

Aging Populations, New Business Opportunities and New Business Models Developed in Japan

– Developing Products for the Over 65s and Persons with Disabilities –

By Goto Yoshikazu

Japan's Ageing Population Offers New Market Opportunities

Japan's population is aging in characteristic ways in comparison with other countries, as indicated by these three factors:

(1) The population is aging quickly. According to the latest projections, Japan's aging rate⁽¹⁾ is projected to rise from 18.0% (October 2001) to 22.5% in 2010, to 27.8% in 2020, then to 29.6% in 2030. These projections were published in January 2002 by the National Institute of Population and Social Security Research (IPSS, under the Ministry of Health, Labour and Welfare [MHLW]), and are an upward adjustment in the aging rate from previous predictions.⁽²⁾ The population in Japan has already moved from the status of an "aging society" (an aging rate of 7% and over) to an "aged society" (an aging rate of 14% and over), and this transformation took only 24 years. The rapidity of the transformation is evident when we compare it with the

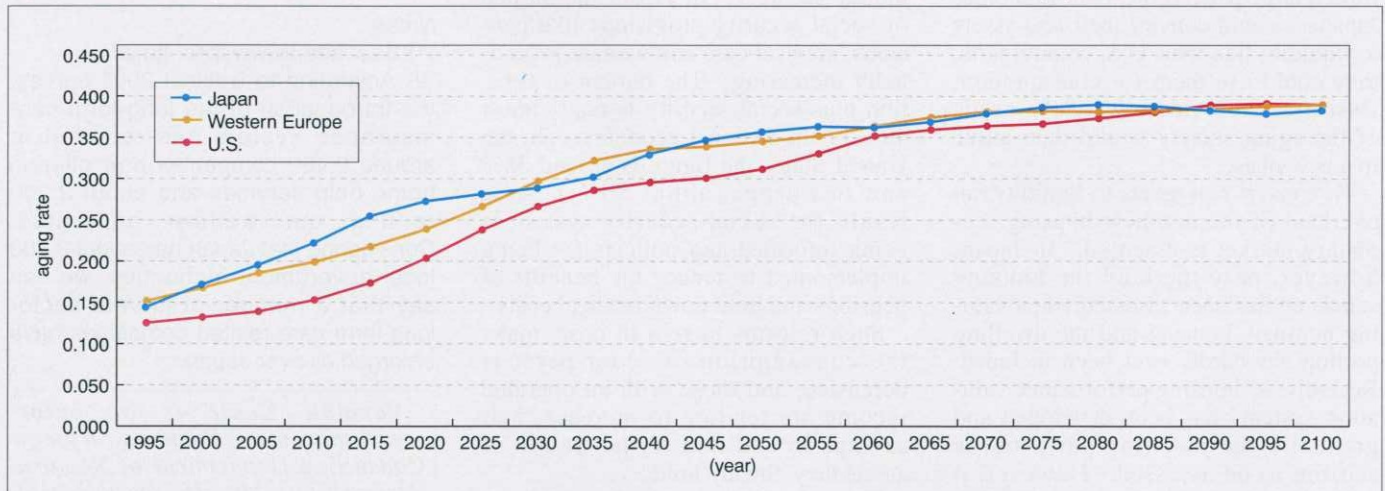
time needed for other countries to achieve a similar transformation: the United States, 69 years; Britain, 46; Germany, 42; and France, 114.

(2) The absolute number of Japan's older persons⁽³⁾ is remarkably high. According to IPSS projections, the number of older persons in Japan will have increased from 22.04 million in 2000 to 34.77 million in 2030 – a jump of almost 160%. The increase – which is both rapid and large – is already having an impact on the nation's socioeconomic structure. Given concrete examples, it poses challenges that require swift adjustments in social systems within a limited time period, and it creates business opportunities for companies serving the rapidly expanding elderly market.

