Towards a More Resilient Society: Lessons from Economic Crises

Report of the Social Resilience Project
October 2010

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Foreword

Two major economic crises have hit the Asia-Pacific region in the past 13 years. Our society has to be resilient against these economic shocks. To facilitate discussions on the development of social safety nets in this region, the Japan National Committee for Pacific Economic Cooperation (JANCPEC) launched the Social Resilience Research Project (SR Project) in 2009 as a PECC international project.

The SR Project consists of four teams – pensions, medical insurance, unemployment insurance, and macro analysis of savings/consumption – and each team comprises two to seven research members. This is the first time that PECC has addressed these particular social issues; heretofore it has been exclusively concerned with measures to liberalize and promote trade and investment.

JANCPEC held the PECC International Workshop on the Social Resilience Research Project on March 4-5, 2010 to compile an interim report for this project. Attended by a hundred people from industry, government, and academia, the workshop was successful in soliciting comments from various perspectives and further deepening and refining our research activities.

This report, including policy recommendations and individual research papers, is the final output of the SR Project's first year. The report's findings will be reported to the 19th PECC General Meeting, and might also be reflected in the policy recommendations considered during APEC 2010 Yokohama.

In 2010 APEC will be meeting in Japan for the first time in 15 years. The international community has high expectations of Japanese leadership, and JANCPEC would thus like to contribute to APEC activities via the SR Project in order to realize APEC's growth strategies.

The views expressed herein are the personal views of the individuals indicated, and do not necessarily reflect the views of PECC. However, I hope that these inputs will prove useful in illuminating the way ahead for the region and APEC.

In closing, I would like once again to express my heartfelt gratitude to the SR Project members for their enthusiastic commitment to this study and their immense contributions to this project as well as to the many people who worked so hard in preparing this report.

October 2010

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Executive Summary

I. Introduction

A financial crisis of a "once-in-a-century" scale has struck at the underpinnings of social safety in the Asia-Pacific region. The earlier 1997-98 crisis saw vigorous debates over social safety nets, but these debates quickly faded after 2003 because, with Asia's export markets in Europe doing well at the time, the crisis was overcome simply by pursuing the liberalization of investment and trade. The situation this time is different in the sense that market conditions in Europe and the US are worse than in Asia, inspiring little hope for economic growth by relying on exports to these economies. On the other hand, we are in a similar situation to the previous financial crisis in that the debates over social safety nets are about to fade again as the economy in this region starts to recover, led by the robust development of emerging markets in Asia. Many economies in this region are gaining economic impetus by increasing exports to developing Asian economies.

Economic crises have hit our economies almost every ten years during the past two decades. Being aware that we must consider not only economic rescue policies in the short term but also the resilience of infrastructure against frequent economic crises in the long term, we launched the Social Resilience Research Project (SR Project) last year as a PECC International Project. Discussing policies and economic models tailored to the new structure within the context of a major paradigm shift from export-led growth to domestic demand-led growth is also of significance. Both APEC and Asia must have been aware after experiencing this worldwide financial crisis that export-led growth relying on a certain big economy is fragile and that domestic demand needs to be expanded for solid economic growth. A system of efficient social safety nets functions to increase consumption instead of savings and helps boost domestic demand.

The SR Project is designed to shed light on the importance of social safety nets and to closely examine the mechanism of their roles in the domestic economy. This topic has never been discussed in depth among APEC economies. Overly focused on the liberalization of investment and trade, APEC has let slip opportunities to discuss the sense of security of those persons who underpin liberalization and brisk domestic demand as well as social safety nets for them in connection with a major paradigm shift toward the construction of a resilient model for sustained economic growth. In this regard, the SR Project is a very good opportunity to focus more on the social and living conditions of people and to share good or bad practices for social safety nets in the Asia-Pacific region. Comparative research on the actual status of Asian social safety nets would definitely be useful if we are to make our society more resilient against economic crises that may occur again in the future.

The SR Project has a four-fold focus: the pension systems, medicare systems, and unemployment insurance systems in the Asia-Pacific region, and a macro analysis. A working team was formed in each field, and research members on each team pursued studies, collaborating with each other while focusing on their own subjects. An interim research report was made during the PECC International Workshop on Social Resilience Project held in Tokyo on March 4-5, 2010. The head of each working team as well as team members presented their research findings and received advice and suggestions from commentators and participants. Having summarized the discussions at the very successful and useful Workshop and recognized their next tasks and future directions, each working team continued its respective research, incorporating and referring to the comments and suggestions made at the Workshop; a final report was then completed and is to be submitted to the leaders of APEC.

The economies in this region are recovering steadily, and now is the time to pay more attention to organizing domestic social safety net systems. Instead of missing this opportunity again as we did in the late 1990s, we should highlight the significance of constructing a resilient society and take action as soon as possible. Not enough time remains for most Asian economies, which are aging rapidly. Many economies in Asia will face the population onus period within 30 years, though they are now enjoying a population bonus. Korea, China, Thailand, and Singapore will fall into the population onus period in 2015-25, and Vietnam, Malaysia, and Indonesia in 2025-40. Before these economies experience the population onus period and during the period of population bonus when economies can gain more economic resources, they should establish secure systems of social welfare, including pension and health care, and prepare for aging societies.

II. Team Report

1. Pension System Team

The pension team submitted four papers. The paper written by Professor Mukul Asher from the National University of Singapore focuses on how the pension arrangements can be improved in Asia-Pacific economies to enhance social resilience. Enhancing social resilience in Asia-Pacific economies would require that pension reforms be regarded as being integral to overall economic, social and political management of an economy rather than being of secondary concern. Moreover pension reforms will require complementary reforms in other areas such as fiscal policies, labor markets and financial and capital markets.

There are several factors that have increased the urgency of conventional and innovative initiatives concerning pension policies and processes with the objective of making pension promises more credible in Asia-Pacific economies. First, Asia-Pacific economies are exhibiting rapid population aging arising from declining fertility rates, and increasing longevity. Second, increasing informalization of the labor market relationship requires innovative approaches,

including better designed and funded social pensions, to extend pension coverage. Third, rapid aging as well as accelerating industrialization and urbanization in Asia-Pacific economies are expected to increase the resources, both public and private, needed for pensions and for health care. Fourth, pension arrangements for cross-border workers have acquired greater importance as their numbers grow, and because of opportunities to take advantage of potential demographic complementarities between low fertility economies and those economies where the ratio of the working age population to total population is still rising.

The urgency of pension reforms has increased but the 2008 global crisis has made this task even more complex, primarily due to its adverse impact on medium-term growth and on fiscal sustainability. The global crisis also led to a considerably less benign environment for generating returns from pension assets. Pension reforms will also need to accommodate global concerns about the nature of current economic growth, as environmental issues gain greater prominence and the social and human costs of conventional growth patterns that assume ever rising consumption of goods and services per person become more evident.

Professor Asher argues that each Asia-Pacific economy would need to construct a pension reform package suited to its own policy objectives and economic, fiscal, and institutional capacities. Major elements of such a package for each economy would include a differing mixture of greater competence or professionalism in performing core functions of provident or pension fund organizations; parametric and systemic reforms; budget-financed retirement income transfers; creation of a labor market environment in which some retirement income could be obtained by the elderly from remunerative economic activities; conversion of home equity into retirement income streams; and the use of microfinance to develop micro-pension products. Healthcare measures and habits that enable individuals to resist the onset of geriatric diseases should acquire greater prominence, if the elderly are to be able to participate in remunerative economic activities.

In constructing context-specific pension reform packages, the Asia-Pacific economies would need to pay considerable attention to, and be open to, innovations in pension design and delivery systems. The reversibility issue in pension design would also need to be addressed. Construction and maintenance of robust databases, strong analytical capabilities, appropriate organizational structures and mindsets, and understanding of the subtleties of pension economics (particularly sustainability over a long time-horizon, the tyranny of seemingly small numbers exerting a powerful impact on pension scheme viability) will also be needed. It is vital that provident and pension fund organizations publicly communicate to stakeholders stochastic actuarial assessments providing long-term projections of the impact of changes in demographic, labor market, and other variables on the sustainability of current pension arrangements. The importance of social pensions financed from budgetary resources, requiring fiscal and public service delivery capacities, would need to be recognized.

As the single most important macroeconomic variable in social resilience is the

medium-term trend in economic growth, which is widely shared among the population groups, the task of sustaining such growth without undermining the environmental and social capital of societies merits serious consideration. This will require much greater emphasis on indigenous capacity for rigorous pension policy research, and the willingness of policymakers to incorporate research findings into pension design and processes.

