

structure of demand continues, but the direction of future changes is unknown, a flexible system of education is necessary. Good knowledge in basic subjects is essential for being able to study, but occupational skills are essential in getting a job.

Changing the skill composition of the labour force by youth education only is a too slow device. Adult education in different forms is a necessary complement. Education of adult workers may be promoted in different ways. Training of the unemployed is a traditional labour market programme. Training those who are not unemployed but at a risk, and training people employed or unemployed for expanding occupations may be an alternative. To strengthen the competence of the employed by subsidizing or regulating personnel training may be one alternative. It could increase the chances of those in the labour market to get a second work career.

2. Mobility support may be a way of decreasing regional imbalances. Changes in the composition of demand according to industry may imply changes in the regional labour demand structure. This type of policy has often been targeted towards unemployed workers (combined with rules regarding eligibility in the unemployment insurance schemes) but it may be a better option to target outward-migration from high unemployment areas (and industries) irrespective if the person is unemployed or not. It could be a way of targeting the subsidy to those with the lowest mobility costs. A special problem in relation to migration is the housing situation. The availability and price of housing may differ greatly. A special problem is that housing to some extent may be a highly regulated market and that the availability of housing depends on queuing time. If a person leaves a municipality he loses either the subsidy inherent in his housing or the queuing time for a subsidized dwelling.

3. A third way of getting a better match between supply and demand in the labour market is by strengthening the labour exchange. A better functioning labour exchange may shorten the duration of vacancies and unemployment spells, and a higher quality of placement may decrease the risk of recurrent spells. Of special importance is that the employment offices are able to handle the demands of groups with special problems, such as for example the disabled, immigrants and young people. To be able to handle those problems the employment offices need not only information about vacancies but also access to programmes that prepare people for the labour market, and also possess the competence required to help (for example office staff who are proficient in the languages of the major immigrant groups).

#### Labour demand policies

1. For some people the opportunities of getting an unsubsidized job in the labour market are few or non-existent both in the short and the long run, for example because of a disability. The alternatives are to pension them off or subsidize their jobs. Subsidized jobs may either be in the form of the wage subsidy paid to the employer or in the form of a public job, for example sheltered workshops for the disabled. Subsidized jobs are preferable if the work principle is adhered to as in Sweden for example.

2. For many, the labour market problems are mainly of a short-term character, at least if measures are taken at an early stage. Young people without work experience and newly arrived refugees are typical examples of those who may have that type of problem. Short-term subsidized jobs may be a way to improve their chances on the labour market. The subsidy may be in the form of a recruitment subsidy or as a defined period of work combined with training. By being able to demonstrate their capacity for an employer they might be able to compensate for their lack of work experience or formal training.

3. Regional policy may be a complement or substitute to mobility assistance. In most cases the outward-migration is neither large nor fast enough to equalize the unemployment and wage rates among regions. Regional policies may work on the demand side for equalizing the labour market situation of different regions.

4. High job security leads to incentives for human capital investments. Employees and employers know that people will remain for prolonged period and the risk with investments in human capital will be smaller than in a system with greater job insecurity. On the other hand, a system with high job security may lead to less flexibility in periods of change and by that to higher costs and less labour demand and also that people with weak prospects never get a chance in the labour market. They may be a too risky investment in the view of the employer. Most countries have circumvented this problem by allowing other forms of employment for some positions or in some parts of the labour market. A problem with this approach is that it may lead to tendencies to a dualization of the

labour market. Finding a viable system of labour regulation is one of the most important tasks of the policy against unemployment.

### Social transfer and tax policies

1. The preferred policy may be to facilitate a better working of the labour market and to change the structure of the labour supply and to some extent the structure of labour demand and by that decrease the tendencies towards inequality. Much inequality, however, may remain and taxes and social transfers may be necessary to counterbalance the tendencies of the economic development towards larger earnings equality.

2. In designing the social transfer systems it is important to do so in a way which does not lead to a weakening of the work incentives and therefore to early exit from the labour force or prolonged periods of unemployment.

### Organizing the "social follow-up" to economic restructuring.

The main conclusion is to utilize a combination of many different means in the policy against social exclusion and increasing income inequality and inequality in the labour market. To do that employer and employee participation is important. An active labour market policy needs the involvement of the social partners. To be able to change the regulation of the labour market and therefore increase the flexibility of the labour market without jeopardizing the job security of the workers, an involvement of both sides of the labour market is necessary.

Cooperation between employers and unions as well as with the labour market authorities is of utmost importance in connection with major restructuring leading to large-scale layoffs. A notification in advance and training programmes started before the employees leave employment may be one way of avoiding consequences like long-term unemployment or large loss of income standard as a result of the layoff.<sup>29</sup>

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<sup>29</sup> For a recent study on the effects of layoffs see Jacobson *et al.* (1993).

## Chapter 2 Japanese Economy, Labour and Technology ---Past Achievements and Future Challenges---

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Dramatic changes in the economic environment have confronted Japanese management with a series of perplexing problems. Until a few years ago Japan's vigorously growing companies were rapidly expanding their shares of world markets. Many people perceived them as like 10-foot-tall giants with the ability to hold sway over the global business community. The Japanese, seduced by the buoyancy of their economy, became convinced of the superiority of their economy, became convinced of the superiority of their country's style of management. Overseas, meanwhile, some people heaped praise on Japanese management, others harbored envy of it, and yet others warned of an economic threat from Japan.

Such views of Japan's economy and its management practices have changed radically over the past couple of years. With the bursting of the speculative bubble of the late 1980s, companies have lost their ability to raise vast amounts of low-cost funds and must now repay the huge sums they raised during the boom years. Having lavished money on capital investments during the formation of the "bubble economy," they find themselves with excess capacity in the current downturn. Operating rates have fallen, and costs are steadily mounting.

Doubts about the soundness of Japanese-style management have moved to the fore at the same time, brought into relief by the dramatic exposure of scandals in the banking and securities as the bubble deflated. At home and abroad, people are questioning the internal mechanisms of this management system. Is it not true that it makes use of this management system. Is it not true that it makes use of hidden rules to bring in improper profits? Are not employees being coerced into a position of subordination within the corporate organization? Has not the government been unfairly protecting companies? Just two years ago nobody could have imagined that Japanese managers would be facing such problems and criticisms.

Neither the earlier sterling reputation of Japanese management nor its present tarnished image are without foundation. Even so, neither offers a balanced perspective, since both place too much emphasis on selected features. In this article I will try to present a more realistic view, reviewing the facts as comprehensively and objectively as possible. I will comment on the strengths and weaknesses of Japanese management, the changes it is undergoing, and the problems and possibilities ahead of it.

### 1 Beyond the Corporate Confines

Let me begin by calling attention to three long-term trends that are altering the management system's environment.

First, the very success of Japanese management thus far has created conditions necessitating reconsideration of management's social significance both domestically and internationally. As a consequence of the dramatic growth of Japanese companies over the past few decades, the economy as a whole has developed greatly. The growing scale and strength of corporate organizations have, however, changed the company's relationship with the society in which it operates. People must now gain a better understanding of the company's relationship with the society in which it operates. People must now gain a better understanding of the company's position in society and modify its roles correspondingly.

Until recently companies merely needed to carry out their basic mission, which consists of promoting production, creating jobs, generating profits, and making investments. It was sufficient for businesses to concentrate on hiking productivity, cutting costs, and improving quality. When the corporate presence in society grows large, however, these roles become insufficient, and people expect companies to perform additional functions. If managers continue to think only of their company's economic interests, they may seek to corner a commodities market, buy up land, or

speculate in stocks, with adverse consequences for the lives of the people. And they may also harm society through the vast amounts of industrial wastes the company releases into the environment.

Corporate behavior needs to be guided by economic logic, of course, but the framework of this logic must not be too narrow. Managers must give thought not only to how their decisions affect the company itself but also how they affect the community. Moving beyond traditional business activities, companies must contribute to society in a verity of ways. The further Japan's firms have gone in building up international business operations, the more their managers have become aware of the need for the corporation to coexist with the community.