(3) Japan's population will continue to age at a faster rate than that of the United States or Western Europe, in the first quarter of the 21st century. Two years ago, a research group headed by Fujimasa Iwao (doctorate in medicine; professor at the National Graduate

Institute for Policy Studies) published projections very similar to those released in January by the IPSS. (Figure 1) According to Fujimasa, Japan's aging rate will remain higher than that of Western Europe and the United States until 2030, and at that time Western Europe's aging rate will be in second place. The gap will be especially wide around 2015, when Japan's aging rate is expected to be seven percentage points greater than that of the United States. This means that Japan cannot meet the challenges of an aging society simply by following the approaches taken in other parts of the world, such as Northern Europe. Rather, it must develop its own methods to support a society being transformed by a low fertility rate and a growing number of older persons. If we regard these challenges as an opportunity to develop valuable social models, and if these models can be adapted to suit the needs of other countries which will experience an aging society later than Japan, both Japan and those

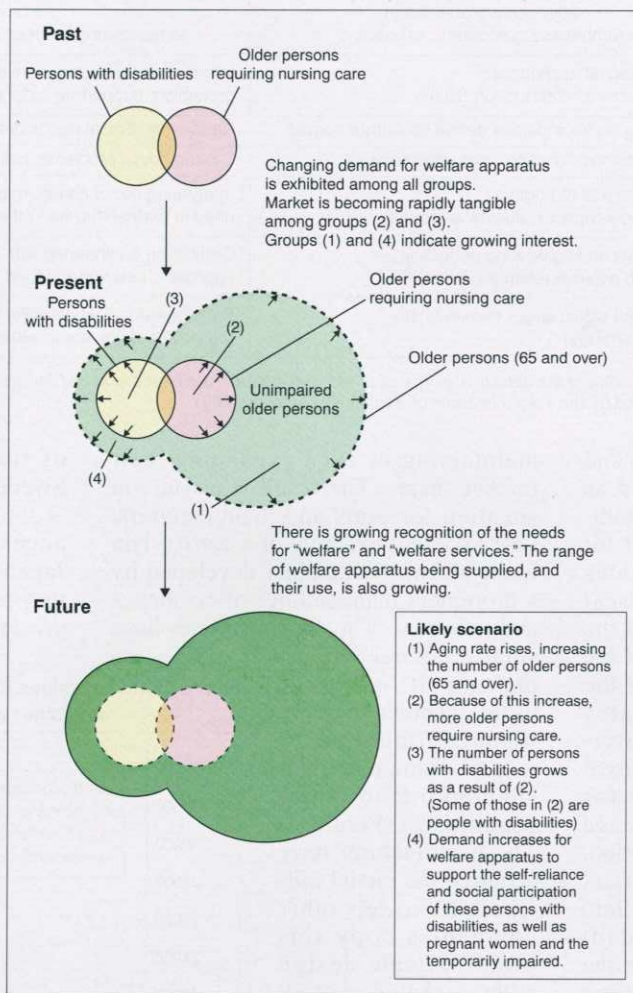
Figure 1 Estimated aging rates in Japan, Western Europe and the United States, 1995-2100, based on 1995 population structures



Notes: Estimates for Japan are based on the actual population structure in 1995. Estimates for Western Europe and the United States are based on their respective 1995 population structures, and assume that birth and death rates will remain unchanged. (Projection studies used GRIPS-SSProj. and CoreShell j95.04 models.)

Source: Fujimasa Iwao, First GRIPS Aging Population Symposium Documents, March 2000

Figure 2 Welfare apparatus users – Projected user expansion



Source: Illustrations and concepts derived from "Welfare Apparatus Businesses Take Off," by Goto Yoshikazu, published in the *Nihon Keizai Shimbun*

other countries could benefit.

Changing Social Attitudes and Industrial Policies

Two major changes in the external environment have attracted attention since the latter half of the 1990s.

(1) In Japan's society, there has been a considerable change in the way older persons and persons with disabilities are viewed. Since the latter half of the 1990s, for a growing number of Japanese, the concept of "persons with disabilities" includes not only those with permanent physical disabilities but also the temporarily impaired, pregnant women, healthy older adults, left-handed people and foreigners who cannot communicate fluently in Japanese. There is a desire to see all such "disabled" people enjoy barrier-free accessibility in their daily life. This broadening concept of "disabilities" is illustrated in Figure 2. The top part of Figure 2 indicates the minimal groups entitled to publicly funded support under welfare policies. As we proceed downward, we see the possibility of more and more people benefiting from the use of welfare apparatus. Market principles and commodity markets will be utilized here.

