The percentage of very old people however continues to increase as the population shrinks—especially among the younger age groups.

[15] Cp. Federal Institute for demographic research: 1973 to 2008. A.a.O..

[16] Graphic chart cp. Sabine Sütterlin / Iris Hoßmann: Unintentionally childless A.a.O., p.9.

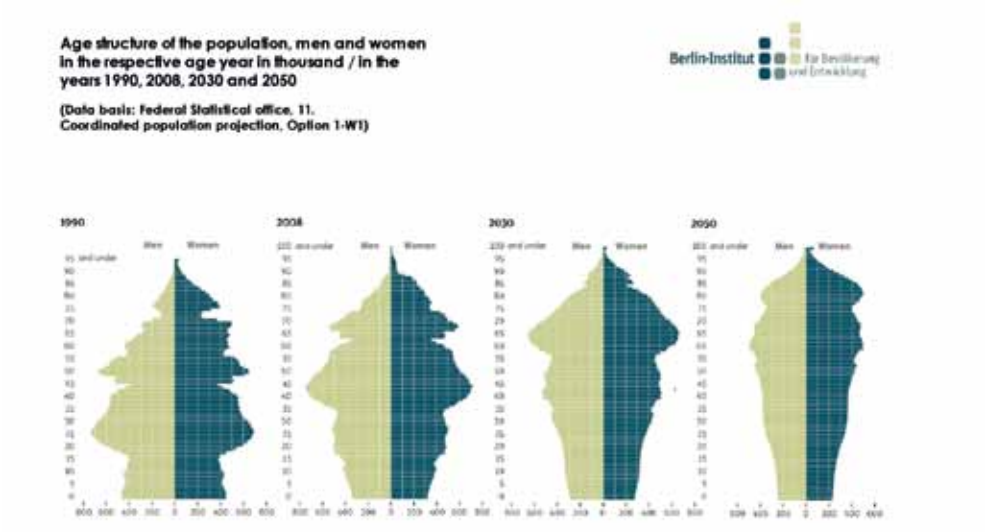

Figure 2: The pyramid evolves into a mushroom.

Today, the "baby boom" generation born in the 1960s constitutes the strongest age groups. Considering that with every generation since 1970 approximately one-third fewer children are raised compared to the number of existing parents, the population pyramid shown in the above figure transforms into a sort of mushroom—sharp tongues may say: into an urn.[17]

The present age structure reveals other defined cuts and decisive points: the few births after the First and Second World War and the victims of the war, the "baby boom", the falling birth rates in the years 1965 to 1975 (whereas the number of newborn infants only dropped under one million from 1972 onwards) and the few births in the new federal states. Since women have a higher life expectancy than men and more men lost their lives during the Second World War, the demographic ageing hits the women stronger than the men. According to the predictions, by the year 2050 the population pyramid will be almost upside down—and will demonstrate heavy list.

Therefore, the systems of pension and healthcare insurance have to prepare for higher costs with lower incomes. Reforms within the healthcare system have to take account the social ageing and the changing needs—especially in view of the rising number of dementia cases. In addition, there must be economic or other compensation for the unpaid work, which is at present mostly accomplished by women for the care of children and elderly—it also needs a structure that ensures that the need for closeness and communication does not have to give way under the economic pressure.

[17] Graphic chart cp. Ylva Köhncke: Old and disabled. How the demographic change is affecting the life of people with disabilities. Published by: Berlin-Institute for population and research. Berlin 2009. p. 11.

The Influential Factor of Internal Migration: Trends

The regional age structure however does not only depend on the number of newborn infants, mortality rate, life expectancy or foreign immigration, but also on internal migration. During the past few years different migration trends could be observed within Germany, of which three dominated: East-West migration, North-South migration, and suburbanisation of the cities towards urban environs. This trend has however weakened: In the meantime cities like Aachen or Mainz attract more people than their urban environs.

And something else has changed: In the years after reunification the old federal states recorded an increase in population, the new ones a deficit. The target area was especially the south of the country: From 1991 to 2008 Bavaria recorded a net influx of 653,000 people, Rheinland-Pfalz 220,000, and Baden-Württemberg 231,000. Between 1990 and 2008, 3.1 million people left East Germany (without Berlin); only 1.5 million headed in the opposite direction. Accordingly, 65.5 million people live at present in the old federal states, 13 million in the new ones (both without Berlin) and 3.6 million in Berlin. In the old federal states the population figures have increased until 2005; since 2006 West Germany is losing population. In the new federal states, the natural population evolution as well as the migration balance is negative.

In past years the migration from the East concentrated regionally on rural and economically underdeveloped areas. More women than men left, the majority from younger age groups with better educational degrees than the ones left behind. The prospect of a job and apprenticeship was particularly decisive for their departure. This evolution can be observed in many peripheral regions of Europe. The biggest shortage of women however is found in the new federal states—where there again the potential mothers are missing.[18]

Civil Commitment as a Resource

In East Germany the demographic ageing is accelerated through migration, especially in the peripheral regions. The public budgets are very dependent on the age structure, in terms of revenues as well as expenses. The decrease of the employable population for instance and the change of employment patterns lead to lower tax incomes, especially in less populous areas. This has an impact on the provision of services, for example on the infrastructure in the transport or healthcare sectors. Rural districts, which are sparsely populated, have higher per capita expenditures to maintain the local infrastructure than densely populated districts, as streets, drainage systems or public

[18] Cp. Steffen Kröhnert / Reiner Klingholz: Men in need. From professional heroes to the new lower class? Living conditions of young adults in economically declining regions of the new German Federal States. Published by: Berlin-Institute for population and research. Berlin 2007. p. 39.

transport generate costs even with low utilisation. Such regions are currently found in the new federal states; in the future, however, also in the old ones. And it is not foreseeable that a balanced ratio between old and young will evolve soon, as well as among the ones who receive social welfare services and the ones who raise them—as desirable as it would be.

As public funds cannot afford services it used to provide, the basic supplies are nowadays increasingly in danger. This also increases the importance of civil commitment. In ageing and shrinking regions voluntary services can support local supply structures: If no buses are circulating, neighbours form car pools in order to share costs and effort—for instance when they bring their kids for sports practice to the nearest city, for doctor's appointments or to go shopping.

Political Tasks

The basic supplies however cannot depend on individuals. This would make them too fragile and would run the risk that not all citizens will be reached. At this point the local politics must take responsibility, as the basic supplies need to be ensured by the state. Since ageing and shrinkage are inevitable evolutions in the Federal Republic of Germany, it is essential that the politics absorb these evolutions and create sustainable strategies in order to adapt to the changes.

The tasks ahead, resulting from the demographic evolutions, cannot be solved exclusively through financial compensation. In order to combat not only the symptoms, for instance by reducing the structures or even by competing with other communities for residents, a radical change in approach is required which is oriented on the basic provision of services. This includes for example the guarantee of mobility and healthcare. This in turn requires regional planning strategies: The density must be improved in rural areas around middle-sized and small towns; it takes central places which provide education, healthcare, public transport, as well as an infrastructure for supplies and waste management.[19] In order to implement such an integrated approach, incentives for collaborations must be established—and in case of refusal to collaborate, sanctions must be considered.

Despite all accordance across the states, the population structure of the Federal Republic of Germany shows significant regional differences. The politics have to manage the balancing act between basic supplies and autonomous regional development, particularly in view of migration from rural areas. It can thereby reflect on a federalism that supports local action without losing the objective of general solidarity within a society. The diversity of living conditions does not necessarily endanger its equal value.

[19] Cp. Andreas Weber / Reiner Klingholz: Demographic change. A political proposal with particular emphasis on the new federal states. Published by: Berlin-Institute for population and research, by order of the Federal Ministry for transport, construction and urban development. Berlin 2009. p.5.

First steps would be more competences for the communities and reduced bureaucracy. This can strengthen an active citizen society, regional development and ultimately improve the quality of life—and therefore lead to a state where the opportunities of the demographic change are being exploited.

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The Impact of Ageing for Social and Political Processes in the Netherlands

Frans Willekens

1. Introduction

The *retirement time bomb* and the *healthcare crunch* are expressions that indicate the public concern for an ageing population and a sense of urgency. Many fear that an ageing population leads to the collapse of the welfare state because of the lack of financial sustainability of social policies. They also point to the risks and uncertainties involved and our limited ability to deal with losses, in particular losses of what we consider to be acquired rights. Traditional risk sharing mechanisms are based on many contributions and few payments. When contributions decline and payments increase, the risk sharing mechanism collapses. It is not of primary importance who manages the risk sharing (the public sector through a social security programme or the private sector selling insurance products or implementing social security programmes for the public sector), how contributions are collected (through premiums or taxes), whether participation in risk sharing is voluntary or mandatory, and whether the contributions are accumulated (and invested) to cover payments later (capitalization scheme) or used to cover current payments (pay-as-you-go scheme). Of prime importance for any scheme that involves the transfer of risk to other individuals, institutions or the collective and the payment of a compensation or premium is the actuarial principle that the current value of payments equals the current value of contributions. That is where the uncertainties come in and the risks need to be managed. It is the main concern of a pension fund worrying about its solvency and an individual concerned about outliving his money. It is also central to the question of how much risk sharing there really is in social security programmes and other programmes designed to share risks. Studies show that social security and taxation schemes offer financial protection more by life cycle smoothing than by redistribution between individuals (Falkingham et al., 1993; de Mooij, 2006, p. 124)[1].

[1] A study of the Netherlands Bureau of Economic Policy Analysis suggests that between 60 and 80 percent of the welfare state actually concerns intrapersonal reallocation of income over the life cycle, rather than redistribution between rich and poor (de Mooij, 2006, p. 137).

In this paper I argue that life cycle risk management should occupy a more central place in the public debate and the political process. The discussions may benefit from a wider use of the actuarial principle to clarify the distribution of risks in social security and private insurance schemes, and the redistributions that are implicit in these schemes. Life cycle risk management should however not be restricted to the payment of taxes and premiums and the accrued financial rights or the accumulated financial capital. Modern life cycle risk management incorporates different types of wealth: physical capital, business capital, human capital, and social capital. It also distinguishes between several life contingencies and considers accumulation and de-accumulation stages of wealth. The most important physical capital that people accumulate in their life is home equity. That capital may be used as a safety net and to cover expenses during the last stage of the life course when long-term care is required, at least in countries where elderly long-term care is not a collective duty (Davidoff, 2010). Business capital is accumulated in the ownership of a successful business. Human capital is accumulated by training, either formal education or informal training on the job, and maintaining good health. Social capital is the extent to which one can rely on members of a social network for assistance and support in case of adverse events and periods in need. The support goes from instrumental aid and the sharing of resources to emotional support and guidance. A focus on the accumulation and de-accumulation of capital during the life course provides an innovative approach to social protection schemes that are comprehensive (include different domains of life) and sustainable. People may substitute one type of capital for another. For instance persons with adequate social capital may have guaranteed social support when in need whereas persons who lack social capital must purchase support from the formal care sector. Some people purchase long-tem care insurance whereas other people rely on reverse mortgages to pay for long-term care expenses. An unforeseen loss of capital is a risk that needs to be managed. It can be the loss of health, source of income, home equity or social network. Life course risk management involves all domains of life.

