

From Silver to Gold

The implications of
Japan's ageing
population



GE imagination at work

In co-operation with the
Economist Intelligence Unit

Preface

From silver to gold: The impact of Japan's ageing population is an Economist Intelligence Unit report, commissioned by GE. The Economist Intelligence Unit bears sole responsibility for the content of this report. The findings and views expressed within do not necessarily reflect the views of GE.

This paper provides insights into implications for Japan of the rapidly ageing population, and outlines some of the challenges that will need to be addressed for Japan to capitalize on the potential opportunities presented by this demographic phenomenon. It is based on interviews with leading experts and senior executives as well as extensive desk research.

The report was written (in both languages) by Dr Amie Nagano and Dr Takato Mori, and the English text was edited by Laurel West.

We would like to thank all of the interviewees for their time and insights. The following individuals were interviewed for the study (in alphabetical order, by company):

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About this research

This report was commissioned by GE Healthcare. The Economist Intelligence Unit independently conducted the interviews and wrote the report. We are grateful to the interviewees for taking the time to share their insights.

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Economist

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From Silver to Gold

GE is an innovative technology and services company that can solve some of the world's most difficult problems. Today, GE is leading ways in addressing the stubborn problems of affordable healthcare. Healthymagination was conceived in 2009 to grow our healthcare business by providing better healthcare for more people at lower cost. We are committed to introducing innovative technologies focused on reducing costs, increasing access and improving quality around the world.

Today, the world and Japan in particular, is facing a serious challenge related to ageing populations. Inspired by healthymagination, GE has commissioned the Economist Intelligence Unit to research not only the challenges but also the opportunities that Japan's ageing population presents. The findings of the research suggest that there are indeed tremendous opportunities for the government and industry to turn the Silver challenge to Gold, not only spurring economic growth but also improving the quality of life for the elderly.

熊谷昭彦



Akihiko Kumagai
President & CEO
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Executive Summary

Many countries around the world are grappling with the implications of ageing populations. The issues vary slightly between countries, but some are common to all—not least of which is the challenge of financing healthcare systems to meet the increasing pressures placed on them by an ageing population. This is no simple matter. With advances in healthcare and the standard of living, people are living longer and healthier lives. And they are demanding a better quality of life. Catering for this demand represents an enormous market opportunity. Japan, with the most rapidly ageing society and challenging demographic profile, is well positioned to take the lead in capitalizing on this opportunity. But will it do so? This paper examines Japan's approach to the opportunity, looking at government policy, misconceptions about ageing, and how Japan can improve its innovation environment. Among the main findings:

- **Japan's demographic challenge is complicated by a low birth rate, increasing longevity and the rapid pace of ageing.** This threatens not only a labor shortage, but also a difficult fiscal challenge as the dependency ratio—the number of workers compared to the number of elderly—worsens. As well as overhauling the healthcare system and its finances to meet the needs of the elderly, the government will need to come up with innovative ways to raise revenue and cover the labor shortfall by, for example, encouraging more women to work and making better use of the talent available in the elderly population.
- **The government has taken the lead in creating a vision of the opportunities an ageing population presents, but now must encourage others to follow.** As part of its strategy to foster demand-led economic growth, the Democratic Party of Japan (DPJ) government that took office in 2009 has unveiled an ambitious vision to turn the ageing of society into a growth opportunity, while catering for the twin needs to contain healthcare costs and improve the quality of life. Now it must focus on the details. Among the fundamental issues to be addressed are a lack of high-quality research on the state of the country's elderly population and shortcomings in the innovation environment (see below).
- **The market opportunity is in helping seniors live the lives they want to lead, not simply catering for those with severe disabilities.** Japan's elderly are not as dependent on care as one might assume. According to one study, 70% of Japanese men begin to see a gradual decline in their self-sustainability only around the age of 75, and 10% retained their self-sustainability into their 80s and 90s. Many elderly people can continue to lead active lives with only minor assistance. This suggests that scientists, innovators, and businesses need to think more broadly about what the market needs.
- **The environment for innovation needs improvement.** Taking advantage of the market opportunity that the ageing of the population presents will require innovation across many sectors. Though Japan has a reputation for technological innovation, its top innovators note the need for broad changes to the way innovation is approached. Many of the issues are cultural, rather than regulatory. For example, the country needs to embrace global talent, whether homegrown or foreign-trained. Its industries must also learn to collaborate in order to reap the benefits of cross-functional innovation, and to focus on integrating and applying technologies rather than focusing on technical innovation *per se*. A key agenda item is to better harness Japan's strengths in information technology to serve the elderly market.

Japan's experience will be instructive to other countries facing similar challenges. Among the broader issues that will be closely observed is how Japan manages its limited resources in terms of medical and nursing care, and determines the role of the private sector, both in caring for the elderly and in developing products and services to improve their quality of life. Valuable lessons could come from how Japan uses innovation (such as community redesign) to support home-based care and, more broadly, "ageing-in-place" for the growing number of elderly living alone in cities where neither community ties nor family members are available to support them.

Introduction

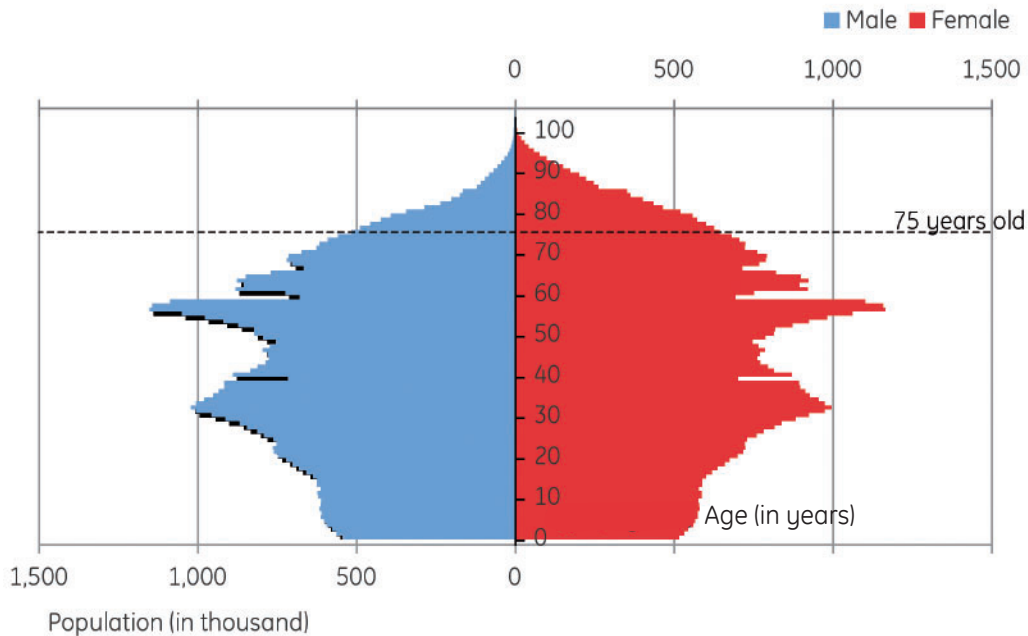
Profound changes to Japan's population in the coming decades will have an equally profound impact on the economy and society. What are the implications of this demographic shift, and how will Japan cope?

The most obvious implication is a shrinking population. The ageing population combined with a low birth rate mean that Japan's population, which began to fall in absolute terms in 2005, is now expected to decline from 127.5m in 2009 to below 120m by 2025 and to 90m by 2055¹. But the most alarming issues arise from the drastic change in the shape of the country's population pyramid—and the unprecedented pace at which the demographic shift is occurring.

The country's 28m elderly (those aged over 65) currently account for less than one-quarter (22.1%) of the total population. With a birth rate of just 1.34% in 2007, well below the level of 2.1% necessary to replace the population, and no prospect of a drastic improvement in the rate, the country's National Institute of Population and Social Security Research (NIPSSR) predicts that the elderly will account for more than one-third (33.7%) of the total population by 2035, and for one out of every 2.5 people by 2055 (see Charts 1-3).