(2) Japan's socioeconomic structure and the rationale behind industrial policies are both evolving. Historically speaking, up until the 1970s, economic efficiency was promoted in order to boost, for example, the campaign of "Shokusan Kogyo" (increase production and promote industry) and expanding the heavy and chemical industries. There were some negative results, however, such as pollution, trade friction and energy crises. Since the 1980s, government policies have also promoted a model of economic "fairness," as a way to ensure the "affluent life." In the 21st century, with an emphasis on satis-

fying social needs, economic "fairness" is used as a yardstick to a greater extent. Industrial policies in the 21st century are compared to those of the 20th century in Table 1. In Japan, therefore, there is a growing demand for social needs in industrial and economic policies. This growing demands, and the multifaceted values manifested in our matured society, point to the needs for a new rationale on which to base industrial policies. Companies capable of serving our aging population, and government policies which support them have been developing in this context.

Welfare Apparatus for Older Persons and Persons with Disabilities

Focusing on the markets and industrial policies for the products serving the

needs of older persons and persons with disabilities, two points are noteworthy.

(1) Since 1993, provisions of the Act for Promotion of Research, Development and Diffusion of Welfare Apparatus have been applied by government ministries (The Ministry of Economy, Trade and Industry (METI), and the MHLW). Two positive results have followed; (a) The supply of welfare apparatus, which was previously only a matter of welfare policy, became a matter of industrial policy as well. Through industrial policies, the supply of cost-effective devices involves making the effective use of market mechanisms, and new business opportunities are expected in industrial fields. These changes can already be seen. (b) These policies are the forerunner of industrial policies of the 21st century. (Table 1) In the 1970s and 1980s, industrial policies were formulated as a response to pollution, trade friction and other problems. But since the latter half of the 1990s, these policies have

tended to support industries, choosing the fields that meet social needs. Industrial policies for welfare apparatus are an early example.

(2) The welfare apparatus market has grown tremendously in Japan. Figure 3 illustrates the expansion of this market between fiscal 1993 and fiscal 2000 (data taken from the results of a survey conducted by METI).⁽⁴⁾

In Figure 3, the broad range of welfare apparatus is indicated by the symbol ■. The broad range of welfare apparatus includes: (a) welfare apparatus in the narrow sense of the term (indicated by ●), such as wheelchairs, beds and other items for nursing care, and personal care devices (▲) which have been supplied under the traditional public allowance system of welfare policies; and (b) *Kyoyo-Hin*⁽⁵⁾ (★). *Kyoyo-Hins* are designed for easy use

Table 1 Rationale guiding new industrial policies

	20th century orientation (emphasizing economic efficiency)	21st century orientation (emphasizing fairness achieved by the economic activities)
Industrial sector	Steel, electric appliances; motor vehicles; information (HD)	Information technology; environmental protection; support for older persons
Industrial approach	Seeds push (Companies define consumer needs)	Needs pull (Social needs define industrial approach)
Basis for product evaluation	Specifications; function; cost effectiveness	Solving social problems; culture-oriented
Basis for competitiveness	Technological strength; production capacity; quality; uniformity	Integrating social needs; managerial resources used in partnership with other groups; creativity
Motivation	Emphasis on engineering deduction; desire to achieve relative superiority	Combining engineering with a human-oriented approach; new value added
Corporate goals	Increased sales; larger market share; relative strength	Development of worthwhile, long-lasting products; promotion of universal values; inner satisfaction; social recognition