By means of efforts to elevate productivity, slash costs, and improve quality, Japan's companies have managed to manufacture internationally competitive products that have made broad inroads into many overseas markets. To say that a product is competitive is basically to say that it attracts consumers. By turning out just such products, Japan's companies have benefited consumers throughout the world. When we adopt the perspective of producers, leading to economic friction. To be sure, friction is an inevitable fact of life for economies and companies. But when firms from differing cultures clash and compete, the scope for various types of troubles increases. If these troubles are to be minimized, it is essential that competition take place in accordance with rules accepted by all the players involved. Now that Japan's businesses have grown so large, accordingly, they must pay particularly close attention to the need for playing by international rules.

The economy's growth has at the same time been pushing up income standards and raising domestic production costs. Because many other countries have lower costs, companies have been making direct investments in them to carry out production there. This shift to overseas production has created a host of new problems that people never gave much thought to as long as firms were simply exporting products made in Japan. These problems stem from the reactions of the citizens in the countries targeted for investment. Since every country and region has its own history, values, traditions, and customs, and since there are also differences in laws and administrative systems, companies must consider how they can adapt to the conditions in each place of operation, turning themselves into members of the local community. In recent years there has been a conspicuous increase in investment in North America by Japanese companies, and this has alerted them to the need to be "good corporate citizens." While learning about corporate citizenship, moreover, they are becoming aware that they must take part in corporate philanthropy.

These observations demonstrate that new obligations have been imposed on Japanese companies as a consequence of their rapid growth. Instead of merely pursuing their own economic interests, they must adapt at home and abroad to the wider social setting, and they must guide their behavior in line with a recognition of their positions as corporate citizens.

## 2 Treating the Big-Business Syndrome

The second trend is the emergence of a disease that might be called the "big-business syndrome." This disease is being caused by the growth of Japanese corporations into gigantic organizations, and it is an ironic result of their very success.

The leaders of major corporations have lost the ability to focus on the basics of management and develop ideas starting from those basics. In their hearts and minds, they have become preoccupied with imitating what competitors are doing, and they judge this year's performance only in the light of last year's results and the accomplishments of their predecessors. Middle managers, fearful of jeopardizing their chances for promotion, curry favor with top executives, adhere strictly to precedent, and refrain from advancing controversial ideas. General workers and new employees merely carry out their allocated tasks in the prescribed manner without thinking ahead. Raised in era of affluence, they have no motivation to yearn for better things. They take affluence for granted and complacently believe that nothing will change no matter how they behave. Yet they are nervous about the possibility that co-workers at their level might advance ahead of them, and this drives them into competition to protect their flanks.

The potential for creative activity gradually diminishes when organizations, having grown to immense proportions, become more conservative and establish set routines for making decisions and performing tasks. This irony of success is a common result of economic growth and increasing scale in countries everywhere, but there are reasons for fearing that its effects will be particularly

damaging in Japanese corporate society. One reason for this is the fact Japanese industry has surged to the fore much faster than industry in other countries, making it more reluctant to criticize and reform the systems that have brought it success. Another reason is the high value Japanese businesses place on the seniority system and long-term employment guarantees. In the corporate order thereby created, it is unusually hard to implement reforms that make organizations more flexible and bring in fresh air. Henceforth managers must seek cures for the big-business syndrome, following in the footsteps of managers of other industrial countries that have been wrestling with similar complaints.

The third trend is a change in the technological paradigm. Japanese companies have made enormous progress through innovations in manufacturing technology. They have reduced costs through rationalization, improved productivity through various refinements, and raised quality standards through kaizen, or quality-oriented improvement drives. They have increased their competitiveness primarily through workplace-led technological innovations based on the accumulated efforts of people on the factory floor, not people in laboratories and design departments.

To be sure, researchers and designers have also come up with many innovations. In fact, their efforts have caused the number of industrial patents obtained by Japanese to increase significantly, turning the country into a world leader in the development of advanced technology in many fields of manufacturing. Nonetheless, what has made Japanese industry as strong as it is today is, more than anything else, the unceasing and multifaceted efforts that have been made to upgrade production lines. For some time now I have been asserting that the fundamental source of Japan's competitiveness is a distinctive development model that I call "Japanese-style humanware technology," which enables companies to reap the full potential of creative abilities in the workplace.

This humanware technology is neither uniquely Japanese nor confined to Japan. Given the right conditions, it can be applied in workplace around the world to provide major improvements in productivity and quality. More than that, it is now being transplanted to many countries where local firms find themselves in competition with Japanese companies or where Japanese businesses have set up operations. Japanese industry's lead over U.S. industry, which at one time was widening, has been shrinking in recent years, while Asian manufacturers in countries that have attracted massive Japanese investments have been gaining competitive power.

The spread of Japanese production technology around the world is extremely beneficial in terms of raising productivity and equalizing the opportunity to compete, but it also means that the Japanese can no longer rely on an advantage they have long enjoyed. To move forward in the future, they should be trying not to refine this technological paradigm further but rather to create a new paradigm. Instead of aiming for innovations that permit quantitative expansion and improve precision and quality, they should set their sights on qualitative creativity and the ability to generate new concepts. This is another challenge facing Japanese corporate society.

### 3 Secrets of Japan's Postwar Success

Over the last few decades Japanese management has achieved remarkable results in powering economic growth. Below I examine several facets of this success and the circumstances that made it possible.

#### THE DILIGENCE OF THE WORK FORCE.

Without doubt the excellence of product quality has been a key characteristic of the competitive edge enjoyed by Japanese companies. Whereas Japan still has much to learn from these industrial countries in terms of basic concepts and designs, it leads the world in the quality and reliability of its manufactured goods. Its most important contribution in this area has come from the ability of factories to build quality into a product as it is manufactured. This ability depends on the willingness of workers to accept responsibility for the products they make. In other words, success is determined by whether or no workers have a strong sense of responsibility and apply themselves diligently to their work.

When did this sense of responsibility and willingness to work hard, which have made such an important contribution to Japan's postwar development, take root? Some say that these are inherent

attributes of Japanese culture or natural results of Confucian teaching, but there is no evidence to support this view. If it were correct, surely the Japanese economy would have developed manufacturing power much earlier, perhaps before World War II or even before the Meiji Restoration of 1868. The available evidence indicates, however, that even early in the Showa era (1926-89) Japanese workers frequently changed jobs, showed little loyalty to the company, and were not very productive. Industrialists and opinion leaders in those days often exhorted the Japanese to emulate the diligence of American workers. Clearly it was not until after World War II that workers here began demonstrating sufficient diligence to attract international attention.

It appears that this change was due in large measure to the sweeping social reforms that were carried out after the war. The Occupation authorities, acting under General Douglas Mac-Arthur, radically revamped Japan's political system, economy, and social structure. The reforms with the most impact on the management environment were those that made society more egalitarian and that introduced more competition in the market. In specific terms, equality was promoted by land reform, which reduced the gap between the rich and the poor, educational reform, which was aimed at giving all students an equal chance, and the legalization of labor unions, which helped to break down the status distinctions in corporate organizations. Similarly, the formation of a competitive marketplace was made possible by the dissolution of the military machine ( which wiped out a major component of demand that had mitigated against price-cutting efforts ), the dismantling of the zaibatsu, and the enactment of the Antimonopoly Law. Together these reforms created a social setting in which all people could compete under equal conditions and move up in the world through their own efforts. This milieu seems to have been effective in stimulating the will to work.

Diligence was also spurred by the extremely impoverished state of the nation after the war and by the desire to catch up with the industrial West. The Japanese were keen to rebuild the economy as quickly as possible from the ashes of defeat, and they wanted to achieve living standards comparable with those of the West. With such clearly defined and widely shared goals to aim for , the people had a good reason to work hard.

#### JAPANESE -STYLE HUMANWARE TECHNOLOGY.

The Japanese turned to the United States and other Western countries for know-how to assist in the rebuilding of the economy, and after buying technology from abroad in a bid to rebuild and modernize industry, they modified it to suit the realities of the Japanese workplace. In this refinement effort, priority was placed on motivating workers and utilizing their creativity in productive operations.