Chart 1

Japan's population pyramid: 2005



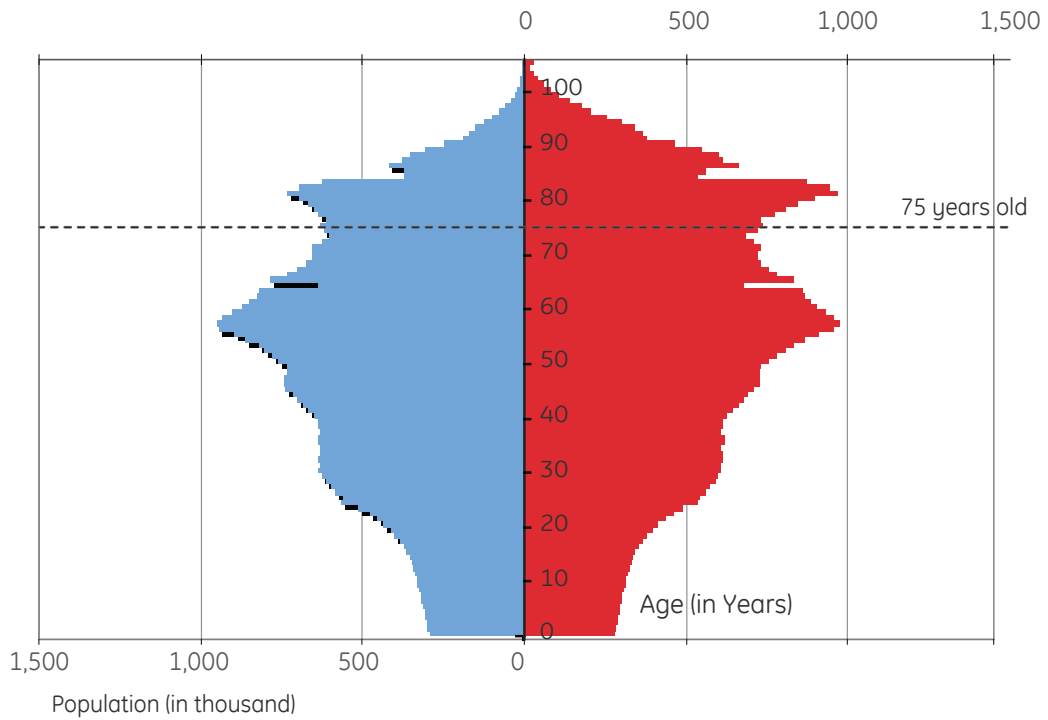
Source: National Census, Ministry of Internal Affairs and Communications

¹ Population projections for Japan (as of December 2006), National Institute of Population and Social Security Research (NIPSSR).

Chart 2

Japan's population pyramid: 2030

Male Female

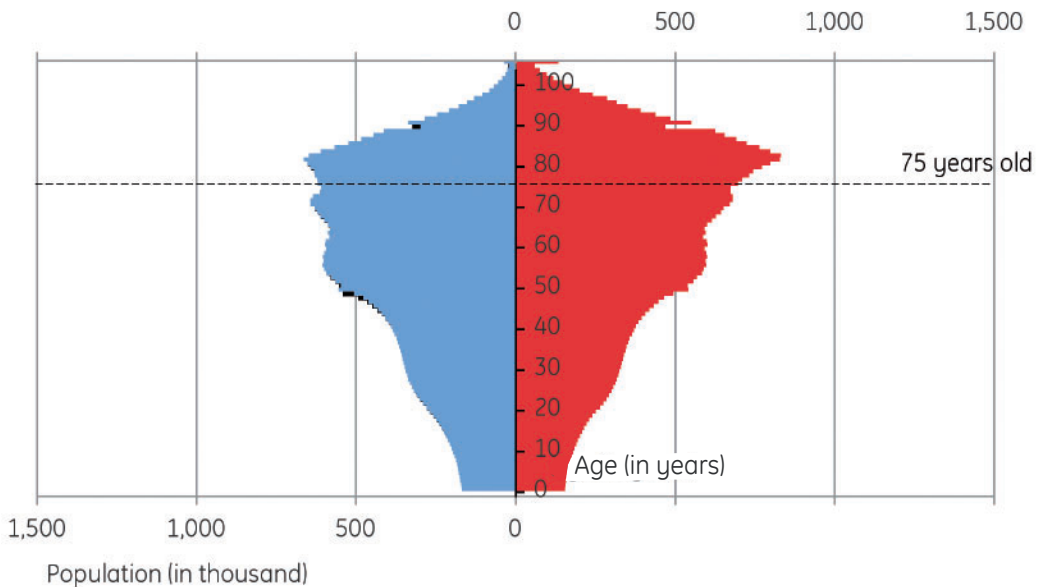


Source: Population projections for Japan, National Institute of Population and Social Security Research (NIPSSR)

Chart 3

Japan's population pyramid: 2055

Male Female



Source: Population projections for Japan, NIPSSR

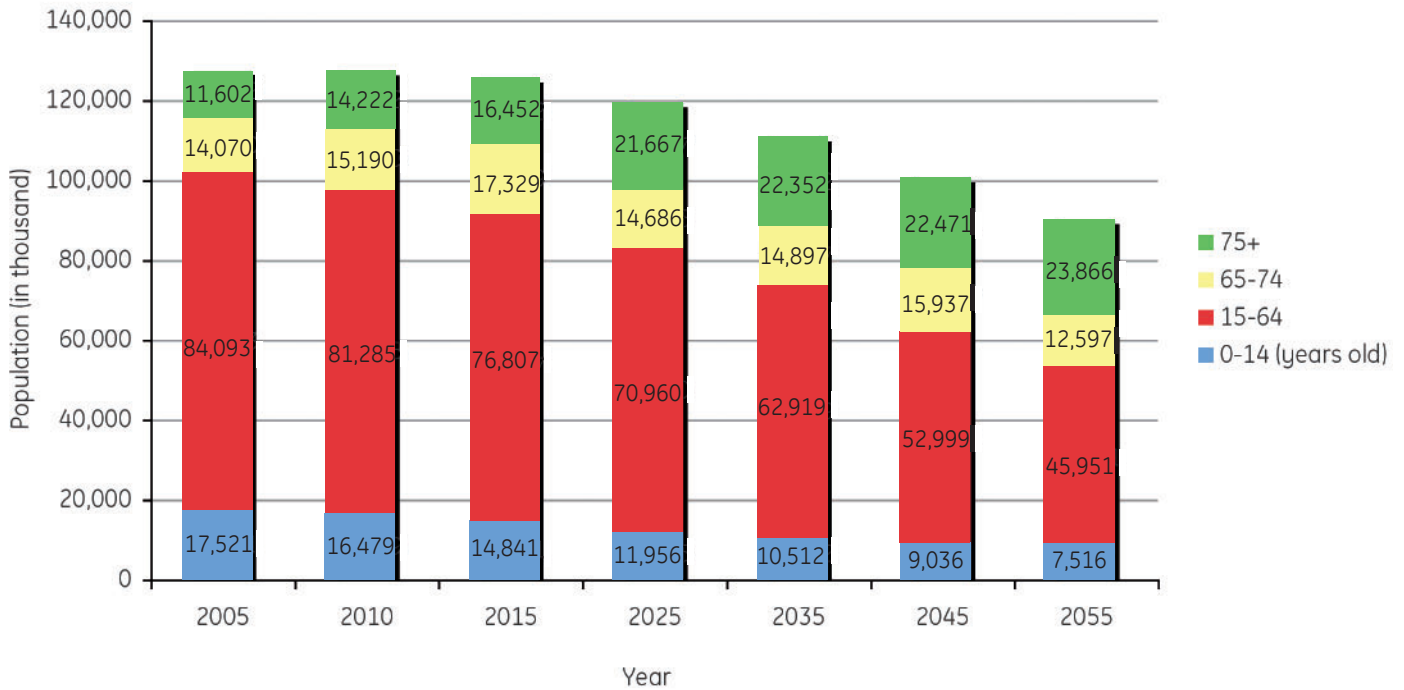
Meanwhile, the elderly are living longer —Japanese women have the longest lives in the world, with an average life expectancy of 86.05 years. Japanese men rank fourth in the world, living an average of 79.29 years. By 2055, these figures are expected to reach 90.34 years for women, and 83.67 years for men².