The structure of the paper is as follows. In section 2, I give a brief overview of the Dutch welfare state from a life course risk management perspective. A major trait of the current reforms is a transfer of risks from the collective back to the individual, while maintaining a safety net to accommodate catastrophic expenditures. That threat is not unique to the Dutch reforms; it is a global feature of reforms. It results in a system of individual accounts. Reforms differ in the instruments used to transfer risks from the collective to the individual, the risks covered by pre-funded social insurance schemes, and the residual risks carried by the collective, i.e., the degree of solidarity. Welfare programmes smooth out income over the life cycle, tame risks by risk sharing mechanisms, and redistribute funds between the haves and the have-nots. In Section 3, I adopt a life-course perspective on social policy and consider individual life planning in the

presence of a multitude of public welfare policies and programmes as a life-course risk management project. Section 4 concludes the paper.

2. The Dutch Welfare State

The aim of social security is to provide a guaranteed income for all those for whom it is not possible or no longer possible to support themselves independently by working. The underlying principle is that people who are afflicted by job loss, health hazard or old age, must be put in a position to exercise their political and civic rights on an equal footing. The main social security programmes cover unemployment, illness and disability, and old age. In addition, there is a safety net, the Work and Social Assistance Act (WWB), for persons who do not qualify for the other social programmes or are entitled only for a benefit too low to live a decent life. All persons legally residing in the Netherlands and all persons who work in the Netherlands and pay income tax are insured under the National Insurance Schemes. People residing in the Netherlands illegally have no entitlement to national insurance and welfare benefits. The money required to do this is generally provided by the working population on the basis of the philosophy of solidarity or shared risk. Social security in the Netherlands can be subdivided into social welfare benefits (*sociale voorzieningen*) and social insurance benefits (*sociale verzekeringen*). In addition, there are other arrangements which by tradition are not classed as social security but which provide financial assistance, such as the housing subsidy or statutory funding of higher secondary and university education. Social welfare benefits are intended as a basic provision and are means-tested. They supplement insufficient (family) incomes, bringing them up to the minimum guaranteed income level for a particular domestic situation[2]. The social provisions include the Work and Social Assistance Act (WWB)[3], Work and Employment Support for Disabled Young Persons Act (Wajong), the Act on Income Provisions for Older or Partially Disabled Unemployed Persons (IOAW), the Act on Income Provisions for Older or Partially Disabled Formerly Self-employed Persons (IOAZ), Regulations governing Contributions towards the Upkeep of Disabled Children living at Home (TOG), and the Work and Artist Income Act (WWIK). They are financed from government funds.

[2] In all social security legislation, two unmarried persons living together are ranked on par with married couples. This also applies to two brothers or sisters who live together and to a grandparent and a grandchild who live together. Married persons who are permanently separated are also regarded as single persons, unless they live with someone else.

[3] The WWB was introduced on January 1, 2004. It replaces the National Assistance Act (ABW) (bijstand), which was introduced on January 1, 1965, with major changes introduced in 1996. The ABW was a social provision for financial support to people who did not have the means to support themselves. In the Dutch social security system it is the last recourse. The ABW replaced the Poor Law (Armenwet), which was introduced in 1854, following article 195 or the Constitution of 1848, with minor changes in 1912. In the early law churches and private institutions were responsible for helping the poor. In the ABW it became the mandate of the government.

The WWB Social insurance is primarily funded from contributions paid by employees, and the system is compulsory: all employees are automatically insured and also pay a contribution. Two types of social insurance exist: national insurance (*volksverzekering*) and employee insurance (*werknemersverzekeringen*). National insurance applies to all residents of the Netherlands; benefits are not related to pay and comprise the state old-age pension (AOW), survivors' pensions (ANW), child benefit (AKW), and benefit under the General Act on Exceptional Medical Expenses (AWBZ). All employees are compulsorily insured under the insurance schemes for employees. Benefits are related the pay. Benefits are received in the event of loss of pay because of illness (after two years), permanent disability (WAO and WIA), and unemployment (WW). On December 29, 2005, the Disability Insurance Act (WAO) was replaced by the Work and Income according to Labour Capacity Act (WIA). The Health Care Insurance Act (ZVW) regulates health insurance to cover the costs of medical care. The current act came into effect on January 1, 2006. By virtue of the ZVW, everyone in the Netherlands is obliged to take out health insurance. The government determines the contents of the basic package. In addition, it is possible to take out supplementary healthcare insurances on an individual basis. Insurers are required by law to accept anyone who registers for the basic insurance. Insurers are compensated by the state if their recruitment area includes a concentration of high-risk cases. The amount of the fixed (nominal) healthcare contribution is not determined by public authorities but by the healthcare insurers. The monthly contribution can therefore differ per insurer. No contribution is required for children under the age of 18. In addition to the contribution to the healthcare insurer, an income-related contribution is paid to the government. This contribution is automatically withheld from wages or benefits by the employer or benefits agency, but is also, in large part, reimbursed by them. Persons with low incomes are eligible for an allowance (the care allowance) to be paid by the tax authorities. The AWBZ is a National Insurance Scheme against the risk of exceptional medical expenses (catastrophic health expenditures) for which people cannot be insured on an individual basis. Everyone who resides or works in the Netherlands has AWBZ insurance and is entitled to AWBZ care reimbursement. AWBZ insurance provides cover against major medical risks not covered by the healthcare insurances. An example in this respect is admittance to an AWBZ institution (such as nursing and care homes), including receipt of the necessary care. An insured party automatically receives AWBZ insurance from its healthcare insurer. The healthcare insurers have delegated the administration of AWBZ insurance to regional healthcare offices. The AWBZ contribution is income-related and is withheld from wages or benefits by the employer or benefits agency respectively. The social security legislation is implemented by several institutions, the most important being the Social Insurance Bank (SVB) (www.svb.nl) and the Institute for Employee Benefit Schemes (UWV) (www.uwv.nl).

Statistics Netherlands (CBS) estimates the cost of social protection in 2009 at €169 billion, which is about 30 percent of the national income or €10,000 per capita. The cost of social protection increased steadily from a little over €90 billion in 1994 to the current €169 billion. In 2009, the health expenditures amounted to €56 billion and the expenditures for state pensions (AOW and ANW) was €58 billion. The expenditures for state pension (AOW) amounted to €28.2 billion in 2009, whereas the total contributions were €17.2 billion. The difference was paid by the state from general revenues (see later). State pension reforms are aimed at a sustainable old-age pension system. A number of instruments exist to increase the financial sustainability. One is to increase the retirement age. By increasing the age at retirement, the working population pays contributions longer and receive benefit for fewer years. The government estimates that an increase in retirement age from 65 to 67 reduces the pressure of AOW on the state budget by €4 billion per year (Ministry Social Affairs, 2010). The current government proposal is to increase the retirement age from 65 to 66 on January 1, 2020, and to 67 on January 1, 2025. On June 4, 2010, the Social Partners (employers and employees) reached an agreement to increase the retirement age to 66 and to make the retirement age flexible. Retirement before the age of 66 implies a lower state pension (6.5 percent reduction). Retirement after the age of 66 implies a higher pension (6.6 percent per year postponement). They also agreed that, starting in 2011, pensions schemes are responsive to changes in life expectancy. The decision is left to the next government.

The welfare state (social security) is under a number of threats (see, e.g., Pestieau, 2006). Some are related to information; others to financing. Moral hazard and adverse selection belong to the first class of threats. Moral hazard exists when, in the presence of protection schemes (e.g., social security and insurance), people alter their behaviour, e.g., reduce self-efficacy. The behavioural change may result in eligibility for a protection programme or a change in risk level in an insurance programme. It may result in a culture of benefit dependency, which undermines the protection scheme. Adverse selection arises in voluntary insurance programmes, when those at high risk sign up and those at low risk do not (opt for self-insurance). The answer to adverse selection is to make participation in protection programmes compulsory. Systemic risks (also referred to as aggregate risks and social risks) belong to the second category. They are too big to insure. A war and a natural disaster are examples. Reinsurance is an outcome. An ageing population is a systemic risk of the welfare state if eligibility for social protection is determined by age rather than means-testing or another form of needs assessment.

In *Reinventing the Welfare State*, the Netherlands Bureau for Economic Policy Analysis (CPB) lists four reasons why the Dutch welfare state is under pressure (de Mooij, 2006). First, public expenditures on pensions and health will rise in the light of ageing while the tax base is being eroded because of globalization. Second, skill-based technological change deteriorates the position of low-skilled workers on the labour market. International economic integration increases the pace of that process. Third,

welfare state institutions are slow to adapt to new realities, such as individualization, smaller families, increased labour force participation of women, and lives that have become less predictable, less collectively determined, less orderly, more flexible, and more individualized; in short, life courses that have become de-standardized (Brückner and Mayer, 2005). The slow response undermines the legitimacy of welfare institutions. Fourth, the welfare state creates sustained inactivity among a number of groups. The CPB names social benefit recipients, elderly workers, low-skilled people, and women. These reasons indicate that people change their lives in response to intrinsic and contextual factors relatively rapidly and that the public institutions that provide social protection by generating and redistributing income are not equipped to change at a comparable pace. In addition, the institutions may not be adequately equipped to deal with problems of non-compliance and moral hazard. The institutions include programmes for pensions, disability, survivor and unemployment insurance, sickness insurance, and perhaps even education.

3. Life-course Risk Management

The welfare state is designed predominantly to deal with life-course or life-cycle risks, i.e., the risks associated with life contingencies. Life contingencies are random events that have major impacts when they occur and the impact is usually a loss with long-term consequences. The financial impact is only one of the consequences. Other losses may relate to the ability to function independently or to participate in society. The loss of a social network and the loneliness that results may also be serious consequences of life events. The welfare state addresses mainly the financial consequences whereas institutions of civil society, such as community organizations, the church, family members, neighbours, and friends (social network) address the other consequences. In some instances different providers of assistance share responsibility, i.e., share risks. The Netherlands has 1 million paid caregivers and an estimated 2.4 million persons who care for others for more than 8 hours per week or a duration of more than 3 months without being paid (WRR, 2006). The boundary between formal and informal care is becoming fuzzy because the formal and informal sectors are becoming more complementary. The availability of a Personal Budget provided by the state, introduced in 1995 and currently part of the Social Support Act (WMO) introduced in 2007, enables caretakers to purchase care from the formal or informal sector, including family members. Since 2003, patients can decide themselves whether they opt for a Personal Budget or use regular care. The Personal Budget aims at empowering those in need of care and offers informal caregivers recognition via wages (Kremer, 2006). The interest in the programme exceeded expectations and the budget is insufficient to cover the demand.