The second paper, written by Mr. Cagri Kumru and Professor John Piggott from the University of New South Wales, Australia, points out that throughout the developed world, pay-as-you-go (PAYG) social security was the backbone of retirement income support for most of the 20th century. Over the last two decades or more, however, governments everywhere have retreated from their unsustainable promises, as they try to balance adequate retirement benefits against manageable tax burdens and fiscal stress. The trigger for this tension has been a demographic shift. Pay-as-you-go plans worked well when labor forces were always growing relative to retired populations. The prototypical social security plan is a Ponzi scheme in which ever-increasing human resources are required for sustainability.

Retirement financing has become the battleground for social resilience. It is imperative that at least the less well-off elderly receive government assistance, since they have few resources, neither human capital nor financial or real assets. However, funding all the retired adequately requires tax rates on the working population that will test social cohesion. Most governments have coped with this by reducing benefits surreptitiously – reducing survivor benefits, for example, or altering indexation arrangements. Such changes provide short-term political relief, but do little in the long term to buttress social resilience – the beneficiaries of survivor benefits, for example, are likely to be among the oldest and poorest in the retired pension community.

With this scene setting in mind, the Australian paper re-visits means-testing as a policy option. Means-testing has a surprisingly bad connotation among policy makers worldwide. The main reason for summary rejection of this policy paradigm is that the marginal tax rates faced by those from whom a benefit is being withdrawn are usually very high. However, the Australian authors will argue that this has been overblown, and that, in fact, the distortions and adverse impacts on consumer choice from a means-tested program may be less than those associated with a typical social security program.

The case for means-testing has been strengthened in recent years not only by the imperatives of demographic transition, but also by new analytic insights that indicate that a means-tested program may in fact be second-best optimal. If this is true, then means-tests, which, when they do crop up, are typically very crude, will require detailed attention to optimize their design impact. Means-test design has received virtually no attention either by academic researchers or by policy-makers, and their potential has not yet been anywhere near realized.

The paper written by Dr. Hyung-Pyo Moon from the Korea Development Institute briefly examines the current social issues in Korea and discusses agendas and suggestions on a new social policy. Korean society is currently faced with new challenges such as rising income

inequality, declining social mobility as well as rapid population aging. Furthermore, increasing social instability calls for the government to intervene in a more active and preemptive manner in its social policy stance. In particular, policy priority should be placed on the reinforcement of a basic social safety net to restore the eroding middle-income class. This paper suggests the challenges and strategies for social policies, including social welfare, labor, education and old-age income security, that should be emphasized in the process of developing and implementing the policy.

The Korean paper emphasized that the new social policy should be geared toward preemptive social investment and system improvement to counter potential risks and enhance individual progress. In order to accomplish these policy goals the government should pursue three driving strategies: a preventative and investable approach, a user-oriented integrated approach, and a life-cycle approach. Under these basic concepts, the major policies in each sector suggested in the Korean paper can be summarized as follows. First, it is crucial to reinforce the basic social safety net and expand the coverage of social insurance and public assistance programs. Second, it is important to guarantee equal education opportunities through the qualitative improvement of public education and reduction in the cost of private education. Third, it is necessary to allow for equal opportunities at the starting line through aggressive early investment policies. Fourth, policies that promote quality and creation of jobs should be pursued as well as sustained. Lastly, to counter increasing longevity risk, it is urgent to expand the pension coverage and compliance of the challenged groups, including atypical workers and the self-employed.

The paper written by Professor Noriyuki Takayama explains how the social security pension system has developed in Japan, where its current coverage is nearly 100 percent, including the self-employed and full-time housewives. He argues that development of the Japanese system looks like a dividend from economic growth, and that it was attained through strong political will. Both demographic and economic factors in future Japan will probably impose greater stresses on social security pension programs, which are based on pay-as-you-go defined-benefit financing. Japan has virtually made major pension reforms every ten years to contain increasing costs while assuring adequate income after retirement. The future picture is yet uncertain.

2. Medicare System Team

Medicare system team examined health insurance systems of Japan and China. The first paper written by Dr. Miho Sekimoto and Professor Masko Ii illustrates Japan's health insurance system and the second paper prepared by Dr. Etsuji Okamoto analyses the role of Japan's National Health Insurance in insuring the indigent population and balancing the income inequality. Ms. Hiroko Uchimura wrote the third paper which explains the status and problems of China's health systems including the recent development of health insurance policies.

(1) Japan's Health Insurance System (by Dr. Miho Sekimoto and Professor Masko Ii)

Since World War II, many developing economies tried to introduce a healthcare system similar to those that had already been in place in developed economies.   However, such a system has often tended to aim at people living in urban areas but not at those living in rural areas. Unlike many of these developing economies, Japan had already introduced a kind of universal health insurance system, though mostly pro forma, at the end of the 1930's and introduced a more genuine universal insurance system in the early 1960's, which is still evolving. In light of the above, developing economies that in the process of moving from a partial health care system to a universal system would benefit significantly from drawing on the Japanese experiences in this regard.

A distinctive feature of Japan's experience is that mandated social health insurance was attained at a time when people not employed in the formal sector comprised a large proportion of the total population. The origin of the health insurance system in Japan dates back to the early 20th century.   The Factory Law, which aimed to protect factory workers, was introduced together with the rise of modern industry in Japan.   About 30 years later, the National Health Insurance Law was enacted, the purpose of which was to insure the general population in rural areas, mainly farmers.   To implement this insurance system, each municipality formed a National Insurance Association and became an insurer.   The general population in rural Japan had a sense of solidarity that had been developed through irrigation and rice-farming activities in each village, which created a sense of local community and mutual assistance.   Such a sense of local community suited the scheme in which the municipality was the insurer and contributed to the implementation of the social health insurance system targeting farmers.   After the Second World War, the social health insurance system was restructured and attained formal universal coverage. The social insurance system ensures equitable access to health care services for the whole population in Japan.

The present social health insurance system, however, needs to be reformed to respond to emerging issues.   In addition to the insurance premium, general tax revenues also fund the insurance fund in Japan, which is a common feature in developing economies.   This mixed system has caused problems in the role of insurers.   The role of insurer should be clearly and appropriately designed, and who has the responsibility for the balance of the insurance fund also should be clarified.   In addition, Japan's experience in struggling to respond to the ageing population will also provide suggestions to some developing economies that are predicted to face aging problems in the near future.

(2) 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 (by Dr. Etsuji Okamoto)

Guaranteeing a universal coverage of health insurance to all population including the

indigent requires an effective income redistribution mechanism in the health insurance system. Two options are available: one is an ample subsidy from the tax revenue and another is an income-metered premium structure. In case of Japan, the first is implemented by the Livelihood Protection Act with means-testing and another is implemented by municipal National Health Insurance system. These two systems are closely related because indigent people migrate between the two systems because a majority of households of municipal National Health Insurance (NHI) have no reported income and are always at the verge of poverty. The municipal NHI has an income redistribution mechanism but its redistribution effect is weakened by the premium cap on high income households. How much of the income redistribution effects are weakened vary from municipality to municipality, but insurers must monitor and evaluate income redistribution effects carefully. The author proposed a formula to calculate the % of the premium "waived" for high income households. The government also monitors the income redistribution effects of the overall social security system and taxation by a questionnaire survey every three years. Although the accuracy of the survey is questionable due to the small sample size, there is a consistent trend of a widening gap between the rich and poor. Such widening gap is mitigated by the income redistribution effects of social security and the Lorenz curves suggest that municipal NHI overall considerably reduces the income inequality as measured by Gini coefficients through premium and health care benefit. But when one looks at municipal NHI particularly, one recognizes that the redistribution effect does not work above a certain income level (five million yen) because of the premium cap. Japan's experience of municipal NHI with its premium policy provides a useful tool for designing and evaluating the health insurance premium scheme for effective income redistribution and thereby achieving a universal coverage.

(3) Health System Reforms in China: Is Universal Coverage Enough to Solve the Problems? (by Ms. Hiroko Uchimura)

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 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 analyzes challenges in China's health system and proposes possible options to address the challenges.

3. Unemployment Insurance Team

In recent decades, unemployment has become a serious problem in East Asian economies, which were affected severely by the recessions stemming from the 1997-98 Asian financial crisis and the 2008-09 global financial crisis. Unemployment insurance (UI) is the most common public income support program for the unemployed in developed economies but it has been introduced in only about half of the economies in this region. The purpose of the UI Team, which produced five papers, is to share the experiences of the economies where UI has already been introduced and to consider the implications for the economies that have not yet introduced UI but aim to introduce it in the future as well as for the economies that have already introduced UI to make their societies more resilient together with other social security programs such as pensions and health insurance.