Such longevity means that the proportion of elderly aged over 75 among the total elderly population will grow. Indeed, people over 75 are expected to outnumber those between 65 and 74 by 2017—and to account for more than 65% of the total elderly population by 2055 (see Chart 4).

2 Population projections for Japan (as of December 2006), NIPSSR

Chart 4

Population projection by age group: 2005-55



Source:

2005: National census, Ministry of Internal Affairs and Communications

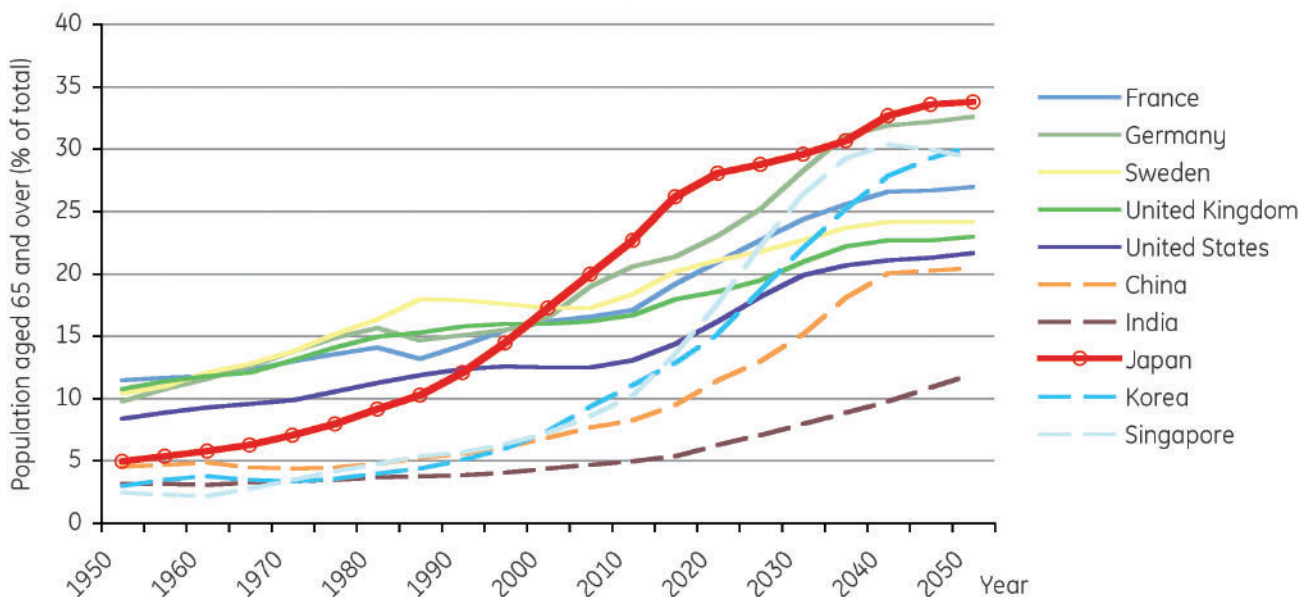
2010-2055: Population projections for Japan, NIPSSR

In a global context, Japan's ageing is notable for its pace. The country took only 24 years to transform from an "ageing society" where the elderly population accounted for 7% of the total population, to an "aged society" where the share has doubled, according to UN definitions.

This compares to 47 years for the UK, 85 years for Sweden, and 115 years for France. Japan is not alone in facing such a rapid shift—South Korea, Singapore and China are also expected to face quick changes. But Japan is graying faster (see Chart 5).

Chart 5

Pace of ageing by country (1950-2050): growth in the proportion of the elderly population (65 & over) in total population



Source: World population prospects, 2008 Revision, United Nations

Economic impact

What are the implications of the ageing of society on Japan's economy? The fundamental impact will be on the size of the workforce. Given Japan's low and declining birth rate, the workforce will shrink, leaving fewer workers to support the elderly (the so-called dependency ratio). According to NIPSSR, by 2055 there will be only 1.3 working people to support every elderly person, a sharp fall from 3.3 in 2005 and 11.2 in 1960.

In order to maintain its finances the Japanese government will need to address the shrinking pool of workers contributing to tax coffers. How will it do so? Assuming that the country remains resistant to large-scale immigration, the Economist Intelligence Unit expects the government to make further efforts to raise workforce participation in the years to 2030, bringing the rate to almost 80%³. There is only limited scope for raising the participation rate among retirees, given that around 20% of those over 65 already work, a high figure by the standards of many developed countries. The main thrust of government policy in this area will therefore be to increase the number of women in the labor force, which, at just under 50%, is low compared with other OECD countries.

Among the fiscal challenges, the most urgent is how to shore up the healthcare system to cope with the increased demands placed upon it by ageing. The elderly are susceptible to multiple diseases, including some, such as cancer and stroke⁴, which require lengthy (and expensive) treatment and/or rehabilitation and heavy use of nursing care. Among those certified to receive nursing care, the leading causes of this are stroke, dementia, age-related asthenia, and arthritic disorder (see Chart 6).

It is not just a matter of treating diseases. Given advances in medical technology, the Japanese government will be under growing pressure to prevent them, or to detect and treat them earlier, and thus improve the quality of life for the elderly in their golden years.

According to NIPSSR, total social security expenditure (including costs for medical care, pension, and social welfare services) in the fiscal year 2007 (April-March) amounted to a record high of 91.4trn (around US\$980bn)—a 2.6% increase from the previous fiscal year. The proportion of social security expenditure to national income reached 24.4%, more than four times the figure in 1970. The benefits paid out to the elderly population (pensions, medical insurance, and welfare services and employment programs) already account for approximately 70% of total social security expenditures (see Chart 7).

By the standards of the industrialized world, Japan spends a modest amount on healthcare—an estimated 7% of GDP or US\$2,795 per head in 2009, according to Economist Intelligence Unit data⁵. This compares with 16.3% of GDP and US\$7,576 per head in the US, which spends more on healthcare than any country in the world. But given the increasing demands a rapidly ageing population will place on the system, these figures could rise dramatically. Given the country's already creaking public finances, Japan needs to radically overhaul its healthcare system to ensure its long-term viability.

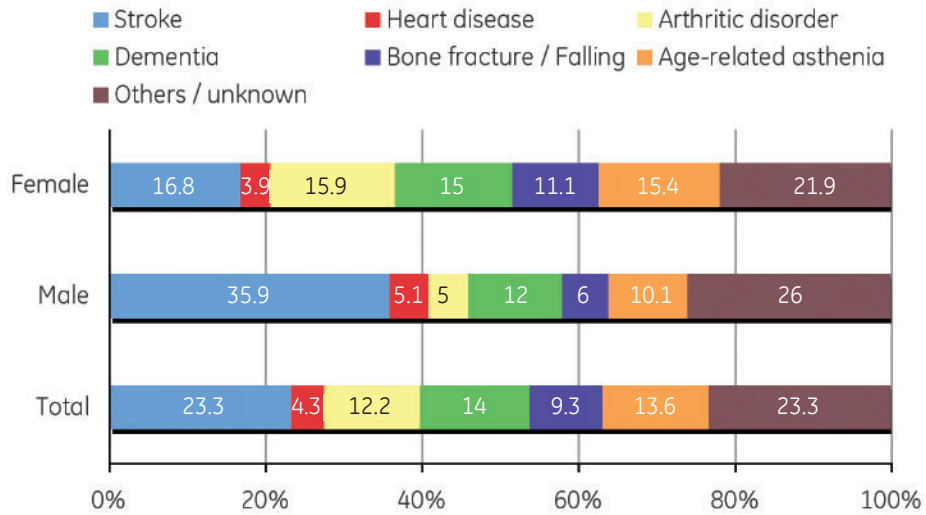
³ Industry report: Healthcare, Japan, February 2010, Economist Intelligence Unit.

⁴ The two major causes for the Japanese elderly to receive medical treatments are: stroke and cancer (as inpatients); and high-blood pressure and spinal disorder (as outpatients).

⁵ An Economist Intelligence Unit estimate for calendar 2009. OECD Healthcare Data 2009 cites the actual data for the year 2007 at 8.1%.