In this paper, I adopt the perspective of an individual citizen in the welfare state. The approach is inspired by Hicks (2007, 2008) who developed the Olivia framework to document the interface between social policy and individual citizens, to document

the interaction of individuals and families with social policies, and to obtain insight into how these interactions vary over the life cycle. Olivia is a fictitious individual, a case study developed to assist in the analysis of social and labour market conditions and policies and their impacts on people. In a recent article, Marshall and McMullin (2010) trace back the antecedents of the life course perspective in public policy to Rowntree (1901), who introduced the perspective in an attempt to understand the persistence of poverty in England. Rowntree found that poverty was most prominent in three stages of the life course: early childhood, childbearing years, and old age. The life course consists of stages separated by transitions. Differences in sequences and timing of transitions give rise to a multitude of life courses. Transitions are outcomes of choice and chance (life contingencies). Risk management involves the identification of unwanted transitions or events, preventive strategies that reduce the likelihood of unwanted events, and insurance against losses incurred once an unwanted event occurs. Life-course risk management is based on the premise that people are adequately informed to determine the likelihood of events and the nature and magnitude of their consequences. The aim of the description is to illustrate the individual life-course perspective and the difficulties of quantifying risks and their consequences in an ageing society.

For ease of presentation, I consider two fictitious individuals, a boy and a girl, Oliver and Olivia. They live in a welfare state, contribute to welfare programmes, such as old-age pensions and universal healthcare insurance during certain stages of their life, and benefit from the programmes during other stages. The contributions and benefit schemes have a triple purpose: to smooth out income over the life course, to tame risks by sharing it, and to exercise solidarity. Oliver and Olivia do not know what part of their contributions or benefits is smoothing out income, taming risks or exercising solidarity because the information provided by the welfare state and its institutions does not allow it. That surprises them because research shows that when a clear relation exists between contributions, through taxes and premiums, and accrued rights and benefits, the contributions have fewer distorting effects on the functioning of the welfare state (Goudswaard et al., 2006). Oliver and Olivia enjoy the welfare state and are concerned about its sustainability. They believe that public support for the welfare state and its institutions depends on being able to make informed choices. Being rational persons they like to manage their own risks in the context provided by the welfare state. They perceive inadequate transparency, however, as hindering informed choices and as a barrier to fully participate in the system (Rubenson and Desjardins, 2009).

Suppose Oliver and Olivia are born in 2010 in the Netherlands. Social support is always near, from cradle to grave. Throughout their life, support is available, although at varying degrees. Support is provided by a range of institutions of the welfare state, by community organizations, and by the social network. Support is generally affordable because the collective pays part of the cost, in cash or in kind. Oliver and Olivia learn that in order to receive support they must be eligible, which means that they must

meet certain conditions. Their social network is an important source of information on what these conditions are. The internet is another significant source.

When Oliver and Olivia get involved in life-course risk management, the first question to answer is: how long will they live? The length of life depends on many factors, such as the genetic constitution, lifestyle, living conditions, random events, and other intervening factors. Some genes are beneficial and enhance longevity. For example, a FOX03A gene can triple the chances of a person living past 100. Some genes interact with lifestyle and it is the combined effect that determines the length of life. Oliver and Olivia are therefore likely to live longer if their parents and grandparents survive to old age. If they are born in a family with a history of heart disease, they are at elevated risk. If they are born in a poor neighbourhood with substandard housing, they live shorter lives, suffer more impairment and suffer them longer than those born in upper-class neighbourhoods. If Oliver and Olivia ever smoke, their expected lifetime declines substantially, by about seven years. Because of the substantial life shortening effect of smoking, the expected number of years with chronic diseases and disability also declines (Mamun et al., 2004; Reuser et al., 2009). If they do not watch their weight and become obese, irrespective of whether the cause is genetic constitution, early life experience or lifestyle, Oliver and Olivia will spend more years with disability than persons with normal weight. Obesity plays a major role in disability at all ages and increases healthcare costs more than smoking or drinking (Rand, 2007). Mild obesity at higher ages (55) shortens disability-free life expectancy by 3 years for males and by more than 4 years for females compared to persons with a normal weight. Severe obesity (Body Mass Index over 35) shortens the disability-free life expectancy by 6 years for men and 8.4 years for women (Reuser et al., 2009). The effect of obesity on disability and mortality is an active area of research (Ferruci et al., 2009). Oliver and Olivia are disabled if they need help with at least one of the basic activities of daily living (ADL) (walking, bathing, dressing, toileting, and feeding)[4].

If they are given the opportunity to attend and complete higher education, Oliver will live about 7.3 years longer than his contemporaries who leave school after primary education and Olivia 6.4 years (RIVM, 2010). The life expectancy is 74 years for men with lower education and 81.3 years for men with higher education. For women it is 78 years and 84.4 years, respectively. The difference in life expectancy at birth by level of education has not changed much since 1997. The differences also persists throughout the life course. When they reach 65, Oliver may expect to live another 16.9 years if he completed lower education and 17.5 years if he finished higher education (16.6 years on average). For Olivia the life expectancy at 65 is 18.2 years if she completed lower education and 21.4 years if she finished higher education (20.0 years on average). At 65,

[4] ADL disability differs from disability defined in terms of Instrumental Activities of Daily Living (IADL). The IADL are basic activities that someone must be able to perform in order to live independently in a community. They include doing light housework, preparing a meal, shopping, managing money etc.

men with higher education outlive men with lower education by 5.9 years. For women the figure is 5.7 years.

In the year Oliver and Olivia are born (2010), close to 200,000 children are born in the Netherlands (185,000 in 2009). Most are born to mothers with medium and low education, for two reasons. First, there are more women with medium or lower education. Of women born in 1965-79, a little over 50 percent have medium education, a little over one out of five has lower education and the rest (27 percent) have higher education. Second, women with higher education are more likely to remain childless (currently 27 percent of women aged 45+) compared to women with low education (10–15 percent). Women with higher education who do have children, have about the same number of children as women with medium or lower education. For details, see van Agtmaal-Wobma and van Huis (2008). The size of birth cohorts and their socio-economic composition are important variables in welfare state reforms. What is good for an individual may have counterintuitive effects on society. For instance, although smoking cessation is desirable from an individual and public health perspective, smoking cessation leads to increased healthcare costs because non-smokers life longer, but spend also more years with disease and disability (Barendregt et al., 1997). Using the Chronic Disease Model developed by the National Institute for Public Health and the Environment (RIVM) and Dutch Costs of Illness data, Rappange et al. (2009) come to the counterintuitive finding that a prevention of obesity will result in substantial additional costs for long-term care with important consequences for the sustainability of the healthcare system.

How long will Oliver and Olivia live? The scholarly literature gives conflicting signals making it quite difficult to predict the length of life, which is a basic first step in life-course risk management in a welfare state. The length of life depends on a multitude of factors. The impact of genetic predispositions, lifestyle factors, and living conditions on the life expectancy remains poorly understood. Olshansky et al. (2005) predict that in the United States the rise in life expectancy will soon come to an end because of the *obesity epidemic*. Oeppen and Vaupel (2002), on the other hand, defend the claim that the life expectancy is not approaching its limit but will continue to increase because over the past 160 years, life expectancy in "record holding countries" increased at a pace of almost three months per year. Recently, Christensen et al. (2009), in an article co-authored by Vaupel, assert that half of the children born today in countries with high life expectancies may expect to live beyond age 100. The figure is based on evidence and educated guesswork. In the most recent (2009) life table of Japan, which has the highest life expectancy in the world, only 1.8 percent of males and 7.8 percent of females live past 100 years. That means that with the mortality level of 2009, few would survive to past 100. To come to their assertion, the authors make relatively strong assumptions about continued mortality decline. The 50 percent survival assertion is more than 10 times greater than the current figures of Japan.

The Netherlands is not part of the group of "best practice life expectancy" countries. Based on the mortality data of 2009, 1.2 percent of males and 3.6 percent of females may expect to reach between 98 and 99 years. The life expectancy is 78.3 years for males and 82.3 years for females. It is only slightly (0.5 years) higher than the life expectancy in the 15 (Western) countries of the European Union. Will the Netherlands do better in the future? Instead of looking at the current survival data we must look at projected survival probabilities and the associated life expectancy. The projections include assumptions about changes in lifestyle, living conditions, and healthcare. Both Statistics Netherlands (CBS) and the National Institute for Public Health (RIVM) project the life expectancy. Statistics Netherlands (CBS) expects that by 2050 ,the period life expectancy (i.e. the life expectancy based on age-specific mortality rates in 2050) will be 83.2 years for males, about 5 years higher than the 2008 figure, and 85.5 years for females, a little over 3 years higher. The RIVM expects a little higher increase for males (to 83.8 years in 2050) but a considerably higher increase for females (to 88.1 years). The difference is due to different assessments of the effects of lifestyle factors, in particular smoking. The proportion of the population smoking is 27 percent, only a little higher for males than for females. In the late 1950s, almost all males and about 30 percent females were smokers. Smoking is an important lifestyle factor to explain the lower life expectancy in the Netherlands than in the surrounding countries. "Refrain from smoking" is an important message for Oliver and Olivia if they were born in the Netherlands. How long will Oliver and Olivia live? If we adopt the RIVM expectation that life expectancy will increase about 6 years in a little over 40 years and assume that the gain continues throughout this century, then Oliver and Olivia may expect to live about 12 years longer than the survival probabilities the 2009 life table indicates. Hence Oliver's life expectancy is 90 years and Olivia's 94 years. This illustrates a key feature of ageing populations; namely, that children born today live considerably longer than the life expectancy today indicates. The life expectancy today is based on contemporary mortality patterns, whereas the expected lifetime of children born today is based on mortality patterns in a distant future. This feature leads to an important policy issue. If pension benefits depend on the life expectancy, as is the case in several countries and may soon be the case in the Netherlands, which life expectancy should be used: the period life expectancy, which is based on contemporary empirical evidence, or the cohort life expectancy, which is based on evidence and educated guesses? In the Netherlands the intention is to link pension benefits to the period life expectancy at 65, adjusted for the difference between period and cohort life expectancy. The adjustment implies an addition of 0.85 to 1.15 years to the period life expectancy (CBS, 2009). The impact of the life expectancy at 65 or the retirement age on the annual pension after retirement depends on the calculation of the annuity divisor. In the Netherlands the details are not known yet.

To predict their life expectancy, e.g., to determine their pension, Oliver and Olivia must account for their smoking behaviour. But there is another puzzling factor. Whether they smoke or not, they live shorter lives than their contemporaries in neighbouring countries, if past evidence is extrapolated into the future. That is particularly the case for Olivia and less for Oliver. Since 1980, the life expectancy in the Netherlands stagnated whereas it continued to increase in other countries in Europe. To explain that astonishing observation, scientists pointed to the high prevalence of smoking, in particular among women. But in 2002, the life expectancy started to increase again and gained a momentum that was highly unexpected. In a recent study by the U.S. National Research Council Panel on Understanding Divergent Trends in Longevity in High-Income Countries, Mackenbach and Garssen (2010) propose the hypothesis that the recent increase is related to the more and better care since the beginning of the 21st century. The recent official public health forecast, issued earlier this year, underlines the plausibility of that hypothesis by pointing to research showing that at least half of the increase in life expectancy in the second half of the 20th century can be attributed to medical care and prevention (RIVM, 2010, p. 16). At the turn of the century, the Netherlands was confronted with long waiting lines in the healthcare sector. The public unrest resulted in additional public funds, resulting in a rapid decrease of the waiting lines. The impact of the healthcare system on life expectancy is one of the effects that are not well understood because of inadequate data and research.

