

2. Medicare System

The Medical Insurance System in Japan

Miho Sekimoto* and Masako Ii**

I. Characteristics of the medical insurance system in Japan

Countries around the world are anxiously searching for better medical systems. The construction of medical systems has followed different routes in the various countries of the world, influenced by the different cultures, histories, and ideas of each country. A distinction that is particularly vital when constructing a medical system is whether medical care is considered to be a merit good (a good that everyone should receive) or is considered to be a general resource which should be allocated depending on the ability of the users to pay for it. Since 1961 Japan's medical insurance system has been predicated on the first of these two approaches.

National experience shows that when a health system works well, it produces good results. Japan, for example, has achieved the world's highest health standards, with extremely low infant mortality rates and very long average life expectancy. These achievements are partly due to Japan's well-functioning health system.

Looking at the situation around the world, medical systems are divided into three groups. The first group is "The United States." The United States has constructed its medical system using the approach of "relying on the market principle based on personal responsibility." Medical care in the United States is entirely private and with a few exceptions they use private sector insurance rather than a public insurance system for medical insurance. A large number of insurance companies are offering a wide range of insurance products. However, some of the citizens do not have enough income to pay the insurance premiums and approximately 40% of the population is uninsured.

The second group is "Northern European countries such as Norway, Sweden, Denmark, etc., and the United Kingdom." In these countries, all of the public are guaranteed medical care, which is funded by taxation. Furthermore, the public sector provides the medical care. However, in day-to-day life commodity prices are high and taxes are also high. The consumption tax is as high as 25%. In Northern Europe the medical services that are provided are limited compared to Japan. The citizens are paying over 70% of their income in taxes, but the national government takes care of all living costs in old age, medical care, living costs for disabled persons, and education.

The third group is "Europe, Germany, France, etc." where the medical insurance system is a part of social security. The amount paid by the patients themselves is low, with most of the cost

* Miho Sekimoto (M.D., Ph. D., M.P.H) is a research fellow at University of Tokyo Graduate School of Public Policy. Her research focuses on quality of health care and medical resource allocations.

** Masako Ii is Professor of Economics at School of International and Public Policy, Hitotsubashi University. Her fields of specialization are health economics, public economics and development economics.

covered by medical insurance, as a part of social security. In France the proportion of medical costs paid by the patients themselves is approximately 5%. Japan's social insurance system was built using Germany as the model, so Japan also belongs to this group. In Japan medical care funding basically relies on the social insurance approach but medical care is mostly provided by the private sector.

Japan's medical system has the following characteristics (Ikegami, 1998). However, these characteristics are not unique to Japan; many countries other than the United States have medical systems that are similar in some respects.

1. De facto, nearly all of the citizens are forced to acquire medical insurance (universal health insurance coverage)
2. The insurance is acquired automatically and neither the insured person nor the insurer has much freedom of choice regarding the scope of coverage of the insurance
3. Nearly all of general medical care is included in the welfare program
4. Insurance premium burdens are calculated based on the income of the insured person
5. Disparities in the burden among different social groups are alleviated through cross-subsidization between the general account burden and the insurance plans
6. Nearly all prices of medical care are strictly controlled by a medical fee schedule
7. The Medical Treatment Fees Table is decided through regular negotiations between the payers and the providers of the treatment
8. Research costs with no direct relationship to medical care and the administrative costs of the insurers and the medical care professionals are kept low.

All of Japan's medical insurance is mainly public insurance, and is comprised of two components: National Health Insurance (NHI) and employee health insurance. Employee health insurance is medical insurance that companies set up for their employees. On the other hand, National Health Insurance is insurance for people who are not covered by employee health insurance. Japan built a system of universal health insurance between 1960 and 1963. In other words, all Japanese people and all foreign nationals who have lived in Japan for a year or more and wish to acquire insurance can acquire health insurance.

We can say that the universal health insurance system transformed the nature of the medical insurance system that had existed until that time (Shimazaki, 2005). Under the former National Health Insurance Act, establishment of national health insurance associations, the operators of the system, was voluntary; moreover participation in the national health insurance was also voluntary on a household-by-household basis. Furthermore, the associations were allowed wide-ranging autonomy and discretion, and the determination of people ineligible for insurance, benefit rates, and the amount of medical costs paid by the patients themselves was also left to the associations. Considering that the associations were organized and operated based on the ideas of the association members in this way, the former National Health Insurance Act was close to the thinking of the "insurance principle" of "benefits based on the size of the contribution." On the

other hand, the new National Health Insurance Act was established based on the philosophy of realizing universal health insurance, and took the approach of compulsory insurance publicly run by municipalities. As a result of this, the insurance principle possessed by the former national health insurance was watered down. In other words, the autonomy and discretion of the insurers was lost because all citizens were forced to acquire insurance whether they wanted to or not and regardless of their ability to pay the insurance premiums.

The year 1973 is known as “the first year of the welfare era” in which the High-cost Medical Care Benefit system was created. Furthermore, at the same time the ratio of medical costs paid by the patients themselves was reduced from 50% to 30%, and medical care for the elderly was made free. The High-cost Medical Care Benefit system is a mechanism under which the individual patient initially pays the full costs but if the amount of medical costs paid by the patient exceeds a fixed amount the patient can be refunded the excess amount from health insurance if they apply for it. Thanks to the High-cost Medical Care Benefit system, the general ratio of medical costs paid by the patients themselves is 30% but on average it is actually just 15%.

II. History of Universal National Health Insurance in Japan

➤ Realization of the Health Insurance Law

In 1922, the Ministry of Home Affairs promulgated the Health Insurance Law— Japan’s first social insurance legislation. The law was designed to protect workers at factories or mines with fifteen or more employees. It was also designed to create cooperation and harmony between capital and labor, and was new legislation modeled after the sickness insurance systems of Germany and other countries. As Shimazaki (2005) pointed out, the Health Insurance Law contributed greatly to the successful enactment of the National Health Insurance Law that targeted farmers who normally do not adapt to social insurance, and this played an important role in the establishment of the later public health system in Japan.

Workers at small-scale factories with less than fifteen employees, government officials, bank employees, and a few others such as farmers and the self-employed were not covered by the Health Insurance Law. There were some arguments regarding the treatment of the then-existing mutual aid associations. Eventually, it was decided that only mutual aid associations for public servants were exempted from application of the law, and private organizations were not allowed to continue the operation of their health insurance programs. This meant that health insurance programs were no longer managed by autonomous private organizations and the government was compelled to become the insurer.

When the Health Insurance Law was first established, the insurers could directly negotiate a contract with physicians. Each insurer could freely determine the unit price and the calculation method used to pay the physicians’ service fees in the contract with medical institutions. The Health Insurance Law covered only the insured’s illnesses, injuries, death, and childbirth incurred both on and off the job but did not cover disabilities of aged people. There were various

restrictions on medical benefits. In principle, the insured were not allowed to change their doctor when being treated for the same disease, and changing to another doctor required an approval from the insurer. Cash benefits included disability allowances, funeral rite benefits, childbirth expenses, and maternity allowances.

The cost of operating health insurance was defrayed by the premiums paid by employees and employers as well as by the contributions from the Japanese government. The government paid 10% of the insurance benefit, which is approximately same as the administrative cost.

➤ **Maintenance of the Health Insurance System: Rapid Expansion during the War**

In the 1920s and the 1930s, farmers suffered from severe poverty caused by economic depression and natural disasters. Medical expenses were a tremendous burden on poor farming villages, so they were unable to see a doctor. Since those farming villages were a source of recruitment for the military, a decline in the physical strength of farmers and peasants stirred a concern from a national defense point of view. In 1934, the government announced a draft outline of the national health insurance system, in which an association would be formed in each municipality, and health insurance would be administered with the association serving as an insurer.

The most important issue in the implementation of the National Health Insurance Law was who would be the insurer – in other words, the chief operator of the system. The issue was resolved by having the municipalities form the National Health Insurance Associations and making them the insurers. The establishment of an association was voluntary, and participation in the association was also voluntary. The association had autonomous and discretionary powers, and benefit rates and some of the co-payment amounts were determined by each association. There was a contractual relationship between an association and its insured. One of the reasons why a municipality-based association was adopted was that many people in rural areas already had a sense of community through irrigation and rice farming activities in each village, and a strong sense of community and mutual assistance existed. Many rural areas traditionally had mutual financing associations as well, and the National Health Insurance system reflected these social realities (Shimazaki 2005).

After experiencing many difficulties, the law was enacted in 1938. While the Health Insurance Law was applicable to somewhere between two and three million factory workers, the National Health Insurance Law applied to several tens of millions, which was about 60% of the total population (an unprecedented number, globally). This was the first time that Japan unified all aspects of the administration of public health and medical services under a single authority (JICA 2005).

The old National Health Insurance Law enacted in 1938 was closer to insurance in its basic sense than the new National Health Insurance Law enacted in 1958. It is significant that health insurance in Japan became more than labor insurance. As a result, the insurance was also extended to the general public.

➤ **Consolidation of various health insurance laws and the First Universal Insurance**

In 1939, the Employees' Health Insurance was inaugurated. Unlike the Health Insurance Law, which was only applicable to laborers at factories, this insurance covered office workers as well. Under this system, the insured bore a partial out-of-pocket contribution. Ordinances concerning government employees' mutual aid associations and school personnel mutual aid associations were also enacted since they were excluded from the Health Insurance Law.

In 1939, the Health Insurance Law was amended to, for example, provide dependents' benefits and extend the payment period of medical expense for tuberculosis. In 1942, the Health Insurance Law and the Employees' Health Insurance Law were integrated. In order to prevent unnecessarily frequent visits of doctors, the out-of-pocket contribution system was fully introduced. It was decided that remunerations for medical services would be paid directly from the Health and Welfare Ministry to doctors according to a medical fee table devised by the Ministry. Physicians' fees were determined by the unit price and a point system which were used both for the employees' insurance and the National Health Insurance.

At that time, only half of the physicians in Japan wanted to become health insurance doctors. An unreasonable calculation method resulted in low unit prices as the number of patients increased; the method was subsequently corrected and the requests of the JMA were accepted under the wartime regulations. The health insurance system managed by the government at that time had a large surplus in its fund, and the government wanted to use the surplus in order to make the insurance more popular. This is how the fee-for-service system without the maximum total service fee was created, and this system basically still remains in effect today.

The amendment in 1942 introduced a mandatory designation system administered by the prefectural governors. On behalf of the insurers, the government, without consulting others, appointed healthcare providers that were common to all insurers (employees' insurances, the National Health Insurance, seaman's insurance), and physicians could not refuse without legitimate reason. The purpose was to control health insurance doctors in order to ensure their cooperation with the "healthy people - stronger soldiers policy" during wartime. The insurers' right to select health insurance doctors was ceased, and the system of appointing insurance doctors by the government still remains in effect today (Fukuda 2003).

In 1942, the National Health Insurance Law was amended. The most important amendment was the one that made it possible for provincial governors to force municipalities to establish a national health insurance association, whereas the establishment of an association had, until then, been optional. The General National Health Insurance Association was established in 95% of the municipalities by 1942 or 1943. This can be seen as the accomplishment of the first universal insurance (Yoshihara and Wada 1999); however, some of the municipal associations were created for number-crunching, and the reality was far from universal coverage.

The integration of the Health Insurance Law and the Employees' Health Insurance Law, as well as the amendment of the National Health Insurance Law, represented a milestone reform: this

was the first instance of consolidating the social health insurance systems within a country; the idea of a universal health insurance system was explicitly spelled out; an out-of-pocket contribution system was partially introduced; health insurance doctors were forcibly designated; and the government was given a great amount of power over the operation of the system. These amendments provided a basic framework for the current health insurance system in Japan.

With the exception of pension schemes for the farming population and the self-employed, a social insurance system that covered almost all citizens was completed during WWII. Although most of the social insurance systems were on the verge of breaking down toward the end of the war, these systems survived and were reconstructed when many of the pre-war institutions and laws were being abolished. It can truly be said that Japan's social insurance systems were a legacy that was created and fostered by recessions and wars during the early 20th century.

➤ **Postwar Health Insurance System: From the Reorganization after the War to the Establishment of a Universal Insurance**

By the end of WWII, 98% of all towns and villages and 63% of the cities, other than the six major metropolitan cities had established a national health insurance association, covering over forty million persons. In the immediate postwar years, however, the majority of these associations were either poorly operated or dormant. Doctors did not treat health-insurance-covered patients kindly since the system remunerated the doctors poorly. They grew increasingly discriminative against and distrustful of health insurance, sentiments which they had held since the pre-war days.

During the several years following the end of WWII, as related laws were amended, the medical fee schedule was revised and the level of fees was increased, a medical fee payment fund was established, health insurance hospitals were established, and the national health insurance system gradually regained its original function and the confidence of the people.

A free appointment system (the government still appointed doctors, but with doctors' agreement) was introduced in 1948, but the selection of doctors was still done by the government, not the insurers (Fukuda 2003). When the Health Insurance Law first became effective, each insurer could determine the rate of the insurance premium and benefits as well as the collection of the premium, but the maximum amount of the premium has been regulated since 1948. The National Health Insurance Law dictated that the insurers determined the premium when the law was first enacted, but the amendment to the law in 1948 transferred the management responsibility from national health associations to municipalities, and premiums came to be determined administratively. The Health Insurance Law and the National Health Insurance Law mandated the range and the level of the benefits. Insurance premiums and the delivery of the benefits were regulated, and there was almost no room for each insurer to calculate the premiums and benefits.

Other major changes that took place immediately after WWII were as follow. First, the Labor Union Law and subsequently the Labor Standards Law were enacted, and designated industrial diseases were excluded from the coverage of the Health Insurance Law and placed

under the jurisdiction of the Ministry of Labor which was established in 1947. Second, in 1948, the National Health Insurance Law was amended to ensure that the NHI became the responsibility of municipalities, with the aim of promoting NHI programs across the country. Because the law's clerical work was closely related to the daily business of municipalities, municipalities took over the administration in principle. Moreover, not only the heads of the households but also all members of the households were required to be insured.

Forcibly insuring everyone regardless of his/her individual will or ability to pay the premium and spreading understanding of the principle of insurance basically were mutually exclusive. An amendment to the Local Tax Law in 1951 created the National Health Insurance Tax, and the method of collecting National Health Insurance premiums became the same as that of municipal taxes. The purpose was to increase the collection rate, but approximately 90% of the municipalities still choose the National Health Insurance Tax as the collection method, and people lost their sense that the National Health Insurance is an insurance system. After the establishment of the universal health insurance, as a group of insurance societies the National Health Insurance system gradually lost its homogeneity as the significance of traditional local communities declined over time.

In the mid-1950s, about one-third of the Japanese population, being largely engaged in agriculture and other self-owned businesses, was not covered by health insurance. Insured persons amounted to approximately thirty million people, of which ten million low-income earners had no choice but to go on social welfare once they became ill.

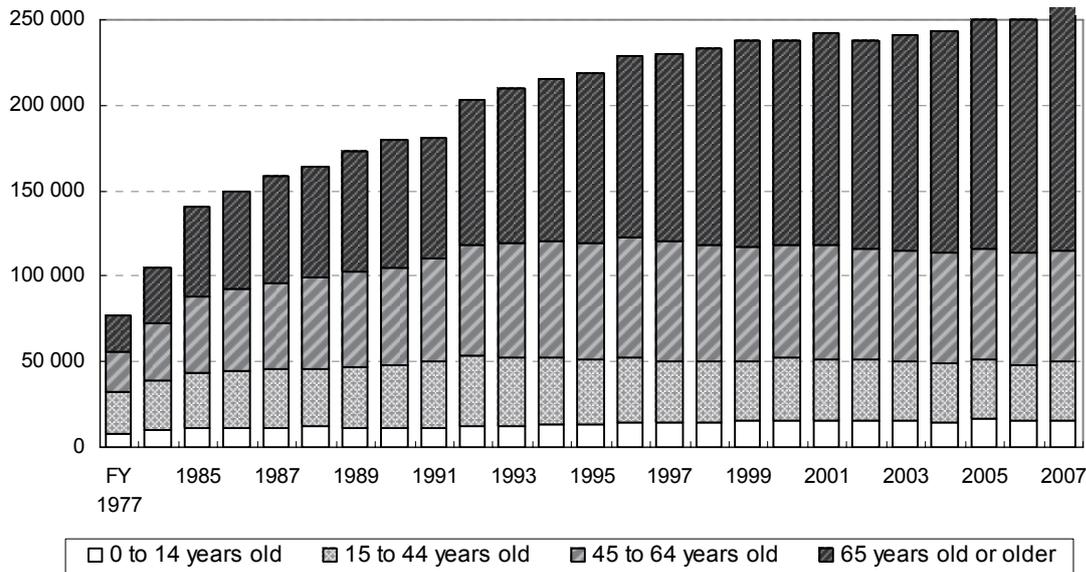
In 1953, the government finally introduced subsidies equivalent to 20% of medical care benefits. This established the financial base of health insurance, and a foundation for the universal insurance was laid.

A new National Health Insurance Law was enacted in December 1958, went into effect in 1959, and was enforced across the country in 1961. The National Pension Law was also enacted in 1959. Universal health insurance and pension schemes were thus achieved in April 1961.

III. The deadlock in Japan's medical insurance system and its causes

The steep rise in expenditure on medical care for the elderly began in 1973 when medical care for the elderly aged 70 years old or older was made free (Figure 1). From 1961 to 1978 medical costs grew at a double-digit rate every year, and from the time universal insurance was achieved until the 1980s the medical insurance system struggled with a fiscal deficit. As a measure to reduce the deficit the finance adjusting subsidies from the government were greatly increased. In 1960 they were 15.7% but by 1980 they had greatly increased to 30%. Looking at the sources of funds for national healthcare expenditure in fiscal year 2005, the portion paid by patients accounted for 14.4%, insurance premiums accounted for 49.2%, and the portion paid out of public funds accounted for 36.4% of total expenditure.

Figure 1. Annual changes in national medical expenditures
(general medical expenditures) by age group



Along with the outbreak of the 1973 Yom Kippur War, the OPEC (Organization of the Petroleum Exporting Countries) member states announced an oil strategy involving cuts in crude oil production, large increases in the price of crude oil, etc., which caused the first oil shock. Japan's economic growth rate declined from the 10% growth it had been enjoying previously to the 5% level, and a period of rapid economic growth came to an end. Although medical costs rose steeply from the middle of the 1950s until 1973 when the first oil shock occurred, Japan was able to find a way to support the medical insurance system because of the rapid economic growth over the long term and the resulting increase in tax revenues. However, subsequently socio-economic conditions changed dramatically and the country came under pressure to review its social security system. Specifically, these changes included the aging of the population, changes to the industrial structure, and economic stagnation.

➤ **Aging of the population**

From before the war until about 1955 the population aging rate in Japan was approximately 5% and the population composition pyramid maintained a Mt. Fuji shape for a long period. In other words, the productive-age population accounted for the majority of the population and supported the relatively small number of senior citizens. However, from about 1950 the birthrate rapidly declined and the death rate among middle-aged and older people declined as well so from 1955 the aging of the population accelerated. The aging of the population was much faster in Japan than in Europe and North America. Furthermore, the first baby boomer generation after the war (in Japan immediately after the Second World War, the generation born in the baby boom from 1947 to 1949) are now about to join the elderly population in large numbers. These

generations are now moving from the productive-age population to the population of senior citizens so the time has come when we have to think carefully about the balance between public funding (by national and local governments) and the individual burden.

➤ **Changes in the industrial structure**

Before the war the workforce was mostly employed in primary industries. In about 1940, when the former National Health Insurance Act was established, nearly half of the workforce was employed in primary industries, and even at the time universal insurance was achieved this figure was approximately one-third. However, during the period of rapid economic growth a shift from primary industries to secondary and tertiary industries occurred, and the proportion of the population working in primary industries rapidly fell, reaching a mere 10% in 1980. As a result, the proportion of national health insurance policy-holders who worked in agriculture, forestry or fisheries rapidly declined, and the proportion of the unemployed rapidly increased. At the same time, more elderly people got insurance and the proportion of households with no income increased, and the size of national health insurance insurers rapidly shrank. For example, in 1965 only 5% of the elderly had insurance, the proportion of people who worked in agriculture, forestry or fisheries was 42% and the proportion of unemployed was 6.4% but in fiscal year 2002 as many as 26.6% of the elderly had insurance, the proportion of people who worked in agriculture, forestry or fisheries was 5%, and the proportion of unemployed was 51%. As a result of this, it can no longer be said that National Health Insurance is either “insurance for farmers” or “insurance for people who are working.” In other words, the population incurring medical costs is now overwhelmingly greater than the population bearing the burden of the insurance premiums.

➤ **Stagnation of the economy**

After the first oil shock in 1973, Japan’s economy entered an era of low growth; moreover, from the second half of the 1980s when the economic bubble burst through to the end of the 1990s (‘the lost decade’), tax revenues stagnated. In the 1990s, the annual average rate of growth of national healthcare expenditure was 7.8% whereas the rate of growth of GDP averaged just 2.1% annually. During this time the government avoided raising taxes and poured money into public works projects, local finance, and medical costs as an economic stimulus measure, greatly increasing its debt. Due to the creation of the health insurance system for the elderly in 1983, the steep rise in expenditure on medical care for the elderly was slowed down but minor amendments to the laws were made nearly every year in order to ensure the stability of medical insurance finances. A specific example of this is the mechanism under which the national government and the local governments jointly provide assistance for the alleviation of the insurance premium burden of low income people and for high medical costs. Furthermore, in 1997 an amendment to the Health Insurance Act raised the proportion of medical costs paid by the patients themselves under the employee health insurance system, increased the amount patients have to pay for medicines, and raised insurance premiums, etc. However, despite these legal amendments medical

insurance finances only continued to deteriorate.