Chart 6

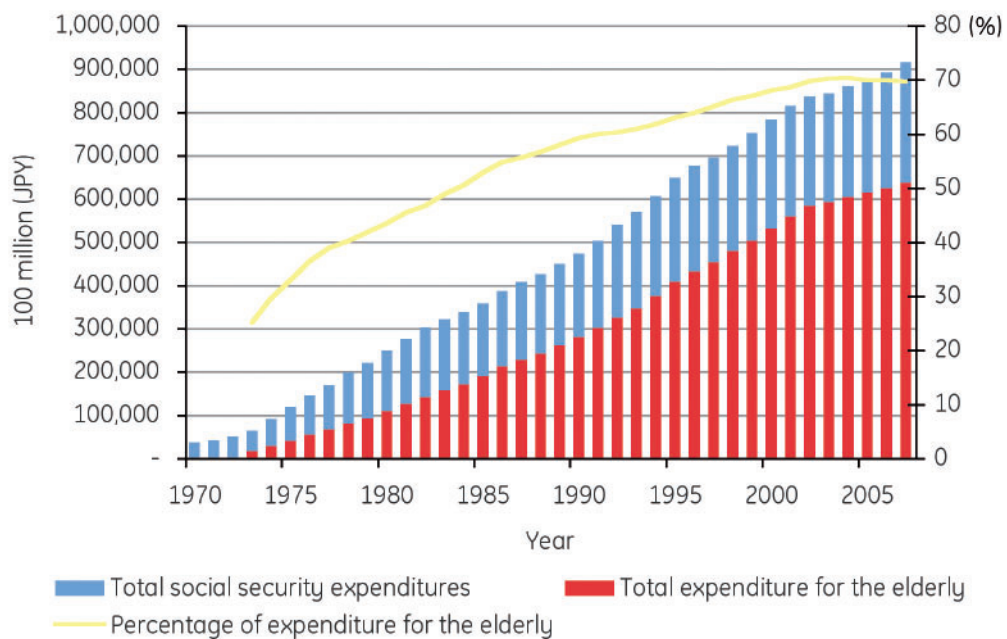
Nursing care certification by disease type: 2007



Source: Basic national livelihood survey, Ministry of Health, Labour and Welfare (MHLW)

Chart 7

Trend in the total expenditure for the elderly: 1970-2007



Source: Expenditure for the elderly, NIPSSR

Opportunity in adversity

The tendency has been to view the rapid ageing of Japanese society as a negative phenomenon. In adversity lies opportunity, however. Given that its population is ageing on a scale previously unseen, Japan has the potential to lead the way in developing systems, services, and products to cater for what will be an important consumer market.

Globally, there is huge interest in pioneering strategies to manage various issues related to an ageing population. In Asia, several countries are preparing to face similar demographic challenges, but with the cushion of relatively robust economic growth. In Europe, the prospect of rising healthcare spending is combined with an outlook of moderate growth.

The Japanese government is keen to capitalize on this opportunity. It recently announced a plan to deliver a “leading elderly society model⁶”—which aims to turn the unprecedented demographic change into a source of economic growth. The plan is to use the prospective demands in the elderly market to foster medical, nursing care, and other health-related services into growth industries. It also aims to improve the quality of life of the elderly by offering them the chance to remain active, including the chance to work.

Remodeling society to incorporate the needs of the elderly has benefits not just for their quality of life but potentially for the Japanese economy as well. The plan could help to unlock the savings of Japan’s elderly—by easing their anxiety about life in old age. It could also help to unleash a huge reservoir of technical and managerial skills that is currently unappreciated and underpaid, with the elderly often being expected to accept low-paying and semi-voluntary jobs.

This paper explores how the country can turn the so-called silver society into gold. What are the challenges Japan faces in its demographic transition? Where are the opportunities for the country and business?

At a personal level, Japanese people today are well aware that they could live beyond 80 and they will undoubtedly begin to plan their lives around this possibility. But Japanese society as a whole—the approach to life and work, the way in which elderly are regarded—has hardly begun to adjust. Japan should be well positioned to tap into this potentially phenomenal market, especially given its reputation for innovation⁷. The question is whether it can make the most of its advantages.

⁶ The new growth strategy (basic policies): Toward a radiant Japan, December 30th 2009, Cabinet Office.

⁷ Japan was placed first in a ranking of the world’s most innovative countries

(see A new ranking of the world’s most innovative countries, 2009, sponsored by Cisco, Economist Intelligence Unit).

The agenda of ageing: The healthcare system

Will Japan rise to the challenge of finding a sustainable healthcare financing model that can meet social demands for a better quality of life?

Healthcare reform has been hotly debated in Japan, as it has been elsewhere, notably the US. Cost, accessibility, affordability, and quality are, as ever, the central issues in the debate. Given that Japan is on the cusp of feeling the full impact of its rapidly ageing population on healthcare costs, reform has become increasingly urgent.

Accessible and affordable

In shaping its healthcare system Japan has followed broad goals that are similar to those of many other countries. Its current national system, created in 1961, focuses on mandatory insurance and universal access. This evolved to include free access for citizens over 70 years of age. But over the years certain inefficiencies became clear. Affordable and accessible treatment led to over-use of the system, and the fee-paying structure for doctors encouraged the over-prescription of medicines. These practices, combined with the introduction of expensive medical technologies, led to ballooning costs.

With the prospect of a rapidly ageing population adding to the increasingly costly system, successive governments have attempted to contain costs while maintaining service. Various measures have been taken to shift more of the outlay to households (and other contributors to the insurance system). A co-payment system was introduced for the elderly and salaried workers who have faced increases in the share of medical bills they are expected to pay, as well as higher insurance premiums.

As Japan has endured years of sluggish economic performance, households have been increasingly unable to afford the cost of insurance (especially when combined with other payroll taxes such as pension premiums and income tax). In 2008, about 20% of all households failed to pay their insurance premiums and thus lost their full insurance coverage⁸.

In 2002 then-prime minister Junichiro Koizumi introduced a plan that focused on drastically slashing social security spending by putting a cap on how much such spending could increase each year. This marked the beginning of what is referred to in Japan as *Iryō Hōkai*, or the “fall of the healthcare system.” In truth the system was already facing challenges⁹. The emphasis on universal access had discouraged a more systematic approach that would control access to a certain extent and allow resources to be redirected to where they are most needed. Indeed, today there is a mismatch in supply and demand in several areas, such as pediatrics, and the hospital system is fragmented and of uneven quality. At the root of many of the system’s current shortcomings is the lack of a systematic evaluation of health outcomes (and the inadequate availability of this data to the public), a problem common to many countries.

⁸ Finances and the related issues concerning the national health insurance, 2009, Ministry of Health, Labour and Welfare.

Consumers who do not pay premiums can access the health system but must pay 100% of the expenses out of their own pocket. They can obtain temporary insurance cover by paying the outstanding premiums.

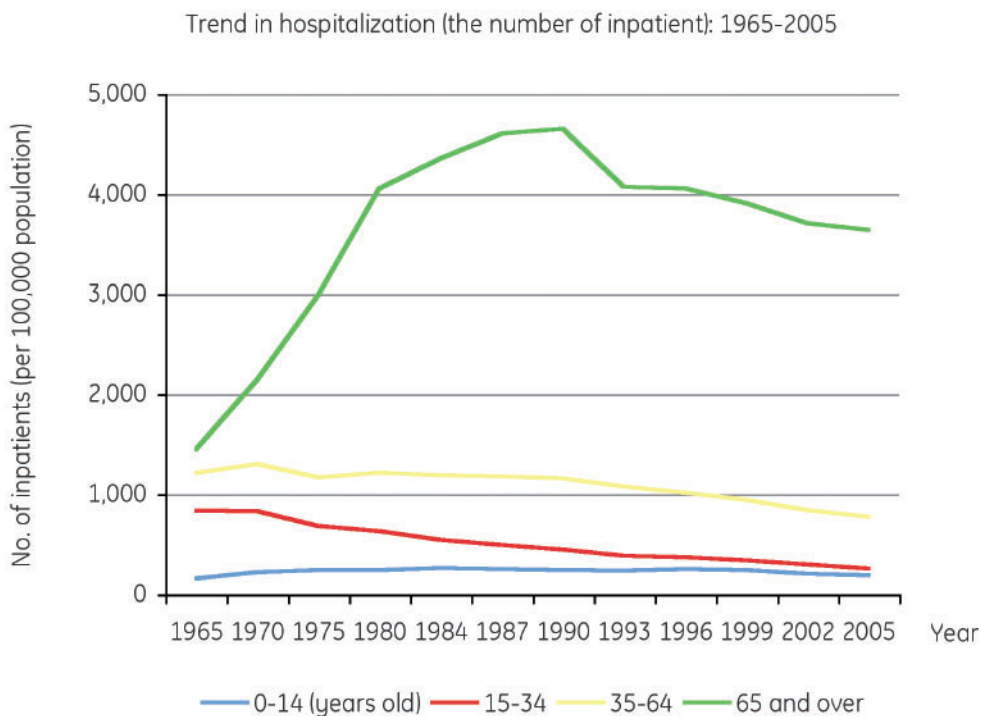
⁹ Japan’s healthcare system is rated highly in the world—for instance, Japan was ranked 10th in the world in terms of overall health system performance by the World Health Organization in 2000. The rating, however, tends to exaggerate the state of Japan’s healthcare system. One of the key factors in Japan’s high ranking is life expectancy. But this rating ignores the role of factors lying outside the healthcare system—such as Japan’s relatively healthy diet—on healthcare outcomes.