Oliver and Olivia will grow up as an only child or with one brother or sister and with mother and father employed. It is also likely that the mother or both the mother and father work part-time while the children are not yet in school. In the Netherlands, the majority of women have a job, but most work part-time. In the Emancipation Monitoring Report 2008 (data 2007), The Netherlands Institute for Social Research (SCP) (2009) reveals that among couples with children at home, more than half (53 percent) have one partner working full-time and one working part-time and 7 percent have both partners working full time. Among couples without children at home, 40 percent have both partners working full-time and 37 percent have one partner working full-time and the other working part-time. Among women below 35, less than half (40 -44 percent) work full-time. That proportion declines after 35 and when there are children, women further reduce the hours worked. The popularity of a part-time job in the Netherlands is related to children, but it is also a result of other factors.

At age four or five, Oliver and Olivia enter school. Oliver has a 4 percent chance to drop out of school without a degree before his 23rd birthday. Olivia is a little less likely to drop out, 3 percent. To obtain an adequate position in the labour market, they need to complete at least secondary education that gives them an initial qualification (*startkwalificatie*). In 2009, the unemployment among persons aged 15-25 without qualification was 14.7 percent, compared to 8.6 percent for those of the same age but with a qualification. If Oliver or Olivia has a chronic disease or are handicapped or

become impaired before age 17 or as a student before age 30, they are entitled to receive an allowance under the Work and Employment Support for Disabled Young Persons Act (Wajong). The Wajong provides an income to persons of 18 and older who became handicapped at younger ages and who, as a result, are not or only partly able to engage in paid work. In 2005 about 10,000 persons entered the programme, and about 8,000 was aged 18-24. It implies that in 2005, roughly 4 percent of those 18 to 24 years of age entered the Wajong programme. Today, about one in 20 18-year olds enter the Wajong programme at that age or later. At the end of 2009, a total of 192,000 persons received an allowance and the number is increasing rapidly. In 2009, 17,600 entered the programme and 4,300 left the programme. The allowance is 75 percent of minimum wage (minimum youth wage until the age of 23 and legal minimum wage between 23 and 65; the latter was €1,416 gross per month in July 2010) and in principle lasts until the age of 65. The state programme is funded by general revenue. The total expenditure exceeds €2 billion per year. In the period 2002-2006 the number increased substantially. Part of the reason is that municipalities (local councils) prefer to provide an income under the Wajong act rather than an income under the WWB act because Wajong is funded by the central government funds whereas since 2004, WWB is funded by local council funds (Suijker, 2007; CPB, 2008). Another reason is an increased diagnosis of autism and ADHD. The Netherlands Bureau for Economic Policy Analysis (CPB) and the Socio-Economic Council (SER) expect that the number of programme participants will continue to increase to 400,000 in 2040. That is twice the size of the Wajong population today. It does not mean that the rate of entry into the programme will increase since persons who enter the programme are likely to stay.

An important reason for leaving the labour market early, i.e., before retirement, is health. How many years will Oliver and Olivia spend in good health and how many years without functional disabilities? Although that information is essential in the context of life-course risk management, a prediction is met with many difficulties. Their health expectancy and the disability-free life expectancy depend on their genetic constitution, early life experiences, life style, living conditions, and the health system, but also on how health and disability are defined and measured. Health is often self-reported health and the outcome differs between males and females and between cultures. According to the World Health Organization, health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. Based on self-reported health, the health expectancy of men and women in the Netherlands is about the same, 63.7 and 63.5 years, respectively (RIVM, 2010). Women spend about four years more with health problem than men; most of the difference are minor health problems. The picture is more pronounced when we look at chronic diseases. Men expect to live 48.4 years in the absence of chronic illness and women 42.5 years, meaning that women spent almost half of their life with a chronic disease and men almost 40 percent. The RIMV estimates that the number of persons in the Netherlands with a

chronic disease is 4.5 million, which is slightly more than a quarter of the population. Many participate normally in society. Chronic disease management developed rapidly in the past decade and most people with a chronic disease are only mildly impaired. For instance, although the incidence of a heart infarct and other coronary heart diseases increased since 1980, the fatality decreased substantially. Deaths from acute heart infarct declined by 70 percent for males and 63 percent for females and that of other coronary heart diseases by 34 percent for males and 33 percent for females. It is interesting that the fatality of other coronary heart diseases declined in the 1970s and late 1990s and not in the period 1980-1996. People with chronic conditions use a large part of healthcare resources. The World Health Organization has identified that such conditions will be the leading cause of disability by 2020 and that, if not successfully managed, will become the most expensive problem for healthcare systems. Early detection and treatment are part of that management. With medical progress, people may not die from a chronic disease in the presence of adequate care. That is part of the reason that experts consider the rise of healthcare costs as a more serious problem than pension benefits.

The life expectancy without disability is considerably higher than the life expectancy without disease. It is 70.9 years for males and 69.5 years for females (RIVM, 2010). Women spend more years with disability and also more years with severe disability than men. As discussed before, the number of years Oliver and Olivia may expect to live without disability depends to a considerable extent on their life style and education, which is an indicator of socio-economic status. If the highest educational attainment is primary education, Oliver may expect 61 years without disability and Olivia 60 years. If they complete higher education, both Oliver and Olivia may expect to spend 75 years without disability, a difference of 14 years for Oliver and 15 years for Olivia. RIVM (2010) reports that the difference increased slightly over the years. The difference persists through the life course. Education is the best strategy for taming life-course risks.

When Oliver and Olivia enter employment they start paying social security contributions and income tax, between 33 and 52 percent of their income[5]. At low income, most of these payments are social security contributions, of which 17.9 percent is a contribution to the statutory old-age pension scheme (AOW) and is used by the Social Insurance Bank (SVB) to pay basic pensions to retirees (pay-as-you-go system). In the Netherlands, the basic universal pension is not paid from taxes but from contributions

[5] If the taxable income is below €18,218, they pay 33.45 percent (most of which is social security contribution and 2.3 percent is income tax). Between that amount and €32,738 it is 41.95 percent (of which 10.8 percent is income tax). For the income that exceeds that amount, they pay 42 percent on the amount below €54,367 (all income tax) and 52 percent on the income over €54,367 (all income tax). Note that income tax starts essentially at an income over €30,000. The social security contribution goes to the state pension scheme (AOW) (17.9 percent), social insurance for exceptional medical expenses (AWBZ) (12.15 percent) and survivor's pensions (ANW) (1.1 percent). In addition there are WAO/WIA (about 6 percent), WW (about 3 percent) and ZW (about 8 percent) contributions paid by the employer.

by the working population. There is no link between contributions and accumulation of entitlements. The AOW is not an instrument to smooth income over the life course and it is not a real social insurance programme. It is a programme designed for social solidarity (Goudswaard, 2009). The contributions are collected by the tax office as part of the collection of income tax. The contributions are not sufficient to cover the costs of the basic pension. In 2009, the SVB paid €28.8 billion to 2.8 million persons aged 65. Since the beginning of the 21st century the income from contributions is not sufficient to cover the expenses, due to changes in the tax law in 2001 (Helleman et al., 2008; Sol-Bronk and Vleeming, 2009). The changes implied a smaller taxable income resulting in a decrease in social security contributions including the AOW. Social security contributions are flat rates applied to the taxable income. Because of these changes the state contributions to the AOW expenditures were resumed in 2002 after many years without state contributions to the basic pension scheme.

Oliver and Olivia contribute almost 18 percent of their gross income to the state pension scheme (AOW), which is the first pillar of a three-pillar pension system. The second is the occupational pension and the third pillar consists of voluntary savings. In the Netherlands, the occupational pension is an important part of the pension system[6]. In occupational pensions, contributions result in accrued rights. The occupational pension is often considered a deferred labour income, subsidized by the government because contributions are tax-exempt and benefits are taxed. In the first quarter of 2010, the Netherlands had 560 pension funds with a total asset of €770 billion. The specifics of the occupational pension are determined jointly by employers and employees. Oliver and Olivia are likely to be covered by a defined benefit (DB) scheme since 94 percent of the employees in pension funds are covered by such a scheme. It is likely that their lifetime earnings and not their final earnings will determine their pension entitlement because it is the earnings measure for 77 percent of the employees in DB schemes. Most accumulate pension rights at an accrual rate of between 1.75 and 2 percent of the pensionable salary per year of service. What Oliver and Olivia should realize when they assess the significance of the occupational pension in the management of their life-course risks is that (a) the pensionable salary is less than the taxable salary because of the use of franchises in the pension arrangements, (b) the old-age pension replacement rate[7] is likely to be less than the commonly accepted 70 percent of final salary and (c) most pension funds have no guaranteed indexation of the pensions for increased prices or wages. The franchise is that part of the wage that is exempted from premium payments *and* from benefit calculations. The idea behind this franchise is that to low-wage workers the basic state pension (AOW) offers a sufficiently high replacement rate, so

[6] That is why experts seem to agree that the Netherlands has one of the best pension systems in the world (http://www.marketwatch.com/story/which-countries-offer-the-best-pension-benefits-2009-09-23).

[7] The replacement rate is the ratio between retirement income (AOW + occupational pension) and income prior to retirement.

that it is not necessary for them to build up a supplementary pension benefit. The higher the franchise, the more employees are excluded from accruing occupational pension rights. Most pension funds use a franchise that is between the AOW benefit for singles (70 percent of the minimum wage) and couples (100 percent of the minimum wage). On August 1, 2010, the largest pension fund, which is the pension fund for employees in the public sector, applied a franchise of €10,500 and a total contribution rate of 21.3 percent of the pensionable salary (14.91 percent is paid by the employer and 6.39 percent by the employee). Both the pension benefit and the contribution rate depend on the solvency of the pension fund. On August 1, the contribution rate increased by 1 percentage point from 20.3 percent to 21.3 percent as a consequence of the low interest rate and its negative effect on the solvency of the pension fund. It is very likely that Oliver and Olivia are not able to estimate their accrued occupational pension benefits, although it is essential in the context of life-course risk management. The benefit depends not only on the solvency of the pension fund, but also on the valorization of earlier years' pay in an average-salary scheme and the indexation applied to pensions in payment. Nearly half of the pensions in payment are indexed to wage growth and about one fourth are indexed to prices (inflation). When Oliver or Olivia changes jobs and pension funds, they can transfer the accrued pension rights but these rights do not need to be indexed before retirement in the same way as pensions in payment are indexed. Although transparency has increased, there is still a long way to go to meet the standard set by the Swedish Pensions Agency in their annual report, known as the Orange Report[8].