Source: Compiled from *Research on the evaluation of the industrial policy of the Ministry of International Trade and Industry regarding Japan's human assist equipment industry*, by Goto Yoshikazu, published by the Tokyo Institute of Technology, January 2001

not only by people with disabilities and the elderly but by the unimpaired as well (see next section). Figure 3 indicates that: (a) the Japanese market for the broad range of welfare apparatus was worth ¥3.2421 trillion in fiscal 2000 – this figure is so large that the apparatus can be regarded as one of the key industries; (b) the market for the broad range of welfare apparatus enjoyed rapid growth of 15.2% (average annual growth rate) between fiscal 1996 and 2000; (c) the market for Kyoyo-Hin expanded 21.9% (average annual growth rate) in the same period, indicating that they played an important role in boosting growth in the welfare apparatus (broad range) market; and (d) the market for welfare apparatus in the narrow sense of the term, including personal care devices, experienced slower growth than the market for Kyoyo-Hin – during the same four years up to fiscal 2000, average annual growth rates were only 4.8% for the narrow range of welfare apparatus,⁽⁶⁾ and 5.5% for personal care devices.

Japanese Companies' Innovative Business Models

Here we will look at two areas in which Japanese companies have developed successful business models.

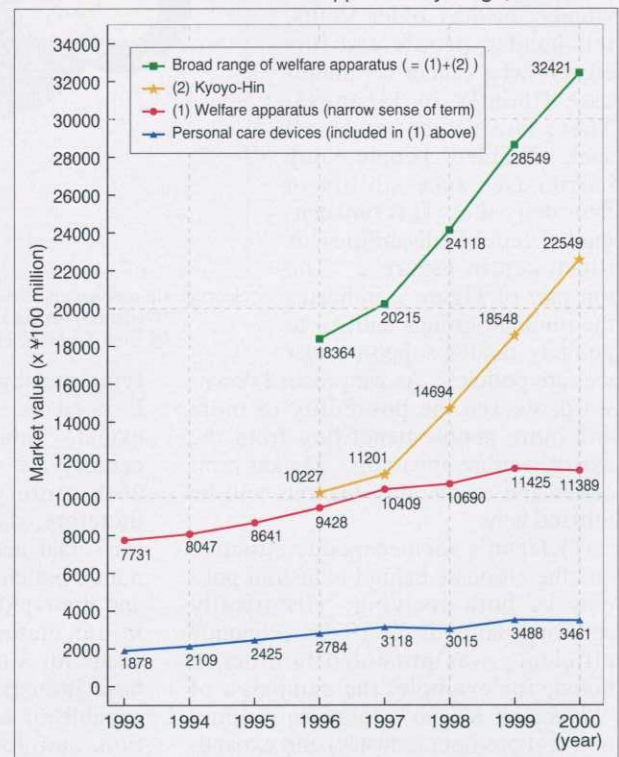
(1) Kyoyo-Hin

Kyoyo-Hins are the products which are designed to be used by as many people as possible – older persons, persons with disabilities, the temporarily impaired and the unimpaired as well. (In Figure 3, Kyoyo-Hins are indicated by the symbol ★.) While improving their convenience, Kyoyo-Hins are

maintaining or even expanding their market share. The result is a win-win situation for users and manufacturers. One excellent example of a Kyoyo-Hin is the shampoo container developed by a prominent manufacturer of cosmetics and toiletries. The container sides have small embossed lines, making it easy for users, whether they are visually impaired or not, to distinguish their shampoo from their conditioner. (Figure 5) The manufacturer have acquired the model utility right but lets other companies copy this practical new design without charge, provided they do not change it. Today, a number of manufacturers, even in the Republic of Korea, have adopted the user-friendly embossed lines. There are other examples. The Association for Electric Home Appliances promotes the use of embossed symbols to more clearly identify electric appliance switches. The Japan Toy Association promotes the use of Labrador Retriever emblems to identify toys that are designed for visually impaired and unimpaired children alike. (Figure 6) The Labrador Retriever emblems are also used in Britain. Other parts

of the world – the United States, Sweden, Canada, Australia and Taiwan – also promote the manufacture of accessible-design toys. Various Japanese manufacturers, even though they are in competition with one another, collaborate constructively to help

Figure 3 Market values for Kyoyo-Hin and other welfare apparatus by range, 1993-2000



Note 1: Personal care devices include: items for personal care; canes and other walking aids; wheelchairs; beds.