Costs

How does the ageing of the population affect Japan's healthcare system? According to NIPSSR, medical costs per capita of the elderly are 4.8 times higher than for the younger population. Medical costs for the elderly aged over 65 amounted to about ¥17.7trn in 2007, or 52% of total healthcare spending, meaning that more than half of healthcare spending goes to just 20% of the population. Among the elderly, those over the age of 70 account for 41.5% of Japan's total healthcare spending. Given that Japan is expecting a sharp expansion of this cohort (see Introduction), this is a worrying statistic. This is particularly so in light of Japan's public debt burden, which at 190% of GDP is the highest in the world after Zimbabwe and severely constrains its options for financing healthcare.

A major plank in the strategy to alleviate pressure on the healthcare system has been a shift in emphasis towards home-based care for the elderly. This began in 1989 with the Gold Plan (followed up in 1994 with the New Gold Plan), which dramatically increased the facilities and services required to support nursing care, with the aim of gradually shifting to home-based care. Prior to these changes the elderly were particularly heavy users of the medical system. Large numbers who did not require medical treatment stayed in hospital for extended periods of time due to a combination of factors such as the under-supply of care facilities, the stigma attached to care homes, the relatively low cost of hospitalization, and the fee-paying structure for physicians (see Chart 8).

Chart 8



Source: Patient Survey, MHLW

The shift towards home-based care, while aimed at containing costs, was also conveniently in line with a growing social desire for a better quality of life—a trend that has emerged globally, underpinned by increased longevity. In the field of geriatric healthcare, this has meant demand for a more holistic approach and a shift in focus from merely prolonging life with medical cures to providing better care to enable the elderly to live more fulfilling lives, including the option of “ageing-in-place” or being able to continue to live an active life in one’s own home and community. Aside from nursing care, this will require improvements in preventative medicine and palliative care, and much else besides.

In 2000 the government introduced an insurance scheme for nursing care for the elderly, which opened the door for the private sector to enter the nursing care market—offering an additional lever for the government to contain costs, while further preparing the system for home-based care. The private nursing care business initially attracted about 130,000 companies from a wide array of sectors, including construction, transportation, and human resources. The industry has, however, suffered from various teething problems, such as low service fees (regulated by the government) and poor working conditions, which have only recently been addressed. Nevertheless, it marked a bold step towards the remodeling of Japan’s healthcare system.

It was only in 2008, however, that the government signaled a clear shift in its approach to the problems facing Japan’s healthcare system, setting twin goals of containing costs and improving the quality of healthcare.

A report¹⁰ prepared by a special task force under the prime minister’s office came up with bold plans (by previous standards) to prioritize spending and investment, and to introduce more efficiency in the system, with the aims of improving the quality of available healthcare and curbing spending. The plans included shifting and even expanding resources in areas where there was a shortfall, such as acute-stage medical care (it had planned to do this by allocating twice as many staff for this type of care, compared with the average number available for general care patients). In addition, it had planned to build more home-like facilities (*Kyojyūkei Shisetsu*) to cater for the elderly who are well enough to stay at home but need minor assistance. This is increasingly important given the expected increase in the number of single elderly households¹¹, which challenges the viability of the plan to rely on home-based care.

The DPJ government that took office in 2009 is continuing the effort to shore up the health-care system by focusing on quality and efficiency. This has been marked by its “health power strategy” which was announced as a part of its overall growth strategy¹² (discussed below), and its pledge to remove the fiscal cap on social security expenditure introduced by Mr Koizumi. Although it has yet to formally do so the latter, it has, for the first time in ten years, allowed the overall reimbursement fee for doctors to rise (although by a small amount). Fees for services needing improvement, such as emergency room treatment and certain surgeries, have increased substantially.

10 Final report of the social security national conference, November 4th 2008, Cabinet Office.

11 Japan is expecting a rise in the number of single elderly households. In 2007, 40.1% of all households included a person aged over 65. Of these, 22.5% consisted of an elderly person living alone. The latter proportion is expected to rise to 33.7% by 2030.

12 The new growth strategy (basic policies): Toward a radiant Japan, December 30th 2009, Cabinet Office.

In line with its overall strategy to boost demand-led economic growth, the ruling government has sketched out a bold vision to turn Japan's ageing population into a major opportunity. According to a government statement: "The ageing of society in Japan poses an opportunity for developing new manufacturing industries and service growth industries by vigorously promoting 'life innovation' [innovation in the medical and nursing care sectors]." It estimates that it can create 2.8m new jobs and a new market worth ¥45trn by 2020 by turning medical, nursing care, and other health-related industries into growth industries with private-sector involvement. The exact details of how this vision is to be achieved have yet to be set out. But the government is planning to make concerted efforts to better utilize Japan's strength in information and communication technology (ICT) to drive innovation and growth (in healthcare and in general).

The "health power strategy" includes the promotion of research and development in pharmaceuticals and in medical and nursing care technologies, including regenerative medicines, remote medical-treatment systems, and medical and nursing care robots. This will involve overhauling the current drug and device approval regime and improving the clinical testing environment to expedite approvals. The plan also refers to catering for demand elsewhere in Asia and other overseas markets.

Underpinning the government's plans is a pledge to "eliminate the anxiety of the elderly about the future, and induce a change from savings for uncertainty to expenditures for an enjoyable life." A key part of this plan involves assuring access to high-quality healthcare, which will be achieved by making Japan's

healthcare system more efficient and investing in areas where the system is particularly stretched. The plan also envisions more and better options in treatment and nursing care for the elderly, to be achieved through innovation and private-sector involvement in health-related industries. Examples of innovations that have the potential to dramatically improve the quality of life for the elderly (and in the process lower the overall cost of their treatment), include a relatively new drug which greatly reduces the lasting effects of stroke (see box). Similarly, new treatments or methods of early detection have been developed for Alzheimer's disease and arthritis, both of which can seriously reduce the self-sustainability of the elderly.

If the government delivers on its promises, the elderly can expect a dramatic improvement in their self-sustainability, which is a key element to allow them to successfully "age-in-place."

Outlook

The government's vision for dealing with the challenges of an ageing society represents a refreshing change and sets the agenda for addressing the issue in the context of the long-term viability of Japan's healthcare system. The challenge now will be to deliver it. Many more details will be needed to achieve the fine balance between containing costs and improving the quality of life.

Epitomizing the challenges: Treatment of stroke victims

The challenges facing Japan's healthcare system in coping with an increasing population of elderly citizens are clearly illustrated by the attempts to use a ground-breaking drug discovery for the treatment of one of the major afflictions affecting the population—strokes.

The use of tPA, a clot-busting drug developed for the treatment of acute ischemic stroke, was approved for insurance coverage in Japan in 2005—after suffering from a lengthy delay due to patent-related problems. While highly effective, the drug carries a risk of hemorrhage and requires careful screening and evaluation before being administered. Moreover, it needs to be given within three hours of the onset of stroke symptoms.