In case of job loss, Oliver and Olivia are entitled to receive unemployment insurance, which may start at 75 percent of the last salary but is limited in time (38 months). If they are unable to find a job, the WWB is the last resort. The social assistance amounts to 70 percent of the net minimum wage if they live alone and 100 percent if they cohabit. An important aspect of unemployment is that the contribution to the occupational pension scheme is interrupted during unemployment episodes. It implies that less pension rights are accumulated.

During their working careers, the contribution to the occupational pension scheme is not the only regular saving scheme Oliver and Olivia have. They may also have a private pension saving scheme, although it is much less popular in the Netherlands than in some other countries. They may also purchase a house. In the Netherlands home ownership is relatively low compared to other countries in Europe. It increased from 40 percent in 1980 to 56 percent of total housing stock in 2006. The proportion of people living in owner-occupied housing is higher (61 percent) because households in owner-occupied housing are a little larger than households in rented housing. Home ownership is higher in rural areas and lower in cities (21 percent in Amsterdam and 30 percent in

[8] http://www.pensionsmyndigheten.se/download/18.259bcaf51293c13203c80004574/Orange+Report+2009.pdf

Rotterdam). The government stimulates home ownership with two major programmes (http://international.vrom.nl/pagina.html?id=37439):

(1) Full deductibility of mortgage interest from personable taxable income. It allows home owners to reduce their taxable income by the interest paid on the loan secured by the principal residence

(2) Subsidy for promotion of home ownership. The subsidy is enacted in the Act on Promotion of Home Ownership (WEB), which has been in force since January 2001. Its purpose is to help people in lower income categories and who have not previously owned a dwelling to acquire an owner-occupied dwelling for themselves by means of monthly tax-free contributions to help pay for mortgage repayment costs. The budget has a ceiling. In 2005, the state budget was about €5 million. The 2010 budget was already spent in March 2010 and no new applications were admitted.

In addition, the National Home Mortgage Guarantee Fund (NHG) guarantees home mortgages resulting in a lower interest rate. Most persons in the Netherlands have a mortgage of the self-amortizing type, meaning that mortgage payment includes rent and part of the capital. With the payments housing wealth is accumulated. Recently, the Netherlands Bureau for Economic Policy Analysis (CPB) revealed that the tax deductibility of mortgage interest implied a government subsidy to home owners of €11 billion in 2005 (CPB, 2010). Today the amount is probably higher since in 2005 the total outstanding mortgage (all households) was €452 billion. It increased to €609 billion in 2009. Since the total housing value is estimated at €906 billion, the mortgage is two-third of the housing value (http://huizen.prijsverloop.nl/algemenestatistieken/). A recent committee of experts (CSED) of the Social and Economic Council of the Netherlands (SER) recommended a discontinuation of the full deductibility of mortgage interest from personable taxable income (SER, 2010). Home owners accumulate considerable wealth, partly subsidized by the collective. Discussions about de-accumulation of that wealth at higher ages in the context of life-course risk management and financial planning are only beginning.

At what age Oliver and Olivia retire is difficult to predict. Most persons who retired at the beginning of the 21st century, retired at a median age of 60 years, which is at a much younger age than the statutory retirement age of 65. About 70 percent retired before or at age 61 (Bruggink, 2007). The current government policy is aimed at increasing the labour force participation of persons 55-64 and to increase the statutory retirement age to 66 in 2020 and 67 in 2025. When Oliver and Olivia retire the statutory retirement age is likely to be closer to 70 than to 65, provided the statutory retirement age still exists. Some feel that the concept of retirement is outdated (Dychtwald et al., 2004). If current conditions prevail and Oliver and Olivia retire at or after the statutory retirement age, they obtain an AOW income, which is funded by those employed at that

time, and draw a pension benefit from the occupational pension scheme. In addition, they may have a house and private savings.

After retirement, Oliver and Olivia may expect to spend several years without severe disability. They may be involved in several activities, including volunteer work. In the last stage of life, they may need long-term care (LTC). Recently researchers at the Netherlands Bureau for Economic Policy Analysis documented the Dutch system of LTC (Mot, 2010). The study is part of a large European project involving 20 institutions around Europe aimed at assessing the future need for care in Europe (www.ancien-longtermcare.eu). The underlying philosophy of the Dutch system for LTC is that the state bears the responsibility for the elderly and others who are in need of long-term care. "The Dutch consider the care of the elderly mainly to be the responsibility of the state." (Mot, 2010, p. 66). While informal unpaid care given by family members and others does play a role, there is no *obligation* to provide this care—save for the usual care that members of a household give each other. The system of LTC insurance has been in place since 1968. It is part of the insurance for catastrophic expenses, the Exceptional Medical Expenses Act (AWBZ), although in 2007 some parts of long-term care (home help) moved to the new Social Assistance Act (WMO). The LTC insurance covers at-home care and care in institutions. Mot estimates that currently between 700,000 and 800,000 elderly are in need of LTC, which is about a third of the population 65 and over. Researchers from the Netherlands Institute for Social Research (SCP) come to a comparable figure (800,000) (Woittiez et al., 2009). The estimate is based on IADL limitations. Mot estimates that the number of older persons who use permanent formal care is at most 650,000. The SCP researchers arrive at 600,000 (2005 figure). Two thirds of them receive care in their own homes as personal care, nursing, support or home help. The one third that receive care in nursing homes (*verpleegtehuis*) or care homes (*verzorgingstehuis*) are largely over 75. The age at which persons enter institutions increases since people are able to live independently longer in the absence of severe disabilities, increased domiciliary care (home care) and other forms of assisted living. The SCP estimates that in 2005, 200,000 persons were cared for by family and friends without public support. Most of these persons may not qualify for publicly funded care since the SCP study shows that only 4 percent of persons do not receive publicly funded care "even though this would be expected on the basis of their profile" (Woittiez et al., p. 102). The long-run sustainability of LTC is a growing concern among policy makers, not only because of funding problems but also because of lack of LTC workers. Important weaknesses in the system have to do with determination of the entitlements and the lack of incentives for efficiency (Mot, 2010, p. 64). For instance, persons who need only small amounts of care are also entitled to publicly funded care. Mot qualifies the system as completely egalitarian. All quality improvements that were introduced in the past years are available to all users under public insurance. That makes expenditures difficult to contain. The SCP researchers predict that the number

of users of publicly funded nursing and care services will increase by 1.2 percent per year between 2005 and 2030 and that expenditure will increase by 3.4 percent per year, 1.9 percentage-points due to price increase (price effect). The share of the nursing and care sector in the GDP will increase from the current 2 percent to 3 percent, provided the economy grows at 2 percent per year. The government wants to separate the home care and nursing care parts of LTC and give private health insurers a larger role and financial responsibility. Although LTC is accessible and affordable today, the situation may soon change.

4. Conclusion

The ageing of the population is changing society. Welfare programmes designed in the 1950s, or during periods when contributors were many and beneficiaries few, are no longer sustainable when the number of contributors declines and the number of beneficiaries rises. The basic ingredient of any welfare programme, solidarity, is changing too. With the emancipation of the individual came the call for self-efficacy, self-reliance, and self-help cumulating in systems of individual accounts replacing traditional welfare programmes. In this paper I followed Oliver and Olivia, two fictitious individuals growing up in the Netherlands and exhibiting a considerable degree of self-efficacy with their interest in life-course risk management in the context of the welfare state that exists today. To manage properly they need information and that is often lacking. The call for more transparency and accountability is growing but good practices remain few. The annual uniform pension overview was introduced in 2007, and since 2008, must be used by pension funds and pension insurers in the Netherlands. This is an important step to providing the necessary information, but is still at a large distance from the practice adopted by the Swedish Pensions Agency that provides information "to make it easier for many more people to calculate their total pension, and to enable pension savers to make sound financial decisions in various phases of their lives" (Westling Palm, 2010).

The new welfare state with conscious individuals calls for programmes that enhance and complement individual life-course risk management strategies. Different groups of individuals are likely to respond to life-course risks differently, with major consequences for social policy (OECD, 2007; D'Addio, 2008). Some people accumulate considerable human capital (e.g., by engaging in lifelong learning), while others accumulate social capital, financial capital or physical capital (e.g., home equity). The welfare programmes are generally not sufficiently flexible to take these different life strategies into account. For instance, by defining human capital as the present value of future earnings, human capital is by definition depleted at retirement age in case of mandatory retirement at a given age. If human capital were defined in terms of skill

level, health, and productivity, some people would have considerable human capital left at the statutory retirement age while others have their human capital depleted at an earlier age. While some invest in human capital, others invest in social connectedness and social support networks as a risk management strategy. Sociological research tells us that personal networks are important means to guarantee and improve life chances. The project "The Social Management of Risk" of the Canadian Policy Research Institute is one of several examples of a new comprehensive approach to life-cycle risk management in the context of the welfare state. The project identifies the risks Canadians encounter over the course of their lifetime, determines the ability and willingness of different social actors to provide support, and assesses the relative efficiency and effectiveness of direct and indirect government support[9].

Ageing is changing society. In *Reinventing the Welfare State*, the Netherlands Bureau for Economic Policy Analysis (CPB) observes that welfare state institutions are slow to adapt to new realities. The new reality is that more people are ready, willing and able to manage the risks they encounter in life and to support others in case of catastrophic events. People invest in more than one type of capital to control risks. A welfare system that takes advantage of that new reality by providing a public infrastructure for life-course risk management involving different types of capital is a sustainable system. It requires insight into the complementary nature of the welfare state, civil society, and social networks in the assurance of welfare and wellbeing.

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[9] www.policyresearch.gc.ca/page.asp?pagenm=pr_sc_risk_index

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Impact of Ageing for Social and Political Processes in Spain

Julio Pérez Díaz

About Spanish Demography

Spain is one of a group of European countries also called "Mediterranean". This label, in demography, means "backward", and a simple example may illustrate the reason. To make up for the frequent lack of empirical data, international models of mortality tables were created in the mid-20th century (Coale, Demeny and Vaughan, 1966). The Mediterranean model was then characterized by a low life expectancy, and very affected by high infant mortality rates. In 1900, life expectancy in Spain barely reached 34 years of age, and was the lowest of the continent, with the exception of Russia. Its main problem was high infant mortality, which was around 200%.

Limited survival logically required higher fertility than the whole of Europe. The combined effect was little population growth and a very archaic age structure, with nearly a third under 16 years old and only 4% over age 64 (Livi Bacci, 1968).

But the 20th century, and especially its second half, has completely changed the traditional situation, and Spain is now among the countries of the world with the highest life expectancy and lowest fertility, a combination that results in rapid population ageing. Generally, this evolution of the age pyramid is viewed with fear (it is symptomatic to talk of its "impact"). It is thought to cause social stress and political and economic problems. This article, written by a demographer and from a demographic point of view, will hold a very different position.

The "Population Ageing" Concept

This concept bears clarifying before proceeding. It is an unfortunate name that creates widespread misunderstandings, which results in many of its alleged consequences being simply myths.