Note 2: Welfare apparatus (narrow sense of term, identified here as (1)) and Kyoyo-Hin (2) overlap in some cases, so (1) and (2) totals do not correspond precisely with totals for the broad range of welfare apparatus.

Source: Compiled from *Estimation of Welfare Apparatus Market Values, Fiscal 1999*, published by the Machinery and Information Industries Bureau of the Ministry of International Trade and Industry (now METI)

pull down barriers. This can be regarded as the result of an effective use of the flexible nature of the Japanese. This helps to explain why Japanese companies have been able to develop more Kyoyo-Hins, produce them at higher quality levels, and distribute them more widely, than companies in any other country.

When Kyoyo-Hins were first developed in Japan in the early 1970s, the momentum came from public-spirited product designers. Today, much of the support for their development comes from the Kyoyo-Hin Foundation.⁽⁷⁾ To promote the wider use of these products, both in Japan and abroad, the Foundation maintains a network linking manufacturers, business groups and users. Following Japan's recommendation, in 1998 the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) began drawing up development standard guidelines to address the needs of older persons and persons with disabilities. The guidelines, now known as Guide 71, came

Figure 4



A vehicle with a rotary and movable front passenger seat (Toyota Motor Corporation)

into effect at the end of 2001. Kikuchi Makoto (professor at the National Defense Medical College; doctorate in engineering) showed considerable leadership in efforts to draw up the Guide as the Chairman of ISO's working group. The European Committee for Standardization (CEN) has already adopted Guide 71's principles in full. Incidentally, Guide 71 is the first ISO guide

published in Braille. Japan is clearly contributing to the progress of these international efforts.

(2) Specially designed motor vehicles

Europe and Japan have taken different approaches in the development of such vehicles. In Europe, the vehicles are subject to welfare policies, and as a result specifications are regulated in detail. Since their supply depends on the welfare system, their distribution is not as extensive as one would expect, given the wider distribution of welfare policies and welfare apparatus. Japanese companies have succeeded in developing some unique business models. In Japan, specifications are not as strictly regulated, and this gives manufacturers a freer hand in innovation. One such innovation is the rotary and movable front passenger seat. A wide variety of vehicles for people with disabilities can now be seen – some are large vans, some are hybrid energy cars. Supply has expanded tremendously, at an average annual rate of 41.9% between 1996 and 2000. (Figure 4)

In the case of Kyoyo-Hins, the Kyoyo-Hin Foundation, a citizens' group, promotes a network linking various groups (business associations and groups for persons with disabilities), and individuals (product designers and users). Working under their own initiative, on the other hand, private companies manufacture and supply vehicles to transport persons with disabilities and older persons. Kyoyo-Hins and vehicles for welfare use are examples of business models unique to Japan, answering the needs of a rapidly changing society by making use of market

Figure 5



Shampoo container (right) have small embossed lines in order to distinguish from conditioner container (left) (Kao Corporation)

Figure 6



The Labrador Retriever emblem identifies toys that are designed for visually impaired and unimpaired children alike (The Japan Toy Association)

mechanisms. We have every reason to assume that these efforts to cope with the external environment will lead to management innovations of the companies themselves. **UJI**

Notes

- (1) Aging rate: The percentage of the general population aged 65 and over.
- (2) See: <http://www.ipss.go.jp>
- (3) Older persons are defined as people aged 65 and over.
- (4) For further information (in Japanese) on this issue, see: <http://www.fukushiyo-gu.com/marketyogu.htm>
- (5) The concept of Kyoyo-Hin is similar to that of "universal design," "barrier-free design" and "accessible-design products."
- (6) The decrease in the market values of welfare apparatus in the narrow sense of the term in 2000 was a consequence of the prior demand by distributors in 1999, as they prepared for the introduction of the national long-term care insurance system in the following year. The new insurance only covers rentals and not purchases of items such as wheelchairs and nursing beds. As a result, the substantial demand for welfare apparatus since the year 2000 has shifted from purchases to rentals, and firms were required to have large inventories to prepare for this transition.
- (7) See: <http://www.kyoyohin.org/eng/>

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