UI is considered to be a "luxury" good in developed economies. In fact, the incidence of UI is strongly related to the level of economic development.[1] However, as illustrated in Dr. Yasuhiro Kamimura's paper, which explores the characteristics of the labor market and unemployment insurance in East Asian economies, in East Asia it is neither related to per-capita GDP nor to the

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[1] Vodopivec, Milan (2004) *Income Support for the Unemployed: Issues and Options (Regional and Sectoral Studies)*, the World Bank.

share of the agricultural sector, suggesting that UI can be successfully introduced without a high level of industrialization if it is adequately implemented with sufficient consideration to economy-specific features. In East Asia, UI was introduced in Japan (1947)[2], China (1986, limited to urban areas), Korea (1995), Chinese Taipei (1999), Thailand (2004) and Vietnam (2007), mostly in recent years. This team examined in detail UI schemes in four economies (Japan, Korea, Chinese Taipei and Thailand), after compiling an overview of UI schemes in this region.

In developed economies, UI is provided together with pension and health insurance as social insurance. UI is publicly provided primarily because its functioning is affected by strong information asymmetries that give rise to moral hazard and adverse selection problems. UI provides good protection, enabling a relatively high degree of consumption smoothing, for all covered workers compared with other alternative income support programs for the unemployed such as unemployment assistance, public works and severance pay, acts as an automatic macroeconomic stabilizer, and encourages the emergence or expansion of more risky jobs or industries that may increase efficiency, though it has also been found to create reemployment disincentives and wage pressure, which increase the equilibrium unemployment rate and make unemployment persistent.[3]

Nonetheless, the standard OECD-style UI program in developed economies is unlikely to function well in developing economies faced with large informal sectors, weak administrative capacity, large political risk, and environments prone to corruption.[4] In developed economies, the UI program typically requires that workers and their employers pay contributions that, upon separation, entitle workers to unemployment benefits according to predetermined eligibility conditions. To qualify for benefits, the worker must satisfy the minimum covered employment or contribution requirement. Continuing eligibility requires that applicants are available for and willing to take a job and that they actively search for a job while unemployed. In industrialized economies, unemployment typically denotes that a worker who does not have his own means of production has lost his work. In this sense, unemployment is a "discrete" event: employed or unemployed. In developing economies, though, unemployment is a "non-discrete" event. A large proportion of the workforce is "partly unemployed" or underemployed and the entry to informal employment and exit from it is easy with low entry/exit costs. Workers cannot afford to be jobless and therefore they undertake any type of work, even work that leaves them underemployed. Consequently in low income economies, the unemployed are not necessarily poor. Enforcement of the standard continuing eligibility conditions of the OECD-style UI program, if applied to developing economies, would hamper self-protection by taking away informal jobs and underemployment. In addition, monitoring of the continuing eligibility conditions would be too

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[2] The numbers in parentheses show the year UI was introduced.
[3] Vodopivec (2004).
[4] Vodopivec, Milan (2009) "Introducing Unemployment Insurance to Developing Countries," *Social Protection Discussion Paper Series, No. 0907*, the World Bank.

costly, given the weak administrative capacity of developing economies.

The experiences of Thailand documented by Professor Yasuhito Asami provide a good example of the successful introduction of a UI program tailored to these circumstances in developing economies. Thailand introduced UI in 2004. Since then, the UI scheme has been generating healthy annual surpluses. It alleviated the plight of unemployed workers, at least to some extent, when the Thai economy was hit hard by the worldwide economic downturn in 2009, although it only covers workers in the formal sector. The main lessons from Thailand's experiences are as follows.

(1) *(Virtual) Exemption of informal sector work from disqualifying conditions for continuing eligibility*

As it is difficult for the Social Security Office to know who works in the informal sector, dismissed workers can continue to get unemployment benefits (UB) even after they start working in the informal sector, though they are formally disqualified from receiving UB. In other words, Thailand's UI is virtually designed on the assumption that many UB recipients would do part-time jobs in the informal sector during the period in which they receive UB.

(2) *Modest unemployment benefits with low premium rate*

The replacement ratio is 50% and the duration of UB is six months for involuntary separation. By making the duration shorter and the amount smaller, UI can maintain surpluses even with a low contribution rate (0.5% for both employees and employers). Many UB recipients do part-time jobs in the informal sector. Thus, even with modest UB they can continue to look for a decent job in the formal sector. Moreover, the small amount and short duration of UB give workers a strong incentive to search for a new job.

(3) *Co-existence with severance pay at initial stage*

Like many other developing economies, Thailand made it mandatory for employers to provide severance pay to laid-off workers. As there are significant overlaps in coverage, the mandatory severance pay system should be integrated into UI in the long run. However, the abolition of mandatory severance pay when introducing UI might complicate the negations on the design of UI. To start UI with modest UB without abolishing mandatory severance pay might be a practical way to introduce UI at an early stage of industrialization.

(4) *The best timing for the introduction of UI is the period of recovery from the global economic crisis*

Thailand introduced UI in 2004, seven years after the Asian financial crisis. It was the best timing, because the Thai economy was in good shape but people's memory of the social pain caused by the economic turmoil in 1997-98 was still vivid.

(5) *The introduction of UI is politically attractive*

It should be noted that the introduction of UI is likely to raise the popularity of political leaders who play a prominent role in its implementation.

(6) *Role of international organizations*

The feasibility studies conducted by international organizations such as the ILO, the World Bank and the Japan International Cooperation Agency turned out to be a very effective tool for the Ministry of Labor and the Social Security Office to persuade other government agencies and business leaders to agree on the introduction of UI.

The experiences of the economies that introduced UI in earlier years also shed light on important issues with which other economies may be confronted after the introduction of UI. In this regard, three economies -- Chinese Taipei, Korea and Japan – were examined respectively by Dr. Ke-Jeng Lan and Dr. Wen-Chi Chou, Dr. Myoung-Jung Kim, and Professor Naoki Mitani. In all these economies, UI was introduced in the 1990s or earlier and UI has been integrated with Employment Insurance (EI), together with Active Labor Market Programs (ALMPs).

In recent recessions, Employment Insurance played the expected roles in these economies of alleviating the plight of the unemployed with UB, preventing unemployment by preserving jobs and facilitating reemployment of the unemployed through various ALMP measures. Korea in particular was able to provide a large number of the unemployed with UB during the 1997-98 Asian financial crisis, which occurred just after the introduction of EI. Nonetheless, EI in these economies has been under pressure from recent structural changes in the labor market such as the increase in non-regular (non-standard) employees, together with aging and low fertility rates, which grew ever more serious during the 2008-09 global financial crisis. The implications of the experiences in these economies are as follows.

(1) *Public short-time work (STW) schemes played an important role in preserving permanent jobs during the 2008-09 global financial crisis*

Short-time work (STW) schemes are public schemes that are intended to preserve jobs at firms experiencing temporarily low demand by encouraging work sharing with subsidies to the firms or workers. To tackle the current job crisis, Japan and Korea conducted large-scale public STW programs as ALMPs and succeeded in preserving a large number of permanent jobs, particularly in Japan.[5] As the economic recovery gains momentum, it is important to begin phasing out these STW schemes so as not to hinder productivity-enhancing labor reallocation across sectors. As the experiences in OECD countries show that STW schemes tend to be most effective in the early phase of an economic downturn, it would be preferable to prepare them in advance, for example, by keeping a small but well-run STW scheme even in good times.

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[5] OECD (2010) *Employment Outlook: Moving beyond the Jobs Crisis*, OECD, Paris.

(2) *Larger safety net for non-regular workers*

      With growing shares of non-regular workers, Japan and Korea have made efforts to extend EI eligibility to vulnerable workers such as non-regular young employees and, in some cases, the maximum duration of benefits to provide better safety nets for such workers. However, such measures should be carefully designed so as to minimize adverse effects on work incentives that could lengthen the joblessness spell.

(3) *Assistance for the non-insured such as first-entry young unemployed workers without insurance records*

      Faced with the growing share of non-insured workers, reflecting labor market slackness and structural changes, social assistance financed by the government is needed to help the non-insured such as young unemployed who cannot find jobs after graduation. In economies such as Japan, where temporary measures that support the training and livelihood of non-eligible unemployed have already been implemented, it is desirable to perpetuate these measures.