Back in the early decades of the 20th century, when such a process was beginning to be noticed in the most developed countries, the reaction was of alarm and rejection. It was associated with Western decline or national degeneration, topics that were in style at that time (Spengler, 1918). Organicism and Darwinian biologism applied to

societies led to the belief that populations were like living beings, that are born, mature and also grow old and die (Gini, 1930).

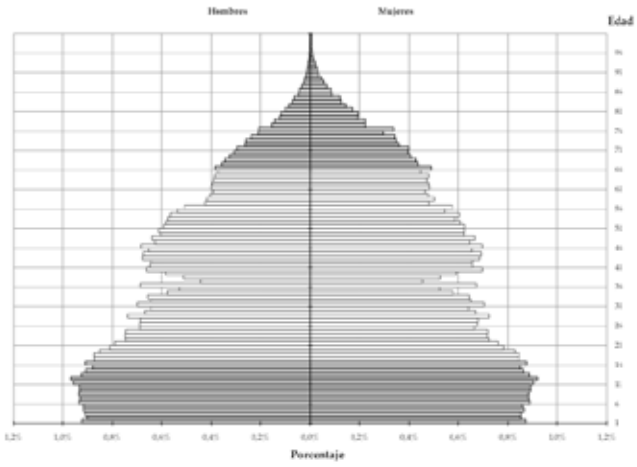
But populations do not age, they do not grow old, they do not have an age, and we have had a century to see that the foreseen "decline" was a fallacy. What populations do, as they modernize, is modify their composition (their age structure), in a process whereby the traditional profile of the population pyramid is narrowed at the child and youth base, while gaining weight in favour of mature and advanced ages, which were so rare in the past. The conceptual trap implicit in the term "population ageing" is a legacy of which we have not yet divested ourselves, and which continues exerting its biased influence.

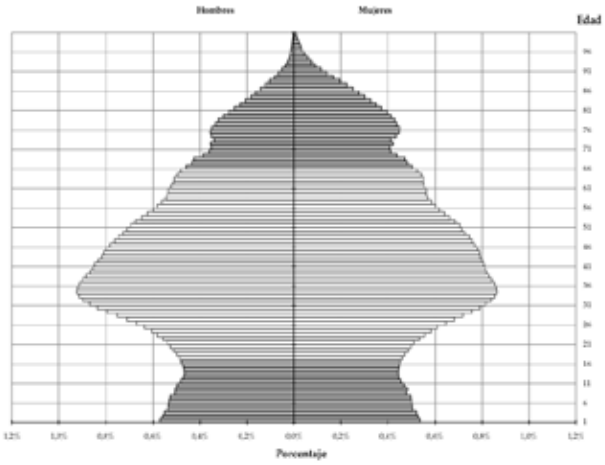
That which is "old" still has negative connotations, so the ageing of the population cannot be good. But the theoretical foundations of such prejudice are easily refutable, and the historical reality doubly disproves it. It was important to start clarifying it, because the Spanish population is experiencing this trend with unprecedented intensity and speed, and the process is far from having reached its end.

The Change of the Pyramid

The proportion of people over age 64 is increasing in Spain. It increased from 10% to 17% between 1975 and 2010, and will still increase substantially in coming decades. But it would be a mistake to think that the normal population is what it was in 1975.

The pyramid of 1975 shows how the civil war (1936-1939) and the low birth rate it caused left its mark on the limited number of people with ages around 25-30. Something similar happened in Europe with World War II, although this was some years later. But unlike the other European countries, Spain did not recoup its birth rate with the end of the war. The dictatorship and international isolation were accompanied by two decades of misery and few births, despite the state's official pronatalistic policies.



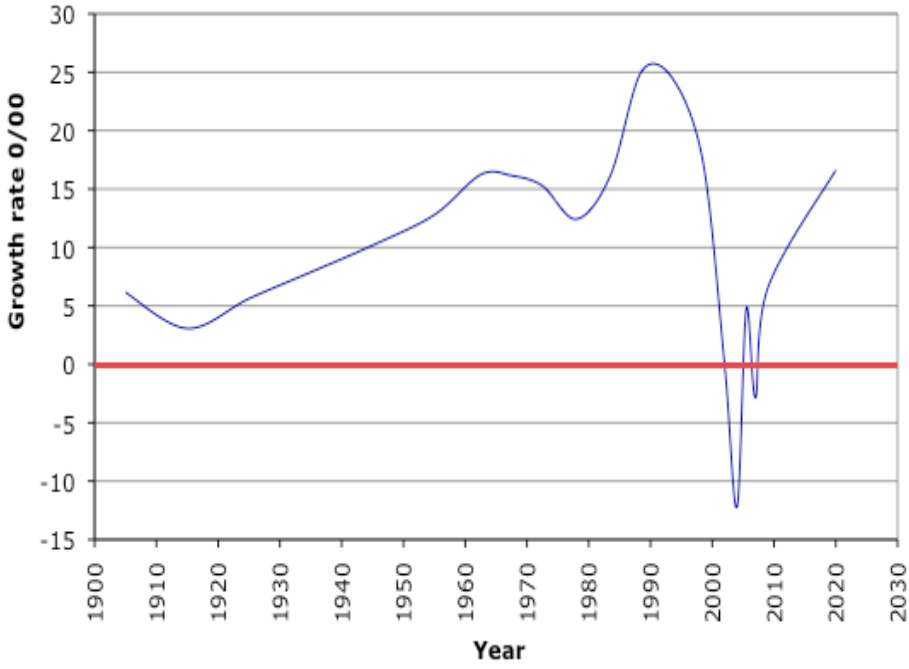


Graph 1: Spain Population Pyramids 1975 and 2010.
Source: INE, Census Registry 1975, and 2010: INE *Estimates of Spain's Current Population* (January 1).

The pyramid of 1975 is abnormal due to the extraordinary age 0 to 14 base, which is a result of the delayed baby-boom of the 1960s and which actually ended in 1975.

The 2010 pyramid is not "normal" either. It shows the pronounced baby-bust, after 1975 that lasted 20 years. But also, the weight of the central adult ages, the most abundant, has swelled even more due to an extraordinary flow of immigrants, unprecedented in a country which until now had been traditionally emigratory (Arango, 2004). We are thus faced with the results of a very intense fluctuation in the weight of children's ages, first upward and then downward. It would be wrong to draw conclusions only from these two pyramids with regard to the causes of population ageing in Spain.

In reality, the proportion of adults aged 64 and above has always grown throughout the 20th century. What can be observed in that historical constant are different rates.

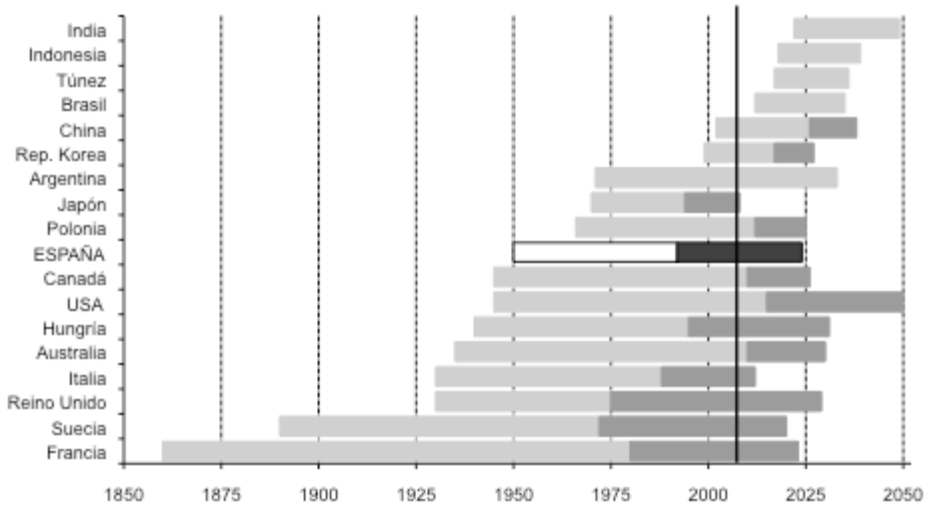


Graph 2. Aged Population's Annual Rate of Increase. Spain 1900-2025.
Source: INE, Census, Demographic Patterns and Forecasts.

After the extraordinary surge in the process during the baby-bust of the late 20th century, in the last decade there was a reversal in the trend for the first time. But it was a mirage. What caused it may have been the very high immigration of young people, along with a moderate upturn in birth rate, as well as the retirement of the meagre generations born during the civil war.

The mirage, nevertheless, quickly dissipates. The recent economic crisis has slowed immigration, as well as marriages and birthrates, but additionally the generations born in the 1950s and 1960s will now start to retire, and the adult weight will again grow significantly over the whole, exceeding 20% probably within the next 15 years. This is not a circumstantial and passing trend, nor is it a rarity; the same can be seen in practically all developed countries. The main differences have got to be looked for in the historical moment in which the process began and the point where it currently is.

The paradigm of early onset and gradual process is France, where mortality and fertility began to descend very early. By 1860 its adult population had reached a weight of 7% (while Spain did not reach until 1950) and it has taken 120 years to raise it to 14%, which happened in Spain in just three decades.



Historical Moment When Adults Over 64 Reached 7%, 14%, and 21% of the Population. Spain and Several Countries of the World.

Source: Based on the idea of Mirkin and Weinberger (2001), updating the information with the UN's *World Population Prospects: The 2006 Revision*, in its median hypothesis, and dates for INE in Spain.

Notes. (1) The black vertical line separates real and projected data. (2) The ends of the horizontal bars indicate the time when the three percentages mentioned in the graph's title are reached: 7% on the left end, 14% where the colour changes, and when 21% will be reached is on the far right end. (3) Some countries will not reach 21% before 2050, and has been drawn without the second segment.

There is a widespread belief that Spain is one of the most aged countries in Europe and the world, which is a false idea formed in the late 1990s, when the pace of population ageing was the most accelerated. At that time the population projections, if trends were prolonged indefinitely, effectively ended with Spain beating adult population records over a period of half a century. But the trend projections are simple exploratory tools, not predictions, and it is well known by demographers that trends behave cyclically, and not in a linear manner. Currently, the adult weight in Spain is very similar to that of Europe as a whole, and less than that already reached in large-weight countries like Germany or Italy. The extraordinary drop in the birth rate that began in 1975 bottomed out in the mid-1990s, to later reverse over more than a decade.

In short, if what is being done is to observe the process of Spanish population ageing in an international context, Spain is late, but fast. It could be said that it is a "second wave" country, like Japan and Poland, but very advanced compared to those who joined this wave of change only after the second half of the 20th century. Some of these have not even reached 7% yet, though they evolve in that direction and such a proportion of adults is foreseen in the near future. These are countries of America, Asia and especially Africa, which share late and poor economic and social development.

The Consequences

This change in the population pyramid has consequences in all areas of society, so they should be distinguished separately. There are automatic demographic consequences, which in demography is known as "structural effects".