Japanese-style humanware technology came into being in the course of the efforts to assimilate Western know - how in factories, and soon it spread through many key industries and took firm root. Stated simply, this technology is a set of production techniques and systems that take full advantage of the motivation, sense of responsibility and creativity of the workers on the factory floor. A strong emphasis is placed on teamwork and the sharing of information among team members, and various arrangements are employed to help everybody gain more knowledge and new skills. The purpose of this technology, we may say , is to enhance the learning capacity of the organization.

The humanware technology developed in Japan has demonstrated its effectiveness in the manufacturing sector, especially in assembly industries, where it has been instrumental in the drive to cut costs, elevate productivity, and raise quality standards. By the 1970s it was being used quite widely in the industrial world, giving remarkable competitive power to assembly industries in fields like automobiles, machinery, household appliances, and electronics. Just how mighty this power was can be appreciated from the fact that the exports of these industries took off during the second half of the 1970s, when Japan was no longer a low-wage country, and grew at an accelerating pace even after the mid- 1980s, when the sharp rise of the yen put upward pressure on export prices and turned Japan into a high-wage country. <sup>1</sup>

#### THE INDIRECT-FINANCING SYSTEM.

While Japan was rebuilding from the wartime destruction, with financial resources in short supply, many Japanese companies, especially big export-oriented corporations, managed to raise capital at

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<sup>1</sup> Please see Appendix for further details of the concept of the "humanware technology -Japanese style.

relatively low cost through a singular system of indirect financing; they were thereby able to achieve economies of scale and elevate productivity. The system's key element was guarantees by the Ministry of Finance and the Bank of Japan for loans from commercial banks to a select group of export-oriented companies. Although real interest rates in general were quite high at the time because of the fund shortage, the guarantees motivated banks to lend generously at fairly low interest rates to strategically important companies.

After the Japanese economy entered the high-growth phase toward the end of the 1950s, many firms became sufficiently competitive and creditworthy to raise funds directly from the capital market. Even so, they continued to need huge amounts of capital because they were beginning to expand into overseas markets while simultaneously trying to maintain or expand their shares of a rapidly growing domestic market. As a result, most continued to look to banks for funds, relying on the banking system for the bulk of their financing needs.

As the high-growth years rolled on through the 1960's, Japan established a position as a leading member of the group of industrial nations and in the second half of the decade, after Japan opened its market to the manufactured goods of the countries, it came under increasing pressure to open its financial sector as well. When so-called capital liberalization began, businesses sought to protect themselves from foreign companies hoping to acquire them by placing large blocks of their stock in the hands of their business partners in an interlocking web of cross share holdings. By the 1970s, accordingly, Japanese firms were operating within an unusual financing system. They were relying on banks for most of their financing, and they had reduced their vulnerability to foreign takeovers and stock market fluctuations by means of cross-share holdings. This enabled managers to make decisions in an extremely stable financial setting.

The mechanisms of this financial setup and capital market fostered special behavior patterns. In an indirect-financing system where firms make great use of bank loans, there is comparatively little need for them to raise funds directly from the capital market. Any company that goes to the capital market for funding must make itself attractive to general investors, and this means that it must build a corporate structure and adopt a management strategy geared to yielding high profits, thereby permitting the payment of handsome dividends. When banks are the providers of funds, by contrast, profit margins can be set at lower levels; from the banker's point of view, a good customer is one who borrows and repays money in large volumes. The best corporate strategy in this case is one aimed at increasing its market share.

The cross-share holdings also kept dividends low. Since companies held stock in each other, large dividend payments would only have created flows of funds among them that tended to cancel each other out. A better strategy was to retain profits in-house and invest them in expansion plans. Eventually the company's share price would rise, bringing capital gains to the shareholders. As these gains built up, moreover, firms acquired a wealth of "hidden assets." Under Japanese law, the shares owned by companies are recorded at their acquisition price, not at market value. As market values rise, accordingly, companies accumulate a large pool of unrealized capital gains that they can utilize fairly freely for investment purposes, with little interference from shareholders or outside agencies.

In this way we find that the fund-raising circumstances of the Japanese corporation put it in a favorable position for long-term investment. Not needing to report high profits and pay large dividends, managers could build up internal reserves without constraint from shareholders and external agents, and they could secure additional funds from banks. This facilitated the implementation of ambitious expansion plans drawn up from a long-range perspective, and the investments led to dramatic improvements in capacity and productivity. Thus we should see the nature of Japan's financial system as a crucial ingredient of the economy's development.

Management became hyperactive in the use of arrangements like these in the second half of the 1980s. Taking the Japanese mode of corporate behavior to the extreme, companies participated enthusiastically in the wheeling and dealing that created the bubble economy. Both stock and land prices began a sharp upward climb, and many big businesses, confident that the bull market would continue, used the occasion to boost their net worth, issuing new shares and convertible bonds. The cost of this fund raising was essentially zero, since prices on the stock market were moving smartly up, and this persuaded other major corporations, acting on the expectation—indeed, the assumption—that the rise would not stop, to join the stampede into equity financing. Part of the vast sums raised in this way was channeled into the money games known as *zai-tech*, or "financial

technology," and part was used for investment in plants and equipment. Japanese companies suddenly had access to mountains of extra funds, and they used this to invest aggressively in assets and productive capacity. It is little wonder that they appeared to have been transformed into 10-foot-tall giants.

#### THE EFFICIENCY OF THE KEIRETSU.

The Japanese business groupings known as *keiretsu* have become so famous—or perhaps I should say so notorious—in the international community that the word *keiretsu* has entered the English language. In the eyes of many foreigners, the *keiretsu* come across as closed and exclusionary groups, and they seem to stand for all that is bad in the practices and institutions of Japanese industry. But are these associations of companies really all that deserving of condemnation?

Basically a *keiretsu* is a set of long-term economic relationships among specific companies. The partners in this network are bound together by the fact that their long-term business ties are, by and large, more beneficial for all concerned than are short-term ties with temporary objectives. The principle involved here is the same one that motivates business people around the world to put great stock in good customer relations, and it leads them to prefer working in a "customer market" than in the spot market, where strangers get together to make deals. One important advantage of working with the same partners for years on end is that it presents fewer risks than dealing with a partner encountered only once in the spot market. Recognizing that the risks are not very large, managers can minimize transaction costs, and presuming that other conditions are equal, they can complete transactions with greater efficiency.

The rapid growth achieved by Japanese companies with the help of groups and networks of groups appears to have been based largely on the efficiencies inherent to long-term relationships. Since economists in other countries have corroborated the observation that long-term ties tend to be highly efficient, it seems reasonable to conclude that the *keiretsu* system has made a major contribution to the development of the Japanese corporation. The critics of the system do not dispute its efficiency; what bothers them instead is that the actual operation of the *keiretsu* is apt to exclude outsiders. I will return to this point later.

#### MANAGEMENT'S GREAT DISCRETIONARY FREEDOM.

It seems that Japanese managers enjoy a far greater measure of freedom and discretion than their counterparts in the United States and some other countries.

Take the case of meetings of the board of directors. Whereas many seats on U.S. corporate boards are occupied by outside directors, who closely scrutinize the activities of managers and sometimes engineer their dismissal, the outside directors on Japan's boards are few in number and virtually powerless. Consider also general meetings of shareholders. Whereas those in the United States are often used as opportunities for shareholders to exercise their lawful right to have companies managed to their satisfaction, those in Japan are extremely formalized and proceed according to a prearranged scenario. In effect they rubber-stamp the actions already taken by managers. Japan's auditors, similarly, generally do nothing more than give ex post facto approval to the company's accounts, failing to perform a genuine checking function like that of auditors in the United States and other countries. One more example is the labor union. Though trade unions in the United States and Europe tend to be adversarial toward management and have great say over working conditions and managerial decisions, Japan's unions are organized on a company-by-company basis and are friendly and cooperative toward management.