(4) *Activation measures for UB beneficiaries*

      The negative effects of UBs on job search efforts or the duration of unemployment could be mitigated by activation measures such as frequent checks of active job search activities, intensive job-search assistance or the inclusion of training participation into the qualification conditions for UB. It should be noted, however, that putting in place such activation measures generally takes time, as it involves institutional changes associated with the operation of the PES, etc.

(5) *Evaluation of ALMPs*

      A variety of ALMPs are provided in these economies. Nonetheless, these ALMPs have rarely been evaluated, though more effective and systematized ALMPs are needed under strict budget constraints. The compilation of relevant statistics is necessary so as to conduct scientific evaluation of the programs.

      As mentioned above, the evidence in this research suggests that UI can be successfully introduced in East Asian economies without a high level of industrialization if adequately implemented. The period of recovery from an economic crisis is a good time to introduce UI or to improve EI as people have vivid memories of the social pain. These efforts will certainly enhance social resilience in this region.

4. Macro Analysis Team

      The Macro Analysis Team submitted two papers: (1) "The Determinants of Saving Rates in Developed and Developing Countries: The Impact of Social Safety Nets" by Professor Charles Yuji Horioka, and (2) "The Uncertainty of Public Pensions and Precautionary Saving in Japan—Evidence from the Micro Data of Close-to-retirement Households" by Professor Wataru

Suzuki and Dr. Yanfei Zhou.

In the first paper, Professor Horioka analyzes the determinants of saving rates in the developed countries of the OECD and the developing countries of Asia and found that the age structure of the population (especially the aged dependency ratio) and financial development (credit availability) are the most important determinants of saving rates in both developed and developing economies and that the development of social safety nets and income levels are also important in some cases.

Turning to the policy implications of those findings, the apparent absence of a clear relationship between social safety nets and saving rates implies that improving social safety nets will not necessarily reduce household saving rates and stimulate consumption, but doing so may be desirable in any case because it will obviate the need for households to worry about unexpected contingencies, retirement security, etc., thereby enhancing household welfare. Moreover, a finding that financial development is more important as a determinant of saving rates implies that the development of capital markets (and the relaxation of borrowing constraints) will alleviate the need for precautionary saving (self-insurance), which is very inefficient, and serve as a partial substitute for the development of social safety nets, especially in economies with underdeveloped social safety nets, leading to lower saving, higher consumption, and higher household welfare. Thus, a two-pronged approach of simultaneously developing social safety nets and private capital markets may be the most effective way to enhance household consumption and welfare.

Using households' anticipated percentage/value changes of public pensions with respect to the present benefit level as proxies for public pension uncertainty, the second paper investigates the impact of public pension uncertainty on wealth accumulation by close-to-retirement Japanese households. A principal econometric finding is that households' financial wealth holdings are positively and significantly related to public pension uncertainty for various measures of wealth and both uncertainty proxies. It is also found that households discount future pension benefits much more heavily than the government's planned pension cut. Simulations suggest that approximately 10% of the net financial assets and 5% of the gross financial assets of close-to-retirement households are held as a precaution against public pension uncertainty. These findings are in accordance with the precautionary saving model and provide supportive evidence for the hypothesis of excessive saving and wealth accumulation by elderly Japanese households.

III. Policy Recommendations

Having acknowledged long-term projections of the impact of changes in demographic, labor market, and other variables on the sustainability of current pension arrangements, each Asia-Pacific economy would need to construct a pension reform package suited to its policy objectives and its economic, fiscal, and institutional capacities in order to enhance social resilience.

Much greater emphasis on indigenous capacity for rigorous pension policy research and the willingness of the policymakers to incorporate research findings into pension design and process will be required. It should also be borne in mind that the new social policy should be geared toward preemptive social investment and system improvement to counter potential risks and enhance individual progress.

A growing number of economies in the Asia-Pacific region are making efforts to develop a national health insurance with universal coverage. Having gone through the pains of development later than Western economies but earlier than other Asian economies, Japan's experience in designing its health insurance system might have important implications for setting-up a national health insurance system in developing economies.

Health policy makers and the general public 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. 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.

For economies that have unemployment insurance, it is recommended that they reform their respective schemes and adequately cover people who are really in need of social protection. Economies such as Hong Kong (China), Singapore, Malaysia, the Philippines, and Indonesia that do not yet have unemployment insurance systems could consider introducing unemployment insurance or strengthening other schemes that would suit their situations. These efforts will certainly enhance social resilience in this region.

The period of recovery from an economic crisis is a good time to introduce unemployment insurance or to improve employment insurance as people have vivid memories of the social pain. For developing economies that want to have an unemployment insurance system, Thailand's successful introduction of such a system would be a good example. Economies in this region could learn a lot from the experiences of the economies that introduced unemployment insurance in earlier years, such as Japan, Korea, and Chinese Taipei.

Improving social safety nets may be desirable in any case because it will obviate the need for households to worry about unexpected contingencies, retirement security, etc., thereby enhancing household welfare.   The development of capital markets will alleviate the need for precautionary saving (self-insurance), and serve as a partial substitute for the development of social safety nets, leading to lower saving, higher consumption, and higher household welfare.   Thus, a two-pronged approach of simultaneously developing social safety nets and private capital markets

may be the most effective way to enhance household consumption and welfare.

As one important macroeconomic variable in social resilience is the medium-term trend in economic growth, which is widely shared among population groups, the task of sustaining such growth without undermining a society's environmental and social capital merits serious consideration.

When discussing social security schemes including pensions, medical insurance, and unemployment insurance, needless to say, we should keep in mind that since these schemes are interrelated and intertwined, the so to speak horizontal approach to the issues is of critical importance; namely while conducting research and analysis on each scheme, we must study the schemes in totality and in a comprehensive manner.

We also recognize that there are no panaceas applicable for any economy and in any time. What we have engaged in is to collect and share good practices and bad practices with a view to enhancing resilience of societies, not to impose any fit for all solutions on anyone.

To promote policy innovation, it is essential to compile comparable and longitudinal data relevant to social issues; for this purpose, it is expected that the StatsAPEC will be upgraded to the level of the Eurostat in the EU.

APEC also needs to take up social resiliency issues and consider what infrastructure resilient against economic crises we can establish in the Asia-Pacific region's economies. A working team should be formed to discuss how to make our society more resilient against economic crises and to design effective social policies for the economies of this region.

1. Pension System

Making Pension Promises More Credible in Asia-Pacific Economies

Mukul G. Asher[*]

1. Introduction

The Pacific Economic Cooperation Council (PECC) has initiated a project on Social Resilience which comprises four elements – pension, medical insurance, unemployment insurance and macro analysis on savings/ consumption, to provide policy suggestions for the 2010 APEC meeting in Japan (Japan Institute of International Affairs, 2010). This paper focuses on how the pension arrangements can be improved in Asia-Pacific economies to enhance social resilience.

The need to strengthen pension systems in Asia-Pacific has been evident since at least the 1997-98 Asian financial crisis. As the economic recovery was swift and robust, the initial efforts to strengthen social protection systems made to address the crisis were not sustained in many parts of Asia. The dominant thinking that Asia should concentrate on high economic growth, and not construct robust social protection systems therefore continued among the policymakers and influential stakeholders.

The current global crisis is once again leading to intense focus on pension reforms as credibility of pension promises has come under scrutiny. As the crisis is global, and has underlined the urgent need for structural as well as financial sector reforms, it is hoped that the focus on making pension promises more credible will not be short -lived.

The main objectives of any pension system security are consumption smoothing over an individual's lifetime; insurance (particularly against longevity and inflation risks); income redistribution for society as a whole; and poverty relief. However, these have to be traded off against economic growth, labor market efficiency. As resources devoted to social protection have opportunity costs, needs of groups other than the elderly in society, and other needs such as health, education, and infrastructure, have to be traded off against allocations for retirement.

Individual, fiscal, and societal affordability should also be considered when constructing and reforming pension systems. It should be emphasized that the trend of rate of economic growth is among the most important macroeconomic variable impacting on economic security of both young and the old, provided growth is shared widely among different income groups and regions. Moreover high rate of growth in employment, particularly in the formal sector where workers are more likely to receive pension and health care benefits, has traditionally been the instrumental factor leading to expanding coverage of the labor force.