Hirofumi Nakayama, a medical doctor and executive director of the Japan Stroke Association, says that Japan's ambulance and emergency medical services are not yet prepared to deliver the rapid care required to make use of the drug. "In order to successfully utilize tPA, we have to be prepared right from the beginning of emergency services. The ambulance crew will have to deliver screening at the scene, and take the patient to an available doctor who can administer appropriate diagnostic service and treatment. Unfortunately, we still need to coordinate local efforts—local clinics and hospitals are developing randomly, in an uncoordinated way, and in many cases no collaborative way of working with the ambulance teams has been established. In most cases, we are lacking the (acute stroke care) protocol that sets the local procedures concerning the working of ambulance services and intake of patients at the hospital. The situation is such that we are unable to deliver remote medical services. The infrastructure within the hospitals will also have to improve. We need reform that will allow the emergency and medical services to work in an integrated way." The potential of tPA both in terms of reducing healthcare spending on stroke treatment and alleviating the suffering of patients and their families is immense, says Mr Nakayama. However, there is no tracking system to evaluate its actual value in a holistic way that takes into account the savings to be had as a result of the reduced need for hospitalization and

rehabilitation. The law protecting personal information is one key hurdle that makes such tracking difficult in Japan, says Mr Nakayama. In the absence of such data, tPA is evaluated inappropriately.

Mr Nakayama is also concerned that calls for more focus on "care" over "cure" in Japan's healthcare reform will threaten the development of new technologies/treatments that could vastly improve the overall outcome for disease sufferers. "The shift in emphasis to care from cure has a solid background. The medical system has been biased in favor of cure and has poorly served the need to care. But we should be careful not to disregard the importance of technical innovation in terms of cures. As the benefits of tPA show, finding a new treatment can lead to a dramatic improvement in patients' quality of life and reduction in the social cost imposed."

"The challenge of stroke care is really the epitome of the problems concerning the Japanese healthcare system."

Hirofumi Nakayama
Executive Director, The Japan Stroke Association

Mr Nakayama identifies further challenges in terms of care of stroke victims, particularly in light of the new emphasis on home-based care. Patients are often transferred from one hospital to another as they recover and require close monitoring even after they return home. "After returning home, there will have to be close coordination with a local doctor in order to set preventative measures in place. We have to also think about the response plan in case symptoms reappear. This requires coordination among emergency, medical and nursing care services. The challenge of stroke care is really the epitome of the problems concerning the Japanese healthcare system," he says.

Interview with Hiroyuki Nagahama, Senior Vice-Minister of Health, Labour and Welfare

Q. What will be the key emphasis of healthcare reform?

A. In our Manifesto, we pledge to shore up the healthcare system. Of course, there is the issue of financing. But besides that, it might be an obvious thing to do, but the reform will first focus on examining the efficiency of the system.

To give you an example, I am aware that it was received with mixed responses but in April this year we raised the overall reimbursement level by 0.19%, the first rise in ten years. The emphasis was on improving the remuneration for salaried physicians in hospitals, and fees for acute-stage surgeries that require high-level skills and home-based care. Rather than just slashing medical spending, we believe such changes are an important part of our effort to find a more efficient healthcare system.

Both the reimbursement levels for medical and nursing care will be evaluated in the next review, planned for 2012. The key issues we are preparing to address involve clarifying the roles to be played by the medical and nursing-care sector providers, and the coordination between them. We believe these are important issues to be addressed in order to allow medical and nursing care services to be delivered in a more integrated and seamless way. In turn, this will become an integral part of our efforts to establish a healthcare system that is efficient.

Q. We have been witnessing some very progressive policies and formal plans in the past ten years, which include the New Growth Strategy announced at the end of last year. But it might be said that these policies and plans are not well understood or embraced by various stakeholders such as the general public and professionals, leading to lost opportunities. Will the government address this issue?

A. I believe there are perception gaps. It is, however, less than a year since we came on board. As a member of the DPJ, I hope that the public will give us time, allowing, say, five years before they judge us, rather than expecting rapid changes. That will allow the perception gap (between the highest levels of government and street-level) to narrow.

In terms of the gap between national and regional concerns and perceptions, we have to remember that from Hokkaido to Okinawa, we have had locally-oriented development of healthcare systems. I am aware that I have to carefully attend to the issue of applicability of plans that we make on the table here in Kasumigaseki (where MHLW is located).

Q. (In relation to the perception gap mentioned above) How about accountability as a politician—such as making better efforts to explain and publicize the context in which the policies are coming out, and the merits as well as demerits of the policies?

A. At a conference I attended recently (where he had to present plans concerning the healthcare system), I had to preface my remarks with “at the risk of being misunderstood”. In the conventional thinking in Japan, referring to medical and nursing care sectors as businesses will not be well received. These are areas previously provided by the state—and some believe that the state should continue to cover them given that taxes or insurance premiums are being paid. We have to explain carefully because introducing such ideas—that the medical and nursing care services can be businesses and industries, and even a means to create jobs—can invite misunderstanding.

Q. How will the government address the issue of a shrinking workforce? Will the government address the issue of productivity rather than merely the provision of jobs?

A. Japan is currently ranked 17th in the world in terms of GDP per capita (referring to International Monetary Fund data for the year 2009). This is not a desirable performance when we are ranked second in terms of the size of GDP. One of the reasons for the relatively weak performance is the low workforce participation rate for women.

The employment opportunities in the medical and nursing-care sectors within the framework of community-based healthcare can play a significant role in this. By implication, it is significant that the government has made the decision to turn these sectors into growth-driving industries.

Talking about the way to secure efficiency in the system, the quality of the workforce is a relevant issue here because it results in productivity. For instance, this year there is a record-high quota for the admission of medical students. But merely increasing the number of doctors is not enough to improve efficiency in the healthcare system.

(Referring to the decision to turn the healthcare-related sectors into growth-driving industries) We often looked to learn from developed countries in Europe and the United States. But in terms of the way to deal with ageing and even to turn this into an opportunity—especially now that the DPJ has made the bold step to turn the medical and nursing-care sectors into growth-driving industries—we are aware that these countries are now looking to see how Japan will deal with this as a leading-edge case.

The agenda of ageing: Embracing the potential

Understanding what the elderly actually need and want is the first step toward improving their quality of life

The government's "health power strategy through 'life innovation'," as its plan is called, places great emphasis on innovation across a number of sectors. The ambition is to come up with a "leading elderly society model" that responds to the challenges of healthcare financing while meeting the elderly's needs and wants—not only with products and services, but also with systems to allow them to lead active and fulfilling lives.

It is easy to imagine the potentially huge market to cater for this vision: products, services, and systems to support home-based care; robots and related products; barrier-free housing; preventative medicines and care—the list of possibilities is long. What is missing is a clear understanding of what the elderly want and need, underpinned by a lack of research and numerous misconceptions. Indeed, it may not be unfair to say that many products and services aimed at this market to date have been based on assumptions, rather than understanding of the market.

To realize the potential of this market one of the misconceptions that must be overcome is the notion that catering for the elderly market means developing products for those with severe disabilities. "You might think of the elderly over 75 as Alzheimer patients or bed-ridden. Only that is not so true," says Hiroko Akiyama, a professor at the University of Tokyo's Institute of Gerontology. "With a little help many of them can continue to live an ordinary life. Here you find a potential market. At the moment, their wishes to continue to pursue their various interests are often unmet."

Indeed, what little data is available on the state of the elderly population in Japan suggests that many are well enough to lead ordinary lives with minor assistance. In a study¹³ launched in 1987 to track the ageing patterns of approximately 6,000 elderly people, it has been shown that 70% of men began to see a gradual decline in their self-sustainability only around the age of 75, and 10% retained their self-sustainability into their 80s and 90s (see Chart 9). Women were less lucky, with 90% beginning to experience a decline in self-sustainability from their mid-70s (see Chart 10).

¹³ The study tracked, at three-year intervals, 5,715 randomly selected men and women aged over 60 living across Japan (see Hiroko Akiyama, Conceptualizing science and society in the age of longevity, Science Journal Kagaku, Vol. 80 No. 1, January 2010, Iwanami Shoten).