Often in the United States the market delivers the final verdict on the worth of executives; for example, a takeover may be staged to oust an incompetent management team. Japan's executives are insulated from external forces of this sort, and except in extreme circumstances, they also need not worry about an internal revolt. In this sense, they enjoy considerable security. Among other common mechanisms used to check management's behavior, I might mention fair-trade watchdogs and, in the United States, the Securities and Exchange Commission. Japan has a Fair Trade Commission that monitors the behavior of ordinary companies, but it does not have a powerful agency like the SEC for the banking and securities industries. The organ that has recently been set up to oversee financial transactions was not given as many powers or as much independence as the SEC, partly because of opposition from the administration.

It would be fair to say that because of conditions like these, top managers in Japan have far greater



discretionary power than their counterparts in the United States and elsewhere. And if they can secure the understanding and support of the government's regulators, who have long been enthusiastic about promoting economic growth, they can operate virtually without restraint. Herein we find another of the background factors that enabled Japanese companies to achieve such remarkable growth out of the postwar ashes.

#### 4 The Emergence of Contradictions

Factors like the foregoing were instrumental in propelling Japan's dramatic postwar growth, but they are ceasing to function as smoothly as they once did because, as I explained at the outset, the management environment is being fundamentally altered by several long-term trends. In some cases, moreover, the mechanisms of fast growth have become counterproductive and are holding companies back. Perhaps I should add that while the growth of the bubble gave an exaggerated view of corporate performance, the collapse of the bubble has exaggerated the appearance of the difficulties that they face. With this caveat in mind, let us look at the emerging problems.

##### EROSION OF THE WORK ETHIC.

Above I noted that after World War II the Japanese emerged with a keen sense of responsibility and a willingness to work hard, and I cited among the causative factors the egalitarian structure of society, the opportunities to get ahead through competition, and the enthusiasm for catch-up efforts. In recent years these three factors have started to break down.

The growth of the Japanese economy has brought prosperity to the people. Their income levels are among the highest in the world, at least when measured using current exchange rates. There are complaints that factors like high domestic prices are blocking ordinary Japanese from achieving true affluence, but there can be no denying that their nominal wealth places them among the richest people in the world. This means that they are no longer driven by the ambition or dream of achieving living standards as high as those in the industrial West. While this was only to be expected, it has deprived the Japanese of a widely shared national goal. Today it is no longer easy for people to see why they should continue to work hard.

During the high-growth phase from the late 1950s into the early 1970s, income levels rose rapidly while income differentials shrank. But during the slower growth since then, gaps between the rich and the poor measured in terms of income and wealth have been widening again. At the time of the speculative excesses of the 1980s in particular, disparities in the ownership of assets greatly increased. Changes like these have been undermining the fundamental factors that sustained the strong work ethic of the Japanese. Slowly but surely, it seems, the will to work in a conscientious fashion is being eroded. One of the key conditions on which Japanese management has relied is weakening.

##### CHANGE IN THE TECHNOLOGICAL PARADIGM.

Thus far Japanese-style humanware technology has been put to effective use in the industrial world, notably in assembly industries, for the purpose of improving productivity, quality, and competitive strength. But now the time has come to reconsider and revise this technological paradigm.

The high priority on teamwork and the sharing of information was fine as far as it went. At a time when people are asking why they must unquestioningly strive for greater growth and harder competition, however, continuing emphasis solely on the techniques of improving the organizational structure can cause individuals to lose sight of themselves and feel as if they have become submerged in the organization. In such a context, it becomes increasingly difficult for workers to demonstrate individuality.

The basic purpose of Japan's humanware technology is to make full use of the creative potential of each team member. The merits of this technology diminish, however, when team members cannot readily perceive what corporate goals they should be aiming for. To make matters worse, there is a growing need today for creative intellectual endeavors by individuals in the industrial world, and to the extent that this humanware technology holds the individual back, it can hinder the growth of Japanese industries and companies.

## THE RISING COST OF FUNDS.

As we have seen, unusual fundraising systems helped Japanese companies to achieve rapid development, and in the days of the bubbles economy, they enabled firms to grow suddenly much bigger---in some cases to overblown proportions. But when the bubble began to collapse, the same mechanism started to drag companies into a bottomless pit.

As stock prices fell, the magic of equity financing, which had enabled companies to raise vast sums value of land as collateral. This reduced the lending money at no real cost, lost its power. Worst than that, companies now faced the task of repaying with interest all the money they had raised on the assumption that it would cost them nothing. The crash of the stock market went so far that it wiped out the hidden assets of many businesses, leaving them with no freedom to make investment. Executives also came under enormous pressure from the heavy costs of funds for investment in new plants and equipment, which they had expected to be able to finance easily.

The downturn in land prices, meanwhile, undercut the capacity of banks, and it put a financial squeeze on many of their customers. As these customers began to default on their loans, banks became saddled with a large volume of non performing or unrecoverable assets. This has led to a management crisis in the banking sector that has further reduced the supply of funds.

The interaction of these developments has pushed the Japanese economy deeper into recession, creating a vicious cycle in which each report of bad news on the business horizon is causing managers to become even more pessimistic and retrenchment-oriented in their behavior.

## CRITICISM OF THE KEIRETSU.

While most people acknowledge that the long-term transactions favored by the *keiretsu* work to enhance efficiency, as I stated earlier, in recent years the *keiretsu* system has become a target of criticism from Japan's trading partners, notably the United States, on the groupings exclude outside participants. When Tokyo and Washington were conducting the trade talks known as the Structural Impediments Initiative during the administration of President George Bush, the U.S. negotiators not only called on Japan to tighten the enforcement of its Antimonopoly Law in order to overcome the harmful effects of the *keiretsu* but also suggested that U.S. antitrust laws might be applied extraterritorially to these groups.

The merits of the *keiretsu* need to be more fully explained to the world. More than that, conditions must be prepared so that foreign companies can join the groups and share in their benefits. As long as outsiders do not feel confident that they can take part in group transactions, criticisms and complaints are bound to escalate. And this will limit the activities of Japanese companies and put obstacles in their way.

## 5 THE PITFALLS OF MANAGERIAL FREEDOM.

As I noted, Japanese executives enjoy greater measure of freedom than their overseas counterparts, and this has made an effective contribution to the rapid growth of the Japanese corporation in the postwar era. In recent years, however, many executives have not been making good use of their wide latitude for discretionary judgments, and their freedom has even become a breeding ground for problematic corporate behavior.

During the days of the bubble economy, when executives were beguiled by schemes to make money using financial commodities and land, there were numerous cases in which managerial freedom failed to yield the expected benefits. In the mood that swept over the business world at the time, corporate managers were presumed to be incompetent if they stuck stubbornly to their core business, failing to grab the chance to rake in profits from money games and land deals, and this prompted more people to take part in the speculative excess, even when they were not confident about what they were doing and had no need to do it. Some businesses made a profit through skill or good fortune, but a significant number of companies were severely hurt. The late 1980s also witness an overheated drive into investment abroad, one promoted by concern that the Japanese market was becoming saturated and that domestic production costs growing too large. Among those who decided try their chances in overseas operations, many did so not with a sense of confidence but only because other companies in their industry were doing the same. A significant number of these firms suffered major losses as a consequence.

These examples show how executives can cause harm when they lose sight of the basics of management and simply move with the crowd. Through these people have long enjoyed considerable freedom, they have become so intent on copying what other companies are doing that their freedom is going to waste. Far from making use of doing their companies with shortsighted vision. The narrow focus on their competitors is not their only problem, moreover. They are also constricted by their habit of comparing their achievements with those of their predecessors, by their devotion to established precepts and precedents, and by their preoccupation with year-to-year comparisons of business results.

In a situation where executives have great latitude for action without constraint from external parties, there is ample room for decisions and deeds that do great harm to society. Various problems in this area have also surfaced. The weakness of the regulatory system was exposed in the summer 1991, when a series of scandals came to light in the banking and securities industries. Big brokerages, had taken advantage of inadequacies in the Securities and Exchange Law to make secret compensation payments to major clients who had suffered losses already a big business by the time they joined it, one with a surfeit of assets and accumulated wealth. Overawed by the organization, they have become conservative, conventional, and conformist in their thinking, permitting their decisions to be hemmed in by rules set by their predecessors, actions taken by their competitors, and the performance targets and budgetary guidelines used in previous business years. At heart these executives seem to be custodians, people with a deficiency of the free will that characterizes the entrepreneur. The more any organization grows in scale and achieves a stable position in its field, the greater is the tendency for those promoted to the top to be capable but cautious caretakers, and the more the risk taking entrepreneur gets the cold shoulder.