- Feminization: the ancient difference in mortality between men and women makes their numerical relationship increasingly unbalanced in favour of women, as the population ages. In Spain, there are twice as many women around age 80 as there are men. In an old pyramid this was not too important to the overall relationship between both sexes in the whole population. But with the new pyramid caused by population ageing, by increasing the weight of older adults, women are the ones who gain more presence. Today, women aged 65 or older already make up one-tenth of the total Spanish population.
- Overageing: As survival to early old age becomes more generalized, the number of people also reaching a very advanced age increases. Given that in the past survival to these ages was very rare, now they are the ones growing the fastest.
- Increase in Disabilities and Dependency. Since health problems are directly related to age, population ageing increases its collective presence. In a country with an underdeveloped welfare state and very few supported by family solidarity, the growing weight of dependent care has had to be addressed as a matter of state. In 2006, the "law of dependence" has literally created a fourth "leg" of the Spanish welfare state, along with health, education, and pensions.

There are many other socio-demographic areas in which the reconfiguration of the weight of the different ages produces automatic changes. Forms of cohabitation and household structures change with age, so the new pyramid itself implies greater weight to those who characterize ageing (Sánchez Vera, 1996). This factor is important, for example, in reducing the average size of Spanish households as a whole.

Typically, these changes are viewed with fear and, in fact, are often used to foresee serious problems in social and political areas as important as old age pensions, healthcare, care giving by relatives, or labour market competitiveness. Population projections virtually guarantee that in just two decades Spain will have its record share of older people when the central baby boom generations retire, exceeding ¼ of the total population.

The problem with projections is that they predict changes in a variable "with the rest of the conditions remaining the same"; meanwhile in this case we are dealing with a change, that of the population pyramid, which is impossible without changes occurring in many other conditions. Actually, the problems of population ageing have been incorrectly predicted for practically a century. Sometimes the insistence on alarms becomes ridiculous, because their founders age and die, and it is inherited by their disciples, and

the predictions are never borne out. One good example of this is the trend started in France in the middle of the pronatalistic fever by demographers like Sauvy or Boverat, and maintained by their student Gérard-François Dumont, coining the successful concept of "Demographic Winter". Dumont, in turn, has aged while maintaining his speech unchanged (Dumont, 1979, 1995), and which reality has disproved for almost one hundred years.

A good way of tracking how the rest of the conditions surrounding the age structure have changed is to notice the characteristics of the generations turning age 65: the "new old" Spaniards, long overdue with respect to what happened in other developed countries, are revolutionizing the traditional sociological profile of old age. Recently turning age 65 are the first generations to achieve full schooling, the first to have an adult and working life uninterrupted by war, the first in which the majority was no longer of rural origin or working on a farm, and the first who enjoyed mass consumption of products such as cars or appliances.

That is why it is important to understand what makes up the spectacular international modernization of population dynamics, because the ageing of the pyramid is only one of its expressions.

The Reproductive Revolution

Actually, the pyramids are not the only things changing. The overall demographic systems have been changing for two centuries. It is not a progressive reform throughout human history, but an authentic revolution.

Faced with the Demographic Transition Theory, which describes the change but is unable to explain its causal mechanisms, several authors have been proposing an alternative theory for some years, the *Theory of the Reproductive Revolution*[1]. We believe that what developed countries have achieved, and what practically all the others are on track to achieve, is a qualitative leap in the efficiency of their demographic systems.

The analogies that general system theory provides are very useful here. Any open system, whatever its internal organization, endures over time by avoiding degradation and entropy. To that end, it includes external elements of limited duration that must be renovated, like human populations. "Demographic systems" feed on births and immigration, and maintain populations over time even though its members, human beings, inevitably die.

The greater or lesser efficiency of a system depends on the relationship between the results it achieves and the quantity of "input" required. Seen this way, human populations have always been very inefficient. In order to stay in existence, they needed a prodigious amount of births that, for the most part, never reached fertile ages. They

[1] Research with the support of Ministerio de Ciencia e Innovación, VI Plan Nacional de I+D+I, 2008-2011, Ref: CSO2009-11571.

were like a combustion engine that burns a lot of fuel, but loses a large part of the energy produced without converting it into work.

The many children and the short life gave shape to the pyramid. It was very wide at the base, narrowed rapidly, and the mature and advanced ages had scarcely any weight. They were "young" pyramids. But they also determined the gender relationships, family organizations or resource and care flows between the different generations present. Life was difficult for human beings until recently.

In some parts of Europe, in the late 18th century, things began to change. For various reasons, high and unfortunate mortality, typical of all previous human history, began to decline. Population growth began to rise. Population pyramids became even younger again, because infant mortality was the first thing to improve.

Only when survival improvements were strengthened did reproductive behaviours react adaptively, as fertility started the decline that led to the current very low rates.

The Demographic Transition Theory has been criticized as a mere empirical generalization with no explanatory power (Caldwell and Caldwell, 2006). But it describes a far-reaching change for humanity. If it laid aside its conception of populations as mere stock (conception based on common annual and simultaneous death and birth rates), and dealt with the reproductive changes among generations, it would make full sense to speak of the greater or lesser efficiency of population reproduction. This is what we do with the Theory of the Reproductive Revolution (MacInnes and Pérez Díaz, 2009).

In our theoretical proposal, the reproductive revolution is only one of the "productive revolution" that is achieved by humanity in a continuous process of modernizing innovations, and has gained so much momentum since the industrial revolution. It is a question of a large-scale leap in efficiency with which human beings, in this case, are "produced".

From a strictly demographic point of view, this efficiency begins to increase when generational survival is "democratized" (affects the majority) until certain ages that represent important thresholds for population reproduction: first, it is essential to ensure survival of the majority until it reaches fertile ages; then, it is equally important to extend survival until middle age, living long enough to complete the parenting of the children, which I have elsewhere called the "maturity of the masses" (Pérez Díaz, 2003b). Although these are "targets" that are apparently limited to the field of mortality, it is crucial to achieve them in order to dramatically increase the overall efficiency of reproductive systems.

In all of human history prior to the reproductive revolution, only a small fraction of births lived long enough to be able to have their own children. The majority died much earlier. In more quantitative terms, the mortality rate was always above 200% in the first year of life, and the initial strength of each generation continued to erode very quickly in later childhood. Fifty per cent had died long before their early reproductive ages.

Under such conditions it is clear that the fertility of minority survivors had to be high, well above the two children per woman theoretically needed for generational replacement. And despite such high fertility, the result was very poor in terms of population reproduction, with a population growth rate of practically zero. The "inefficiency" of the system here literally makes a lot of sense. Much is invested and very little is gained.

Therefore, the traditional young pyramids accompanying all of human history, with a large child presence, very short of adults, and practically no elderly people, may seem like "normal" pyramids and are most familiar and known to us, but in reality until a few decades ago have been a simple expression of reproductive delay and inefficiency.

Reproductive efficiency conditions other areas of social relations, starting with gender relations. In the past, women's reproductive effort was of such intensity that it was their main occupation and the definition of the ancestral core of their own femininity.

Also vital projects and collective enterprises were affected. Individuality of life interests and choices were almost meaningless, because the isolated individual was not able to succeed.

Similarly, forms of cohabitation were rigidly restricted. The maximization of descendents was always achieved in a precarious balance with available resources that were scarce and unstable, thus generating extensive and complex family formations. Couples had neither the means nor sufficient safety to address the reproductive "endeavour" alone and, moreover, other household structures were hardly avoidable, given the high probability for any of the adults in families dying "early".

All these are structural conditions that change when survival begins to become widespread. The democratization of life until youth ages is in itself a factor of reproductive success (populations grow faster, with the same number of births, if their "tenants" stay longer.)

Democratization of life until middle age is another efficiency threshold because it allows raising one's own children better and because it is a success that feeds itself: by increasing the proportion of each generation that can have children, the number of children each should have can decrease to ensure the same population volume. The job of having and raising the next generation is distributed better and among more people.

Having fewer children and in better conditions closes the "virtuous circle", because the new generations that are better cared for and looked after live even longer. A circularity of response factors leads to the current successful and efficient population dynamics. And, of course, to an entirely new population pyramid.

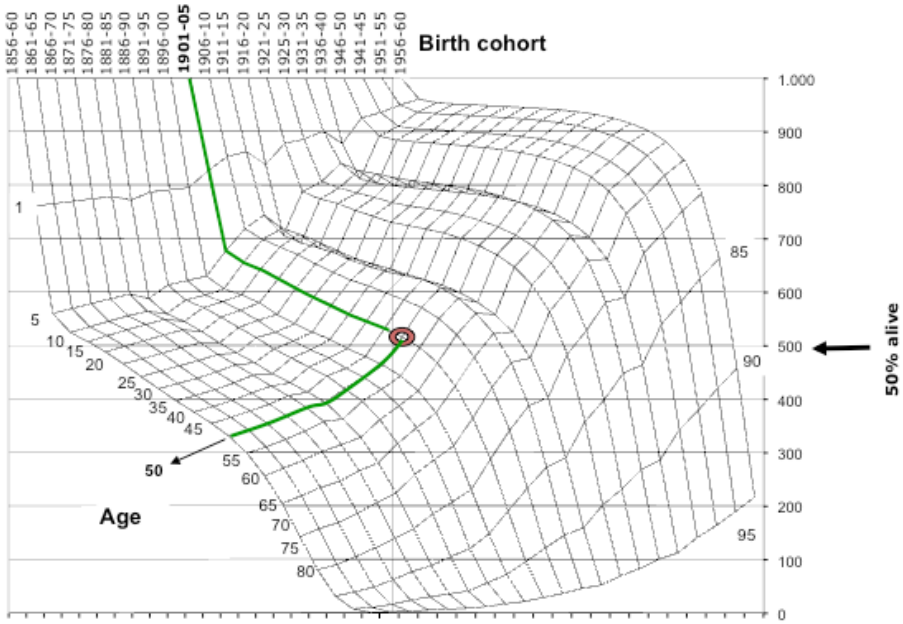
Ageing and Reproductive Revolution in Spain

Spain seems to be an extreme case of rapid population ageing caused by the baby-bust of the 1980s and 1990s. But it must be remembered that its demography is just

as extreme in everything that concerns the modernization process outlined above. At the start of the 20th century, life expectancy did not reach age 35 (many European countries were already around age 50), but a century later, at over age 80, it is among the highest in the world.

Generational improvements in survival have been spectacularly speedy. That is the only explanation for the reproductive efficiency finally achieved, and therefore, the possibility of reducing fertility to extremes never before seen. It is this generational survival, and not that of isolated ages at each moment, which should be observed if we are to understand its impact on complete life cycles.