This paper discusses the implications of the Global Crisis for the pension systems and

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suggests an avenue for strengthening the pension system with a view to increasing the credibility of pension promises in Asia-Pacific Economies. The rest of the paper is organized as follows. Main implications of the 2008 global crisis for the pension systems in Asia-Pacific economies are indicated in Section 2. This is followed in Section 3 by analysis of the demographic and labor market trends and their implications for the pension systems in Asia-Pacific economies. The trends portray rapid ageing, and strong tendencies towards informalization of employer-employee relationships, increasing the complexity and scope of pension reform challenges. A brief overview of current pension systems in Asia-Pacific economies is provided in Section 4. This is followed by discussion of possible avenues to make pension promises more credible. As the discussion of these avenues is by necessity fairly general, each Asia-Pacific economy would need to construct pension packages combing elements from different avenues keeping in view the starting point, the policy goals, and its economic, institutional and other capacities. The final section provides the concluding observations.

2. Implications of the 2008 Global Crisis on Pension Systems

The 2008 global economic crisis is arguably among the most severe since the Great Depression of the 1930's (IMF, 2010). The crisis has increased the need for strengthening the pension systems in the Asia-Pacific economies, but has simultaneously made the task of sustaining robust, adequate, and equitable pension systems accessible universally even more complex and difficult. The crisis is expected to have a significant medium to long term economic, financial, and social impact globally. For the pension promises in Asia-Pacific, the following impacts of the crisis are of particular relevance:

Reduction in medium term growth rate, which is the single most important macroeconomic variable impacting on the economic security of both the young and the old (IMF, 2010).

Adverse impact on the pace and quality of jobs and livelihoods creation (see Section 3).

Potential rise of the cost of debt refinancing (particularly for highly leveraged economies) as sovereign debt risks have risen. This is indicated by the widening sovereign CDS (credit default swaps) spreads for many European economies. As an example, between August 3 and August 12, 2010 the spread for Ireland rose by 41 percent to 282 basis points (The Financial Times, London, August 14-15, 2010, p-16). Another indication of the concern is that the US federal government issued debt in 2009, which was about equal to the debt issued in six proceeding years; and in 2010, the 2009 debt issue level is expected to be exceeded (The Financial Times, London, August 14-15, 2010, p-15).

The global crisis is expected to adversely impact the growth of remittances flows (Ratha et al, 2008). This is relevant as in many Asia-Pacific economies such as the Philippines, Vietnam, and Thailand; the inward remittances constitute an important part of the social safety nets for both the young and the old persons.

Potentially lower medium term real investment returns on pension assets (Pino and Yermo,

2010).

Aggressive fiscal and monetary stimulation could lead to inflation, constraining fiscal space for expanding social safety nets (IMF, 2010).

On the positive side, the global crisis provides an opportunity to extend pension systems and social safety nets as an important component of rebalancing the economies (IMF, 2010). Linking of rebalancing with expansion of pension coverage however will be a complex process which will take a decade or more. It will also need to accommodate the global concerns about the existing nature of economic growth, as environmental issues have gained greater prominence, and social and human costs of conventional growth patterns which assume ever rising consumption of goods and services per person become more evident.

3. Demographic and Labor Market Trends

Demographic and labor market trends constitute the essential context within which policies and programs to make pension promises more credible must function. Tables 1A to 1C provide selected demographic indicators based on projections by the United Nations (2008) for Asia-Pacific economies. The demographic trends suggest rapid ageing in the region due to declining fertility rates and increasing longevity. In 2030, the number of persons above 60 years of age in the World is projected to be 1.8 times the corresponding number in 2010, but for Asia it is expected to double. In some Asia-Pacific Economies such as Singapore, Vietnam, Malaysia and Philippines the growth in number of population above 60 years of age between 2010 and 2030 is projected to more than double. In 2010, Asia's share of World population aged 60 or over was 54 percent, but by 2030 it is projected to be 60 percent, implying more rapid ageing in Asia (Table 1A). Asia will also exhibit more than doubling of the population above 80 years of age. Asia-Pacific economies will continue to exhibit among the highest life expectancy in the World (Table 1B). The above trends imply that not only each person will need to be supported in old age for a longer period, but health care expenditure increase disproportionately with increases in longevity (Fuchs, 1998), the total resources needed to support each individual in retirement will also increase substantially.

Table 1A: Asia-Pacific Economies: Selected Demographic Indicators

Economy	Total Population (million)		Population aged 60 or over (million)		Population aged 80 or over (million)	
Year	2010	2030	2010	2030	2010	2030
World	6,909	8,309	759.1 (11.0)	1370.4 (16.5)	105.6 (1.5)	194.2 (2.3)
Asia	4,167	4,917	413.6 (9.9)	821.2 (16.7)	47.3 (1.1)	99.2 (2.0)
Asia-Pacific Economies						
Australia	22	26	4.2 (19.5)	6.8 (26.5)	0.8 (3.9)	1.5 (6.0)
Brunei	0	1	0.0 (5.8)	0.1 (13.5)	0.0 (0.5)	0.0 (1.2)
China	1,354	1,462	166.5 (12.3)	342.3 (23.4)	19.3 (1.4)	40.9 (2.8)
India	1,214	1,485	91.7 (7.5)	184.6 (12.4)	8.1 (0.7)	18.0 (1.2)
Indonesia	233	271	20.8 (8.9)	43.4 (16.0)	1.8 (0.8)	4.2 (1.5)
Japan	127	117	38.7 (30.5)	44.5 (37.9)	8.1 (6.3)	15.1 (12.9)
Malaysia	28	35	2.2 (7.8)	5.3 (15.0)	0.2 (0.7)	0.6 (1.6)
New Zealand	4	5	0.8 (18.2)	1.3 (26.3)	0.2 (3.5)	0.3 (5.4)
Papua New Guinea	7	10	0.3 (4.2)	0.7 (7.3)	0.0 (0.2)	0.0 (0.5)
Philippines	94	124	6.2 (6.7)	14.1 (11.3)	0.5 (0.5)	1.3 (1.1)
Republic of Korea	49	49	7.6 (15.6)	15.3 (31.1)	1.0 (2.0)	2.5 (5.1)
Singapore	5	5	0.8 (16.0)	1.9 (35.6)	0.1 (2.0)	0.3 (5.9)
Thailand	68	73	7.9 (11.5)	15.8 (21.6)	0.8 (1.2)	1.6 (2.2)
Vietnam	89	105	7.8 (8.7)	19.2 (18.2)	1.1 (1.3)	1.9 (1.8)

Source: Population Division of the Department of Economic and Social Affairs of the United Nations

Secretariat, *World Population Prospects: The 2008 Revision*, http://esa.un.org/unpp

Note: Numbers in parentheses is the percentage of total population above 60 and 80

By 2025-2030, only two Asia-Pacific economies, the Philippines and Papua New Guinea are projected to have total fertility rates (TFR) above the replacement rate of 2.15 (Table 1B). The median age in Asia in 2010 was slightly lower than for the World as a whole but by 2030 it is projected to be higher at 35.2 years; indeed, in Japan the median age will be 52 years, Korea and Singapore 48 years, and in Australia and China 41 years.

Table 1B: Fertility Rate, Life Expectancy and Median Age in Asia-Pacific Economies

Economy	Total Fertility Rate		Life Expectancy at Birth		Median Age	
Year	2010-2015	2025-2030	2010	2030	2010	2030
World	2.49	2.21	68.9	72.1	29.1	34.2
Asia	2.26	2.01	70.3	73.6	29.0	35.2
Asia-Pacific Economies						
Australia	1.85	1.85	82.2	84.1	37.8	41.2
Brunei	1.95	1.85	77.7	79.1	27.8	33.7
China	1.79	1.85	74.0	76.6	34.2	41.1
India	2.52	1.96	65.2	69.4	25.0	31.7
Indonesia	2.02	1.85	72.2	75.7	28.2	35.4
Japan	1.27	1.4	83.7	85.3	44.7	52.2
Malaysia	2.35	1.87	75.2	77.5	26.3	33.2
New Zealand	2.02	1.85	81.0	83.0	36.6	40.2
Papua New Guinea	3.77	2.8	62.3	66.7	20.0	24.6
Philippines	2.85	2.35	72.9	75.8	23.2	29.0
Republic of Korea	1.26	1.39	80.0	81.7	37.9	47.6
Singapore	1.29	1.44	81.0	82.6	40.6	48.4
Thailand	1.85	1.85	69.9	73.5	33.2	38.8
Vietnam	1.95	1.85	75.4	78.0	28.5	36.7

Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects: The 2008 Revision*, http://esa.un.org/unpp

Note: The average number of children a hypothetical cohort of women would have at the end of their reproductive period if they were subject during their whole lives to the fertility rates of a given period and if they were not subject to mortality. It is expressed as children per woman.