IV. Measures to deal with the continuously increasing medical costs of the elderly: the health system for the elderly

The steep rise in expenditure on medical care for the elderly began in 1973 when medical care for the elderly aged 70 years old or older was made free. Furthermore, after the war the composition of diseases changed, and demand for treatment of acute diseases, particularly the infectious diseases which had been prevalent until that time, shifted to demand for care of chronic diseases, primarily adult diseases (diseases associated with adult lifestyle habits). As a measure to deal with these diseases, it was decided to impose some of the financial burden for treatment on the elderly as well. Furthermore, an attempt was made to ensure a fair burden on all citizens by setting up a system in which the national government, the local governments, and companies jointly contributed to medical care for the elderly. This was the essence of the Elderly Health Act established in 1983. The most important feature of this system was that “the national government, the local governments, and companies jointly contribute to medical care for the elderly,” an approach which can be said to be a kind of finance adjusting.

However, what should be noted here is that the Act did not create a health system for the elderly under which the previous employee health insurance and National Health Insurance were separate; rather it made the health system for the elderly a joint scheme of the insurers (the local governments, companies, the national government). In other words, it did not newly establish places for the elderly to acquire insurance, but rather created a framework for how and by whom the medical costs of elderly people aged 70 years old or older should be borne. The joint scheme was funded from three sources: 1) the proportion of the medical costs paid by the patients themselves, 2) the contributions for the health of the elderly from each medical insurance system, and 3) public funding by the national government and the local governments. Medical costs other than those paid by the patients themselves were shared fifty-fifty between the contributions for the health of the elderly from each medical insurance system, and the public funding by local governments. Furthermore, when deciding the contributions of the medical insurance system, the Act attempted a “transfer of money between insurers” caused by the differences in the percentage of the elderly with insurance, that is, a transfer from insurers with a low percentage of the elderly with insurance (companies) to insurers with a high percentage (local governments). In other words, the act provided a mechanism under which an insurer could receive a subsidy if it had a large number of elderly policy-holders and conversely would have to make a contribution if it had a large number of young policy-holders.

One-third of medical costs are medical care for the elderly and the question of who would bear the financial burden for these costs became a major problem. It is strongly asserted that large companies should bear the burden, but the national government and the large companies are already paying contributions. According to the companies, they do not mind bearing the burden of

the medical costs of their own employees but they cannot accept being forced to take over the payment of the expanding medical costs of the elderly without limit. In 1999 health insurance associations no longer able to cope with payment of the contributions encouraged a situation in which a non-payment campaign unfolded. The health insurance associations are insurance established by the large companies for the current working generation. The government created a new system, saying that it would work hard to ensure that the elderly medical costs portion did not increase any more than it already had, and that it wanted the companies to pay the last part. This was the Latter-Stage Elderly Healthcare System for elderly people aged 75 years old or older. The major difference between this system and previous systems was that under the medical system for the elderly in the Elderly Health Act, medical care for the elderly was applied even while the person continued to be insured through other health insurance, etc., whereas under the Latter-Stage Elderly Healthcare System independent insurance was created only for elderly people aged 75 years old or older and it was decided to operate national health insurance integrated at the prefectural level, because elderly people have the highest medical costs. Furthermore, it was decided that elderly people aged from 65 years old to 74 years old would acquire the same insurance as under the previous system, bear the burden through finance adjusting among insurers, and go to independent insurance from the age of 75.

It has been said that the major objective of this system was to use public funds to rescue medical insurance for the elderly, which was *de facto* bankrupt (Saito 2008). For the current elderly generation to continue receiving the medical benefits they have received in the past, annual insurance premiums of 72,000 yen (the nationwide average) are not nearly sufficient; it is necessary to pay insurance premiums of the order of several hundreds of thousands of yen. However, the latter-stage elderly generation has lower incomes than when they were working and suffer from deteriorating health so it is impossible for them to contribute this amount in insurance premiums every year. If they do not put aside money for the future in their working years either, and so cannot pay the insurance premiums, they cannot receive medical benefits, so it is fair to say that medical insurance for the elderly is substantially bankrupt (liabilities exceed assets). It is thought that the medical insurance system for elderly people aged 75 years old or older was made independent at this point to make it clear to the citizens that the liabilities of the medical insurance system for this age group exceed its assets, and to cover the excess of liabilities over assets by injecting taxes and the insurance premiums contributed by all citizens into the system. Furthermore, under the medical system for the elderly until that time, the implementers of the scheme, the municipalities, only paid the medical costs and did not levy the insurance premiums, so it was unclear where the responsibility as an insurer lay.

The forecast for the medical costs of the latter-stage elderly in fiscal year 2008 is 11.4 trillion yen. Under the new system the 10.3 trillion yen remaining after deduction of the 1.1 trillion yen in medical costs paid by the patients themselves is allocated to public funding (50%), support funds (40%), and insurance premiums paid by the elderly (10%). If we also take into

consideration the taxes paid by the latter-stage elderly (= public funding), the total amount paid by the latter-stage elderly generation is about 20% of the overall medical costs, and just under 80% of the medical costs has to be made up from other accounts.

V. Introduction of market-based principles to medical care and the failure of this approach

Prime Minister Junichiro Koizumi came into office in 2001 and attempted to eliminate the fiscal deficit and achieve economic growth by deregulating the medical care sector. In June 2001, shortly after the administration was inaugurated, the following three medical care reforms were incorporated in a Cabinet Decision (Basic Policies 2001).

- 1) Lifting the ban on the management of medical institutions by stock companies
- 2) Lifting the ban on mixed medical services (free combinations of medical services covered by insurance and private medical services)
- 3) Lifting the ban on direct contracts between medical institutions and insurers

Under the Koizumi reforms, the medical care reform policy for government and systems which had been monolithic until then was split into the following three elements (Niki 2007). Firstly, the reforms considered a United States type of society and “small government” to be ideal and attempted to slow down the growth medical costs within economic growth. Secondly, there was the scenario led by the Ministry of Health, Labour and Welfare under which the overall framework of the previous universal health insurance system was maintained while the scope and level of public medical insurance benefits was reduced and the medical guarantee system was partially reorganized into the “two-tiered public and private system.” In response to these reforms the medical associations and medical groups called for the universal health insurance system to be maintained and the overall budget for public medical costs to be expanded.

Niki concludes that the background to the appearance of the Koizumi medical care reforms was that Japan’s large companies and economic agencies (the Ministry of Economy, Trade and Industry, etc.) regarded the medical care and welfare sector as one of the growth industries of the 21st century and as one way to escape the economic recession, so they were eager to enter this sector. Saito (2009) points out that the trends in the long-term debt balance, etc., and changes in social security policy coincided. He then asserts that the combination of efficiency and fairness that had been possible in the high growth period became impossible due to financial constraints in the zero growth period and that a situation arose in which there was no option but to place greater priority on efficiency than fairness in the medical care and welfare services sector.

However, the Koizumi administration largely failed to realize the three reforms included in the Basic Policies 2001. Niki (2007) suggests two reasons for this: 1) an economic reason and 2) the citizens did not want the reforms. The economic reason was the concern that if the proportion of medical costs paid by the patients themselves under the medical insurance scheme was expanded and the “mixed medical services” were expanded the market of the companies would

expand but not only total medical costs but also public medical costs would rapidly increase. Furthermore, from the perspective of fairness, there was a fear that income-based discrimination would become more prevalent and that a structure would be created in which the burden for a part of the consumption of medical care by middle income and wealthier groups would be borne by the low income group. Furthermore, the citizens and medical care professionals were united in their opposition to the reforms. In all of the opinion surveys the overwhelming majority of the citizens supported equal medical care and no more than 10%-20% of the respondents supported mixed medical services.

In addition to these medical care reforms, the Koizumi administration further strengthened the traditional medical cost containment policies that had been followed since the 1980s. Specifically, it raised the ratio of medical costs paid by the holder of the health insurance (from 20% to 30%), lowered fees for medical services for the first time ever, and established laws related to reform of the medical system. The laws related to reform of the medical system strengthened regulation of both the medical insurance system and the medical care provision system in order to keep down medical costs. The major examples are 1) measures to combat diseases associated with adult lifestyle habits and 2) the policy to reduce the average length of hospital stays. Prime Minister Koizumi was very popular and his administration lasted for six years but even during this time the environment surrounding medical care deteriorated further.

Due to these tough medical cost containment policies, the level of medical costs in Japan (total medical costs as a percentage of GDP and per capita medical costs) became the lowest among the seven leading industrialized countries. Meanwhile, the universal health insurance system is collapsing with the increase in the number of people in irregular employment (called “freeters” in Japan) and the appearance of people who are *de facto* uninsured, although their numbers are still small. This includes those people who do not acquire National Health Insurance because they cannot pay the insurance premiums, etc. The citizens have been relatively uninterested in the problem of social security and medical care previously but now the medical crisis and depredation centered on emergency medical care and obstetric and pediatric medical care has become a social problem which is being discussed frequently in the mass media. In particular, due to medical care professionals quitting their jobs and medical institutions closing, particularly in the field of emergency medical care, situations are occurring in which regional medical services can no longer be provided. As a specific example, in the fields of emergency medical care and obstetric medical care regional medical institutions that can accept patients are closing and there are shortages of medical care professionals, resulting in the problem that the patients cannot be accepted when necessary.

The time when the collapse of medical structures became more pronounced and the time of the Koizumi reforms overlapped so the view that these reforms were a direct cause of the collapse of medical care is deeply entrenched. However, it has also been pointed out that the Koizumi reforms targeted “(big) government that had created bloated government enterprises” and that

their aim was to defeat the parts of the government that were getting fat on the safety net of employment insurance, etc., to create a “small government” without waste and to enhance the safety net necessary for competition. Actually, in the end the three medical care reforms proposed by Koizumi were largely left unimplemented so it is unreasonable to conclude that the reforms were the direct cause of the collapse. However, the collapse may have been caused by the distortions in the medical cost containment policies that had been continued for such a long time becoming obvious at this time.

VI. Discussion

[Are Japan’s total medical costs high?]

Japan’s “national healthcare expenditure” is an estimate of the expenditure under Japan’s medical insurance system and the scope of the estimate is limited to treatment costs for injuries and diseases, with expenditure that is not covered by medical insurance excluded from the expenditure total. Therefore, there are some items that are included in the medical costs of other countries but are not included in the medical costs of Japan. For example, the costs of normal childbirth and privately-funded dental consultations, excess room charges when hospitalized, elective therapy charges, special charges such as the first visit charge if the patient does not have a letter of introduction the first time they receive treatment at a given hospital, and health diagnoses and immunization, etc., with the objective of maintaining and enhancing health, the costs related to nonprescription drugs and the operation of medical systems, and the costs for the operation of medical institutions and the development of facilities are not included.¹ Therefore, if we estimate the scope of Japan’s “national healthcare expenditure” making it as close as possible to the scope included in the estimate of the scale of economic activities in the medical care sector in the SNA (system of national account), Japan’s national healthcare expenditure is being underestimated by approximately one-third (Ikegami 1998).

However, even if we take into consideration this problem with the estimate of the medical costs, Japan’s medical costs are lower than the medical costs of other developed countries. Furthermore, whether we look at the international situation or look at Japan’s medical costs as a percentage of GDP, Japan’s medical costs are so low that one wonders how they are kept down to that level. According to an OECD survey (2003), national healthcare expenditure as a proportion of GDP is high in the United States at more than 15%, and in addition in Switzerland, Germany, Iceland, Norway, and France this figure is over 10%. Japan has a large economy so the absolute amount spent on health care is large but relative to GDP Japan is middle-ranked at 17th among

¹ From fiscal year 2007 most of the statistics shown in the section entitled “Major Statistics, etc. related to Items not Included in National Healthcare Expenditure” related to the amount of expenditure and the number of cases of such expenditure. (Statistics and Information Department, Minister's Secretariat, Ministry of Health, Labour and Welfare (2010), from page 117 to page 120)

OECD member states (Figure 2). Furthermore, looking at Figure 3, in other countries such as Germany, France, Canada, the United Kingdom, Sweden, etc., medical costs resulting from aging are rising rapidly whereas Japan is the only country in which aging and medical costs are not linked. This reflects the fact that insurance medical service points, the price of medical care in Japan, have been set and fixed at a low level.

Figure 2. Ratio of total medical expenditures to GDP (%)

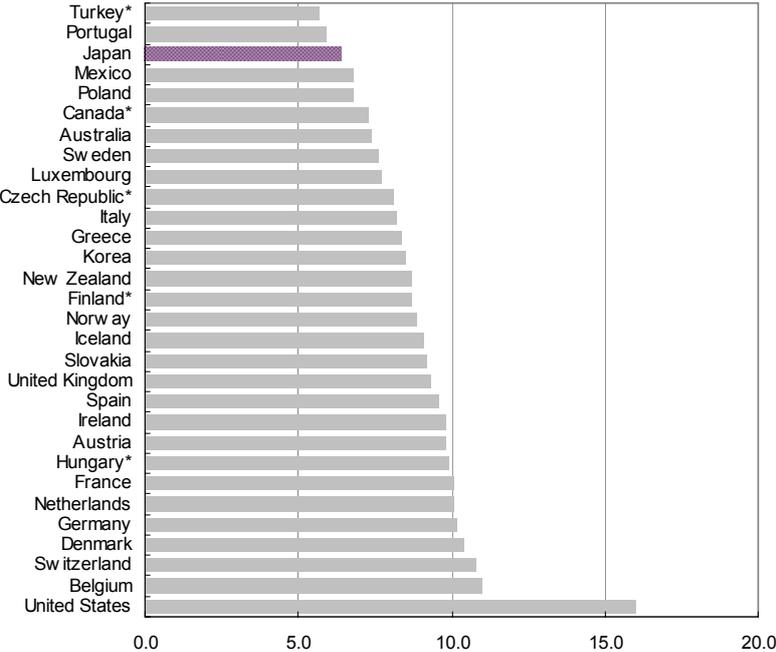
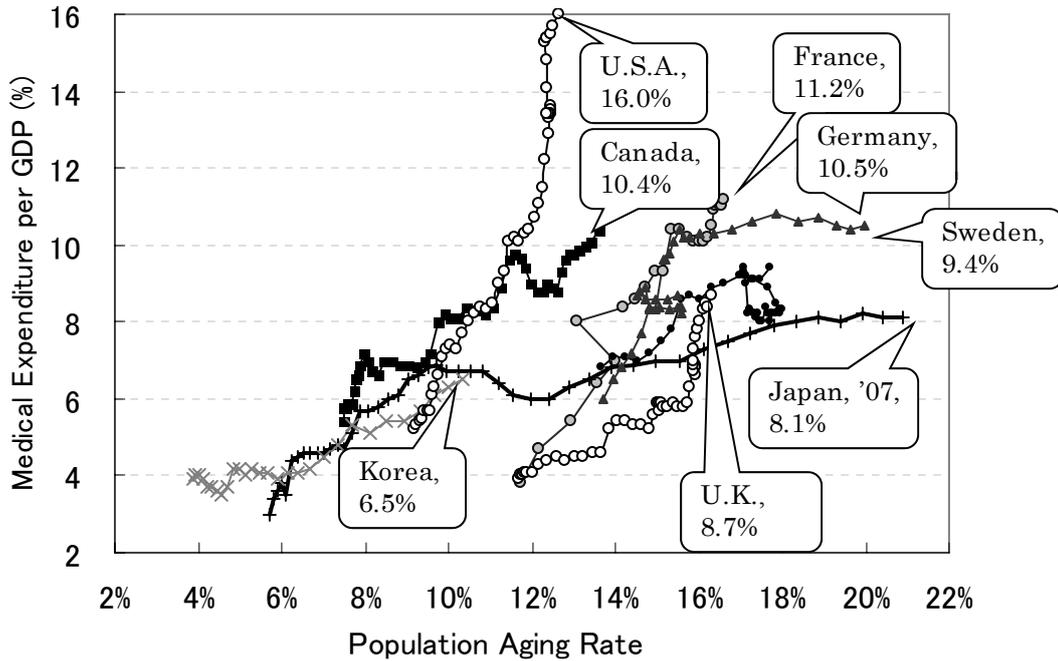


Figure 3. Escalation of medical expenditures with aging population

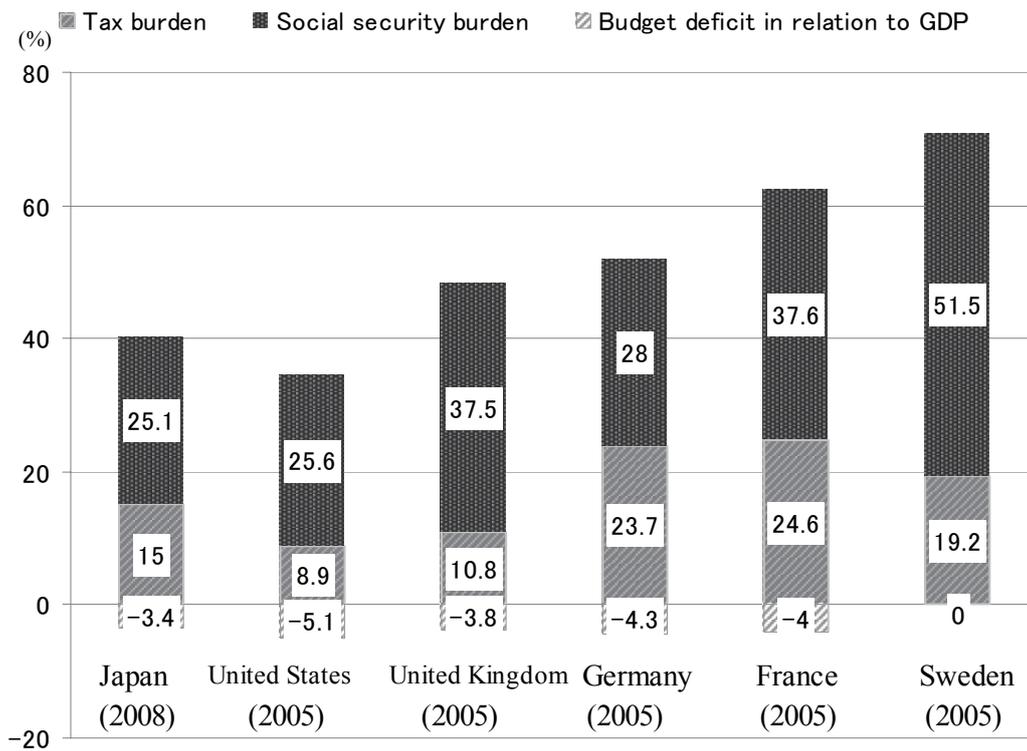


* “Population aging rate” represents proportion of people aged 65 years or older to the entire population.

* Korea’s data started to be collected from 1980.

Looking at the international comparison of the percentage of medical costs paid by citizens (figure 4), we can see that Japan has kept medical costs low while providing medical care to all of its citizens. In 2007 Japan’s aging rate was the highest at 21.5% but the percentage of medical care borne by citizens was 39.7%, lower than the percentage of medical care paid for by citizens in countries with a much lower aging rate than Japan, such as the United Kingdom, Germany, France, Sweden, etc. This shows that Japan’s medical system is very economically efficient but the system must achieve sustainability and also provide medical services that enable the citizens to have peace of mind. There is a concern that medical costs are being kept low in Japan through the sacrifice of doctors, nurses, and other medical care professionals. In fact in recent years doctors unable to stand the harsh working environment have left their jobs at hospitals, and as a result the phenomenon known as “medical care collapse,” in which medical care in some regions has become unsustainable, has arisen.

Figure 4. International comparison of self-pay ratios



When considering the percentage of medical costs that should be borne by the citizens, the balance between the percentage of the burden and the benefit rates should be considered. Abe (2007) states that “in places like Sweden and Denmark where the percentage of the citizens’ burden exceeds 60%, the difference from the rate of return to citizens is kept to about 15% so a high level of welfare was realized due to the income redistribution effect. As a result, their per capita medical care expenditure is smaller than in the United States and Japan.” He points out that the claim of Thatcherism and Reaganomics that this kind of high burden and high welfare approach would rob those countries of their vitality and would become deadlocked sooner or later is unsustainable in light of the fact that the Northern European countries score much higher than Japan in international competitiveness rankings that incorporate not only a country’s economic power but also its financial power, cultural power, environmental power, etc. (according to the World Economic Forum (Davos Meeting)).

[Japan’s finances and medical costs]

Except for the introduction of the long-term care system in 2000 and the downward revision in 2002 (the lowering of the fees for medical services), medical costs have been consistently increasing over the last 50 years. In particular, medical care for the elderly has been growing at an average of 8% per annum since 1986 and by 1999 it accounted for 38.4% of national healthcare

expenditure. However, since the introduction of the long-term care system in 2000 this growth in costs has slowed down because the costs for long-term care which had previously been counted as medical costs were no longer included and in 2003 and 2004 the growth was negative. On the other hand, the ratio of national healthcare expenditure to GDP has rapidly increased since the 1990s and reached 8.1% in 2008 (OECD 2010).