Once executives of this mold take over, their subordinates quickly shift to an even more conservative organization style, and the employees under them---the workers on the front line---are forced to submerge themselves in what soon becomes a suffocating organization. People who have succumbed to this mentality tend to react passively to change in business conditions. When the economy goes into recession, they simply call for government action, failing to consider what might do for business with their own creativity and efforts. Of course, comments like these are quite impressionistic. Nonetheless, I firmly believe that the excellence of Japanese management is being seriously debilitated by the big-business syndrome.

## 6 Six Directions For Change

Japanese companies have set in motion a tide of change by their remarkable growth, and in the aftermath of the bubble's collapse, they must also cope with growing contradictions born of the very benefits they have enjoyed

Up to now. How are they to overcome the problems before them? To conclude this analysis, I will identify a number of key tasks and offer some comments on directions for change.

### A NEW NATIONAL TARGET.

The foundation that supported the strong will to work has been considerably altered and may even be falling apart. The foremost source of this motivations---the shared desire to overtake the West---has been eliminated by the ending of the catch-up process, and we find ourselves unable to discover another target to aim for. Inequalities in the ownership assets are, moreover, widening and the feeling that no amount of work can ever bridge the gap has begun to spread.

Two steps must be taken to remedy this situation. First, the government must reinforce measures designed to halt the widening of assets differentials and achieve a fairer distribution of wealth. Land reform, pension reform, and tax reform are all essential. Second, we must identify a new goal that can be shared by the people in an era of affluence. Companies must work toward its attainment, and the government must devise policies to assist its realization.

Now that our society has overtaken the West in terms of material wealth including money, the single most common deficiency in the lives of many Japanese, irrespective of their differing aspiration, might be summed up as the happiness of the individual. What people are seeking is a life that brings them peace of mind, offers them wide choices, and permits the raising of a family. For such a life to be brought within reach, companies must offer working conditions that are appropriate in term of the length of hours and that enable women to balance a job with their role in the home.

The central and local governments must install more infrastructure for housing and transportation, bring down Japan's internationally high prices, and formulate a policy for comprehensive income guarantees to meet the needs of an aging population.

Unlike in the days when all the Japanese were working as hard they could to improve productively and catch up with the West, we cannot expect fast progress in a society where the common goal of the people is to achieve the happiness of the individual. The tempo of progress is instead likely to be leisurely and gentle. Yet this is not a cause for concern but only a natural development in a mature country that has attained material prosperity.

#### UNLEASHING THE CREATIVITY OF THE INDIVIDUAL.

Undoubtedly the answer will entail a wholesale restructuring of the teaching program in schools, the practices used by companies to foster human resources and develop technology, and there continues to be a great need for the maintenance and application of Japanese-style humanware technology, but the places where the techniques involved can do the most good will be shifting to the countries in which Japanese companies are making direct investments. As work in this area goes forward, no doubt it will promote industrial development and the dissemination of technology.

What Japan should be placing special emphasis on is the fostering of creativity for technological development in areas where products incorporate a large measure of knowledge. The question is how technological development can be made more creative, and the policies employed by the government to promote technology. The reform in each area need to be aimed at unleashing the creative potential of the individual and preparing conditions in which this potential can be put to full and free use.

#### HIGH-MARGIN MANUFACTURING.

Corporate strategies need to be redirected. In simple terms, there should be a transition from mass production with thin profit margins to high-margin manufacturing. The traditional strategy of the Japanese corporation has been to borrow heavily from bank, expand market share by keeping profit margins low, and increase the volume of sales through mass production. For today's big businesses, however, there is no longer room for expanding market share rapidly, and the raising of funds must increasingly be done directly from the capital market. This means that companies need management policies that yield high profits and large dividends even at times of slow growth.

The key to this task is the development of original and creative products that can generate high profits. Firms must build organizational structures conducive to the creation of highly original products, and they must introduce personnel systems that facilitate the recruitment, training, and utilization of creative people.

#### OPENING UP THE KEIRETSU.

Companies also require open and transparent organizations. The reason the *keiretsu* have come under attack from abroad despite their generally accepted efficiency is that their mode of operation has been opaque and hard to understand. In that they are basically nothing more than networks of long-term business relationships that provide mutual benefits for their members, it should be possible to restructure them as open groups that publicize the benefits of membership, elucidate the requirements for participation in long-term ties, and give admission to any company that meets these requirements.

I might also observe that while Japan's humanware technology is gradually spreading to factories around the world, it sometimes fails to gain acceptance at the middle-management level even when it is welcomed on the factory floor. The main reason for this is that it has never been adequately elucidated. The body of this technology consists of production management, human resource management, organizational practices, and norms of behavior that have gained tacit acceptance among Japanese workers without, in many cases, being explicitly explained conceptually. The ideas and practices involved need to be conceptually clarified, systematically explained, and carefully translated in the context of different cultures if they are to be put to use in different parts of the world.

#### A TURNOVER AT THE TOP.

As I have stated, the big-business syndrome is a more or less universal disease, one that can be

seen as the inevitable price of an organization's success. While there is no magic cure, probably the most effective treatment is to accelerate the organization's metabolism. In Japan's case this means the prompt replacement of top management. This would impact a sense of responsibility and confidence to executives, and the resulting mood of urgency should permeate down to the rank and file. Of course, it is far easier to propose a turnover at the top than it is to achieve it stable and mature society like Japan's. Nonetheless, the path to alleviating the syndrome clearly lies in this direction.

#### SYMBIOSIS WITH THE COMMUNITY.

One final task for companies is the achievement of symbiosis with society. Now that they have grown up, Japan's firms need to develop a stronger awareness of their responsibilities and roles in society at home and abroad. Because they have acquired great influence over the communities in which they operate citizens. In recent years they have been making rapid progress on this front. Awareness of the needs has spread from the top management on down, and various programs are being conducted to strengthen the ties between the company and the community.

In the foregoing six areas I expect Japanese companies to be changing direction. There is already wide recognition in the business community of the need for movement in these directions to improve the corporate organization. In some of the areas reforms have already started, particularly with regard to developing creative technology and being good corporate citizens. By and large, people also relatively keen awareness of the need for high-profit management, as a result of which many companies have started to shift in this direction. The need for early replacement of top management is also widely acknowledged, but with a few exceptions, this has been difficult to accomplish.

As I have attempted to show in this article, Japanese management is confronting numerous knotty problems, and a variety of efforts to overcome them have begun. While it will take time to get the gigantic Japanese ship moving along a new course, a shift in direction is already apparent. Having built this ship anew after World War II and achieved impressive industrial development and economic growth by improving productivity and competitiveness, Japan still has an abundance of managerial resources. Now that it is reaching maturity, it has begun to draw on these resources for the purpose of a gradual shift toward a new development phase.

## 7 Appendix:

### A Brief explanation of the Concept of "Humanware Technology---Japanese Model"

The humanware concept is useful in differentiating among systems. An extensive analysis of the Japanese production system reveals its high dependence on human resources and hence its high vulnerability to human variability. This has many implications for the human resource practices found in Japanese-managed plants. Let us examine the main features of Japanese humanware technology in some detail, particularly as it is used in the automobile industry. Figure I delineates the logical relationships among elements of the Japanese production system. Although there are variation in practices from company to company, the elements described below are typical.