Chart 9

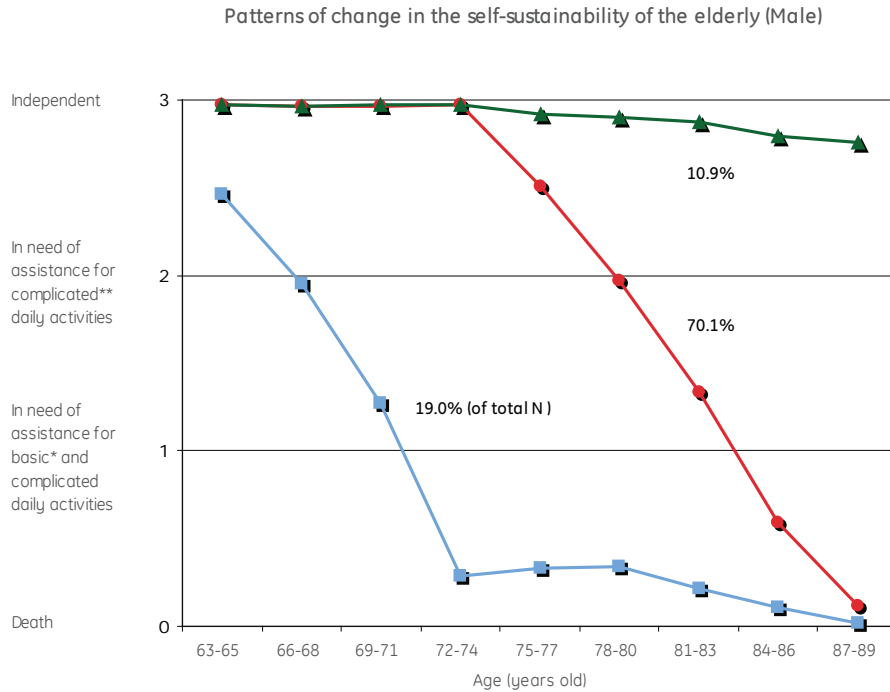
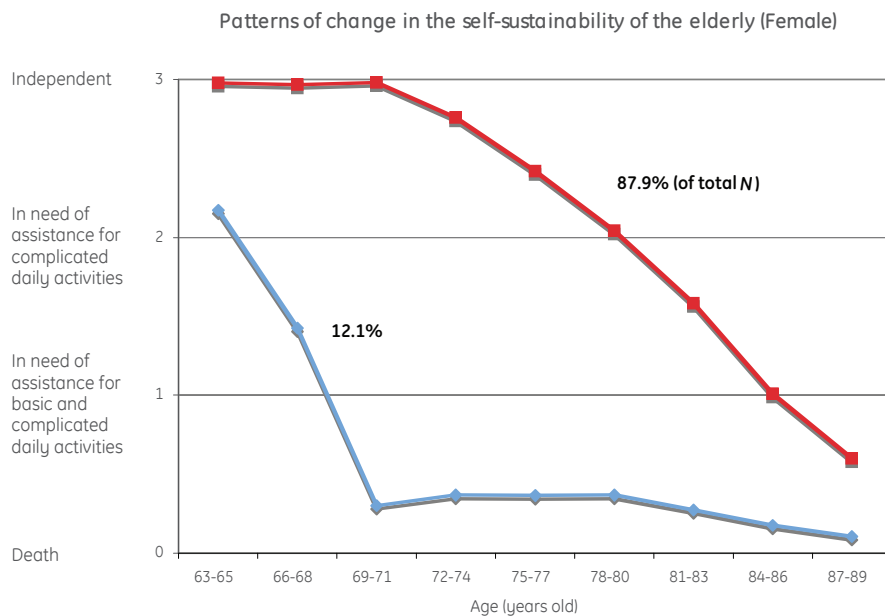


Chart 10



Charts 9-10

Source: Hiroko Akiyama, Conceptualizing science and society in the age of longevity, Science Journal Kagaku, Vol. 80 No. 1, January 2010, Iwanami Shoten.

[Total population for the survey (N) = 5715]

*The ability to carry out the "basic daily activities" is evaluated in relation to one's ability to: take a bath; walk a short distance; and climb 2 or 3 steps.

**The ability to carry out the "complicated daily activities" is evaluated in relation to one's ability to: shop for daily necessities; make a telephone call; and go out by using buses and/or trains.

Professor Akiyama argues for the gathering of more scientific data on the elderly aimed at properly understanding the realities of their lives—their income levels, physical state, psychological health, relationships, and so on. Having properly understood their realities, she encourages business to innovate with a broad vision, looking beyond individual products to actual lives.

“Think about an environment in which a person might enjoy planning a small day out to go to a certain place with a certain person. At stake is not the equipment”, says Professor Akiyama. “It’s the same for food. The food for the elderly should not be all about food that is healthy and practical for instance. Companies should invent food that a person would enjoy eating, say at a particular place. We need to think about designing a community as a whole.”

An example of this thinking in practice is the service robots developed by Tmsuk, a small company based in Fukuoka. One is “Rodem,” a high-tech robotic wheelchair that looks more like a four-wheeled scooter and was designed to allow the elderly to get in and out of the vehicle easily, thereby reducing the reliance on care-givers. It was developed through a joint venture with companies and research institutions abroad, including in Germany and Italy. It has already proven popular, including in Denmark. “We’ve tried to create something that they can board and drive by themselves—something to help them to be inspired to be able to do more, and of course keep their pride,” explains Yoichi Takamoto, Tmsuk’s CEO. “Then we thought about making this into something that everyone can use, from the young to the old. That way, the elderly will not feel bad about their differences.”

This type of broader thinking needs to be applied to everything from basic products to entire concepts, such as “ageing-in-place” the idea that seniors can remain largely self-sufficient and live active and meaningful lives in the community. Such thinking will require study and input and collaboration from a range of disciplines, from the healthcare field to sociology to urban

planning. An example is provided by a project led by Professor Akiyama aimed at turning the concept of “ageing-in-place” into reality in the city of Kashiwa, Chiba Prefecture. The project focuses on the Toyoshikidai housing estate in Kashiwa, which was built in the 1960s, and has been ageing both in terms of its physical structure and residents (one-third of the residents are over the age of 65)—a social scene that is to become recurrent in Japan given that the ageing challenge is no longer just a countryside phenomenon but is spreading to affect major metropolitan areas¹⁴.

In collaboration with the municipal government, the Urban Renaissance Agency (commonly known as UR), and Toyoshikidai residents, the University of Tokyo has been endeavoring to redesign the community to meet the shifting needs created by ageing. The over-arching concerns of the project are the quality of life for the elderly and their families, as well as cost. The aims of the redesign are to improve networks among residents and develop various opportunities for the elderly to take a role in supporting their own community. The plan includes replacing the old five-story residential buildings with barrier-free condominium blocks to ensure mobility. A 24-hour care system to support home-based care has also been mapped out. In addition, there are plans to incorporate workplaces and various other facilities, including restaurants and a space for urban agriculture. Project organizers are also working on models for the elderly to work that will allow them the options to work even up to the age of around 85. The various elements of the community will be connected by ICT. The project is attracting interest from various stakeholders including companies in different business sectors.

The examples of innovation and collaboration described above are precisely what are needed in order for Japan to achieve the government’s vision of a society free of ageism and to focus its industries to capitalize on the opportunity to turn the ageing of society into an engine for economic growth. The unanswered question is how to encourage more such innovation.

¹⁴ In 2035, Akita prefecture is expected to top the league for the rate of the elderly aged over 65 in the population with over 40%. The rate in Saitama is expected to see a rapid increase from 19.1% to 33.8% during 2008 to 2035, and the rate in Chiba will jump from 20.1% to 34.2% (2008 figures are taken from Projected population, Ministry of Internal Affairs and Communications. 2035 figures from Population projections for Japan by prefecture, NIPSSR).

The route to innovation

Is Japan's innovation environment geared up to deal with the opportunity presented by an ageing population?

Analysts have expected that Japan, by virtue of having one of the most rapidly ageing societies and some of the world's most innovative technology companies, would take the lead in catering for the so-called silver market. But some of Japan's leading innovators feel that there are broad challenges that the country must overcome in order to fully capitalize on the opportunity.

Globalization

One challenge is globalization. As Elizabeth Cobbs, a senior director at Banyu Pharmaceuticals points out, a major gap in the government's plan for "life innovation" is the lack of connection to the global innovation ecosystem. "There is not enough venture capital coming into Japan; foreign direct investment is extremely low," she says. "If you don't overcome that it is very difficult for Japanese biotechnology start-ups to tap into what's going on (elsewhere) scientifically."