Due to the natural increase in medical costs because of aging and the progress of medical technologies, etc., it is not surprising that medical costs are increasing. Despite this, Japan has not boldly increased medical costs the way that the United Kingdom has, and has not solved the problem of how to finance medical costs. Debt servicing costs account for 20,123.6 billion yen (24.3%) of Japan's total expenditure in the general account of 83,061.3 billion yen (fiscal year 2008). Tax revenues are 58 trillion yen but if the debt servicing costs of 20 trillion yen are subtracted only 38 trillion yen of this can be spent. However, the national government spends 63 trillion yen: the 47 trillion yen in its budget plus the 16 trillion yen of tax allocations it must pay to local governments. The amount of money it can spend is 38 trillion yen so if it covers the shortfall by issuing new public bonds worth 25 trillion yen, the debt will balloon out to 553 trillion yen. In other words, Japan's financial problem is that the debt is snowballing. The public bond debtors are the citizens so there is no problem if the debt does not increase. However, we need to avoid letting the debt grow any greater than it is now. For this reason, Japan is endeavoring to make the medical costs of 33 trillion yen and long-term care costs of 3.3 trillion yen as small as possible in order to minimize the amount of taxes that are injected into medical care and long-term care. As a result, it is trying to reduce the increase in medical costs from 1 trillion yen every year to a yearly increase of 780.0 billion yen, by reducing the costs by 220.0 billion yen.

Japan's Ministry of Health, Labour and Welfare has expressed the view that "as a result of accelerated aging the growth in the medical benefit costs covered by insurance premiums and taxes is outpacing the growth of the economy, so it is necessary to make efforts to keep down medical care benefit costs through the reduction and rationalization of medical service provision costs, the prioritization and streamlining of benefits, etc., in order to ensure that the medical system will continue to be sustainable in the future." In other words, it is taking the view that there are not enough financial resources so containment of medical costs is unavoidable. If tax revenues greatly increased as a result of economic growth or a national consensus could be reached to inject more taxes into medical costs and long-term care, it would not be necessary to contain medical costs. However, politicians know that if they directly said "please bear the burden yourself" to the citizens they would be defeated at the next election so they do not talk about increasing the burden. It is still fresh in the memory that just recently Prime Minister Naoto Kan mentioned raising the consumption tax to 10%, making his comments just before a House of Councilors (Upper House) election was to be held, and as a result the Democratic Party of Japan suffered a huge defeat in the election.

Regarding an increase in tax revenues as a result of economic growth, it is clear that Japan can no longer achieve the breathtaking economic growth it managed in the 1960s and 1970s. Furthermore, the declining birthrate and aging population means that the productive population is declining every year so even continuing gradual economic growth will be difficult. Given this situation, bold reforms will be necessary to maintain the medical insurance system as a sustainable social security system. It is essential to have a medical system that can continue to survive in tough economic conditions and medical care that meets the needs of the citizens.

[Japan's medical insurance system does not operate on a nationwide basis]

Japan's medical system is an awkward system in which the insurance entranceways (levies) are fragmented and the national government decides the exits (the price of medical care). The national government decides the price of medical care and decides the ratio of medical costs paid by the patients themselves but, for example, the levying of National Health Insurance premiums is carried out on a local government basis and local governments also decide the insurance premiums. Furthermore, employee health insurance is insurance that companies establish for their employees so there are an extremely large number of organizations involving in running it. With employee health insurance, employers and employees share the insurance premiums fifty-fifty but naturally the insurance premiums and the methods of levying them differ depending on the company. Therefore, even if the employees' income is the same, their insurance premiums differ depending on the company they work for, and moreover insurance premiums are lower at large companies than at small- and medium-sized companies. The insurance premiums for National Health Insurance also widely vary depending on the local government, and the amount of insurance premiums levied from people with the same income differs depending on the local government. It has been reported that currently insurance premiums for National Health Insurance differ by as much as 500%. In addition, insurance premiums naturally differ between cities that receive large amounts of business taxes from large companies and the regions in which a large number of small- and medium-sized companies and micro-enterprises are located.

Thinking about this in terms of the so-called doctrine of fairness, "take a lot from the strong and give it to the weak," the basic philosophy underlying social security, it is clear that the current medical insurance system has lost touch with this principle. In order to correct this it is necessary to levy insurance premiums justly. The simplest method is to decide insurance premiums solely on the basis of income, regardless of employment status, age, or residence. To achieve this, it is essential to integrate the insurers and financial resources which are currently fragmented. Speaking only from the perspective of fairness, it is probably better to take the regions into account to some extent when deciding insurance premiums. This is because although access to medical institutions is free in Japan in principle, there are some disparities among regions in the medical services that can be received. In other words, the patient is free to select the medical institution for his or her treatment, but usually the patient is limited to select medical institutions

in or near the region in which he or she lives.

[A sustainable medical insurance system]

Nishimura claims that the value of social security is that it is a “social contract system that protects people from an uncertain future” and that the “value of guaranteeing a minimum standard of living” and the “mechanism for the reallocation of income” offered by social security are secondary (Nishimura 2010). He raises the difficulty of making forecasts about the future, giving the reason that it is difficult for the government to make “wise choices” regarding how to construct a “social contract system that protects people.” Fifty years ago no-one forecast the extension of life-spans, economic development and growth in citizens’ income, birthrate forecasts, etc., that are currently placing the medical guarantee system in such a difficult situation. Nishimura noted the fact that these kinds of future forecasts are extremely difficult so he concluded that construction of a system that could respond in a precise and flexible way to changes in conditions was important.

In particular due to the results of factor analyses of the growth of medical costs, the theory that by far the greatest portion of the rise in medical costs is due to technological progress is becoming accepted around the world. This is because the medical expenditure that is expected to be necessary in the future is influenced by the progress of medical technologies and because it is extremely difficult to forecast how much medical expenditure will be necessary. Moreover, taking into consideration the fact that the elderly are currently spending more than 30% of the national healthcare expenditure, benefits to cover the largest portion of the increase in medical costs that will occur due to future technological progress will be paid to the elderly. Nishimura asserts that the essence of the debate at such a time is how the burden should be distributed among the generations.

In other words, the problem of medical insurance is entirely about how the financial resources needed to fund the medical costs of the latter-stage elderly can be raised. As we stated above, Japan’s financial position is extremely bad, and the previous policies to contain medical costs and social security costs were unavoidable in some respects because Japan had to improve its primary balance. However, today when unease about social security is giving rise to social unease it is necessary to revise the medical insurance system, including reforms to make its financial foundation sounder in the future. Japan should begin reducing the outstanding debt as soon as possible, given the need for fairness among generations and the efficient allocation of resources.

What should be done to raise the financial resources needed to fund the pension? Continue the current pay-as-you-go pension approach? Or adopt the funded pension approach? Generally people find that after they retire their income declines as they get older. This means that in order to cover medical care expenditure in old age it is essential to save some of the insurance premiums paid during the working years for the future. We will only be able to cover our own

medical costs in old age if we do this. Therefore, medical insurance will not be financially sustainable unless a mechanism that prepares people for old age is included when it is designed. However, Japan's medical insurance is a kind of short-term insurance that is updated once a year (based on a single fiscal year account) so it does not have a financial design that prepares people for old age. One of the criticisms of the Latter-Stage Elderly Healthcare System is that "we have paid insurance premiums for many years but now they do not count for anything." Probably these critics have private sector insurance in mind. They mean that they had finished paying the amount equivalent to their medical costs in old age while they were still working. However, under Japan's medical system the contributed insurance premiums are consumed in that year and there is no structure in place to set aside some of the premiums for the future.

In international terms, Japan is a country in which the percentage of medical costs paid by citizens is low. That means citizens have a lot of disposable income (income they can spend freely). Faced with the current financial difficulties of the national government and various problems related to social security, the citizens are beginning to form the view that in the end raising taxes and insurance premiums will be unavoidable. Nonetheless, even the people who hold this view are saying that they want waste to be eliminated and other financial resources to be obtained before the burden is increased. However, "the elimination of waste" is not so simple, not only in medical care but also in various other sectors. In particular in the medical care sector it is extremely difficult to judge if something "is waste or not?" and the costs of finding waste may in the end be higher than the costs saved by eliminating the waste. In the future the elderly will be the majority in society so it is also necessary to abandon the thinking that the young will support the elderly and accept the idea that the elderly have some kind of social role and some of them will return to a role in which they help support society.

References

- 1 Abe, Isao. Medical reform and the medical service market -for restructuring of the community medical system-. Bulletin of Osaka University of Pharmaceutical Sciences 1 (2007): 53-63.
- 2 Campbell, John Creighton and Naoki Ikegami. The art of balance in health policy: maintaining Japan's low-cost, egalitarian system. Cambridge University Press, 1998.
- 3 Fukuda, Motoo. 2003. Hokensha to iryou kyokuyuu shutai no Kannkei (Relation between insurer and health provider). In Iryouseidokaikaku to hokennsha kino (Health system reform and the role of insurer) Edited by Yasuhiko Yamazaki and Hiroya Ogata. Toyo Keizai Shimposha.
- 4 Ii, Masako. 2009. "Development of Social Health Insurance Systems: Retracing Japan's Experience" in Hiroko Uchimura (eds.) Making Health Services More Accessible in Developing Countries, UK: Palgrave Macmillan.
- 5 Ii, Masako. 2009b. "Nihon: Nihono Iryo Hoken Seido no Ayumi to Sono Konnichiteki Kadai (in Japanese) (Japan: Development of Social Insurance Systems in Japan)," in Masako Ii (eds.) Asia no Iryo Hoshyou Seido (in Japanese) (Health Systems in Asia), Tokyo, Japan: Tokyo Daigaku Syuppankai.
- 6 JICA. 2004. Development of Japan's Social Security System – An Evaluation and Implications for Developing Countries –. Tokyo: Institute for International Cooperation, Japan International Cooperation Agency.
- 7 Niki, Ryu. Health care reform under the Koizumi and Abe administrations in Japan: the rise and fall of neoliberal reform. Monthly Hoken Shinryo, Vol. 62, No. 12, pp. 113-121, December 10, 2007.
- 8 Nishimura, Shuzo. The future of social security in Japan. Journal of the Institute for Health Economics and Policy 2010; 21(3):279-289.
- 9 OECD Health Data 2010.
- 10 Saito, Tetsushi. Weekly Economist (May 13, 2008 issue): The Latter-Stage Elderly Healthcare System is a debt disposal scheme for medical insurance (<http://www.dir.co.jp/publicity/column/080529.html>).
- 11 Shimazaki, Kenji. 2005. Wagakuni no iryouhoken seido no rekishi to tennkai (History of Japanese health insurance and its development). In Iryouhoken/sinnryouhoshuseido (Health insurance and the system of fee schedules). Edited by Hisao Endo and Naoki Ikegami.
- 12 Uchimura, Hiroko. 2009. "Key Factors for Functioning Health Systems" in Hiroko Uchimura (eds.) Making Health Services More Accessible in Developing Countries, UK: Palgrave Macmillan.
- 13 Yoshihara, Kenji, and Masaru Wada. 1999. Nihon iryohoken seidoshi (History of Japanese Medical Insurance System). Toyo Keizai Shinposha.

Insuring the no- or low-income population and balancing the income inequality: the National Health Insurance program as the base of Japan's social security

Etsuji Okamoto*

1. Introduction

Insuring the indigent population is the most difficult challenge that the social security system faces. Japan's national policy features universal coverage of health insurance (plus pension program) since 1961. The indigent people are guaranteed not only health care but also equal benefits as people who pay premiums worth millions of yen! Such a system is supported through two mechanisms: income redistribution through income-related premium and ample input from the governmental subsidies. Furthermore, the National Health Insurance (NHI) program functions as an income redistribution mechanism to bridge the widening gap between the rich and poor. Japan's experience will be a lesson to economies for achieving both universal coverage for health insurance and social integrity through effective redistribution of wealth.

2. Population coverage

Japan's health insurance system comprises two main components: the employment-based system (Japan Health Insurance Association, corporate-based Health Insurance Societies, and Mutual Aid Association for civil servants) and region-based system for the non-employed population (National Health Insurance system and the newly created Latter-Stage Elderly Healthcare System that insures elderly people aged 75 years or above). The NHI program managed by municipal governments (villages, towns, and cities) or municipal NHI assumes the ultimate responsibility of the residents who are not covered by other systems. A means-tested, tax-funded "Livelihood Assistance" system that includes Medical Assistance (MA) is also implemented.

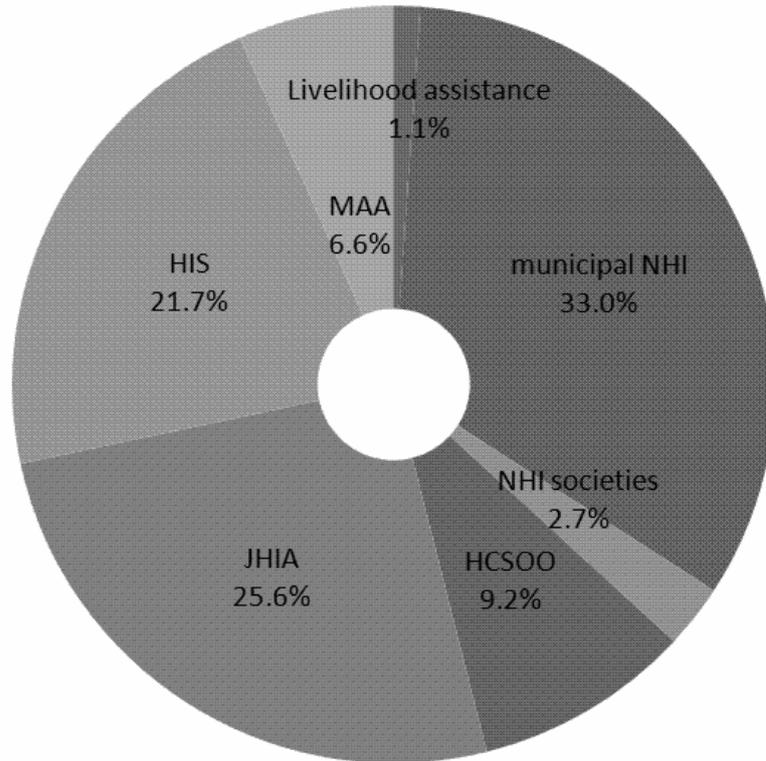
Approximately 33% of the Japanese population is covered by municipal NHI and 1.1% is covered by the MA. Livelihood Assistance is not an insurance system, and it is funded exclusively by tax subsidies. Unlike other health insurance systems, beneficiaries are not required to pay any premium or co-payment. Benefits are similar in all the systems. Beneficiaries of MA can avail the same medical care facilities (no restrictions of providers, drugs, or treatments), and healthcare providers can receive the same reimbursement as that corresponding to insurance patients.

* Etsuji Okamoto is Chief of Business Administration at National Institute of Public Health. He received a M.D. from Kinki University in 1983, Master of Public Health from UCLA in 1988 and a Ph.D. from Osaka University in 1991. His research focuses on health economics and health service research using health insurance claims data.

Figure 1

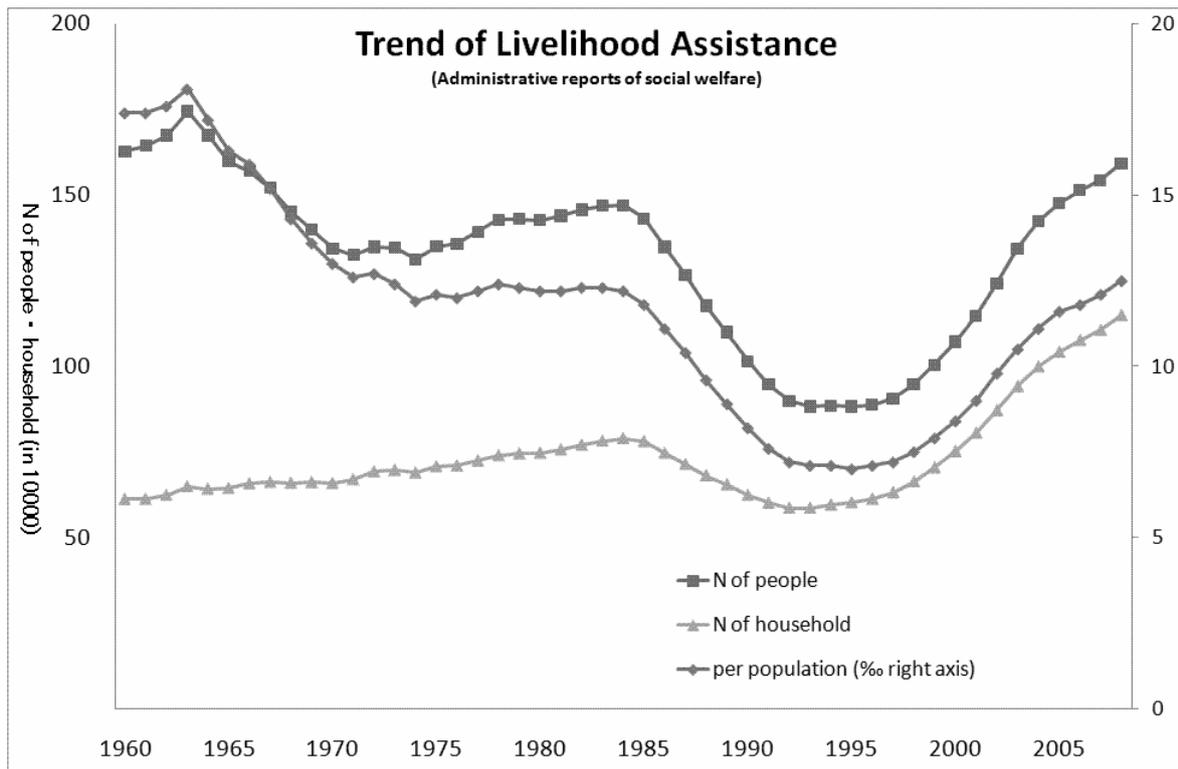
Distribution of population coverage by health insurance

(as of April 2008, NHI:National Health Insurance, HCSOO: Health Care System for the Old-old, JHIA: Japan Health Insurance Association, HIS: Health Insurnace societies, MAA: Mutual Aid Associaiton)



The percentage of population under Livelihood Assistance declined in the 1990s when Japan's economy was booming, but it recently increased owing to the prolonged recession.

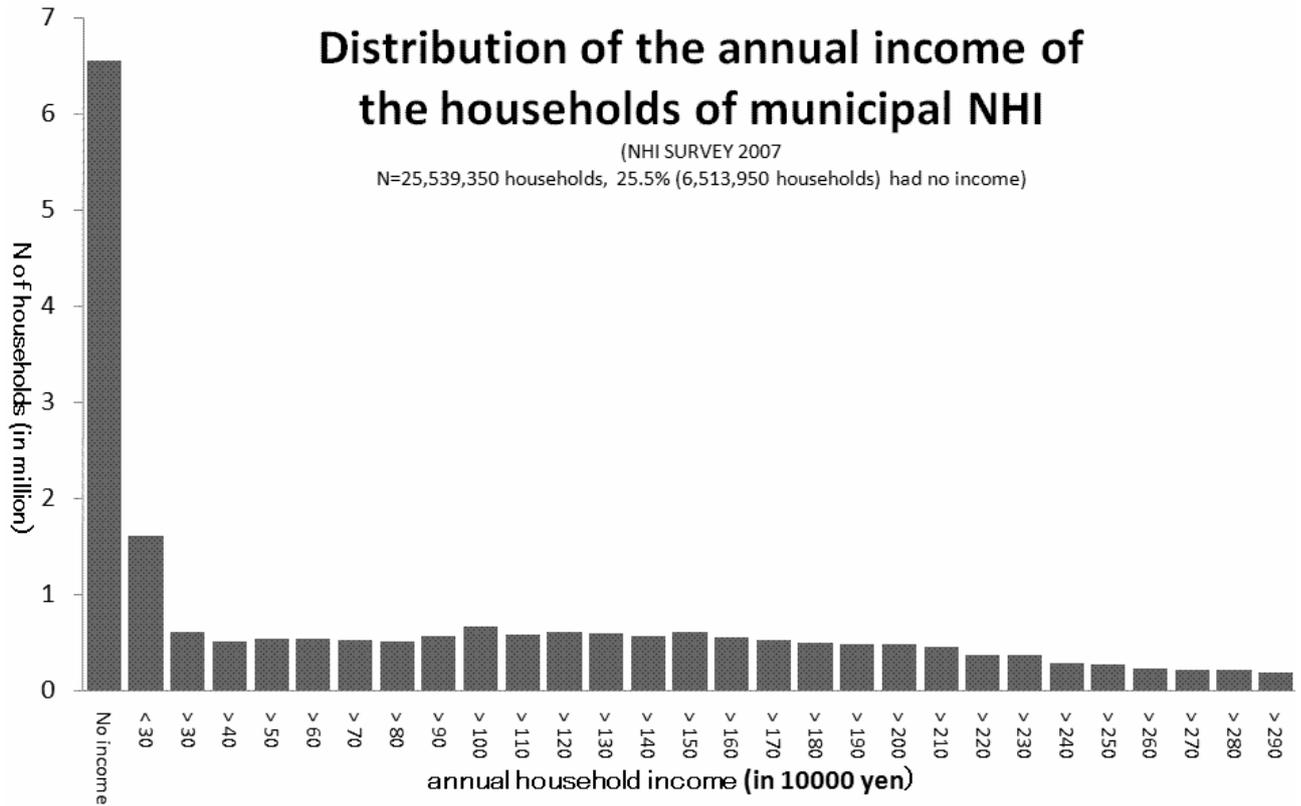
Figure 2



3. Premium structure

Municipal NHI also includes many indigent beneficiaries. It insures approximately one-third of the Japan's entire population (47 million) in 25.6 million households (premium is levied on households) and about one out of four households had absolutely no reported income (in case of self-employed business people, income = revenue - expenses. If an individual does not report any income, it does not necessarily mean that he/she does not earn any money at all. It is widely believed that many of the self-employed people underreport their income).