Corporate goals of growth and profit are largely achieved through the production of high-quality cars at a low production cost. The production systems contributes to these goals by achieving low inventory costs, low labour content, and low defect rates. These results of the production system are inter-related. For example, it is now widely acknowledged that reductions in inventory levels play a vital role in improving product quality, forcing a discipline of problem-solving for quality improvement through the elimination of buffer stocks. Key technological features of the Japanese production system yield these results:

1. Just-in-time production. This approach, now well known, reduces work-in-process inventory levels through delivery of inputs to the production process only in the amount needed and at the time needed.
2. Small-lot production. Small lots provide quick and effective feedback between production stations in order to minimize quality problems. The improved quality that results helps the production process work with low buffer stocks, and also smoothes production flows, because the reliability of inputs to inputs to each stage of production becomes more certain.
3. Human control. There are several significant aspects:
  - (a) "Giving wisdom to the machine". The effectiveness of machine performance is steadily enhanced through incremental improvements emerging from the daily experiences of production workers; particularly important is equipping machines with autonomous functions of avoiding mistakes in production.
  - (b) Visible control of production. Workers participants in production control by watching for visible signs of potential problems, e.g. producing products by watching the *kanban* (ordering plate), recognizing problems that have occurred when alarm lights flash and responding accordingly, etc.
  - (c) Self-management of the work process. Production workers have a high degree of responsibility for controlling the work process, particularly for specifying and modifying methods and procedures at their work stations.
  - (d) Saving labour input. Workers constantly strive to find new labour-saving techniques in performing their jobs, thereby enhancing productivity and consequently the company's competitive power in the market.
  - (e) Self inspection. Production workers are responsible for inspecting the quality of what they produce and are allowed to take necessary steps to prevent quality problems from spreading, including stopping the production line.
  - (f) Building quality into the process. Each worker tries to solve quality problems at the spot he finds them, by stopping operation and searching for causes and fixing them, instead of passing them on to final inspectors.
  - (g) Constant effort for improvement. Workers constantly try to improve their performance, machines, systems, environments, etc. which all contribute to realizing higher productivity, improved quality, and better rewards.

Each element of human control involves contributions that human resources make to the overall production system and reveal the high integration between machinery, production techniques, and human resources. For human resources to contribute effectively, three attributes must be developed in the work force: skill, motivation, and adaptability. Each is indispensable. A skilled workers will not be effective unless motivated. Even if he is skilled and motivated. Even if he is skilled and

motivated, if he cannot adapt to necessary changes in the mode and structure of production, he will not be useful.

How are these human resource qualities developed for the Japanese production system? Figure 2 presents four major categories of human resource management policies and their role in developing these qualities.

**Recruitment and training** receive a great deal of attention.

Employers, during extensive selection efforts, emphasize the "trainability" of applicants - a general attitude of openness to learning new skills and moving flexibly among different jobs - rather than specific skills. After hiring, new employees receive extensive in-house on-the-job training under the close guidance of experienced production workers and engineers, often over a period of months, with an emphasis on learning multiple skills.

**Job structure** is characterized by a few broad job classification of numerous narrowly-defined job classifications, as differences among employees and production schedule variations. Job rotations, both within work teams and across departments, are extensively utilized to increase a worker's mastery of skills and to provide him with a kind of career progression.

**Rewards** in Japanese companies of monthly regular pay, bonuses, and promotions. Regular pay makes up the greatest percentage of compensation, with bonuses that reflect both corporate and individual performance comprising one-fourth to one-third of annual income. Because of broad job classifications, wages are not linked closely to the particular tasks an individual performance comprising one-fourth to one-third of annual income. Because of broad job classification, wages are not linked closely to the particular tasks an individuals performs. Promotion of production workers to "team leader" or to managerial position is common and reinforces the idea of career progression, which has substantial motivational value.

**Participation** efforts include extensive information-sharing sessions among various groups of employees and managers, problem-solving groups, and union activities-both collective bargaining over pay, benefits, and working conditions, and joint consultation on a broad range of planning and production issues. All of the major Japanese automobile companies are unionized, and these enterprise unions play a play a critical role in the Japanese production system.

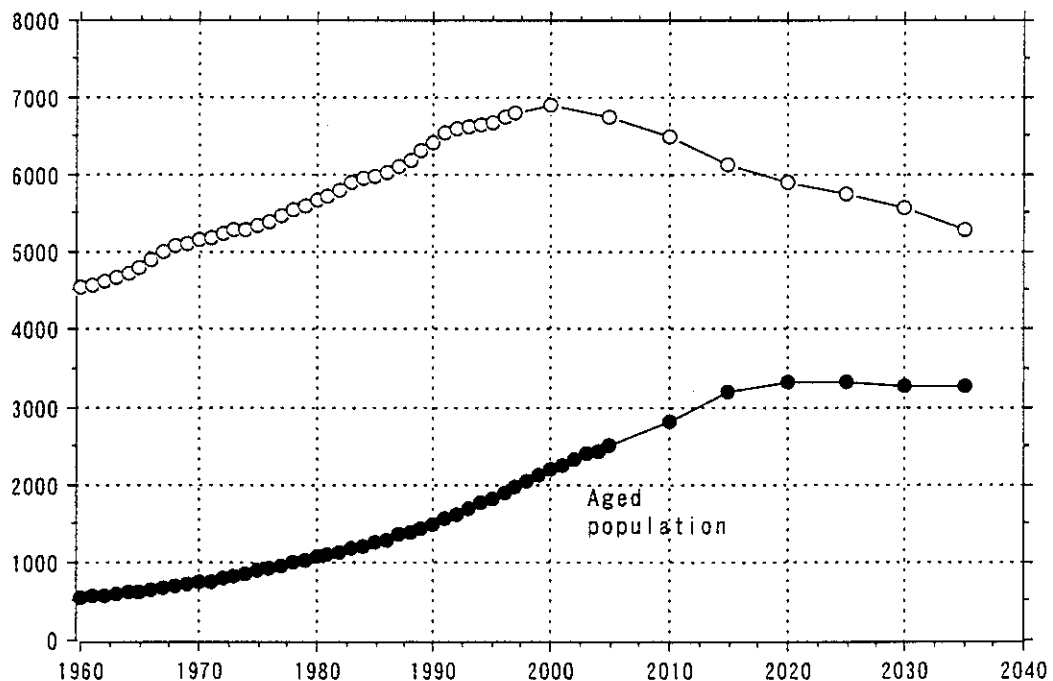
# Chapter 3 Adaptation of the Japanese Labour Market to an Ageing Population: Towards a New Japanese Model

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## 1 Impacts of Population Ageing on Economic and Social Factors

Until two decades ago Japan was considered a relatively 'young country' among the OECD countries. The ageing of the population has proceeded notably since then. The proportion of the elderly (65 years old and over) to the total population increased from 7.04 % in 1970 to more than 17% in 1999. According to the latest estimate of the Ministry of Health and Welfare, the proportion will increase to 28% in the year 2030 (See Chart 1). This proportion is much higher than that of the present 'aged countries'. For example, the proportion in Sweden, which is assumed to be one of the most 'aged countries', is around 18 %.

**Chart 1 Productive Age Population and Aged Population as % of the Total Population**



Figures after 1996 are government estimates  
Source: Ministry of Health and Welfare, Japan

The ageing of the population is assumed to cause at least four economic problems related to economic growth, labour market and social security.

- (1) Decrease of labour supply and increase of welfare dependency ratio.
- (2) Decline of savings ratio.
- (3) Unfavourable influence on economic growth.
- (4) Financial difficulty in social security funds.