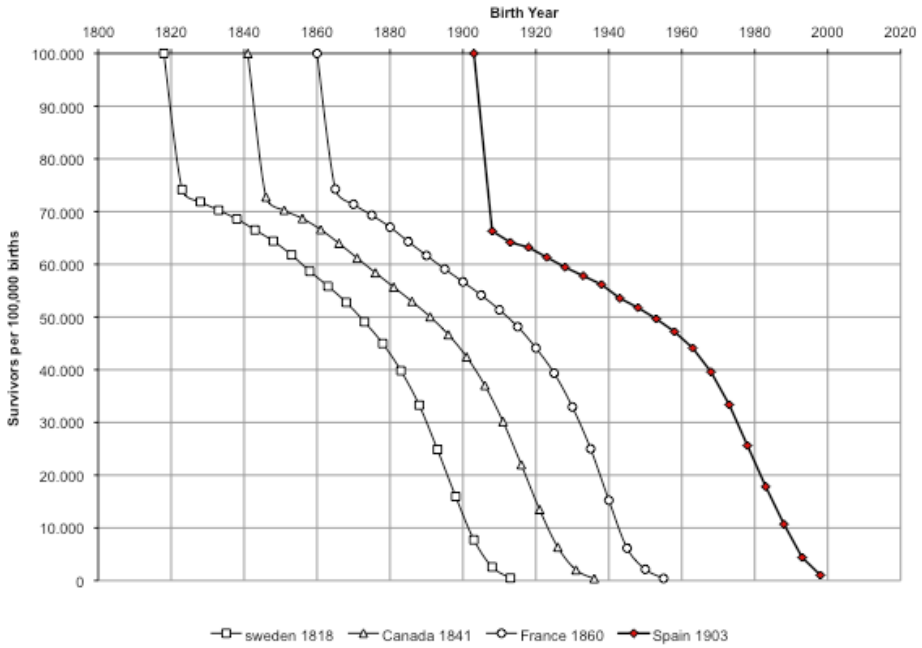
"Maturity of the masses", the threshold mentioned by which the majority of the generations are able to survive up to age 50, is achieved in Spain for the first time in the female generations born between 1901-1906—women who were age 50 in the second half of the 20th century.



Graph 3: Survival curves, Spanish Female Generations 1856-1960, emphasizing the first mass maturity birth cohort.
Source: Drawn with data from (Cabré i Pla 1989).

The delay in reaching this reproductive efficiency threshold is transmitted to many other features and behaviours, and gives a new explanation to the different international "social modernization" rhythms. Much has been speculated in Spain about the historical or cultural factors that explained the earliness of some Nordic or Anglo-Saxon countries to adopt the new family or couple formations. This is what today is known as the Second Demographic Transition. Sweden's low fertility and high female employ-

ment contrasted with the archaic Spanish patterns still in the 1970s, and explanations were always sought in its political, ideological or cultural peculiarities. At the least, it is surprising that hardly any importance was given to the earliness at which the first Swedish generations were able to democratize survival to critical age thresholds, with its consequent effect on reproductive efficiency, compared to the Spanish delay in this crucial area of its population profile.



Graph 4: First Mass Maturity in Four Countries (female birth cohorts): Sweden, Canada, France and Spain.
Source: (Pérez Díaz 2003b).

Any basic demographic analysis manual explains that overall fertility indicators are an instrumental fiction. They construct a hypothetical generation of women free of mortality and tell us how many children they would have if, throughout their life, they were having children at each age with the same intensity that women have had in each age over the course of any given year. But that deliberately ignores how many women of that hypothetical generation would have survived from birth to puberty, or how many would die during their fertile years, or how long they would live after being mothers, or how long the children they brought into the world would live. Demography "analyses" and separates fertility in its "pure form" from the rest of the other determinants that affect reproduction, especially mortality.

Spain provides good examples of the difference between fertility and reproduction: the generations of women born between 1871-1875 had more than 4.5 children per woman, but their generational reproduction barely exceeded replacement (one daughter

per woman born in her mother's generation). With improved survival, the generations of 1936-1940 achieved the same rate of reproduction, but with almost two children less per woman (2.6). This is what I described above as greater reproductive efficiency, and is the reason why Spain, after the scarce growth of the 19th century, and after a 20th century of steady decline in fertility, has gone from 18 million to over 40 million people.

In short, then, population ageing is no more than the result of a better way to maintain human populations, with a much more efficient yield for each new life brought to the world. From the standpoint of the demographic transition, it may seem like just a by-product, an unintended consequence; from the standpoint of the reproductive revolution, it is an essential part of the process, a part of it.

The decline in fertility is explained in this context, at least from a long-range historical standpoint. We are too focused on the small differences, of tenths sometimes, in the fertility of the more developed countries, and too often we search for explanations in extra-demographic and cultural determinants. But the modernization of fertility and age structure are not a circumstantial or accidental issue, or the result of recent tax or family policies, housing prices, labour market conditions, or relationship patterns between young people today.

They are a result of a large-scale change in the survival and reproduction of human beings, that will still become more pronounced in coming decades, and that leads us irreversibly to a new population equilibrium typical of the wildest prophecies.

Conclusions

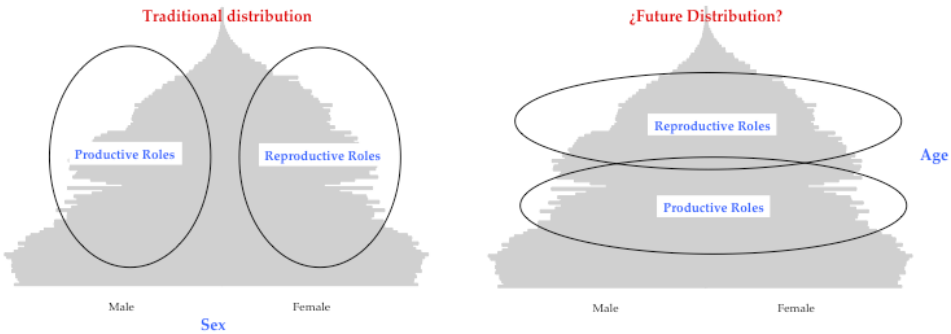
If I have disappointed those who hoped for a new repetition of the usual alarms about the social, political, and economic consequences of population ageing, I hope at least to have been able to explain the reasons. Such alerts are based on predictions that never come true. They are reproduced as part of the "consensus" in the field of demography (O.N.U. 1956), without anyone feeling forced to later explain why they were not right. But in science, errors should serve to review the assumptions and to make different predictions again later. Someone should try to explain sometime why population ageing is almost perfectly correlated with levels of wealth and international wellbeing, and not vice versa. Spain, of course, does not negate this relationship, but quite the opposite: it has only prospered while the proportion of adults went from just 4% a century ago to the current 18% today.

The theory of the reproductive revolution is a good explanation, not just of the change in population dynamics and its consequent effect on the population pyramid, but of the reasons as to why that change is positive and does not cause any of the predicted catastrophes.

In fact, demographic change has enabled greater social and family investment in children, so that human and social capital in Spain has increased dramatically. This has made the economy more productive, and has opened a new and abundant labour pool, women, now much less obligated to perform reproductive tasks. It is not even true that it overloads healthcare systems; it is the changes in consumption patterns and the modernization of systems which explain most of the increase in health spending in developed countries (Dormont, Grignon and Huber, 2006)

Logically, there has not been the ever-announced intergenerational conflict (Arber and Attias-Donfut, 2007) because the ageing of the population does not drive a wedge between the different ages as if they were independent, organized groups fighting for the same resources. Demographic change, however, has consolidated the family and has made it the institution most valued by Spanish youth.

Elsewhere I have speculated on the possible reconfiguration of gender and age roles in a direction that may just be provocative, but I cannot resist showing this graphically here:



Graph 5: Ideal Scheme of Possible Change in the Distribution of Roles by Sex and Age.
Source: (Pérez Díaz 2003a).

The mere fact that the pyramid has changed and there is a better balance among all ages has also had positive consequences for the productive economy (Gómez and Hernández de Cos, 2006). A profile of more diverse users and consumers makes the markets more stable as opposed to the sectoral crises, and the new old age is opening up consumption and basic service sectors for the Spanish economy and, actually, for all demographically advanced countries, as acknowledged even in the US (Krugman, 2005).

What has been extended has not been old age, but youth. Those born in Spain in the early 20th century began working at an average age of 13 and became adults very soon, and elderly people, too. Today in Spain a 40-year-old person is considered young, and that is directly related to the support and resources transferred by the elders to the youngest, and with the simple fact that they remain alive for many more years. In a country with an underdeveloped welfare state and strongly based on family care, the

growing proportion of people in middle age or early old age has been of great help for other ages. Those are the ages that help in caring for their grandchildren (in the absence of public support in work-family reconciliation, health services, or day care) and also for their older relatives. A new social actor has appeared, therefore, with a growing demographic weight that has opened up new possibilities of relationships and family strategies. Let us not receive it with fear.

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	0-14	15-64	> 64	Total
1900	6,240,701	11,408,535	968,849	18,618,086
1910	6,792,408	12,097,011	1,106,628	19,996,046
1920	6,914,876	13,254,350	1,220,617	21,389,842
1930	7,494,647	14,835,000	1,434,558	23,764,205
1940	7,748,951	16,438,632	1,690,388	25,877,971
1950	7,337,386	18,615,864	2,023,505	27,976,755
1960	8,361,283	19,643,207	2,508,515	30,513,005
1965	8,800,620	20,443,436	2,862,816	32,106,872
1970	9,459,640	21,290,338	3,290,679	34,040,657
1975	9,744,457	22,510,040	3,757,754	36,012,251
1981	9,685,730	23,760,901	4,236,727	37,683,358
1986	8,643,897	25,140,028	4,689,407	38,473,332
1991	7,532,668	25,969,348	5,370,252	38,872,268
1996	6,361,626	27,111,282	6,196,472	39,669,380
2001	5,932,653	27,956,202	6,958,516	40,847,371
2006	6,341,606	30,108,189	7,308,455	43,758,250
2010	6,868,095	31,406,561	7,742,899	46,017,555
2030	6,574,887	29,791,620	11,192,699	47,559,206

Population of Spain from 1900 to 2010. Large age groups (absolute numbers).
Source: INE, Census, Census Registrations and corresponding census renewals.

	0-14	15-64	> 64	(>64)/(<15)
1900	33.5%	61.3%	5.2%	16
1910	34.0%	60.5%	5.5%	16
1920	32.3%	62.0%	5.7%	18
1930	31.5%	62.4%	6.0%	19
1940	29.9%	63.5%	6.5%	22
1950	26.2%	66.5%	7.2%	28
1960	27.4%	64.4%	8.2%	30
1965	27.4%	63.7%	8.9%	33
1970	27.8%	62.5%	9.7%	35
1975	27.1%	62.5%	10.4%	39
1981	25.7%	63.1%	11.2%	44
1986	22.5%	65.3%	12.2%	54
1991	19.4%	66.8%	13.8%	71
1996	16.0%	68.3%	15.6%	97
2001	14.5%	68.4%	17.0%	117
2006	14.5%	68.8%	16.7%	115
2010	14.9%	68.2%	16.8%	113
2030	13.8%	62.6%	23.5%	170

Population of Spain from 1900 to 2010. Large age groups (relative numbers) and relationship between the elderly and children.
Source: INE, Census, Census Registrations and corresponding census renewals.

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