Figure 3



Municipal NHI has a different premium structure. While employment-based health insurance levies a premium in proportion to the worker’s monthly wages, municipal NHI has a two-part premium: income-related portion and fixed portion. For example, Saitama city has a premium rate of 9.1% of the income plus 29,500 yen (per year) per beneficiary (2007). Therefore, a household with no reported income will have to pay a fixed portion of the premium in proportion to the number of household members. A household of four with an annual income of 2 million yen will have to pay $2 \text{ million} \times 9.1\% + 29,500 \text{ yen} \times 4 = 300,000 \text{ yen}$ annually. The fixed portion of the premium may further be waived by 20%, 50%, and as much as 70% according to the situation of the individual household. In any case, all the households will be required to pay a certain amount of premium; this is an important norm of insurance.

For the indigent households who cannot afford to pay premiums, Livelihood Assistance may be applied after means testing. As shown by the graph below, a majority of the new recipients of Livelihood Assistance are migrants from the NHI. The NHI and MA have the same benefit package, and MA does not make co-payment by patients mandatory, unlike the NHI that requires a co-payment of 30%.

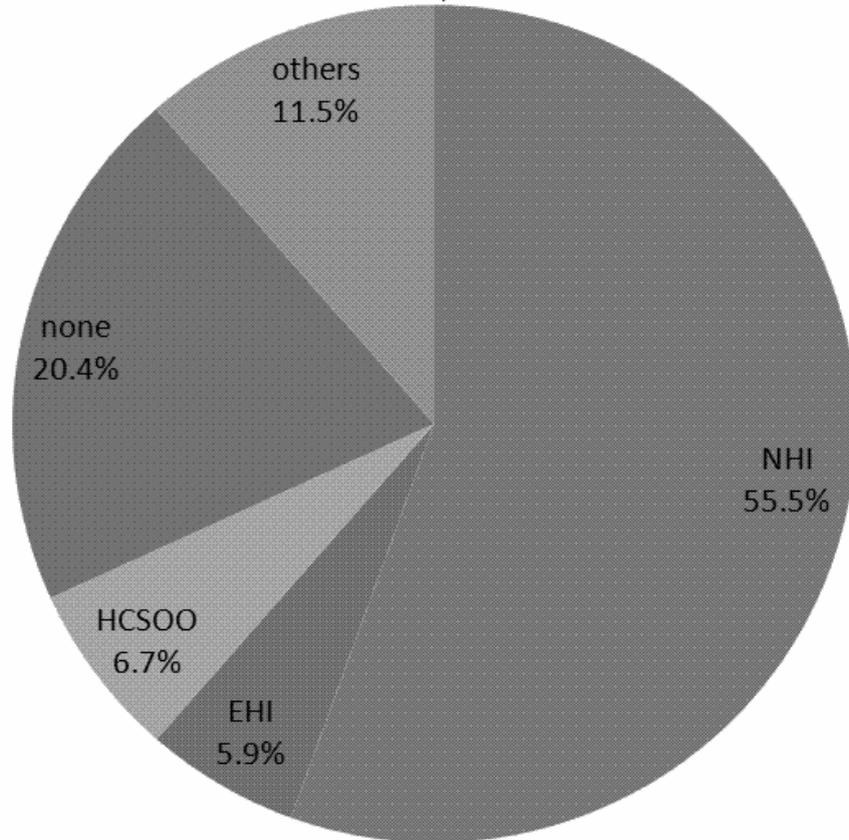
Figure 4

**Distribution of health insurance
of the new recipients of Livelihood Protection**

(2008, N=22556, source: administrative report of social welfare)

NHI: National Health Insurance, EHI: employment-based health insurance

HCSOO: Health Care System for the Old-old



4. Cap of premium

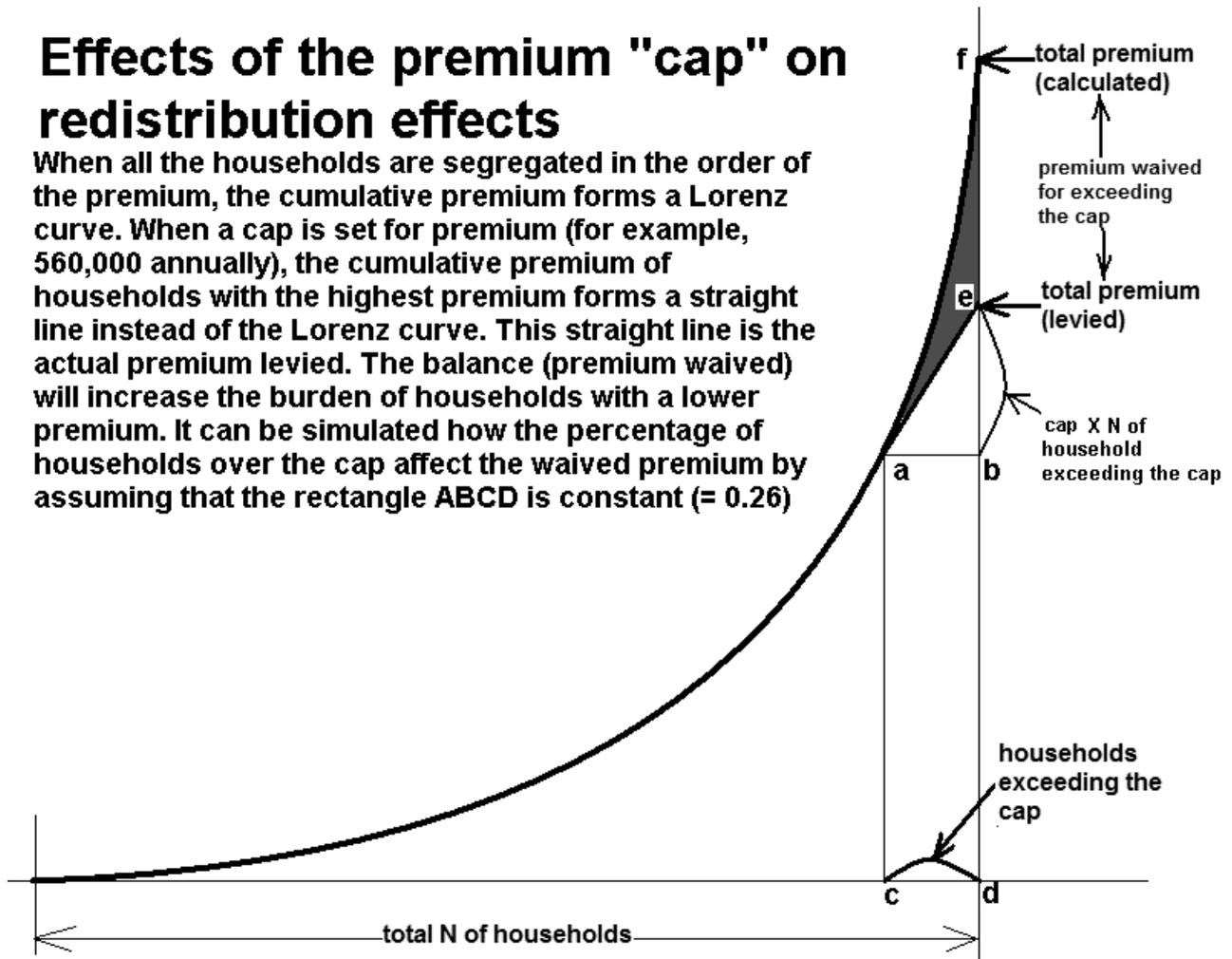
The premium also has a ceiling: a cap of annual premium. In 2007, the ceiling was typically 530,000–560,000 yen. In the case of Saitama city, a household of four with an income of 5 million yen would have to pay 573,000 yen (calculated premium), but in fact, it will be charged 560,000 yen (levied premium); that is, the exceeding 13,000 yen will be waived. Such capping serves as a waiver for high-income households, and hence, it weakens the income redistribution mechanism of the insurance system.

Approximately one million households out of 25.6 million (3.9%) exceeded the cap in 2007, and a total of 0.7 trillion yen was waived out of 4.8 trillion yen of the calculated premium (14.6%). This relationship can be illustrated as follows:

Figure 5

Effects of the premium "cap" on redistribution effects

When all the households are segregated in the order of the premium, the cumulative premium forms a Lorenz curve. When a cap is set for premium (for example, 560,000 annually), the cumulative premium of households with the highest premium forms a straight line instead of the Lorenz curve. This straight line is the actual premium levied. The balance (premium waived) will increase the burden of households with a lower premium. It can be simulated how the percentage of households over the cap affect the waived premium by assuming that the rectangle ABCD is constant (= 0.26)

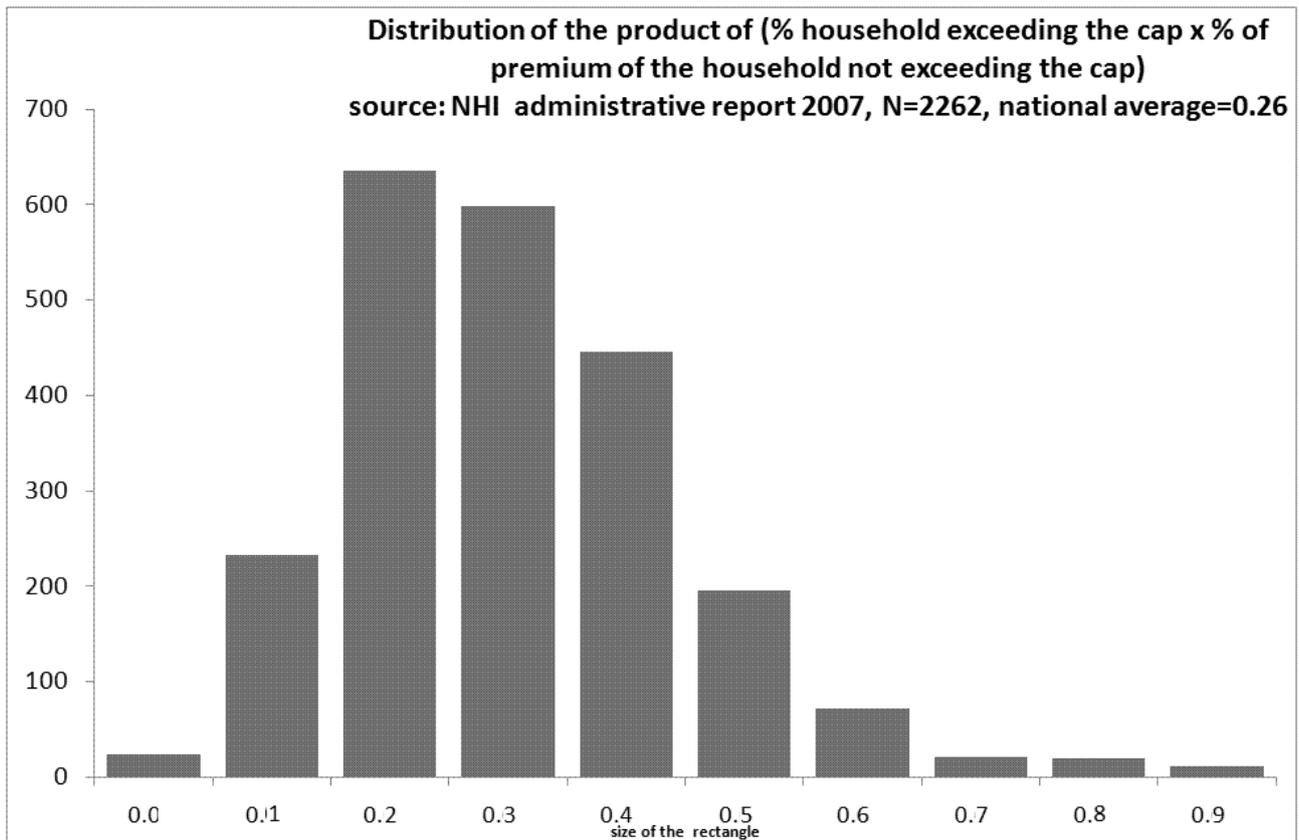


It can be assumed that the rectangle (expressed as ABCD in the graph) is constant. It signifies the area (percentage of households exceeding the cap) \times (percentage of the cumulative premium of households NOT exceeding the cap in the total premium calculated). The national average of the size of rectangle ABCD was 0.26.

Suppose that P% of the households exceed the cap (CD) when the cap is set at Q yen. Then, the percentage of the premium of the households NOT exceeding the cap (AC) is $0.26/P$, and the premium levied from the households exceeding the cap (EB) is $Q \times P \times N$. Finally the % of the premium waived for the households exceeding the cap (EF) is $R - (0.26/P) \times R - (Q \times P \times N)$, where R is the total premium calculated and N is the total number of households.

The size of the rectangle varies across municipalities. However, the distribution of the size of the rectangle over the 2,262 municipalities concentrates considerably around the national average, as shown below:

Figure 6



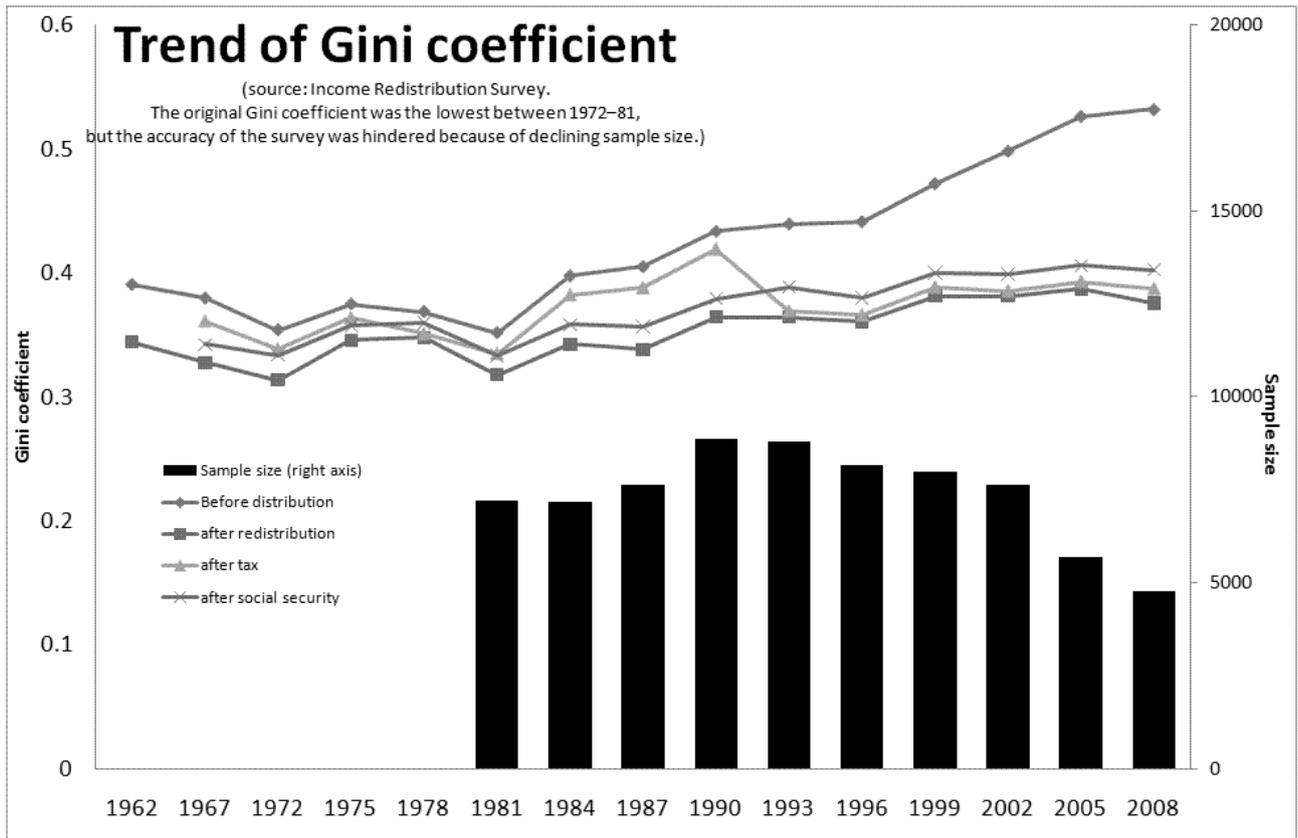
5. Evaluation of income redistribution effects

One of the important functions of social security is income redistribution, that is, levying heavier tax or premium on the wealthy and providing it to the needy. The effectiveness of redistribution is measured by the Gini coefficient by comparing the coefficient of the original income distribution and the coefficient of the income distribution after deducting the contribution (tax and premium) and adding the benefit (health care benefit is typically provided as service in kind and converted into monetary value).

To evaluate the effectiveness of redistribution, Ministry of Health, Labour and Welfare (MHLW) conducts a nationwide sampling survey “Income Redistribution Survey” every three years, the latest of which was conducted in 2008 (surveyed households: 9,144, sample size: 4,792, response rate: 52.4%). The survey has some methodological limitations: it is a one-time questionnaire survey unlike the Household Survey that requires all the surveyed households to maintain a diary for the entire year.

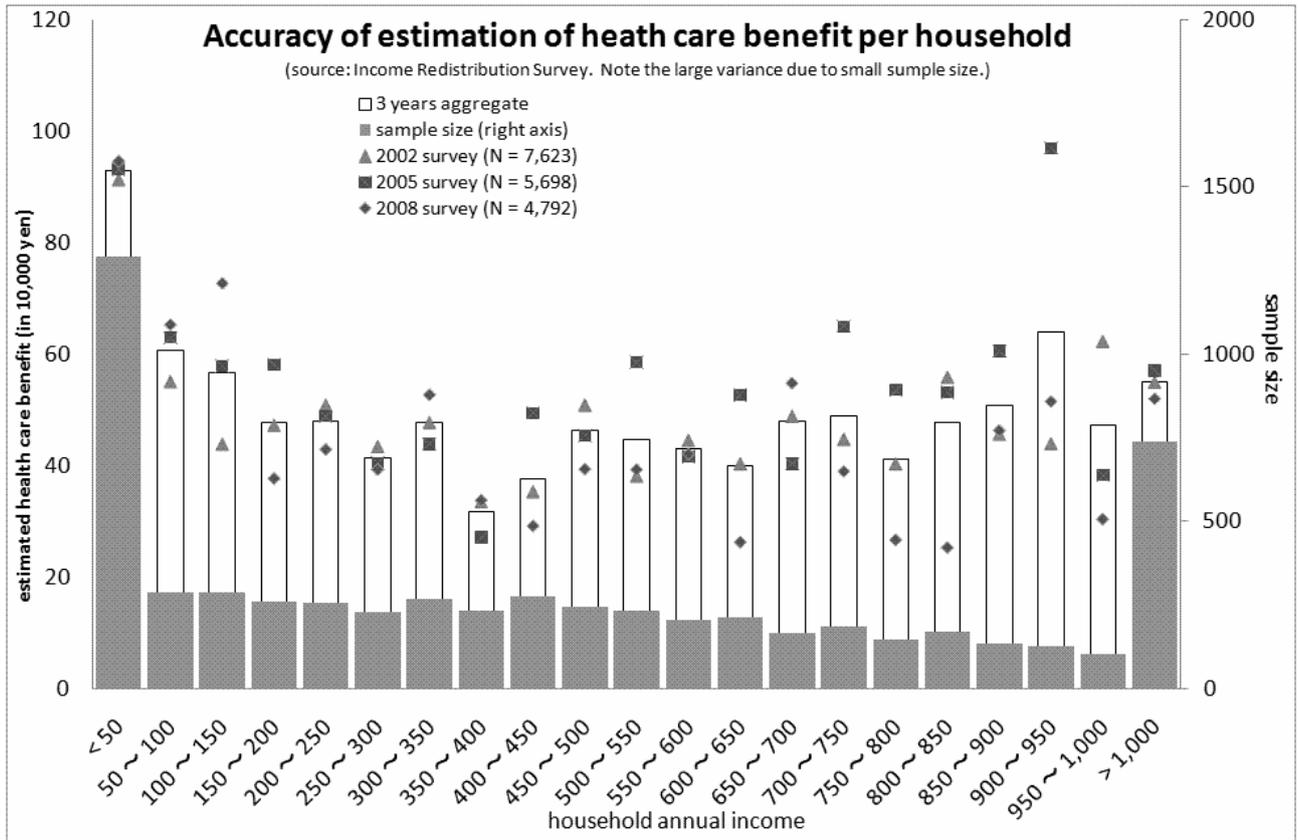
Japan was once considered as an “egalitarian” country as evidenced by the low Gini coefficient around 1972–1981. However, the Gini coefficient has constantly increased to date (i.e., the gap between the rich and poor has widened) and the gap is narrowed by income redistribution through tax and social security (it should also be noted that the accuracy of the estimate of the survey is declining because of the declining sample size).

Figure 7



Moreover, the estimate of the benefit of health care is approximate; the health care expenditure of a household was estimated by simply multiplying the number of doctors' visits by the average expenditure instead of collecting micro data such as health insurance claims. Further, the estimated health care benefit is subject to a large variance owing to the small sample size (note that the estimated benefits widely vary in income brackets with a small sample size, while the highest and lowest income brackets show consistent estimates owing to a large sample size).