The flow of capital is critical for providing risk capital and channeling information via the flow of people and ideas. While Japan may increase funding for basic research, this alone will not fill the gap because it does not encourage the flow of information with the outside world. Equally important is the free flow of talent, and encouragement for the homegrown variety. In her experience, other countries do a better job of embracing global talent. "I was in a graduate school in University of Chicago, and studied with Koreans and Taiwanese who went home—they are now running important institutions in their countries (i.e., government officials)." In contrast, Ms Cobbs says the Japanese that she knew from her graduate study were given the cold shoulder by home institutions and companies, and struggled to find a place to work in Japan.

Yasuchika Hasegawa, a prominent business leader and president of Takeda Pharmaceuticals, also indicates that countries such as China and South Korea might be faring better in nurturing and capitalizing on global talent. "Research and development for new drugs in China, for instance, will see a dramatic improvement with the return of Chinese PhDs from top institutions elsewhere," he says. "Japanese retirees are also proactively hired by companies in China and Korea."

Mr Takamoto of Tmsuk, one of Japan's leading innovators shares the view that other countries are doing a better job of attracting talent. He contrasts what he perceives to be his own government's lack of drive to attain global leadership with what he finds abroad. "This country is going for second¹⁵, what a hurtful message to Japanese scientists," he says. "In comparison, we are being called by countries like Singapore and Denmark, to work together to become the world's best at service robots."

In today's globalizing world, it may seem dated to want to keep Mr Takamoto in Japan. But if Japan is counting on innovation to drive growth, the concerns of innovators like Mr Takamoto will need to be addressed.

¹⁵ Mr Takamoto is referring to high-profile remarks made by a DPJ member, Renho Murata, during the process of screening the budget for super-computer development, in November 2009. During a debate with bureaucrats, she asked: "Why must Japan aim to develop the world's best? What's wrong with being the world's number two?"

Innovation culture

Mr Takamoto finds the Japanese market environment frustrating for a number of reasons, not least of which is the way in which new products are judged and accepted. "It's quicker to go abroad to try out, market, succeed and then come back to Japan to convince various parties to approve your product. Japan closes up when you come up with pioneer-type products," he says. This is not a government issue, he insists, but reflects society at large. "In Denmark, there is an infrastructure to try out new things. For instance, cities buy new products with government funding. The residents try out the product and report back the pros and cons. The new product is received and improved with the consensus of the people who will be affected by it, for better or worse." He notes that in Japan, data is often collected in a laboratory-like setting, rather than through test piloting or thorough market studies. The disconnect among the various stakeholders in the process of innovation prevents innovators from matching new products to the needs and wants of those affected by them. As Denmark exemplifies, bottom-up innovation that involves consumers early in the process increases the possibility that a product will find acceptance, both in the market and with regulators. "You can see why it is difficult to commercialize in Japan," he says.

Mr Takamoto says that the key to his company's international success is that it pays attention to market needs. "You will hardly find a specialist service robot company that is profitable. But then it is not a surprise because we are seeing various very technically oriented innovations that do not address the actual needs of the elderly," he says. "We (Tmsuk) don't make robots on a whim."

Unleashing potential

The challenges to innovation are complex and will not be resolved overnight. But as Mr Hasegawa notes, with the increasing globalization of knowledge and technology “it is a little naïve to think we have unique technologies and drugs, and retain superiority. Japan has decided to secure its position based on technology and innovation, however. Survival depends on our ability to always be half a step ahead.”

How can Japan stay that half-step ahead? There is plenty of opportunity for cross-functional collaboration, he notes. In the field of healthcare, one example is “missile therapy”—treatments for cancer and other diseases in which a drug is delivered only to the affected area. This requires pharmaceutical and medical device companies to collaborate. Mr Hasegawa also points to translational medicine and personalized medicine, both of which require the transcendence of conventional boundaries, as medical models gaining increasing importance.

But innovation through collaboration—coming up with useful and profitable services by integrating strengths across different fields—is something that Japan has not been particularly active or successful in doing in the past. Mr Hasegawa points to the iPhone as an example of lost opportunity—the device is based on technologies mostly developed in Japan but combined by a US company.

Better use of ICT, one of Japan’s strengths, in the healthcare field is an obvious solution and is on the government’s agenda. Referring to one company’s ICT-based monitoring and remote-care service invention, which could improve the prospects for single elderly households to receive home-based care¹⁶, one senior policy maker at MHLW (who declined to be named) commented, “we want to support this kind of service because it serves to lessen the social burden (by allowing the elderly to be cared for at home rather than in care facilities), and it is good for them in terms of their quality of living.”

The new minister of state for the new concept of public service (*Gyōsei Sasshin*) has also recently commented publicly that the government is considering recognizing ICT-based remote medical treatment as a medical practice. This would make its recipients eligible for reimbursement under the national insurance scheme, at least in defined areas (such as care for chronic conditions).

Japanese companies are also figuring out ways to better harness their ICT skills to serve the elderly market. For instance, Fujitsu, an electronics giant, recently rolled out a prototype of a high-tech teddy bear robot that can read facial expressions and actions, and respond with more than 300 actions. It is aimed at providing comfort to the elderly and children. “We sought to find a people-friendly (Hito ni Yasashii) interface by capitalizing on and further developing our IT expertise,” Toshihiko Morita, a director at Fujitsu Laboratories, says regarding the development of the teddy bear robot. The firm is planning to equip the bear with more functions, and use ICT networks to deliver content.

Similarly Secom, a security services firm, has been applying its expertise in online security systems to new services in the healthcare sector. Its offerings include remote treatment support systems and hospital management services¹⁷.

“We are going beyond products and endeavoring to create new social systems,” says Tatsuro Fuse, the president of Secom Medical System.

Given its strengths in ICT and telecoms, Japan is well equipped to come up with new services and systems in the healthcare field. The real opportunity, however, is not in narrowly focused technical innovations *per se*, but in using technology to meet the needs and wants of the target market.

16 The significance of this is keyed to the expected rise in the number of single elderly households in Japan (see The agenda of ageing: The healthcare system).

17 Secom defines their involvement as “consulting and support services” for management of hospitals. Japanese law disallows medical institutions to be run as “profit-oriented” organizations except in restricted circumstances.

Outlook

In different circumstances the issues arising from the rapid ageing of Japan's population might not present problems, but in its current fiscal state Japan cannot afford to maintain the status quo. The country's gross public debt-to-GDP ratio (a whopping 190%), is the second highest in the world¹⁸, severely limiting the options available to the government to deal with a rising dependency ratio and increasing demands on the healthcare system.

The good news is that perhaps for the first time since ageing became a policy issue, Japan has come up with a plan that takes a fairly different tack and sets the agenda for long-term viability. But much remains to be done.

One problem with this relatively radical plan is that it has come from the top, and may not be well understood by the general public. The unveiling of progressive laws and measures which the general public struggles to keep up with has been a recurrent theme since reform efforts started in around 2000. But for the government's plans to succeed, the buy-in of the public, including the business sector, is an issue that must be addressed. Priority should be placed on communication aimed at developing a shared vision among various stakeholders. This will require openly discussing the merits and drawbacks of new policies, as well as doing more to spell out the demographic and fiscal context that makes the policies necessary.

To meet its twin goals of addressing the needs of the elderly and fostering economic growth, the Japanese government must also find ways to improve the environment for innovation. A key step in this direction would be to recognize the global nature of the challenge of creating an elder-friendly society, and to develop an innovation culture and infrastructure that attracts and retains talent, both home-grown and foreign.

For their part, scientists, innovators and businesses must focus on market demand, understanding and embracing the realities of Japan's elderly population, while at the same time balancing the need for cost containment with the desire for a better quality of life. "The key to the future is the extent to which politicians, bureaucrats, private business, and people would go to think seriously about Japan's growth strategy, and their initiative to drive restructuring—beyond deregulation," says Mr Hasegawa of Takeda Pharmaceutical.

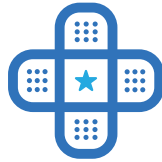
18 Japan's debt problem: Sleepwalking towards disaster, April 8th 2010, The Economist (print edition).

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