By 2030, China is projected to have 342 million persons above 60 years of age; while the corresponding number for India, Japan, Indonesia and Vietnam are 185 million, 44million, 43 million and 19 million respectively. Such large numbers suggest that pension reform should not lock an economy into a particular pension arrangement from which reversibility would be very costly. Even maintaining fairly robust administrative records for such large numbers over a long period would be a major task, which if not performed with requisite accuracy could adversely

impact on credibility of the pension system.

The Old Age Dependency ratio (ODR) is expected to increase significantly in many Asia-Pacific economies. As compared to the global average of 5.6 active workers supporting each retiree in 2030, in eight Asia-Pacific economies the corresponding figure will be the same or lower (Table 1C).

Table 1C: Trends in Old-Age Dependency Ratios in Asia-Pacific Economies

Economy	Old Age Dependency Ratio	
Year	2010	2030
World	12 (8.3)	18 (5.6)
Asia	10 (10.0)	17 (5.9)
Asia-Pacific Economies		
Australia	21 (4.8)	34 (2.9)
Brunei	5 (20.0)	13 (7.7)
China	11 (9.1)	24 (4.2)
India	8 (12.5)	12 (8.3)
Indonesia	9 (11.1)	15 (6.7)
Japan	35 (2.9)	53 (1.9)
Malaysia	7 (14.3)	15 (6.7)
New Zealand	19 (5.3)	33 (3.0)
Papua New Guinea	4 (25.0)	7 (14.3)
Philippines	7 (14.3)	12 (8.3)
Republic of Korea	15 (6.7)	36 (2.8)
Singapore	14 (7.1)	46 (2.2)
Thailand	11 (9.1)	23 (4.3)
Vietnam	9 (11.1)	18 (5.6)

Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects: The 2008 Revision*, http://esa.un.org/unpp

Note: The old-age dependency ratio is the ratio of the population aged 65 years or over to the population aged 15-64. All ratios are presented as number of dependants per 100 persons of working age (15-64).

Numbers in parentheses refers to persons between ages 15-64 which could potentially support those above 65; calculated as inverse of the old age dependency ratio.

In many Asia-Pacific economies, the share of formal sector employment is relatively low – in the range of ten and thirty five percent of the total labor force (Forteza et al, 2009). Even in high-income economies such as Japan, nearly a quarter of the labor force is reportedly no longer on full-time contracts. So the path followed by the OECD countries in extending coverage

through the expansion of formal sector employment is less applicable, particularly in low and middle income economies of the Asia-Pacific as labor markets will continue to be characterized by high informal sector employment. Moreover, as many economies in Asia-Pacific are rapidly ageing, they will have a more mature demographic profile before they attain high income status.

There are four major implications of the above demographic trends suggesting varying levels and pace of aging among Asia-Pacific economies may be noted.

First, the above demographic trends suggests that time available for extending coverage of pensions is also relatively less than was the case in the OECD countries. Therefore acting in time to reform pension systems, and recognizing that such reforms are a process and not an event, merit greater urgency and focus of the policy makers.

Second, rapid population aging signified by rising old-age dependency ratios, and increasing life expectancy at birth, suggests that greater resources will have to be devoted to the elderly. These will involve not only higher pension costs, but also higher health care costs as these tend to rise disproportionately with improved longevity trends (Fuchs, 1998).

A substantial share of the increase in resources will be through the government budget. Finding more budgetary resources, particularly when the medium-term growth rates are likely to be moderate, will be a challenge as there will be other demands on such resources. Better management and governance by social security organizations, and the need to undertake parametric reforms in the design of various provident and pension fund schemes to ensure their medium-term financial sustainability, have therefore become even more urgent in Asia-Pacific economies.[1]

Aggressive fiscal stimulus packages by Asia-Pacific economies to sustain growth during the current global crisis may also constrain future fiscal flexibility as the resulting future budget deficits will need to be financed. In Australia, the budget deficit is projected to be 2.3% of GDP in 2009 and 3.5% of GDP in 2010, a sharp contrast to the average annual surplus of 1.7% of GDP during 2003–2008 (IMF, 2010). Similarly, the International Monetary Fund (IMF) projects that in 2009 and in 2010, Japan's budgetary deficit will be close to 10% of GDP, as compared to 5.2% of GDP during 2003–2008. If the slowdown in global economic growth continues, the fiscal situation in most Asia-Pacific economies will become even more constrained. However, some economies such as the People's Republic of China have considerable fiscal capacity to expand government expenditure, including that required for social security and safety nets (*The Economist* 2009). In some Asia-Pacific economies, such as Japan and the Philippines, large debt to GDP ratios constrains capacity for continuing fiscal stimulation measures (EIU, 2009).

Third, the social security needs of foreign workers will need to be addressed by Asia-Pacific economies. Many economies in the region, such as Korea, Japan, Malaysia, U.S., Australia, Thailand, and Singapore, are large and persistent recipients of foreign labor, much of which is

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[1] Giang and Pfau (2009) have undertaken a stochastic actuarial assessment of pension finances in Vietnam and found that the demographic changes are likely to deplete the pension fund by about 2052 with a 90% confidence interval range of 8 years.

supplied from economies, such as Bangladesh, Sri Lanka, India, Myanmar, Philippines, Thailand, and Viet Nam. Several economies in Asia-Pacific such as U.S., Australia, China, India and Thailand have significant bi-directional flows of manpower as they simultaneously host a significant number of foreign workers while their own nationals are also working abroad.

Totalization agreements[2] and agreements involving working and living conditions of foreign workers, involving Asia-Pacific economies, will need to be encouraged. Recent agreements by Japan with the Philippines and Indonesia for special arrangements for workers from these two economies to be employed in Japan on a temporary basis represents an example of taking advantage of demographic complementarities, as well as drawing attention to the social security needs of foreign workers.[3]

Fourth, between 2010 and 2030, it is projected that Asia-Oceania will need to generate 56.5 percent of the total livelihoods to be generated globally, followed by Africa (38.2 percent) Latin America and Caribbean (8.4 percent), Northern America (2.1 percent), while Europe and Japan will exhibit a decline in the economically active population (Table 2). In the Asia-Oceania region, India alone will need to generate 26 percent of the global livelihoods, while China will need to generate only 1 percent. The labor market challenges therefore will vary among the economies, with the livelihood creation priority being high for India, while improving labor productivity as a priority being high for China and Viet Nam.

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[2] Totalization agreements are designed to ensure that individuals and employers do not end up paying social security taxes or contributions in more than one jurisdiction, or alternatively avoid paying them in either jurisdiction. They also assist in recognition of pension rights and in cross-border social security administration. The Philippines has entered into about 10 such agreements, mainly with economies in Europe and with Canada. India has also made several such agreements, primarily with European economies.

[3] The main objective of leveraging demographic complementarities is to help expand economic space, and to achieve greater economic integration among Asia-Pacific economies. Rapidly aging Asia-Pacific economies such as Japan, Korea, and Singapore could make more extensive and innovative use of off-shoring activities, involving those economies such as India, Philippines, and Vietnam, which are currently in a demographically favorable phase (i.e. where the share of the working-age population to total population is rising). They can also use technology to minimize use of labor in economic activities, including elderly care. Some Asia-Pacific economies, such as Malaysia, see hosting the affluent elderly as long-term residents from rapidly aging Asia-Pacific economies as a good business opportunity.

Table 2: Potential Livelihoods Generation* by Region (2010-2030)

Potential Livelihoods Generation by Region (2010-2030)		No (Millions)	% of world total
World		931.1	100.0
Asia-Oceania		525.8	56.5
of which	India	241.1	25.9
	Indonesia	31.8	3.4
	Vietnam	10.4	1.1
	China	9.9	1.1
	Japan	-13.0	-1.4
Africa		355.5	38.2
Europe		-47.6	-5.1
Latin America and Caribbean		78.3	8.4
Northern America		19.1	2.1

Note: *This is defined as the number of economically active persons, defined as those between 15 and 64 years of age in a given region, for whom livelihoods will need to be generated in the formal or the informal sectors.

Source: Calculated from Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision, http://esa.un.org/unpp/

4. Pension Systems in Asia-Pacific Economies: An Overview

Asia-Pacific economies have overtime constructed fairly elaborate social security arrangements involving old-age, sickness and maternity, work injury, unemployment and family allowances (Table 3). This range suggests that there is a general acceptance of the importance of the role of pension systems in ensuring equitable growth and social stability. Since space constraints preclude a detailed description of the pension systems in each economy, the discussion is confined to the broad features and characteristics of Asia-Pacific pension systems.