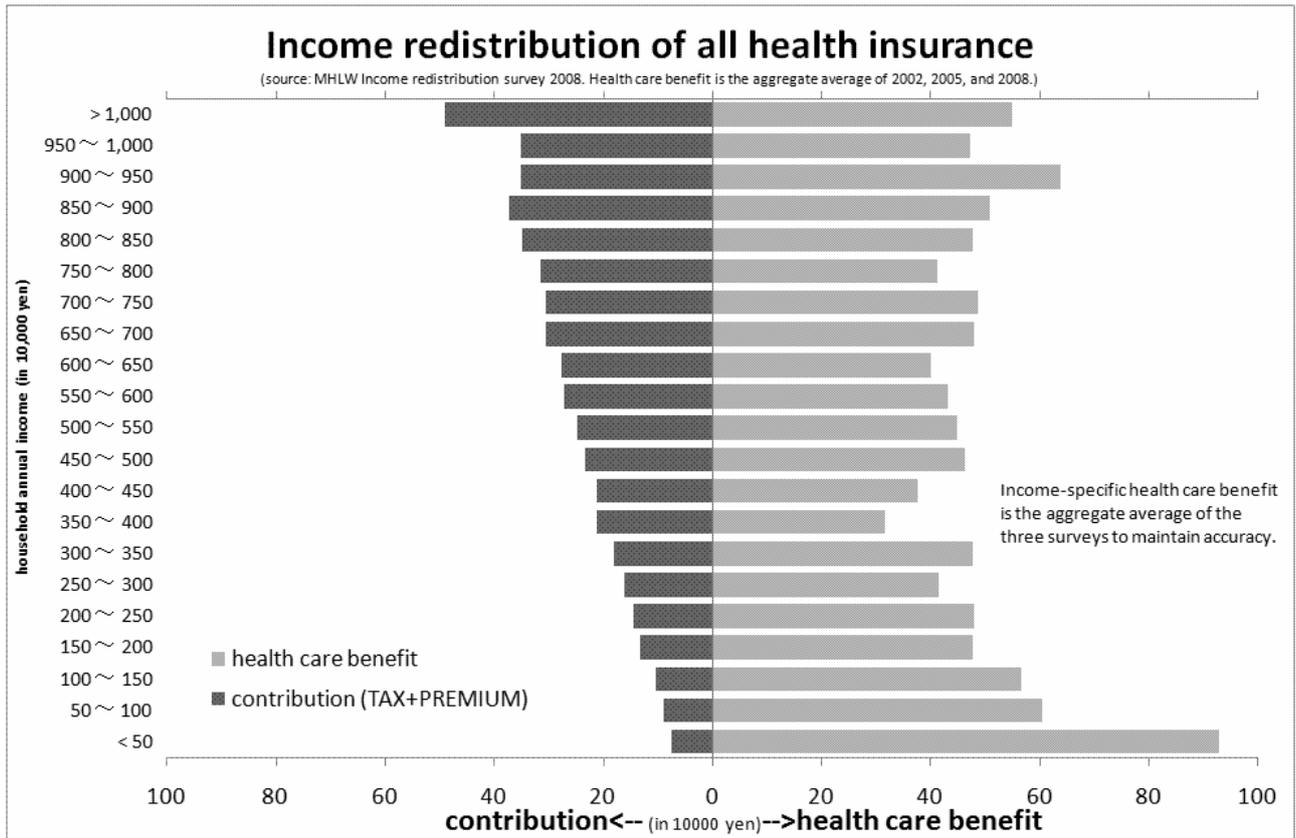
Figure 8



Nonetheless, the survey is the only source of data for income-specific health care expenditure (MHLW has been conducting surveys on health insurance claims including the income and occupation of an individual beneficiary, for the last 50 years, but the results have never been officially published). Therefore, the author aggregated three surveys in 2002, 2005, and 2008 to provide reliable estimates of income-specific health care benefit.

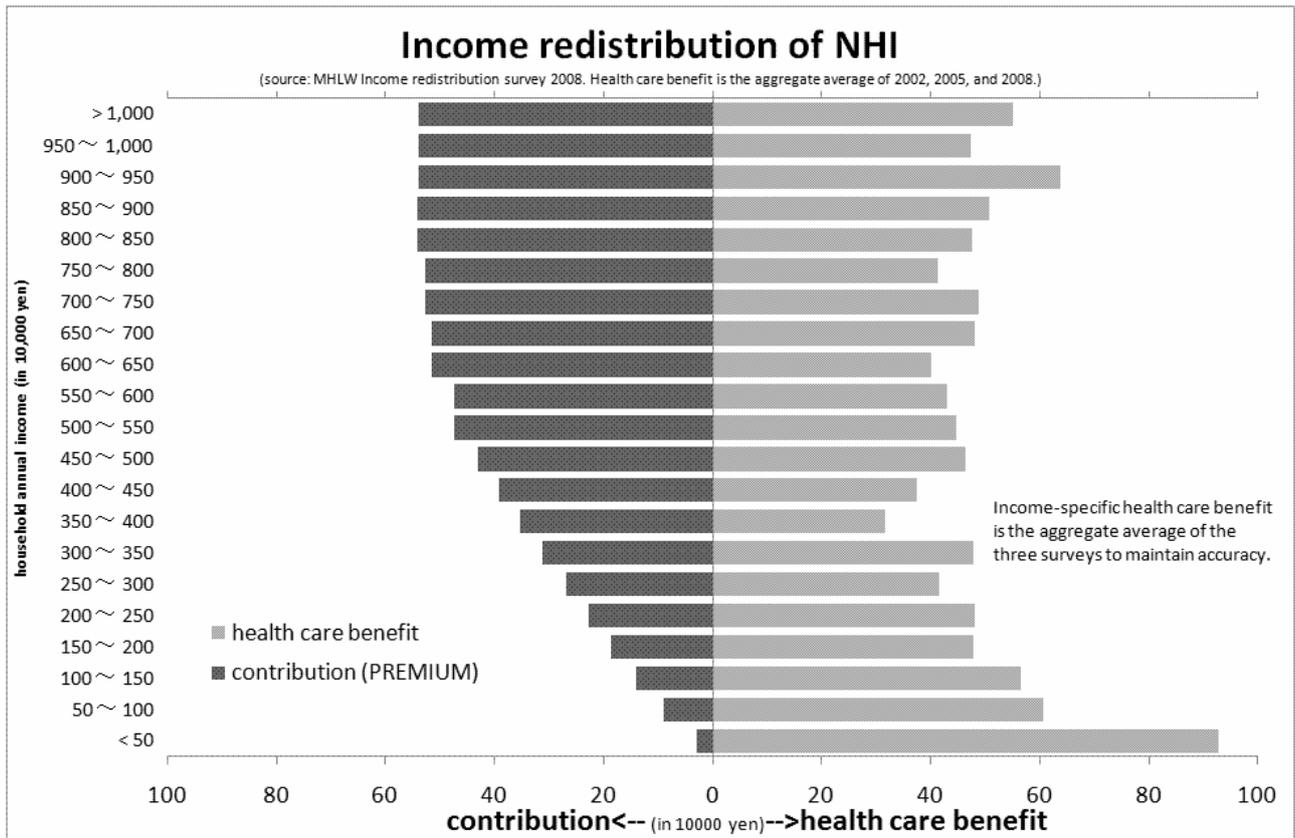
The contribution (premium for health insurance) and health care benefits broken down by the income class are stated as follows:

Figure 9



Premium contribution increases as the income of households increases but the benefit is consistently larger than the premium contribution. This is because approximately one-third of Japan's national health care expenditure is subsidized from the government. However, the contribution appears different when only the NHI is considered (below).

Figure 10



First, the premium contribution is heavier than the national average except the very low-income class. It hit the cap (530,000–560,000 yen) at the income class of five million yen and above. In some income classes, premium contribution is heavier than the average health care benefit.

When measured by the Gini coefficient, NHI households are characterized by a large inequality among themselves. The Gini coefficient of the surveyed households of the Income Redistribution Survey was 0.53 in 2008. This inequality was remedied by tax, premium of health and pension insurance, and social security benefit of both cash and services in kind to 0.4 or a reduction of 24.5%. When compared with the NHI, the income redistribution effects were higher in NHI (reduction from 0.65 to 0.41, or 37% reduction). While this was an encouraging result, it should be noted that the income redistribution effects would have been larger if the cap of premium did not exist. With an appropriate setting of the premium cap, the health insurance system would be effective not only as a health care security but also as an income redistribution mechanism that contributes to social and economic integrity.

Figure 11

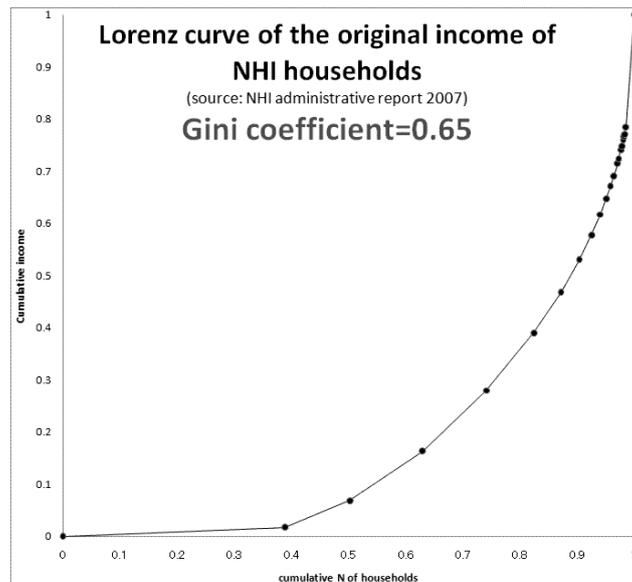
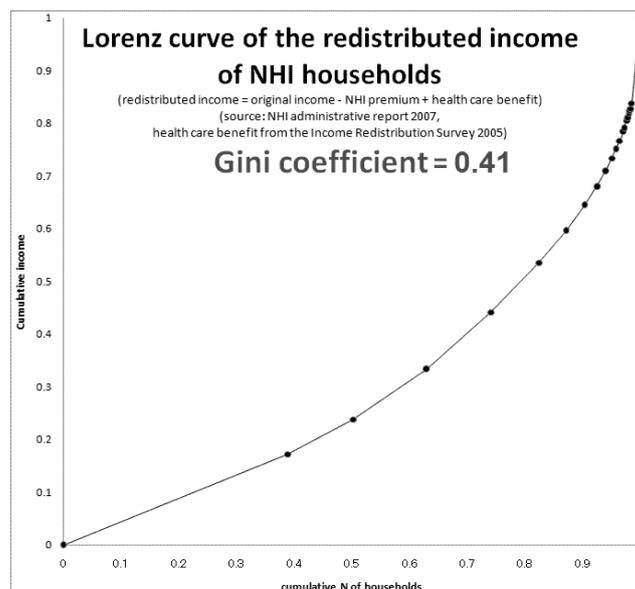


Figure 12



6. Conclusions

This paper demonstrated that Japan's NHI program not only guarantees equal opportunity for health care but also provides an effective income redistribution mechanism, thereby closing the gap among social classes. However, the author would like to point out that Japan has long been neglecting the analysis of its health insurance system from the perspective of social equality and income distribution. This is clearly evidenced by the fact that MHLW has conducted a sampling survey linking individual health insurance claims with the income and occupation of each beneficiary every year for as long as 50 years, but the results have not been officially

published. The author had to use inaccurate estimated data from another survey as a substitute, and therefore, the findings of this study are subject to limitations.

A growing number of economies in the Asia-Pacific region are making efforts to develop a national health insurance with universal coverage. Health policy makers and the general public are naturally concerned about the technical aspects of insurance: the benefit package and premium setting. However, one should not neglect the important role of a health insurance program as a social security system and its most important functions: redistribution of wealth and securing the integrity of the nation. Therefore, policy makers and designers of insurance policies should evaluate and monitor the effectiveness of income distribution functions of every health insurance scheme. This study provided a useful methodology for such an analysis.

Health System Reforms in China: Is Universal Coverage Enough to Solve the Problems?

Hiroko Uchimura*

1. Summary of Challenges and Possible Options

China's economic growth has been highly impressive. China has achieved over 9 % growth per year since the 1990s, which has attracted worldwide attention. Along with the economic development, socioeconomic conditions have changed considerably in China. These changes brought about decay in the conventional health systems based on state owned enterprises (SOEs) or people's communes. Instead, governments were required to take substantial responsibility for restructuring and financing the health systems. On the contrary, governments, and particularly the central government, actually tightened the fiscal investments in the health sector in the 1990s. As a result, most of the population was uninsured and individuals came to bear most of the financial burdens of obtaining health care services.

Against such deterioration in the health system, the central government eventually initiated restructuring of the health system at the end of the 1990s; that is, it institutionalized new health insurance programs. A health insurance program was established for urban employees in 1998 (Urban Employees' Basic Medical Insurance), and for the rural population in 2003 (new Cooperative Medical Scheme). Pilot programs of health insurance for urban non-employees started in 2007 (Urban Residents' Basic Medical Insurance). Initially, the insurance coverage rate was quite low; however, recently, the government has increasingly stressed the importance of expanding the coverage and has increased the fiscal subsidy for the insurance funds. Consequently, health insurance coverage has substantially increased both in urban and rural areas. By the end of 2007, coverage of the new CMS reached 86.2 % (Ministry of Health 2008).

Expansion of health insurance coverage has resulted in some progress in health system reforms in China. However, broadening the coverage has not sufficiently reduced patients' financial burdens related to obtaining needed health services. In fact, in 2007, half of the total health expenditures were still financed through out-of-pocket payments (OOP). Is expanding health insurance coverage enough to lighten people's financial burdens so that they can access needed health care services? This is a key question to examine among the challenges in China's current health system.

The present Chinese government is concerned with these health issues, and has launched new health system reform plans. In April 2009, the government presented guidelines for the health

* Hiroko Uchimura is an associate senior research fellow of Institute of Developing Economies, IDE-JETRO Japan. Her research work covers policy analysis, related to public finance, fiscal decentralization, health financing and health system reforms, as well as issues on income distribution. Her work mainly focuses on developing economies in Asia.

system reforms which include fiscal outlays of CNY 850 billion (about US\$125 billion) from 2009 to 2011 (details in section 5 of this paper). Not only the amount of funds but also their allocation in the health sector has a critical impact on the outcomes. The reform has just been initiated; hence, it is a good time to review current health systems in China and examine barriers to improving people's access to needed health care. In this context, this paper will analyze challenges in China's health system and propose possible options to address the challenges. The main findings and recommendations in this paper are summarized below.

1.1 Challenges in China's health system

Benefits restricted to limited areas

At present, there are three insurance programs that are supposed to cover China's entire population.¹ Two programs are for the urban population: the Urban Employees' Basic Medical Insurance (UEBMI), and the Urban Residents' Basic Medical Insurance (URBMI). Another program has been prepared for the rural population: the new Cooperative Medical Scheme (new CMS).

These medical insurance programs have three salient features. First, the insurance programs are segmented on the basis of urban or rural registration (the *hukou* system). Second, people are supposed to be enrolled in one of the urban programs or the rural program depending on their urban or rural registration (the *hukou*) which does not change even with population mobility. Third, the insurance schemes are mostly restricted to limited areas. This means that people can benefit from the insurance only in limited areas, which are primarily the localities where they are registered in the insurance programs.

These features make certain people, particularly rural migrants, unable to benefit from insurance. Rural people are supposed to be registered in the rural program (new CMS) based on their rural registration, which does not change even if they move to urban areas as rural migrants. As mentioned above, most insurance schemes designate local health services. The central government currently encourages local governments to include rural migrants in the urban insurance program (URBMI); however, as OECD (2010) pointed out, URBMI has not been properly extended to rural migrants. Under such conditions, rural migrants cannot benefit from the insurance practically if they obtain health care services in the localities where they actually reside. In addition, serious concerns exist regarding the substantial disparity in quality and quantity of health care services between urban and rural areas, or between provinces. If people cannot obtain needed health care services in their insurance-registered localities, they have to bear most of the financial burdens of obtaining the needed services in other localities.

¹ In addition, a Medical Assistance program has been prepared to support the certified poor who cannot afford to contribute to insurance premiums.

Benefits are too small

UEBMI, financed by premiums contributed both by employees and employers, reimburses the expenditures both for outpatient and inpatient care. Most URBMI and new CMS schemes also include both inpatient and outpatient benefits. However, the benefits skew considerably toward inpatient care; thus, the benefit level for outpatient care is quite low. Based on one estimate, it is indicated that the average reimbursement rate, including reimbursement both for inpatient and outpatient care, is about 30% (Wagstaff et al. 2009). Moreover, Herd, Hu and Koen (2010) pointed out that the actual reimbursement rate for catastrophic illnesses is much lower than the scheduled rate, due to insufficient funding. Because of such limited insurance benefits, patients are still required to bear a large portion of financial costs for obtaining health care services, even if they are insured.

Service costs are climbing

The government tightened its investment in the health sector in the 1990s. This affected not only the demand-side (the patients' side) but also the supply-side (the providers' side). Although most health institutions are public in China, they came to rely on their own earnings. As a result, health institutions in China have become almost commercialized. Along with such commercialization, the pricing system for health care services and pharmaceuticals fuels the rise in service costs.

Prices of most health care services are regulated in China. The regulations set prices for general services that are lower than the actual cost of providing such services. On the contrary, some services with high-tech equipment cost much more than the actual cost of providing such services. For instance, the service with CT scans costs over 50% more than the actual cost of provision (OECD 2010). With regard to pharmaceutical prices, hospitals are allowed to make a 15 % (or 30 % in some cases) mark-up over wholesale pharmaceutical prices.

Such price regulations induce over-prescribing or excess-provision of high-tech and expensive services. It has been noted that some hospitals set pharmaceutical sales targets or link doctors' payment/bonuses to their monetary outputs, particularly regarding sales of pharmaceuticals or high-tech services (OECD 2010, Hu et al. 2008). This situation drives an increase in service costs.

1.2 Possible Options

To address the challenges, the following outcomes are expected from the reform:

- 1) Enrollment in the insurance programs based not on the urban/rural registration system (the *hukou* system) but on actual place of residence;
- 2) Lifting the restriction on areas where insured people can benefit from their insurance;
- 3) Increasing the level of insurance benefits;
- 4) Containing the costs of health care services.

To materialize the outcomes, the proposed options are summarized as follows.

Implementing the central government initiative

Regarding the first point, the central government has recently encouraged local governments or enterprises (employers) to include rural migrants in the urban insurance programs, i.e., URBMI or UEBMI. That is, the central government is trying to adjust the schemes for people to be enrolled in the insurance programs based on their actual place of residence. In addition, as detailed in section 5, other policies, namely the urbanization policy and the reform in the *hukou* system, will contribute to addressing the problems caused by the enrollment system in which people need to be registered in the insurance programs based not on their actual place of residence but on their *hukou* registration. The progress of those reforms, however, varies considerably between localities because local governments take the practical initiative in implementing the reforms. Such diversification may also widen the disparity in health between localities. The central government needs to take a substantial initiative by enacting necessary laws and providing fiscal support.

Building a cross-subsidy or a unified fund pooling system

In order to lift the restriction on the areas where the insured can benefit from insurance, it is necessary to establish a cross-subsidy system between insurance schemes (localities) or a unified fund pooling system. For instance, in the Philippines, although there are several insurance programs based on the insured's employment status, an insurer, i.e., PhilHealth, pools the funds from all insurance programs. Hence, the insured can benefit from their insurance regardless of where they obtain health care services. The other experience in the Netherlands indicates that in parallel with keeping each local insurance fund, a central fund can be set up and the central fund can be reallocated to local funds (Wagstaff et al. 2009). Sources for the central fund would be income-related contributions from the insured as well as subsidy from the central government.

Increasing funding levels

The insurance benefits for outpatient care, and particularly for chronic disease care, must be expanded; at the same time, reimbursement for inpatient care expenditures also needs to be increased to meet the scheduled reimbursement rate. The current funding level is too low to allow for expansion of the insurance benefits. In particular, the funding level for the new CMS is quite low compared with the actual health expenditures. In this sense, central fiscal support is necessary to raise the funding level and expand insurance benefits.

Together with the central fiscal subsidy, several means may apply for the insurance schemes. First, the individual contribution required under URBMI and new CMS can be modified to relate to the income level of the insured. Although administrative capacities of insurers may be another challenge in implementing such modifications, this would contribute to increasing each insurance

fund. Second, the above-mentioned cross-subsidy system and a central fund system can be applied to the insurance fund system, which will contribute to an increase in the insurance benefit level. A cross-subsidy system between insurance schemes will equalize insurance funds horizontally; that is, insurance funds are redistributed from high-income funds to low-income funds, which will contribute to increasing the insurance benefit level of low-income funds. In addition, a central fund can be used to further increase the average benefit level. These attempts will also be conducive to establishing a unified insurance program at the country level in the future.

Injecting necessary fiscal resources into the supply-side and modifying payment schemes

It is necessary to increase fiscal investment in the supply-side of health systems in order to improve the quality and quantity of health facilities in rural areas/poor regions and secure a certain income for the providers. Such reform will ensure a certain level of health service provision with the population as well as redress the commercialization of health institutions. In addition, improving the quality of providers, particularly providers in rural health facilities, is also essential. Those reforms in the supply-side will improve the referral system of the health service provision, which will also contribute to controlling total health expenditures. The central government referred to the supply-side reform in its guideline for new health system reform plans released in 2009. It stressed the importance of improving the quality and quantity of health facilities, in particular the lower-tiers of facility that are supposed to provide primary care.