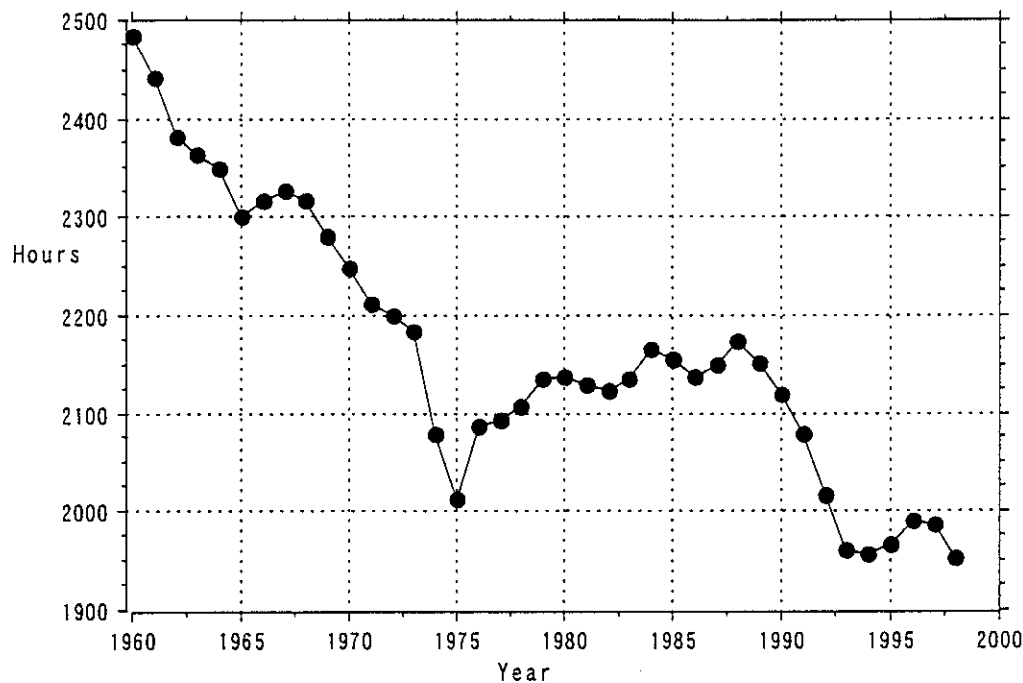
### Labour Supply

The productive age population that had been increasing began to decrease from 1996. Combined with the decreasing trend in average working hours (See Chart 2), the total supply in terms of man-



hours declines notably from 1996. The rate of increase of the productive age population began to take a downturn trend since 1964 and the rate of increase has declined sharply since 1989.

**Chart 2 Average Working Hours in a Year**



### Influences on Savings

The lifecycle hypothesis assumes that the private savings ratio will decrease as social security develops. The population ageing will entail the decline of savings ratio if the savings propensity of the elderly is lower than that of workers. Chart 3 shows that the household savings ratio (private savings divided by disposable income) that peaked in 1973 began to follow a decreasing trend after 1975. Though it is difficult to confirm econometrically, it would not be a coincidence that the savings ratio began to decrease just after the “first year of welfare”. One of the important explanations for the decline of the rate of economic growth and expansion of social security in Japan was the rapid ageing of the population. The proportion of the elderly (65 years old and over) to the total population increased from 7.04% in 1970 to more than 17.% in 1999. It is estimated to increase to 18 % in 2005 and 28% in 2030 according to the latest Government estimate (See Chart 2). As the ratio of social security costs in national income increases as the elderly ratio becomes higher, it is estimated that the future costs of social security will be too large if Japan follows the Scandinavian model of welfare state that depends too much on government and public sectors.

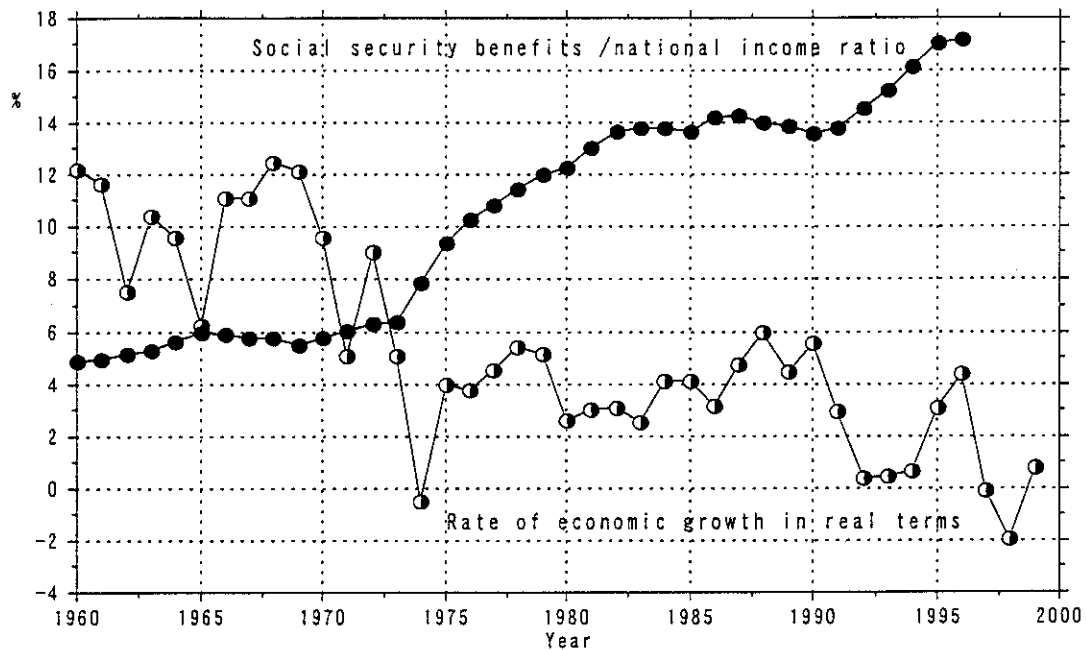
The population ageing is assumed to have unfavourable effects on economic growth in real terms by lowering the household savings ratio and the rate of increase in productive age population\*. As Chart 5 shows the rate of economic growth in real terms began to decline when the share of social security in national income began to take an apparent upward turn and the rate of increase of the productive age population has declined as a trend. As long as the rate of economic growth depends much on the increase rate of labour supply and the savings ratio, it is not surprising that the rate of economic growth declined when the population’s ageing proceeded.

If Japan follows the Scandinavian model, the tax ratio including social security contributions will be too high, because the elderly ratio in future Japan is estimated to become much higher than that of present-day Sweden. This is one of the reasons why Japan can not follow the Scandinavian model of a welfare state, though Japan has learnt much and will continue to learn from the experiences of the Scandinavian welfare state. Welfare mix (Richard Rose & Rei Shiratori eds., 1986, Maruo, 1984 &

1989) or welfare pluralism (Evers, Adalbert and Ivan Svetlik eds. 1993) that tries to share the role of welfare supply and costs by the government sector, market sector and informal sector will be required to moderate the excess burden of tax and social security contribution in the future.

The population ageing influences the rate of economic growth through the increasing burden of social security on the one hand and through the decline in the rate of labour supply increase and the savings ratio on the other.

**Chart 3 Rate of Economic Growth in real terms and Share of Social Security Benefits in National Income in Japan, 1960~1995**