Table 3: Availability of Programs under Different Branches of
Social Security in the Asia-Pacific Region

Economy	Old age, disability, and survivors	Sickness and maternity		Work injury	Unemployment	Family allowances
		Cash benefits for both	Cash benefits plus medical care [a]			
Australia	X	X	X	X	X	X
Brunei	X	b	d	X	b	b
China	X	X	X	X	X	X
India	X	X	X	X	X	b
Indonesia	X	b	d	X	b	b
Japan	X	X	X	X	X	X
Myanmar	b	X	X	X	b	b
New Zealand	X	X	X	X	X	X
Papua New Guinea	X	b	d	X	b	b
Philippines	X	X	X	X	b	b
Republic of Korea	X	b	d	X	X	b
Singapore	X	X	X	X	b	b
Thailand	X	X	X	X	X	X
Vietnam	X	X	X	X	X	b

Sources: Constructed from OECD, 2009; and
http://www.ssa.gov/policy/docs/progdesc/ssptw/2008-2009/asia/ssptw08asia.pdf

a. Coverage is provided for medical care, hospitalization, or both.

b. Has no program or information is not available.

c. Old-age benefits only.

d. Medical benefits only.

e. Maternity benefits only.

The considerable heterogeneity in pension systems in Asia-Pacific economies reflects a host of historical and other factors, including the level of economic development and structure of the economy. The role of public sector provident fund and pension organizations is predominant in most of the Asia -Pacific economies. This reflects the structure of the formal sector, where public sector employees and a relatively small proportion of private sector employees are covered by

state-mandated and administered schemes. Only the two economies of Hong Kong, China and Australia operate privately managed defined contribution schemes. There are also programs financed from the government budget which provide income support to the elderly.

The availability of a pension system, however, does not necessarily imply that it is well designed, has wide coverage, or is financially sustainable. Nor does it imply that the pension system organization administering it is well governed, or that different components of the social security system complement each other to bring about systemic effectiveness and financial sustainability. Therefore, in many Asia-Pacific economies greater substance would need to be injected into the formal social security arrangements with particular emphasis on extending coverage (Asher, 2009).

In most of the low- and middle-income economies of Asia-Pacific, between ten and thirty five percent of the labor force is covered by formal pension systems. This reflects relatively low formal-sector employment in these economies (Forteza et al, 2009).

The contribution rates for old-age income, unemployment insurance, and health care vary considerably among Asia-Pacific economies (Table 4). The variations in contribution rates are usually motivated by the larger macroeconomic and political economy factors. For instance, Thailand's Social Security Fund, in view of the current global economic crisis, has reduced contribution rates from 5% to 3.5% for all employers and employees. The state's contribution to plans will also be reduced from 2.75% to 2.25% in 2009. Estimates suggest that the reduction in contribution rates will collectively save Thailand 22.6 billion Baht for employers and employees, and 3.8 billion Baht for the Government.

Table 4: Contribution Rates of Social Security Programs in Asia-Pacific, 2008 (in percent)

Economy	Old age, disability, and survivors (pensions)			All social security programs [a]		
	Insured person	Employer	Total	Insured person	Employer	Total
Australia [d]	0.0	9.0	9.0 [e]	0.0	9.0 [f]	9.0 [e]
Brunei	5.0	5.0	10.0 [h]	5.0	5.0 [f]	10.0
China [d]	8.0	20.0	28.0	11.0	29.0 [f]	40.0 [c]
India [d]	12.0	17.6	29.6	13.8	22.3	36.1
Indonesia	2.0	4.0	6.0	2.0	7.0 [f]	9.0
Japan [d]	7.7	7.7	15.4	12.4	13.1	25.5 [c]
Myanmar [d]	0.0	0.0	0.0	1.5	2.5	4.0
New Zealand	0.0	0.0	0.0 [e]	0.0	0.0	0.0 [e]
Papua New Guinea	6.0	8.4	14.4	6.0	8.4 [f]	14.4
Philippines [d]	3.3 [b]	7.1 [b]	10.4 [b]	4.6	8.3 [f]	12.9
Republic of Korea [d]	4.5	4.5	9.0	7.6	8.5	16.1
Singapore [d]	20.0 [b]	14.5 [b]	34.5 [b]	20.0	14.5 [f]	34.5
Thailand [d]	3.4 [b]	3.4 [b]	6.9 [b]	5.0	5.2	10.2
Vietnam [d]	5.0	11.0	16.0	7.0	18.0	25.0

Total may not add up due to rounding.

Source: Constructed from OECD, 2009; and
http://www.ssa.gov/policy/docs/progdesc/ssptw/2008-2009/asia/ssptw08asia.pdf

a. Includes Old Age, Disability, and Survivors; Sickness and Maternity; Work Injury; Unemployment; and Family Allowances. In some economies, the rate may not cover all of these programs. In some cases, only certain groups, such as wage earners, are represented. When the contribution rate varies, either the average or the lowest rate in the range is used.

b. Also includes the contribution rates for other programs.

c. Government pays the total or most of the cost of family allowances.

d. Contributions are submitted to a ceiling on some benefits.

e. Government pays the total cost of most programs from general revenues.

f. Employers pay the total or most of the cost of work injury benefits.

g. Employers pay the total cost of cash sickness and maternity benefits.

h. Government pays the total cost of the universal old-age and disability pensions.

j. Government pays the total cost of unemployment benefits.

k. Employers pay the total cost of family allowances.

l. Plus flat-rate contributions.

m. Government pays the total cost of the universal old-age pension.

n. Government pays the total cost of cash maternity benefits.

Singapore's Central Provident Fund reduced the contribution rate for those aged 55 and above from 33% (employee: 20%; employer: 13%) in 2003 to 27% (employee: 18%; employer: 9%) in 2006. This was done to enhance wage competitiveness of older workers and to make them more employable.

In some Asia-Pacific economies, the total contribution rates are quite high. Thus, the People's Republic of China total contribution rate is 40%, India's 36.1%, Singapore's 34.5%, Japan's 25.5%, and Viet Nam's 25%. The pension systems contributions are statutory levies and therefore impact on the cost of hiring workers. They also adversely affect the disposable income available to workers, leading to liquidity constraints; and create compliance challenges. As a result, these economies have very limited room to raise contribution rates to improve retirement benefits.

At the other end of the scale, the contribution rates are quite low for some economies like Australia (9%) and Indonesia (9%), Brunei (10%), and Myanmar (4%) (Table 4). These economies therefore have greater flexibility in improving retirement benefits through higher contributions.

Several Asia-Pacific economies, such as Malaysia, do not require civil servants to contribute to their pensions, and finance pension liabilities out of current revenue. In several economies, such as Indonesia and Thailand, contributions by civil servants cover some proportion of the pension costs, with the remaining financed out of government's annual budget.

While there is evidence of parametric reform in civil service pension schemes, fundamental systemic reform has not been widespread (Asher 2000). Such reforms however are needed particularly in economies such as Malaysia, Thailand and Indonesia where there is considerable scope for either improving the sustainability of existing civil service pension arrangements, or for bringing about more equitable treatment of pension provision and accessibility between the civil servants on the one hand and the rest of the labor force on the other.

Pension Assets and Investments: For a variety of reasons, pension assets in Asia-Pacific have been exhibiting rapid growth. The region's pension assets increased from USD 1,251 billion in 2003 to US$2,951 billion by 2008, surpassing those in Europe, but still behind assets in North America, which had US$4,686 billion in 2008 (Watson Wyatt 2009). Many of the largest pension funds in Asia, such as those in People's Republic of China, Japan, Korea, and Singapore are sovereign wealth funds (SWFs). SWFs are an integral part of what has come to be known as the shadow banking system, with hedge funds and private equity funds constituting other components. China's foreign exchange reserves of USD 2,500 billion as at mid 2010 will have profound implications for financial and capital markets globally; and for investment policies and asset allocation of pension funds in Asia-Pacific. There is however considerable uncertainty about the

dynamics of such a major development, particularly the long run implications for global financial and capital markets and for pension investment policies and performance.