The payment scheme for providers also needs to be reformed. By providing necessary fiscal support to health institutions, the institutions will not have to rely as much on their own earnings to finance the provision of health care services. In addition, payment schemes for hospital doctors need to be modified. As suggested in other studies (e.g., Yip and Hsiao 2009, Herd, Hu and Koen 2010), a salary-payment system for hospital doctors is worth considering.

Regarding the pharmaceutical pricing system, the government has noticed the problems related to the mark-up schemes and is initiating the establishment of an alternative pricing system. The guidelines indicate that a new essential drug system will be established to secure reasonable prices for the drugs for common diseases. However, as OECD (2010) pointed out, the drug system covers limited pharmaceuticals; in addition, if the payment scheme for doctors is not be modified, total costs for pharmaceuticals may not change significantly.

Integrating a tax financing system into the insurance system

Apart from those four measures to address the challenges, the alternative is to establish another health financing system. As mentioned, considerable fiscal investment, particularly the central fiscal fund, is required for the health system reforms in China. In this sense, establishing a health financing system by integrating a tax financing system into the insurance system is worth considering. A tax financing system will provide basic and inexpensive health services to the entire population via public health institutions. In the case of Australia, a tax financing system

provides services that are basically free and cover critical care and advanced medical services, while private health institutions provide non-critical care (Maruyama 2009). A tax system would ensure that all the population can access a certain level of health care services. In addition, private health providers provide people with more choices. It would be debatable what services should be included in the tax financing system. In the context of current China, in addition to primary care, critical care should be included in the system.

The integrated system may address the above-mentioned challenges simultaneously. The system, funded by fiscal resources, ensures the provision of basic health care services for the population; therefore, the above-mentioned first challenge will be addressed. It will address the second challenge because services provided by the tax financing system will cover a large part of outpatient care. In addition, payment schemes for doctors in the tax system will be modified, which would also be conducive to controlling service costs.

This system, however, may have other problems, such as long wait times at the public institutions. In addition, the system will not address the disparity in health between high-income and low-income people, and it will not improve the quality and quantity of health institutions in rural areas/poor regions. The quality and quantity of service providers is critically important in order to ensure access for the entire population to needed services. To establish such an integrated system, the central government needs to take a strong initiative and provide necessary fiscal supports.

2. Health Status and Health Resources in China²

2.1 Health status

Health status as a whole country

We first look at epidemiological transition in China. The three major diseases, namely malignant neoplasm, cardio-vascular diseases and cerebrovascular diseases, are in the upper ranking both in urban and rural areas (Table 1). It shows that the chronic disease is a major health concern in China today, which is a common phenomenon in developed economies. Ageing might be one of the background factors for this epidemiological transition, which is also a common issue in developed economies.

² This section is based on Uchimura (2009a, 2009b), and the author revised and compiled the contents.

Table 1: Epidemiological transition and Age structure

| Epidemiological transition | | | | | | | | | Age structure | | | | | |
|----------------------------|--------------------------|-------------|--------------------------|------|--------------------------|-------------|--------------------------|------|------------------------------------|---------|---------|---------|------|------|
| | | Urban areas | | | | Rural areas | | | | | | | | |
| | | 1990 | | 2006 | | 1990 | | 2006 | | | | 1990 | 2000 | 2006 |
| | Cause of death | (%) | Cause of death | (%) | Cause of death | (%) | Cause of death | (%) | Total population (1,000 people) | 114,333 | 126,743 | 131,448 | | |
| 1st | malignant neoplasm | 21.9 | malignant neoplasm | 27.3 | respiratory diseases | 24.8 | malignant neoplasm | 25.1 | Urban population (%) | 26.4 | 36.2 | 43.9 | | |
| 2nd | cerebrovascular diseases | 20.8 | cardio-vascular diseases | 17.7 | malignant neoplasm | 17.5 | cerebrovascular diseases | 20.4 | Rural population (%) | 73.6 | 63.8 | 56.1 | | |
| 3rd | cardio-vascular diseases | 15.8 | cerebrovascular diseases | 17.1 | cerebrovascular diseases | 16.2 | respiratory diseases | 16.4 | 0-14 years old (%) | 27.7 | 22.9 | 19.8 | | |
| 4th | respiratory diseases | 15.8 | respiratory diseases | 13.1 | cardio-vascular diseases | 10.8 | cardio-vascular diseases | 13.9 | 15-64 years old (%) | 66.7 | 70.1 | 72.3 | | |
| 5th | injuries/poisoning | 6.9 | injuries/poisoning | 6.1 | injuries/poisoning | 10.7 | injuries/poisoning | 8.9 | over 65 years old (%) | 5.6 | 7.0 | 7.9 | | |

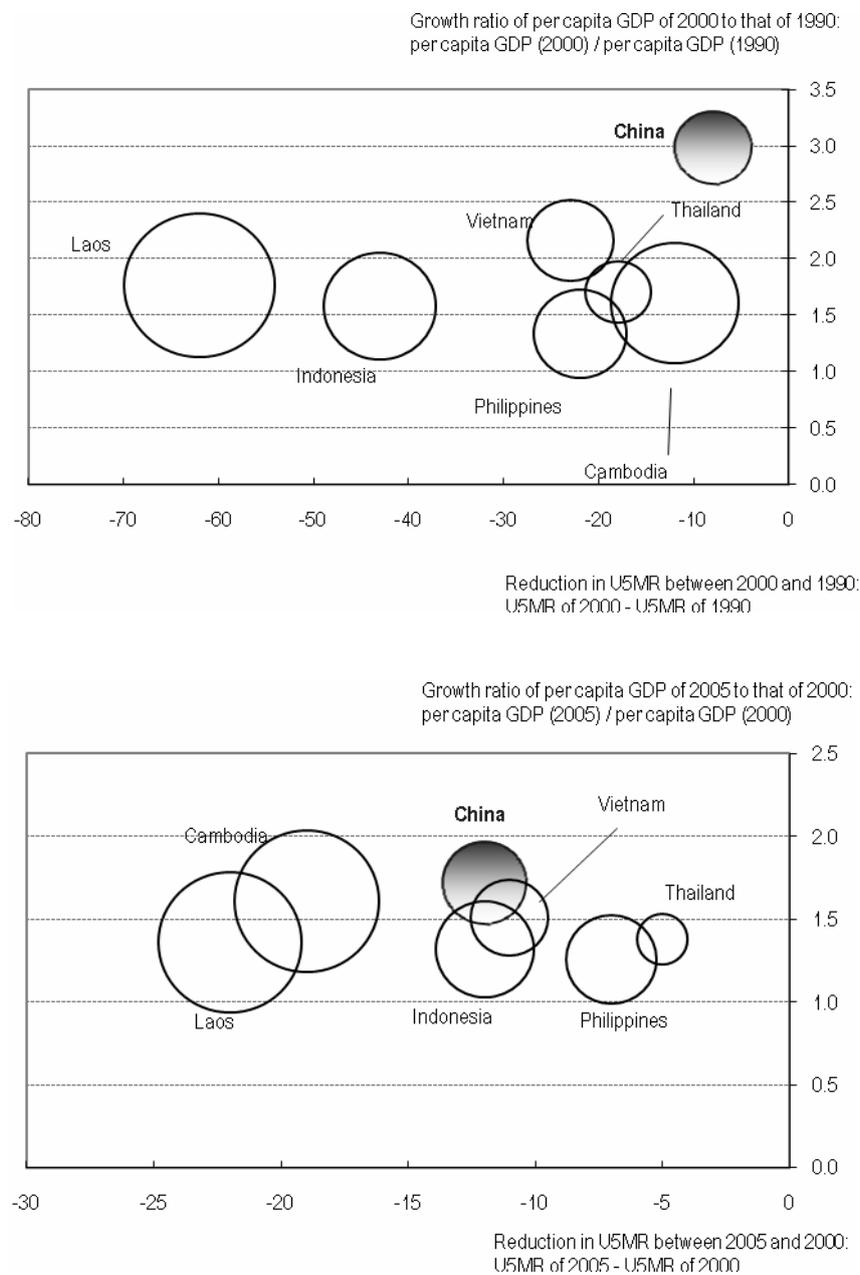
Source: Author's compilation based on data from the *Health Statistical Yearbook of China 2007*.

There are two salient features in China's age structure: rapid contraction of the young population, and expansion of the elderly population (Table 1). The well-known "One-child policy" is a major factor for the rapid decrease in the young population. Crude birth rate has particularly reduced since the 1990s. It was reduced to 12.09 in 2006 from 21.06 in 1990. On the contrary, the elderly population is increasing steadily, and the pace of ageing is anticipated to be acceleratory (Wang and Mason 2005, Xiao 2007a). The ratio of the elderly population (population over 65 years old) to the total population was about 7% in 2000, and it is predicted to be double, i.e., 14%, in 2027, which is almost the same pace as Japan's ageing experiences (Xiao 2007b).

These changes in age structure and epidemiological transition have a critical impact on the health system in China. A large part of the population is seeking/will seek medical treatment for chronic diseases. The health system needs to provide some financial protection for such treatment; otherwise a considerable part of the population has to bear most of the financial costs to obtain needed health care services. Medical treatment for chronic diseases does not necessarily accompany hospitalization, which is not well-covered by the current health insurance programs in China, particularly by URBMI or the new CMS.

Figure 1 shows changes in the under five-year-old mortality rate (U5MR) and economic growth (per capita GDP) in China and other developing Asian economies. U5MR is an important health indicator in developing economies, which is included in Millennium Development Goal (MDG) indicators. Compared with other Asian developing economies, China's economic growth was impressive between 1990 and 2000. However, improvement in its health status (U5MR) was the slowest of the Asian economies. After 2000, the pace of China's improvement in health status caught up with that of other Asian economies.

Figure 1: Changes in mortality levels and economic growth in China and developing Asian economies: U5MR and per capita GDP



Note: Author's compilation based on data from *The United Nations Site for the MDG Indicators*, United Nations, and *World Economic Outlook*, IMF.

Size of the circle in (1) indicates the level of U5MR for each economy in 1990.

Size of the circle in (2) indicates the level of U5MR for each economy in 2000.

In both cases, larger circles indicate higher mortality levels. Per capita GDP is on a purchasing-power-parity basis.

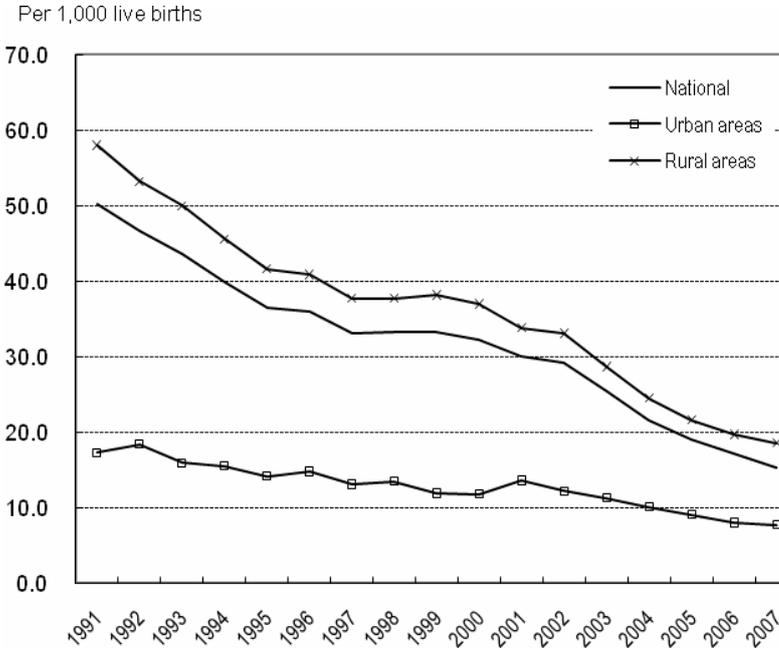
China already has the same health concerns as developed economies; at the same time,

basic health conditions have not improved sufficiently compared with its impressive economic development. Reforming China’s health system is required to address the dual challenge.

Health status within a country

Looking at the health indicators within a country, the trend and level of indicators differ between urban and rural areas in China (Figure 2). The level of infant mortality rate (IMR) is about 15.0 over 1,000 live births, which is lower than that in Thailand in 1995 (17.0). On the contrary, the IMR was more than three times higher in rural areas than in urban areas in the 1990s. The disparity gradually began to decrease after 2000. The mortality level of all of China is strongly affected by that of rural China, which reflects the heavy weight of the rural population as a proportion of the national population. This suggests that, in order to improve health status in China, rural health status must be improved.

Figure 2: Changes in IMR in China



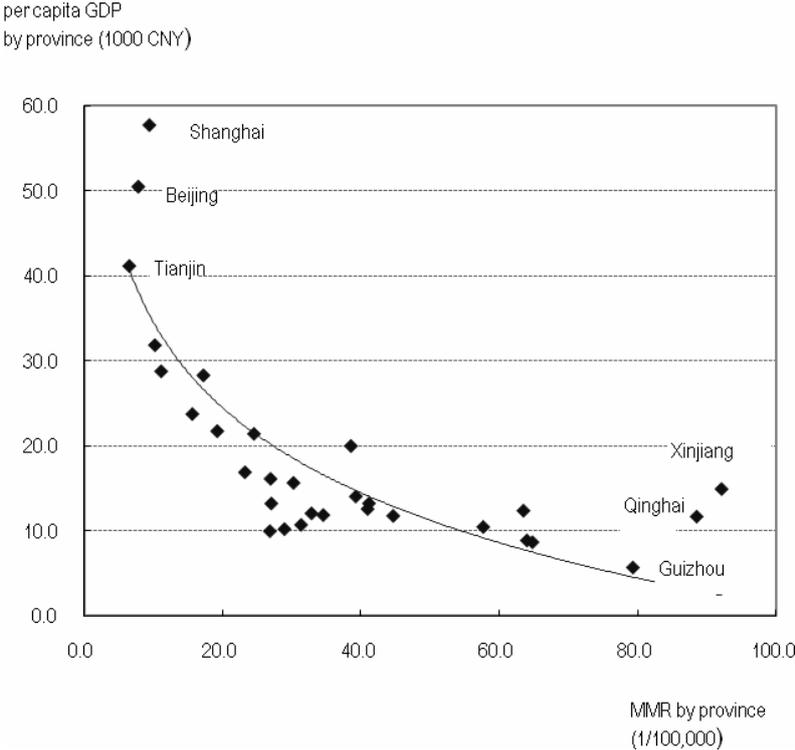
Source: Author’s compilation based on data from the *Health Statistical Yearbook of China*.

In addition to the disparity in health status between urban and rural areas, the disparity between provinces is also critical in China. The maternal mortality rate (MMR) significantly differs between provinces (Figure 3). The provincial MMR appears to be mostly in inverse proportion to the provincial economic level. The MMR of affluent provinces (cities), such as Tianjin (6.6) and Beijing (7.9), is almost at the same level as that of Japan (6.0, 2005)³, which is in

³ The source of Japan’s MMR is the Millennium Development Goals Indicators. The official United Nations site for the MDG Indicator is: <http://unstats.un.org/unsd/mdg/Data.aspx>

fact less than one-tenth of the MMR of less developed provinces, such as Guizhou (79.3), Qinghai (88.5), or Xinjiang (92.1). The MMR is generally improved by proper prenatal checkups and delivery at health institutions. And it is important to provide vaccination and proper treatments for diarrhea and pneumonia in order to improve the IMR. The above figures indicate that the conditions of primary health care services, including maternal health services, lag behind in rural areas or less developed provinces in China.

Figure 3: Maternal mortality rate (MMR) and per capita GDP by province (2006)

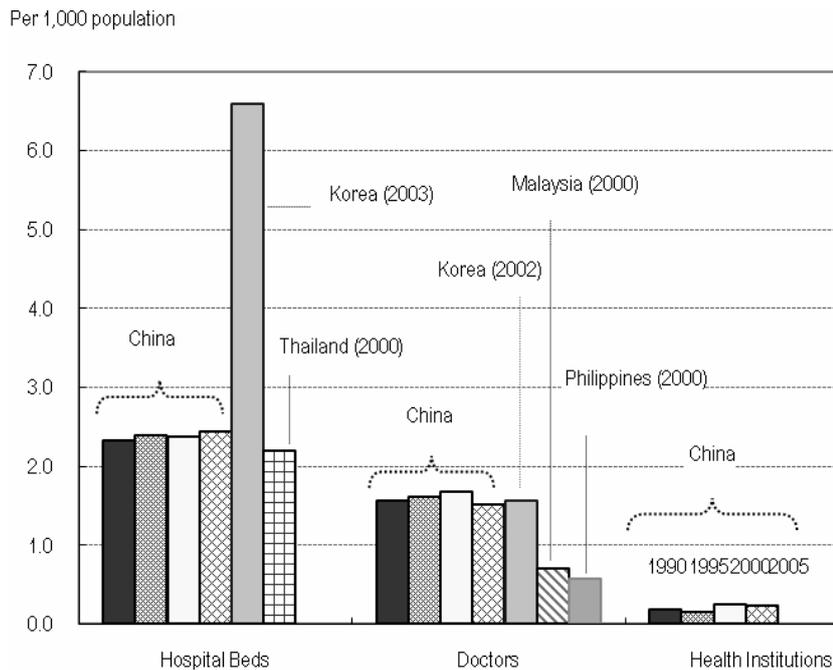


Source: Author’s compilation based on data, including 30 provinces, from the *Health Statistical Yearbook of China* and *Statistical Yearbook of China*. Tibet is excluded because its MMR is exceptionally high (244.1).

2.2 Health resources

In China, the number of hospital beds per 1,000 people was 2.4 in 1995, which remained at almost the same level for a decade (2.5, 2005) (Figure 4). This figure is lower than that of Korea (6.6, 2002), but it is almost at the same level as Thailand (2.2, 2000). As presented in Figure 4, the number of doctors per 1,000 people was 1.5 in 2005, which is not relatively low compared with other Asian economies, such as Korea (1.6, 2003) or Malaysia (0.7, 2000). These figures indicate that China’s health output level as a whole country is not low compared with other Asian economies.

Figure 4: Number of health resources per 1,000 people in China and other Asian economies



Source: Author's compilation based on data for China from the *China Statistical Yearbook*, and for other Asian economies from WHO Statistical Information System (WHOSIS).

However, the number of doctors or hospital beds per 1,000 people varies among provinces and differs between urban and rural areas in China (Table 2). The number of hospital beds per 1,000 people is 6.79 in Beijing and 6.81 in Shanghai, which is the same level as Korea (6.6, 2002), while it is much lower in other less developed provinces, such as 1.69 in Guizhou or 1.98 in Jiangxi. In addition, the level of health outputs in rural areas, i.e., the number of beds in health centers per 1,000 rural population, is very low.

Table 2: Health resources by province

| | Doctors (per 1,000 population) | Hospital Beds | Beds in Townships and (per 1,000 rural population) |
|--------------------|-----------------------------------|-----------------|---|
| National | 1.52 | 2.70 | 0.80 |
| Highest Three | 4.28 (Beijing) | 6.81 (Shanghai) | 2.38 (Shanghai) |
| | 3.23 (Shanghai) | 6.79 (Beijing) | 1.29 (Beijing) |
| | 2.65 (Tianjin) | 4.58 (Tianjin) | 1.29 (Jiangsu) |
| Lowest Three | 1.11 (Guanxi) | 1.98 (Jiangxi) | 0.55 (Guanxi) |
| | 1.06 (Guizhou) | 1.95 (Guanxi) | 0.47 (Guizhou) |
| | 1.01 (Anhui) | 1.69 (Guizhou) | 0.46 (Ningxia) |
| Standard Deviation | 0.68 | 1.21 | 0.36 |
| Median | 1.53 | 2.78 | 0.78 |
| Sample | 31 | 31 | 31 |

Source: The numbers of hospital beds per 1,000 people and beds in townships and villages health centers per 1,000 rural people are based on 2006 data from the *Health Statistical Yearbook of China*. The number of doctors is based on 2005 data from the *China Statistical Yearbook for Regional Economy*.

Based on the 2003 nationwide survey on health services, there are considerable differences between urban and rural areas in physical access to health institutions.⁴ The survey reveals that more than 80% of people in urban areas can access any health institution within 10 minutes, but only 40% of people in rural areas can do so. Moreover, the quality of health care services is significantly behind in rural areas compared with that in urban areas. It has been noted that there are substantial gaps in education/training levels and experiences of doctors/health care service providers between urban and rural areas (Anson and Sun 2005).

Those figures indicate that health resources are not adequately distributed between and within provinces or between urban and rural areas in China. The density of health resources also significantly varies between urban and rural areas. The quantity and quality of health care services in some affluent provinces appear to be close to those of developed economies, while those in rural areas, particularly in some poor provinces, lag far behind. Such disparity in quantity and quality of health care services within a country poses serious concerns for health equity in the country. In addition, such disparity might affect the patterns of health care-seeking behavior. People living in rural areas/poor regions might not prefer to visit primary health facilities in their localities because they anticipate that the facilities might not provide proper medical care. Once people come to suffer from serious health problems, they will visit secondary or tertiary health care facilities. This pattern of health care-seeking behavior would cause a further increase in total

⁴ Regarding the survey study, aggregated data is provided by the 2003 Nationwide Health Service Survey (2003 *Guojia Weisheng Fuwu Diaocha*), which is included in the *Health Statistical Yearbook of China 2007*.

health expenditures. In addition, it would also cause serious financial burdens for individual patients. By increasing fiscal investment, the quantity and quality of health facilities in rural areas/poor regions need to be improved substantially. Such reform is necessary for improvement not only of health equity in China but also of health financing conditions.