## 2 Labour Market and Unemployment

### Low Unemployment Rate

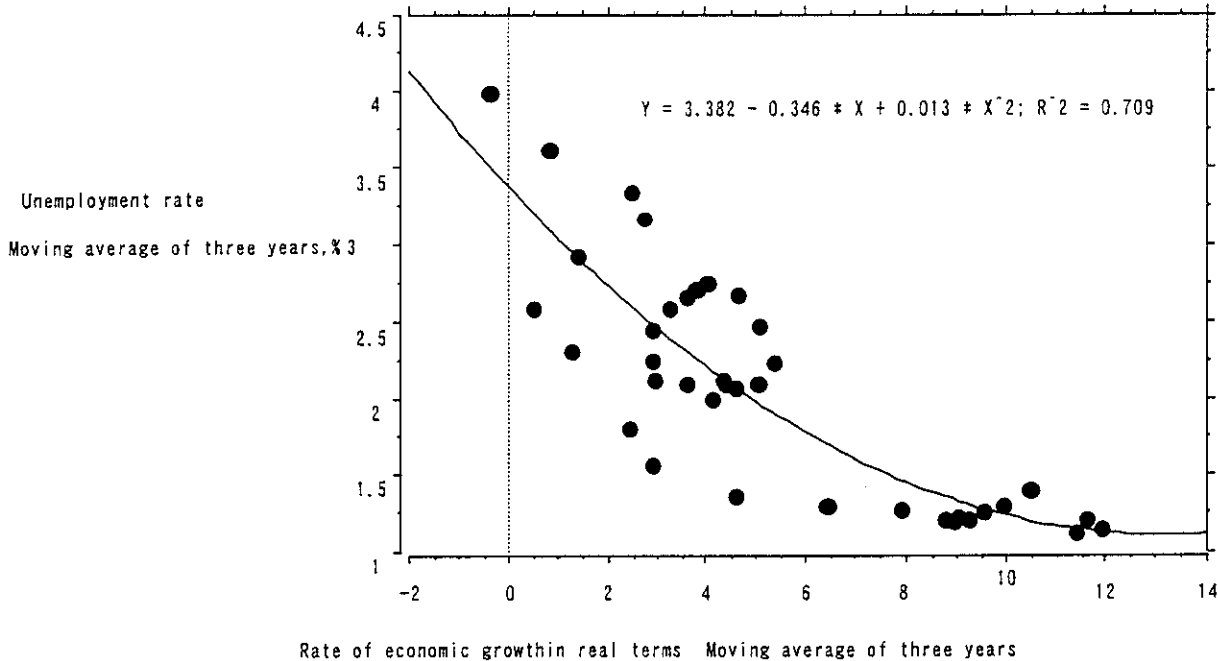
In the long run, the rate of economic growth depends on the rate of labour supply increase, while in the short run the labour market is influenced by the rate of economic growth in real terms. Until a several years ago Japan had succeeded in maintaining full employment. The unemployment rate was less than 3%. In 1995~1999, the rate increased to 4~4.5% (See Chart 4) as a result of prolonged depression. Still the rate was relatively low compared with other industrialized countries. The unemployment rate in Japan will decrease when the Japanese economy recovers from the present depression. Japanese experiences suggest that when the rate of economic growth increases, the labour demand/labour supply ratio increases, then the unemployment rate decreases (See Chart 4).

Still the fluctuation of unemployment rate is not so sharp. One of the possible reasons for the low rate of unemployment in Japan may be explained in terms of Japanese employment practices.

For unemployed workers, an unemployment allowance that covers 60% of wages is paid by employment insurance funds. Thanks to the low unemployment rate, the costs of unemployment benefits was relatively low compared with those of European countries. In 1993~1995, the costs were 0.5~0.7% of national income. To prevent unemployment rather than pay unemployment allowances is the principle of Japanese productive welfare policy. In this respect, the policy stance is similar to that of Sweden.

**Chart 4 Rate of Economic Growth in real terms and Unemployment**

Moving Average of Three Years



where, X Rate of economic growth, moving average of three years.

Y: Unemployment rate , moving average of three years

However, while in Sweden the government implemented an active labour market policy to prevent unemployment, in Japan mainly companies have been responsible in maintaining the employment of their employees due to lifetime employment practices based on an implicit contract between employees and employers.

### 3 Employment of Senior Workers and Female Workers

#### Employment of Senior Workers

In my papers I featured the unique points of the Japanese model of the welfare state as “productive welfare and the optimum welfare mix” (Kato and Maruo, eds., 1998; Maruo, Homepage, 1997).

Employment policy to encourage older workers is one of the examples of productive welfare policy. The labour participation ratio of Japanese people over the age of 65 is higher than that of other OECD countries, though the ratio is decreasing as a trend. The labour participation ratio of male over the age 65 decreased from 58% in 1963 to 35~40 in the 1990s. If older workers participate in the labour market through policies like government subsidies their contribution to GDP will usually more than the costs of the government subsidies. If the employed older workers pay tax and social insurance contribution, there is a good possibility that not only incremental GDP but also the tax revenue from them surpasses the costs of employment subsidies. For example, the formulae below based on simplified assumptions suggest that as long as the amount of government subsidy is smaller than the increase of government revenue caused by the increase of employment of senior workers, government subsidy does not worsen but will improve the net government revenue\*.

\* Government revenue from the increase of employment  $R = pq(N+N_0) + \phi\beta wN_0$

Government expenditure for subsidizing employment  $E = \gamma wN_0$

$$R - E = pq(N+N_0) + \varphi\beta wN_0 - \gamma wN_0$$

Differentiating with respect to  $N_0$ ,

$$\delta (R - E) / \delta N_0 = pq'(N+N_0) + (\varphi\beta - \gamma)w,$$

As long as  $pq'(N+N_0)$  is larger than  $w(\gamma - \varphi\beta)$ , net government revenue will increase by subsidizing the employment of senior workers.

where  $p$  : price,  $q$  : national income in real terms,  $N$  : total labour force,

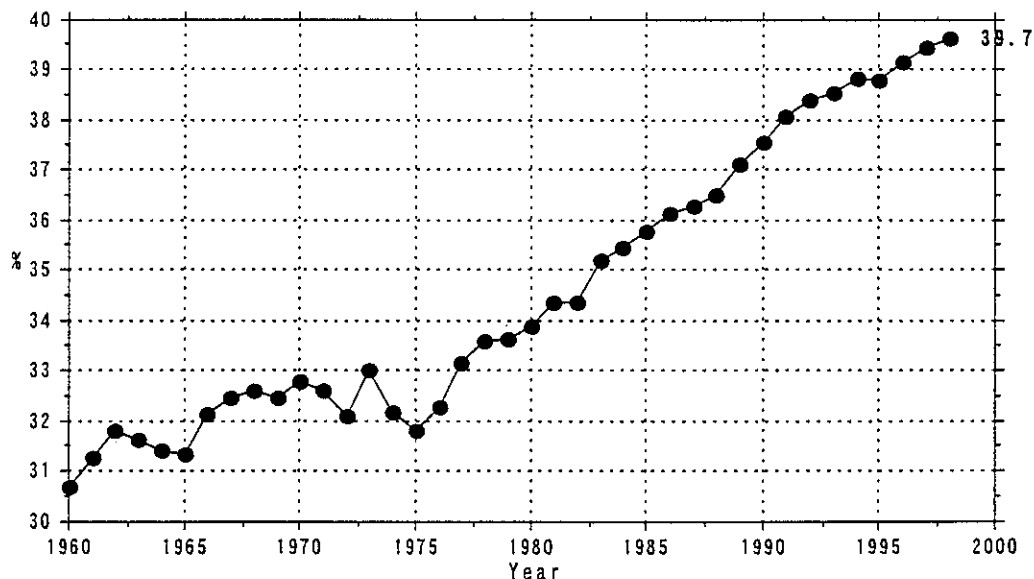
$N_0$  : number of senior workers that receive public pension,  $w$  : wages,  $\beta$  : replacement ratio of public pension when senior workers retire,  $\varphi$  : reduction ratio of pension when senior persons work,  $\gamma$  : government subsidy as % of wages of the newly employed worker.

## Employment of Female Workers and Family Policy

Family policy to support working women who have children is one of the underdeveloped fields of social security in Japan. The Government decided to develop this policy and named it 'Angel Plan'.

In Japan the labour participation ratio of women in non-self employed sectors is increasing and the proportion of female employees to the total employees has an upward trend as Chart 10 indicates, though it declined somewhat when the economic growth rate dropped. The ratio increased from 30.7% in 1960 to 38.8% in 1995.

Chart 5 Proportion of Female Employees to the Total Employees



Source : Ministry of Labour, *Survey on Employment*, 1999.

Three circumstances were behind the development of family policy for working women. The first was the desire to promote equal opportunity and equal treatment for female workers. Opinion surveys suggest that one of the most undesirable social practices for women in Japan is differential treatment at working place and employment (See, for example, Japan Productivity Center for Social and Economic Development, 1996).

The second circumstance was the labour shortage around 1990.

The third is the declining fertility rate in recent Japan.

The second circumstance has become somewhat less pressing due to the prolonged depression, but the third one has become more urgent. As Chart 6 indicates, the total fertility rate has been declining since 1967. Year 1966 is exceptional. This year is called Hinoeuma year. There is a sort of superstition saying that women who were born in the Hinoeuma year are not suitable as wives. It is of interest to note that superstition still has some influence on actual human behaviour.

As to the causes of the declining fertility rate, there have been discussions. But it seems that the increasing tendency of woman working is one of the possible reasons for it. Chart 7 based on annual