3. Health Systems in China⁵

3.1 Conventional health system and its decay

The health system has differed between urban and rural areas, and more precisely between the urban registered population and rural registered population, since before the economic reform in China. Health service provision in urban areas was based on the labor insurance system (LIS) and the publicly funded health system after the 1950s (Zhang 2001, Wong et al. 2006). Health care services were provided mainly for employees and retirees of SOEs based on the LIS, whereas health care services were provided for personnel and retirees of government organs and institutions based on the latter system. Health service provision was primarily financed through SOEs under the former system, and financed publicly in the latter system. Regulated funds were provided for the assigned health institutions, and the assigned institutions provided basically free services for the members.

Health care service was provided through the cooperative medical scheme (CMS) in rural areas after the late 1950s (World Bank 1997, Li 2004, Wong et al. 2006). The CMS is based on people's communes, and was financed by subsidies from people's communes and member contributions. The CMS covered a part of health care service costs, and patients needed to pay for remaining costs. Although the health system in rural areas, i.e., the CMS, did not provide free services, the spread of the CMS over rural areas contributed greatly to improvement in rural health (World Bank 1997).

Along with rapid economic development, socioeconomic conditions significantly changed in China. Such changes brought about decay in the conventional health system based on SOEs in urban areas or people's communes in rural areas. In line with the penetration of the market economy, SOEs began to suffer from deficits. A main reason for the deficit was the health financial responsibility of SOEs to provide their employees and retirees with health care services (Nakagane 1999, Li 2004, Zhu 2004). SOEs, suffering severely from the deficits, came to be unable to finance health service provision (Liu 2002, Wong et al. 2006). Another result of introducing the market system was an increase in non-SOE type of enterprise, such as private or foreign-affiliated companies. The conventional health system did not cover employees of those non-SOEs. All those changes made the conventional health system, namely LIS in urban areas, malfunction. By the same token, reforms in the health system were needed in order to solve the

⁵ This section is based on Uchimura (2009a, 2009b) and Uchimura and Jütting (2009), and the author revised and compiled the contents.

financial problems of SOEs and promote SOE reforms.

Along with the economic reforms in rural areas, the rural health system, i.e., the CMS, also began to malfunction. Agricultural production, administration or social services were based on people's communes in rural areas. Economic reforms, however, moved the production base from collectives to the household by initiating a household production responsibility system. This brought about the disbandment of the people's commune that was the organizational and financial basis of the CMS, which ultimately weakened the function of the CMS (World Bank 1997, Li 2004, Zhu 2004). The conventional health system needed to be reformed. The health system, however, was not restructured along with changes in socioeconomic conditions. Particularly, health system reform in rural areas was almost ignored.

Instead of SOEs or people's communes, governments were required to take substantial responsibility for financing health service provisions. However, the central government tightened its fiscal investment in the health sector over the 1990s, and left most responsibilities for health service provision to local governments (Blumenthal and Hsiao 2005). It was noted that local governments in poor regions, suffering from a lack of fiscal resources, did not take sufficient responsibility (World Bank 1997, 2005). The fiscal capacity of local governments in China began to have a critical effect on health care service provision at their localities.

3.2 Introduction of new health insurance programs and challenges

Because of decaying the conventional health systems both in urban and rural areas, the individual patient came to bear a considerable portion of the financial burdens to access health care services. At the same time, health service providers suffered from insufficient financial capacity to provide proper services. Against this, the government eventually initiated the establishment of new health insurance programs at the end of the 1990s. At first, a health insurance program was established for urban employees in 1998 (Urban Employees' Basic Medical Insurance (UEBMI)), which is funded by premiums contributed both by employees and employers (Ministry of Labour and Social Security 1998, Li 2004, Wong et al 2006). This insurance program targets only formal employees in urban areas who have an urban registration.⁶ The dependent family members of urban employees are not eligible to enroll in the insurance program because the enrollment unit of the program is the individual employee (Ministry of Labour and Social Security 1998). Moreover, based on the original scheme, rural migrants who emigrate from rural areas to urban areas and inhabit urban areas were also ineligible to enroll in the insurance program. Therefore, a substantial portion of the urban inhabitants was still uninsured.

⁶ China's registration system (*hukou* system) segments the population into the urban population and rural population. There hence exist two types of registration (urban registration and rural registration) which in general do not change with population mobility. In recent times, however, population mobility has increased in China, and the *hukou* system has gradually become more flexible. In addition, in line with urbanization, some of the rural population has become part of the urban population (urban registration). However, current health insurance programs mostly reflect the distinction between urban and rural registration based on the *hukou* system.

In order to include the non-employee urban population (mainly dependent family members of urban employees) in the insurance coverage, in 2007 the government initiated pilot programs for a new urban health insurance program (Urban Residents' Basic Medical Insurance (URBMI)) (Ministry of Labour and Social Security 2007). To support this insurance program and expand the coverage, both central and local governments subsidize the insurance fund. This new urban health insurance program is hence funded by the individual premium and subsidies from central and local governments. The subsidy from the central government mainly targets central-western provinces. Dependent family members and informal workers who are urban residents (the urban *hukou*) are eligible to enroll in this insurance program. Base on the original scheme, rural migrants were generally not eligible to enroll in this urban insurance program because they are not part of the urban registered population based on the *hukou* system. However, as discussed below, the central government has recently encouraged local governments or employers in urban areas to include rural migrants either in URBMI or UEBMI, although such access for rural migrants has not progressed well so far.

After the 2000s, the government eventually took action to restructure the rural health system; that is, the new cooperative medical scheme (new CMS) was established in 2003 (Ministry of Health 2003, WHO 2004). The enrollment unit of the new CMS is the family (household). The premium is, however, charged on a per capita basis, and thus each household premium is the sum of all family members' premiums. All family members are required to enroll in the new CMS en masse. In order to support this scheme and restore the rural health system, central and local governments subsidize the new CMS fund (Ministry of Health 2003). The central government subsidizes the new CMS mainly in central-western regions where economic levels are relatively low. In addition, the government has made efforts to increase coverage of the new CMS.⁷

On the back of the government initiative, health insurance coverage has expanded; the improvement in recent years has been remarkable. For instance, the number of people enrolled in new CMS reached more than 800 million in September 2009. However, as shown in the next section, half of total health expenditures were still borne by individual patients (out-of-pocket payment: OOP) in 2007. Although the insurance coverage is broadening steadily, the peculiarity of the insurance schemes hinder a certain part of the population from benefiting from the insurance.

The critical concern is that the insurance programs are basically segmented based on urban and rural registration (the *hukou* system), and the registration does not change along with actual population mobility. Rural migrants are registered as part of the rural population even if they actually inhabit urban areas. Thus, based on the original scheme, they were ineligible to enroll in the urban insurance programs. In addition, the insurance programs are planned so that insured

⁷ In central and western provinces, the individual annual premium was 10 CNY, and the subsidy from the central and local governments was 20 CNY respectively in 2007. The central government raised its subsidy to 40 CNY per person per year in the two years from 2008.

people basically utilize the health institutions where they are registered in the insurance programs. Consequently, rural migrants are practically excluded from the insurance benefits unless they obtain health care services in their registered rural localities. Moreover, it has been noted that the segmentation of the insurance programs based on urban and rural registration (the *hukou* system) is one of the critical factors leading to health disparity between urban and rural areas in China (WHO 2004).

The government has recently taken these concerns seriously, and it referred to the importance of the portability or the continuation of health insurance programs over areas in the new health system reform plans released in April 2009. The reform plans suggest that if rural migrants sign employment contracts with employers, they should be integrated in the UEBMI, otherwise, rural migrants may enroll in URBMI of their actual residence (their working places) or in the new CMS of their origin rural areas (National Development and Reform Commission 2009). The progress, however, appears to be mixed, because integrating rural migrants into the urban insurance programs requires the initiative of employers or local governments (cities) who provide contributions to the insurance funds. In some industrialized areas/cities, enterprises have faced lower labor supply in recent years. It has been noted that such enterprises tend to enable rural migrants to enroll in UEBMI as a welfare benefit.⁸ Such movement will be conducive to including rural migrants in the urban insurance program. The movement, however, is still limited in certain areas, such as the Pearl River delta area. In addition, no city has actually included rural migrants in its urban insurance program; only a few cities have introduced some other insurance programs to rural migrants (OECD 2010). These two factors, namely the segmentation of insurance programs based on the *hukou* system and the scheme restricting insurance benefits to limited areas, still hinder rural migrants and certain other people from obtaining insurance benefits.

Another concern is the level of insurance benefits. This also relates to other issues: the disparity in the benefit level between the three insurance programs, and the disunity of insurance schemes between localities. As mentioned above, the funding sources for the UEBMI are premium contributions both by employers and employees, whereas those for new CMS and URBMI are household/individual premium contributions and governments' subsidies. The insurance benefits also vary among the three insurance programs; these vary not only among the insurance programs but also among localities. The central government presented the grand design of the insurance programs, and allowed cities or counties to modify the grand design in actual implementation of the insurance programs. Hence, every locality has its own insurance scheme. The UEBMI scheme is the most unified, and its benefits include both inpatient and outpatient care. The new CMS and URBMI schemes are more diversified, but can be categorized into three types

⁸ According to the field research in Suzhou city conducted by Yamaguchi (Institute of Developing Economies, IDE-JETRO, Japan), some local enterprises attempt to provide better welfare conditions for rural migrants in order to attract them. This is because local enterprises face lower labor supplies (rural migrants), and local governments (cities) encourage enterprises to provide rural migrants with better welfare conditions.

(refer to Table A1 in the Appendix for details of the scheme). All types of insurance schemes include both inpatient and outpatient care in the insurance benefits. However, the benefits are skewed heavily toward inpatient care, and the benefit level for outpatient care is considerably low. In addition, it is pointed out that the planned benefit level differs from the actual benefit level, which is less than 30 % even for inpatient care because of limited insurance funds (OECD 2010).

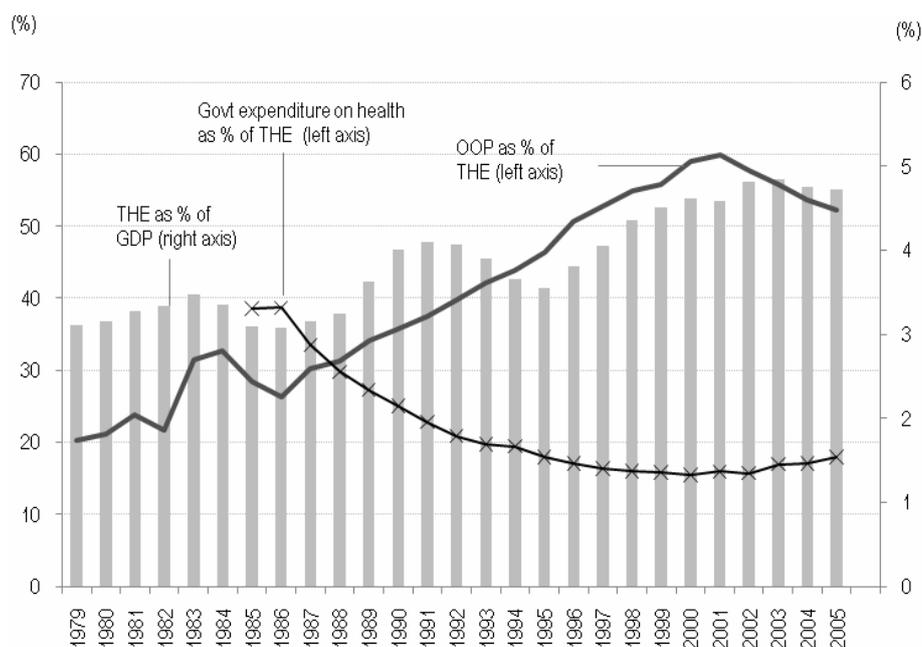
4. Financing Health Systems⁹

4.1 Transition of health expenditure structure

After the economic reform, the health systems declined in both urban and rural areas. In the early 1990s, about 80% of the population was uninsured in China (World Bank 1997). As a result, individuals came to bear considerable portions of the financial costs of obtaining health care services. The individual expenditure on health (out-of-pocket payment: OOP) as a percentage of total health expenditure (THE) had increasingly expanded since the late 1980s, and it reached 60% of THE in 2001 (Figure 5: OOP as % of THE). Such a ratio of OOP to THE is high even compared with other developing economies (Table 3). THE as a percentage of GDP also increased over the period. On the contrary, government expenditure on health as a percentage of THE continuously decreased over the 1990s, reaching about 15% in 2000, which is almost 10% lower than the level in 1990 (Figure 5). The expansion of total health expenditure was mainly borne by individuals' payments (OOP) over the 1990s.

⁹ This section is based on Uchimura (2009a, 2009b) and Uchimura and Jütting (2009), and the author revised and compiled the contents.

Figure 5: Total expenditure and government expenditure on health, and Out-of-pocket payment



Source: Author's compilation based on data from *China National Health Accounts*.

Table3: OOP as percentage of total health expenditure by developing regions

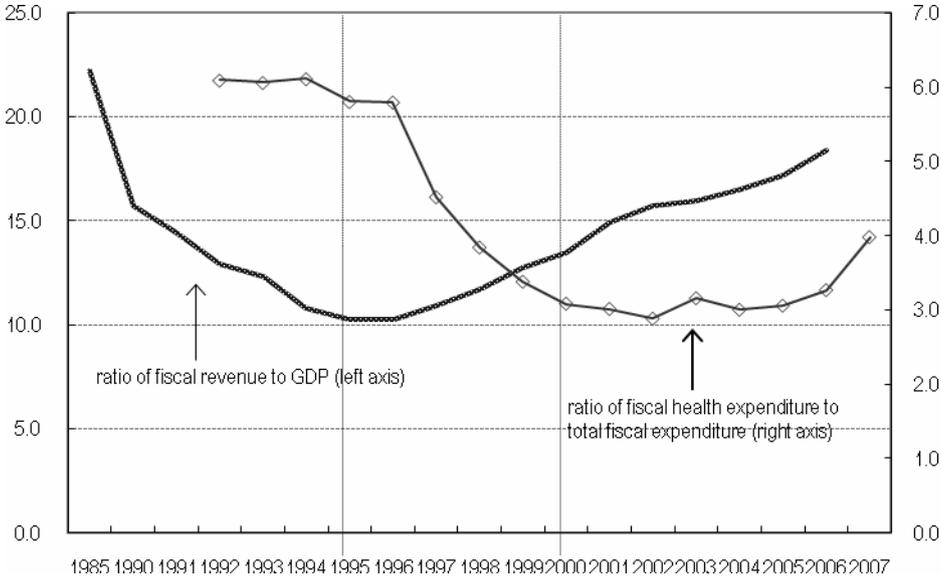
| | 2000 | 2001 | 2002 | 2003 | 2004 |
|--------------------|------|------|------|------|------|
| Northern Africa | 47.7 | 46.0 | 46.9 | 46.3 | 47.2 |
| Sub-Saharan Africa | 50.3 | 49.4 | 48.5 | 46.9 | 46.2 |
| Latin America | 38.2 | 38.5 | 36.9 | 36.3 | 35.1 |
| The Caribbean | 33.5 | 33.5 | 31.7 | 33.0 | 32.3 |
| Eastern Asia | 57.5 | 58.4 | 56.4 | 54.6 | 52.4 |
| Southern Asia | 71.8 | 73.2 | 73.9 | 74.7 | 74.5 |
| South-Eastern Asia | 53.2 | 52.3 | 51.7 | 52.2 | 51.6 |
| Western Asia | 37.1 | 35.6 | 36.9 | 31.2 | 26.9 |
| Oceania | 12.5 | 11.4 | 11.3 | 11.0 | 10.7 |
| CIS Europe | 40.9 | 42.0 | 40.9 | 40.7 | 40.9 |
| CIS Asia | 56.6 | 55.2 | 56.4 | 54.9 | 53.8 |

Source: Author's compilation based on data from WHO Statistical Information System (WHOSIS). The regional groupings adopted here are those defined by 'Millennium Development Indicators: World and regional groupings'. The number of countries included in each region depends on the grouping definition and the data availability. The calculated figures are

population-weighted averages for each region. The population data used to calculate population-weighted average is the data from 2005.

Such contraction of government health expenditure also had a critical impact on the supply-side of the health system. As explained above, health institutions were funded through LIS in urban areas and CMS in rural areas; however, in line with the progress of economic reforms, such funding systems malfunctioned. At the same time, the government tightened its outlays for the health sector. Consequently, health institutions came to rely on their own earnings, and have been almost commercialized. Regarding the price regulations, most health care services and a portion of pharmaceuticals are regulated in China. The prices of general services are mostly set much lower than the cost of provision. On the contrary, the prices of some services with high-tech equipment, such as CT scans and X ray exams, are set substantially higher, some reaching more than 50% of the cost of provision (OECD 2010). Regarding pharmaceuticals, hospitals are allowed to make a 15% (or 30% in some cases) mark-up over wholesale pharmaceutical prices. Such price systems induce over-prescribing and excess-supply of high-tech and expensive health care services. Together with the commercialization of health institutions, such pricing systems drive the costs to increase in the health sector.

Figure 6: Ratio of fiscal revenue to GDP and Ratio of fiscal health expenditure to total fiscal expenditure (%)



Source: Author’s compilation based on data from the *China Statistical Yearbook* and *China National Health Accounts*.

There were mainly two factors that affected decrease in government expenditure on health. One was the decrease in total fiscal revenues, and the other was the decrease in the proportion of

fiscal health expenditures to total fiscal expenditures. The proportion of total fiscal revenues to GDP was reduced substantially in the first half of the 1990s, which means that fiscal revenues did not increase in line with expansion of the economy (Figure 6). Such sluggishness of the fiscal revenue generation was brought about by changes in the economic system and in operating conditions of SOEs as well as by the intergovernmental fiscal relationships between central and local governments (OECD 2006, Wong and Bird 2008). Against that, as mentioned below, the tax sharing system was introduced in 1994, and it was conducive to the increase in fiscal revenues, particularly central government revenues (Naito 2004, OECD 2006). In fact, the ratio of fiscal revenues to the GDP rebounded after the mid-1990s (Figure 6). On the contrary, the proportion of fiscal health expenditures to total fiscal expenditures fell significantly after the mid-1990s (Figure 6). This trend corresponds with the fact that the government tightened its investment in the health sector over the period.

Since 2003, however, the government's contribution to total health expenditures has gradually expanded. The government's attempt at health sector reform since the 2000s appears to be reflected in the changes in fiscal expenditures for health. As detailed in section 5, the government released new health system reform plans which include the fiscal outlay of CNY 850 billion (about US\$125 billion) from 2009 to 2011. Such fiscal expenditures for health will further change the health expenditure structure. In addition, how the fiscal funds are allocated in the health sector will significantly affect the outcomes.

4.2 Intergovernmental fiscal relationships for financing health systems

Local roles in expenditures and revenues

The intergovernmental fiscal relationship is highly decentralized in China witnessed by the high local share of total fiscal expenditures, which has a considerable impact on health inequality between localities (Mei and Wang 2006). Table 4 shows that local governments finance about 70% of total fiscal expenditures. Such a large share of local government expenditures out of the total fiscal expenditures is exceptionally high, even compared with other economies around the world (OECD 2006).¹⁰ In addition, local governments have further expenditure responsibility in the health sector (Table 4).

¹⁰ The local expenditure proportion in China is higher than that in Canada or Germany where based on the federal system, local responsibilities (sub-national governments' responsibilities) are high. According to Fiscal Decentralization Indicators by the World Bank, the proportion of sub-national expenditures to total fiscal expenditures is about 60% in Canada (1997 data basis), and about 40% in Germany (1998 data basis).

Table 4: Percentage of central and local government shares in fiscal revenue and expenditure

| | Fiscal Revenue | | Fiscal Expenditure | | Ratio of transfer from central to total local revenues | Operating Expenses for Health | |
|------|----------------|------------|--------------------|------------|---|----------------------------------|------------|
| | Central Govt | Local Govt | Central Govt | Local Govt | | Central Govt | Local Govt |
| 1993 | 21.6 | 78.4 | 27.5 | 72.5 | 13.3 | 2.2 | 97.8 |
| 1994 | 57.7 | 42.3 | 28.9 | 71.1 | 47.4 | 2.2 | 97.8 |
| 1995 | 54.5 | 45.5 | 28.5 | 71.5 | 42.5 | 2.0 | 98.0 |
| 1996 | 51.8 | 48.2 | 27.2 | 72.8 | 38.7 | 2.0 | 98.0 |
| 1997 | 49.3 | 50.7 | 22.5 | 77.5 | 31.4 | 2.0 | 98.0 |
| 1998 | 49.5 | 50.5 | 28.9 | 71.1 | 40.0 | 2.1 | 97.9 |
| 1999 | 51.1 | 48.9 | 31.5 | 68.5 | 42.2 | 1.6 | 98.4 |
| 2000 | 52.2 | 47.8 | 34.7 | 65.3 | 42.1 | 1.5 | 98.5 |
| 2001 | 52.4 | 47.6 | 30.5 | 69.5 | 43.5 | 2.1 | 97.9 |
| 2002 | 55.0 | 45.0 | 30.7 | 69.3 | 46.3 | 2.7 | 97.3 |
| 2003 | 54.6 | 45.4 | 30.1 | 69.9 | 45.6 | 2.8 | 97.2 |
| 2004 | 54.9 | 45.1 | 27.7 | 72.3 | 46.7 | 2.6 | 97.4 |

Source: Author's compilation based on data from the *Finance Yearbook of China*.

On the revenue side, a major milestone was the 1994 tax reform, known as the tax-sharing system, in which the revenue side of the fiscal relationship was recentralized. This reform was motivated by a decrease in fiscal revenues, in particular a decrease in the fiscal revenue of the central government (Bahl 1999, Wong 1997, Wong and Bird 2008). As presented in Figure 6, the ratio of total fiscal revenues to GDP was 22% in 1985; however, by the mid-1990s, it had fallen sharply to about 10%. The major purpose of the 1994 tax reform was to raise fiscal revenues, achieve uniformity in the implementation of the tax structure, and create the tax assignment system, providing incentives for improved tax effort (Bahl 1999). The ratio of total fiscal revenues to GDP has gradually increased since 1996, and by 2006 had reached about 18% (Figure 2006).

Reforming the health system in China will require considerable fiscal investment. Taking into account the intergovernmental fiscal relationship between central and local governments, the central government will need to provide substantial fiscal outlays for health system reform. The central fiscal resources will also play an important role in improving health equity issues as well as unification of insurance programs.

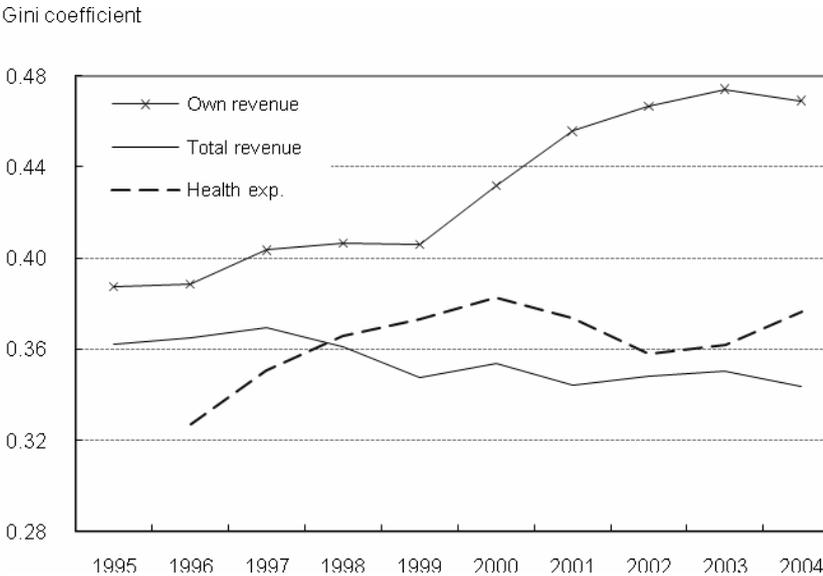
Intergovernmental fiscal transfers

While the revenue side was recentralized by the 1994 reforms, there was no change in the expenditure responsibility alignment between the central and local governments (Ahmad et al. 2004). The local expenditure assignment was not consistent with the revenue capacity of local

governments (World Bank 2002). It generated a large fiscal gap for local (provincial) governments; that is, it widened the vertical imbalance (Ahmad et al. 2004). Such conditions resulted in the provinces becoming significantly dependent on intergovernmental fiscal transfers from the central government (Wong and Bird 2008). In fact, the proportion of the fiscal transfers from central to local governments to the total local fiscal revenues jumped from less than 15% in 1993 to more than 40% in 1994 (Table 4).

Figure 7 presents the Gini coefficient, which captures the inequality level of the fiscal revenues among local governments (provinces). The higher the Gini coefficient, the higher is the inequality. We find interesting differences in the Gini coefficient trends between local own revenues and local total revenues. The local own revenue is the province’s own revenue, whereas the local total revenue includes the province’s own revenue and the fiscal transfer from central to local (provincial) governments.¹¹ The Gini coefficient level is higher in local (province) own revenue than in local total revenue over the period, which means the disparity in the local own revenue among provinces is larger than the disparity in the local total revenue. In addition, while the disparity in the local own revenue has further expanded since the 2000s, the disparity in the local total revenue has decreased slightly since the 2000s. It indicates that the allocation of fiscal transfers has become more redistributive.

Figure 7: Disparities among provinces: own revenues, total revenues, fiscal health expenditure



Source: Author’s calculation based on data from the *Finance Yearbook of China*.

The Gini coefficient level of local health expenditure is lower than that of local own revenue; however, any steady trend in the level cannot be found (Figure 7). As mentioned above,

¹¹ The provincial own revenue includes revenues of all tiers of local government below the provincial level, namely province, prefectures, and counties. The fiscal transfer from the central to local governments includes the fiscal transfer to all tiers of local government below the provincial level.

the fiscal transfer from central to local governments has become distributed as reducing the disparity in local fiscal capacities since the 2000s. However, such redistributive allocation of fiscal transfers appears not to greatly affect the disparity in local health expenditures. Several features of China's fiscal transfer system might prevent the fiscal transfers from reducing the disparity in local health expenditures effectively.

In introducing the tax-sharing system in 1994, the central government also introduced the tax-refund system. Based on local own revenue in 1993, the amount of local fiscal revenue fell in 1994 and afterwards, due to the introduction of the tax-sharing system, has been refunded by the central government (Naito 2004, Dabla-Norris 2005, OECD 2006). This system reduced the redistributive effect of the fiscal transfer from central to local governments on local fiscal capacities; in other words, the tax-refund system weakens the equalization effect of the transfer on the horizontal imbalance between local fiscal capacities (Dabla-Norris 2005, OECD 2006). Though the fiscal revenue of the central government increased after the tax-sharing system was introduced, the central government could not initially use the increased revenue effectively to equalize fiscal capacities between local governments.

Another peculiarity of the fiscal transfer system in China is that nearly half of the fiscal transfers from central to local governments are special-purposed (earmarked) transfers (Dabla-Norris 2005, OECD 2006). It is said that the earmarked transfers did not include many health-purposes subsidies, but mainly included subsidies for rural tax reforms, primary and middle school teacher salaries, or civil servants' salary increases (Mei and Wang 2006, Naito 2004, OECD 2006). In addition, the Chinese government frequently provides earmarked subsidies on a matching-fund basis that requires co-financing by local governments (World Bank 2002, OECD 2006). Such types of subsidy force local governments to allocate their own revenue for co-financing. Earmarked subsidies on a matching-fund basis change the allocation of local government budgets. Moreover, if local governments cannot afford their share of the cost (co-financing), they cannot receive the funds (earmarked transfers) (World Bank 2002).¹² These features of fiscal transfers from central to local governments may reduce redistributive effects on local financing for health in China and may have a considerable impact on the outcomes of fiscal health investment. An empirical analysis indicates that the effect on health resources of changes in local budget allocation due to local fiscal obligations for matching-funds is larger than that of fiscal transfer allocated for health purposes (Uchimura 2009a). Earmarked transfers on a matching-fund basis decrease local government own revenues which can be allocated for their own purposes because local governments must allocate their own revenues for co-financing. Such a change in the allocation of local government budgets might reduce the overall effect of

¹² The subsidy from the central government for the new CMS is also the earmarked transfer on a matching-fund basis. It has been noted that localities that have better fiscal capacity had been assigned as pilot sites for the new CMS because assigned localities must meet their obligations to co-finance the new CMS (Wang 2006). The experiences of other pilot projects of the new CMS in poor provinces, such as Qinghai, Shanxi, and Gansu, indicated that a serious challenge for poor localities, particularly for county governments, was to raise their own funds for sustaining the new CMS (Ministry of Health, Foreign Loan Office 2002).

health-purposed transfers from central to local governments. If the central government aims to improve health conditions in poor localities, it would be more effective to provide the local governments with full subsidies than to provide them with matching-fund transfers.

5. Discussion

In this section, we discuss recent related policies in the context of health system reforms in China. First, the new health system reform plan is the important policy package. Second, the urbanization policy and reforms in the *hukou* system will also have a critical impact on the health system. Prime Minister Wen referred to the importance of the reforms at the 11th National People's Congress in March 2010.

The progress and actual design of the urbanization and *hukou* system reforms vary considerably between provinces because the central government allowed local governments to take the practical initiative in implementation. The overall trend of the reforms can be summarized as follows: 1) relaxing the requirements that non-farming rural populations have to meet in order to obtain the formal urban residence, and including them in the social security system in urban areas; 2) unifying the rural registration (the rural *hukou*) with the urban registration (the non-rural *hukou*); and 3) abolishing the rural registration (the rural *hukou*). The second and third points would serve to abolish the distinction between urban and rural registration based on the *hukou* system either by unifying the rural *hukou* with the urban *hukou* or abolishing the rural *hukou*. For instance, it is reported that Jilin province has been abolishing the rural registration (the rural *hukou*) gradually since the beginning of 2010 (Xinhua News, 2 February 2010). Such reforms will improve social security conditions for non-farming rural populations inhabiting urban areas. In addition, the reforms would be also conducive to establishing a unified insurance system at the country level, which is not segmented based on urban or rural registration (the *hukou* system). However, a critical concern is that the actual progress and implementation schemes vary considerably among provinces. This means that the status of non-farming rural populations in urban areas varies among provinces, which would further widen the health disparity between provinces.

With regard to health system reform, the new health system reform plan was released in April 2009. The plan has five major targets: 1) broadening insurance coverage to 90% coverage by 2011; 2) establishing a national essential drug system; 3) improving medical care at the local level (primary level); 4) improving basic public health services; and 5) launching pilot reforms of public hospitals (National Development and Reform Commission 2009, Zhu 2009, Herd, Hu and Koen 2010). Broadening insurance coverage is an important challenge, but as examined in this paper, other issues need to be addressed in order to make the insurance system work effectively. The second target is to control the increase in total costs of pharmaceuticals, meet the need for basic care, and ensure safety, quality, and affordability of the care. In this drug system, the practitioner will be regulated to sell the listed drugs by the purchase price, and will receive a high

percentage of reimbursement. This system regulates only a portion of pharmaceuticals. In this sense, it would effectively control a portion of the drug prices, but it would be rather doubtful whether the system will reduce the overall costs. As mentioned, a reform in payment schemes for practitioners within a hospital is also necessary in order to control total pharmaceuticals costs.

Regarding the third point, the emphasis is on the improvement of physical conditions and human resources at rural health facilities and urban local health facilities (community health centers). Such reform will improve the provision of primary health care both in urban and rural areas, which will improve the population's access to needed care. A challenge is how to finance the necessary funds for the reform. The central government needs to provide sufficient funds to poor regions in order to ameliorate the disparity in health between regions, and ensure access to basic necessary care for the entire population. In addition, the government needs to set up a salary scheme as well as career development systems for doctors working at the local facilities in order to attract qualified practitioners. The fourth target is to improve preventive or screening services. These services will be provided effectively in the reformed primary health institutions. The fifth target aims to restructure hospital management, and it stresses the importance of correcting the commercialization of hospitals. For that purpose, it proposes increasing the fiscal investment in public hospitals.

This reform plan indicates that the fiscal outlay of CNY 850 billion (about US\$125 billion) will be provided from 2009 to 2011, which will be financed both by central and local governments. Local governments are expected to provide 60% of the funds (Herd, Hu and Koen 2010). As discussed above, local governments have considerable responsibilities for fiscal expenditures, and in particular for fiscal health expenditures, in China. Fiscal capacities of local governments, especially lower-tier of local governments (counties), vary between localities. To improve the health disparity in China and ensure access for the entire population to needed care, the central government needs to take a substantial initiative in reforming the health system. The central government needs not only to present the grand reform plan, but also to provide the practical design of the new health system, covering the entire country, and necessary financial supports.

Appendix

Table A1: Summary of China's Insurance Programs

| Insurance program | Premium | Insurance fund | Medical account (MA) | Enrollment unit | Benefits | User fee |
|--|--|----------------------|------------------------|---------------------------|--------------------|----------------------------|
| Urban Employees' Basic Medical Insurance (UEBMI) | Employer, Employee | Pool at city level | The individual | Employee (the individual) | Inpatient | Deductible, Co-payment |
| | | | | | Outpatient from MA | |
| Urban Residents' Basic Medical Insurance | Subsidy of central and local govts, the individual | Pool at city level | (a) | The individual | Inpatient | Co-payment, (a) |
| | | | | | (a) | |
| New CMS | Subsidy of central and local govts, Household | Pool at county level | Type 1: none | Household | Inpatient | Co-payment, Deductible (b) |
| | | | | | Outpatient (b) | |
| | | | Type 2: none | Household | Inpatient | Co-payment, Deductible |
| | | | | | Outpatient (c) | |
| | | | Type 3: the individual | Household | Inpatient | Co-payment, Deductible |
| | | | | | Outpatient from MA | |

Source: Author's compilation based on information from the Decision of the Establishment of the Urban Employee Basic Medical Insurance Program (1998), The View on the Pilot Programs on the Urban Resident Basic Medical Insurance Program (2007), The Notice of the Establishment of New Cooperative Medical Scheme (2003), Wagstaff et al. (2009), and OECD (2010).

Note:

- (a) It is not clear whether a medical account scheme is applied in any URBMI scheme. Accordingly, it is not clear whether this program includes reimbursement for the expenditure of outpatient care.
- (b) The expenditure for outpatient care is reimbursed with the deductible that increases with the level of the hospital.
- (c) The reimbursement for the expenditure of outpatient care is limited to selected chronic diseases.

References

- Ahmad, Ehtisham, Raju Singh, Mario Fortuna. 2004. *Toward More Effective Redistribution: Reform Options for Intergovernmental Transfers in China*. IMF Working Paper.
- Anson, Ofra and Shifang Sun. 2005 *Health Care in Rural China: Lessons from HeBei Province*. Ashgate Publishing Limited, England.
- Bahl, Roy. 1999. *Fiscal Policy in China: Taxation and Intergovernmental Fiscal Relations*. The 1990 Institute, CA, USA.
- Blumenthal, David and William Hsiao. 2005. "Privatization and its Discontents – The Evolving Chinese Health Care System," *The New England Journal of Medicine*, Vol. 15: 1165-70.
- Dabla-Norris, Era. 2005. *Issues in Intergovernmental Fiscal Relations in China*. IMF Working Paper.
- Herd, Richard, Yu-Wei Hu, and Vincent Koen. 2010. *Improving China's Health Care System*. Economic Department Working Papers No. 751, Paris: OECD.
- Hu, Shanlian, Shenglan Tang, Yuanli Liu, Yuxin Zhao, Maria-Luisa Escobar, and David de Ferranti. 2008. "Reform of How Health Care is Paid for in China: challenges and opportunities," *Lancet*, 372: 1846-53.
- Li, Lian Hua. 2004. "Iryo Hoken Kaikaku (in Japanese) (Medical Insurance Reforms)," in Hidenori Tada (eds.) *Gendai Chugoku no Shakai Hosho Seido (in Japanese) (The Social Security System in China)*, Ibaraki, Japan: Ryutsu Keizai Daigaku Syuppankai.
- Liu, Xiao Mei. 2002. *Chugoku no Kaikaku Kaihou to Shakai Hosho (in Japanese) (The Economic Reforms and Social Security Systems in China)*, Tokyo: Shoubun Sya.
- Maruyama, Shiko. 2009. "Australia: Kouteki Bumon to Minkan Bumon no Heiyou (in Japanese) (The case of Australia: Applying both Public Providers and Private Providers to the Health System)," in Masako Ii (eds.) *Asia no Iryo Hosyou Seido (in Japanese) (Health Systems in Asia)*, Tokyo, Japan: Tokyo Daigaku Syuppankai.
- Mei, Hong and Xiaolin Wang. 2006. *China's Budget System and the Financing Education and Health Services for Children*, Paris: United Nations Children's Fund (UNICEF).
- Ministry of Health, China. 2003. *The Notice of the Establishment of New Cooperative Medical Scheme*, Ministry of Health, PRC.
- 2008. *The Report on Health Development in 2007*, Ministry of Health, PRC.
- Ministry of Health, Foreign Loan Office. 2002. *Basic Health Service Project (Health VIII & Health VIII Support Project): Report on Phase One Review*, Foreign Loan Office, Ministry of Health PRC.
- Ministry of Labour and Social Security. 1998. *Decision of the Establishment of the Urban Employee Basic Medical Insurance Program*. Ministry of Labour and Social Security, PRC.
- 2007. *The View on the Pilot Programs on the Urban Resident Basic Medical Insurance Program*, Ministry of Labour and Social Security, PRC.
- Naito, Jiro. 2004. *Chugoku no Seihukan Zaisei Kankei no Jittai to Taiou (in Japanese) (The*

- Present State and Handling of Intergovernmental Fiscal Relations in China), Nihon Tosho Center, Japan.
- Nakagane, Katsuji. 1999. *Chugoku Keizai Hattenron* (in Japanese) (Economic Development in China), Yuhikaku, Japan.
- National Development and Reform Commission. 2009. *Opinions of the CPC Central Committee and the State Council on Deepening the Health Care System Reform*. 8 April 2009, China.
- OECD. 2006. *Challenges for China's Public Spending – Toward Greater Effectiveness and Equity*, Paris: OECD.
- . 2010. *OECD Economic Surveys China: Chapter 8 Improving the Health Care System*, Paris OECD.
- Uchimura, Hiroko. 2009a. “What is the Role of Public Finance in Health and How Should it be Fulfilled?: A Study of China,” in Hiroko Uchimura (eds.) *Making Health Services More Accessible in Developing Countries*, UK: Palgrave Macmillan.
- . 2009b. “Chugoku: Seido Saikouchiku to Iryo Kakusa Syukusyuu heno Mosaku (in Japanese) (China: Restructuring the Health System Toward Reducing the Disparity in Health),” in Masako Ii (eds.) *Asia no Iryo Hosyuu Seido* (in Japanese) (Health Systems in Asia), Tokyo, Japan: Tokyo Daigaku Syuppankai.
- , and Johannes Jütting. 2009. “Fiscal Decentralization, Chinese Style: Good for Health Outcomes?” *World Development*, Vol. 37, No. 12:1926-1934.
- Wagstaff, Adam, Magnus Lindelow, Shiyong Wang, and Shuo Zhang. 2009. *Reforming China's Rural Health System*. The World Bank, Washington, D.C.
- Wang, Feng and Andrew Mason. 2005. “Demographic Dividend and Prospects for Economic Development in China,” Paper prepared for *UN Expert Group Meeting on Social and Economic Implications of Changing Population Age Structure*, Mexico City, August 31-September 2.
- Wang, Xiaoling. 2006. “Public Expenditure in the Education and Health Sectors,” in Hong Mei and Xiaoling Wang (eds.) *China's Budget System and the Financing of Education and Health Services for Children*, Paris: United Nations Children's Fund (UNICEF).
- WHO. 2004. *Implementing the New Cooperative Medical Schemes in Rapidly Changing China*, Office of the World Health Organization Representative in China.
- Wong, Chack-kei, Vai lo Lo and Kwong-leung Tang. 2006. *China's Urban Health Care Reform*, Lanham: Lexington Books.
- Wong, P.W. Christine. 1997. “Overview of Issues in Local Public Finance in PRC,” in Christine P.W. Wong (eds.), *Financing Local Government in the People's Republic of China*. Oxford, New York: Published for the Asian Development Bank by Oxford University Press.
- , and Richard M. Bird. 2008. “China's Fiscal System: A Work in Progress,” in L. Brandt, and T.G. Rawski (eds.), *China's Great Economic Transformation*. NY: Cambridge University Press.

- World Bank. 1997. *China 2020: Financing Health Care*, Washington: World Bank.
- 2002. *China National Development and Sub-national Finance: A Review of Provincial Expenditures*. Report No. 22951-CHA, The World Bank.
- 2005. *Public Expenditure and the Role of Government in the Chinese Health Sector*, Briefing Note No. 5, May 2005, Washington: World Bank.
- Xiao, Caiwei. 2007a. "The Ageing of Population and its Implications in China," Country Paper, *Seminar on the Social, Health and Economic Consequences of Population Ageing in the Context of Changing Families*, Bangkok, 25-27 July 2007.
- 2007b. "Population Ageing and the Policies of China," *China National Committee on Ageing*, Sydney, 30 October 2007.
- Yip, Winnie and William C. Hsiao. 2009. "Non-evidence-based Policy: How effective is China's new cooperative medical scheme in reducing medical impoverishment?" *Social Science & Medicine*, 68: 201-209.
- Zhang, Jixun. 2001. *Gendai Chugoku Shakai Hosyo Ron* (in Japanese) (Social Security in China), Japan: Soseisya.
- Zhu, Chen. 2009. "Launch of the Health-care Reform Plan in China," *Lancet*, Vol. 373.
- Zhu, Si Lin. 2004. "Zaisei Kaikaku to Chuou Seihu no Aratana Yakuwari (in Japanese) (Reforms of Public Finance and New Role of Central Government)," in Hidenori Tada (eds.) *Gendai Chugoku no Shakai Hosho Seido* (in Japanese) (The Social Security System in China), Ibaraki, Japan: Ryutsu Keizai Daigaku Syuppankai.