In many low- and middle-income economies of Asia-Pacific, the limitations of domestic financial and capital markets, and lack of capacity or unwillingness to engage in international diversification of pension fund assets, have meant that investment risks have been concentrated in terms of geography (domestic assets) and allocation of assets. In economies such as India, much of the provident and pension fund investments are in government securities, while in economies such as Indonesia, domestic bank deposits account for more than half of total investments of the national provident fund. Nearly all of the sizeable assets, of Malaysia's Employees Provident Fund (EPF), equivalent to about half of its GDP as at end 2009, are invested domestically. Consideration, however, is being given to diversifying the investment allocation of EPF balances internationally. Some Asia-Pacific economies, notably People's Republic of China; Hong Kong, China; Korea; Japan; Singapore; and Thailand have, however already diversified their pension assets internationally to varying degrees.

As in other regions, the global economic crisis has added to the challenge of investing provident and pension fund assets of Asia-Pacific economies in a manner that generates high real rates of return over a prolonged period (Watson Wyatt 2009).

Provident and pension fund governance and regulation: The governance and regulation of provident and pension funds involve managing principal–agent (or agency) relationships. These arise when principals (provident and pension fund beneficiaries, and tax payers when government funding is involved) need to rely on agents (provident and pension fund managers and trustees, government bureaucrats) to pursue their interests. While there has been increasing recognition of the need for institutionalizing good governance practices involving clarity, accountability, transparency, and management of differing interests among stakeholders, progress among Asia-Pacific economies has been relatively modest. State domination of provident and pension fund sponsorship and management in Asia-Pacific has led to less receptivity to the role of an independent pension regulator who would enforce good governance practices.

There are, however, encouraging signs that governance and regulation issues are beginning to receive the due attention of policymakers. It is in this context that the establishment of India's interim Pension Fund Regulatory and Development Authority may be regarded as an encouraging sign. International organizations such as the International Social Security Association (ISSA) and the Organization for Economic Co-operation and Development (OECD) are also increasingly emphasizing good governance and regulatory practices by their members. Most Asia-Pacific economies are members of at least one of these two organizations. Increasing the role of private occupational pensions in Asia-Pacific economies, and the pressures to generate better returns on pension assets, are also likely to increase the importance of good governance and regulation.[4]

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[4] Thus Japan's Government Pension Investment Fund (GPIF), with assets of US$1.2 trillion, became an independent institution in April 2006. Earlier it was part of the Ministry of Health, Labour and Welfare.

5. Making Pension Promises More Credible

The description of pension systems of Asia-Pacific economies in Section 4 suggests that these systems are diverse with respect to their philosophy, design features, contribution rates, investment policies and performance, and coverage. As the starting point and the objectives concerning destination are different, no single blueprint of pension reform is applicable to all Asia-Pacific economies. The desired replacement rate (ratio of post-retirement to the pre-retirement income) would however need to be obtained from a variety of tiers, including from engaging in economic activities during the retirement period. A mixture of state intermediated and private savings and other support will be needed in economies at all income levels. In general the share of the state intermediated pension is likely to decline for most groups, except the elderly poor for whom retirement income transfers, sometimes called social pensions may become more prominent, provided fiscal space exists.

Elements in Reform Packages to Making Pension Promises More Credible

As noted, each Asia–Pacific economy would need to plan pension reform to suit its context, policy objectives and fiscal economic and institutional capacities. The reform package can be structured from the following elements:

Core Functions: Modernizing and professionalizing existing social security organizations in performing core functions. Each provident and pension fund must perform five core functions with a reasonable degree of competence and efficiency. These are: reliable collection of contributions, taxes and other receipts (including any loan payments in the security systems); payment of benefits for each of the schemes in a timely and correct way; securing financial management and productive investment of provident and pension fund assets; maintaining an effective communication network, including development of accurate data and record-keeping mechanisms to support collection, payment, and financial activities; and production of financial statements and reports that are tied to providing effective and reliable governance, fiduciary responsibility, transparency, and accountability (Ross, 2004). The use of modern technology, management and governance practices is a prerequisite for ensuring credibility of pension promise. In many Asia-Pacific economies a sixth core function concerns promotion of financial literacy and greater understanding of pension economics, policymakers, trustees or provident and pension fund organizations and other stakeholders.

Parametric reforms: In pension formulas, increasing retirement age, indexing, etc will need to be managed better. This also applies to civil service and military pensions. Parametric reforms involve changing one or more parameter of the pension system, such as altering the pension benefit formula, increasing the retirement age, and changing pre-retirement withdrawal provisions.

The examples of parametric reforms in Asia-Pacific economies include:

Introduction of deferred annuity scheme by Singapore, called CPF Life, to help address the longevity risk. The CPF Life does not increase the resources available to an individual in retirement but changes the timing of withdrawals, and introduces a private risk-pooling insurance

scheme financed by the members themselves.

New Zealand has introduced a portable, defined contribution scheme called the 'Kiwi Saver Scheme', to help manage additional resources needed to address longevity risks

Several economies, such as Japan, Malaysia, and Singapore are encouraging retired individuals to be at least partly active in the labor market through a variety of measures.

Systemic reforms: A systemic reform involves substantive changes in such areas of the pension system as basic philosophy (such as a shift from social risk pooling to individuals bearing pension risks), or pension methods (such as a shift from a defined benefit to defined contribution method of pensions). This may include for example a shift from Defined Benefit (DB) to Defined Contribution (DC) pension systems, with appropriate grandfathering provisions.

China and Vietnam are considering a possible shift to Notional (sometimes called Non Financial) Defined Contribution (NDC) for their pension systems for formal sector workers. The NDC arrangements are complex, but they generally involve pension benefits according to the choice by the member in resaving retirement benefits, and some sharing of risks by the retirees in post-retirement longevity increases and when wage growth is relatively low.

Takayama (2006) has argued in favor of adopting NDC arrangement to address Japan's pension challenges.

Indonesia's 2004 social security law (SJSN) envisages the fundamental change towards the comprehensive social insurance mechanism method for covering not only pension by health care and other social security risks on a universal basis. The current coverage of the pension system in Indonesia is only around one-sixth of the total labor force.

Retirement Income Transfers: More creative and extensive use of retirement income/social assistance transfers, which do not depend on formal labor market relations, requires fiscal space and efficiency in delivery of public services.

Chile's recent reforms emphasizing social pensions, and non-contributory transfers are instructive in this regard.

In 2007, Beijing Municipal Government extended coverage of old-age benefit to all elderly citizens under its jurisdiction. This may be regarded an example of a social pension.

A 2007 Korean initiative expects to cover 70% of all senior citizens through a basic old-age pension financed by the Government.

Others: These include such diverse measures as converting home equity into retirement consumption through reverse mortgages and other avenues; occupational or private pension plans; using the microfinance sector to develop micro-pension products support from family and community; an income derived from physical and financial savings accumulations.

Peoples Republic of China, Philippines, and Thailand are encouraging occupational private pension plans or individual retirement accounts (or both) to broaden the sources of retirement financing and risk sharing.

Indonesia and Philippines are encouraging the linking of pension with microfinance. Policy

makers hope that this will also help enhance financial inclusion and strengthen social cohesion.

Korea and Singapore are experimenting with schemes designed to convert home equity into retirement income stream.

6. Concluding Remarks

Enhancing social resilience in Asia-Pacific economies would require that pension reforms are regarded as being integral to overall economic, social and political management of an economy rather than being of secondary concern. Moreover pension reforms will require complementary reforms in other areas such as fiscal policies, labor markets and financial and capital markets.

There are several factors which have increased the urgency of conventional and innovative initiatives concerning pension policies and processes with the objective of making pension promises more credible in Asia-Pacific economies.

First, Asia-Pacific economies are exhibiting rapid population ageing arising from declining fertility rates, and increasing longevity. It is projected that Asia's share of World population aged 60 or over will increase from 54 percent in 2010 to 60 percent in 2030, implying more rapid ageing in Asia. Asia will also exhibit more than doubling of the population above 80 years of age, with many economies in the Region exhibiting the highest life expectancy in the World. By 2025-2030, only two Asia-Pacific economies, Philippines and Papua New Guinea are projected to have total fertility rates (TFR) above the replacement rate of 2.15. The median age in Asia in 2010 was slightly lower than for the World as a whole but by 2030 it is projected to be higher at 35.2 years.

Second, increasing informalization of the labor market relationship requires innovative approaches; including better designed and funded social pensions, to extend pension coverage.

Third, rapid ageing, and accelerating industrialization and urbanization in Asia-Pacific economies are expected to increase the resources, both public and private, needed for pensions and for health care.

Fourth, pension arrangements for cross-border workers have acquired greater importance as their numbers grow, and because of opportunities to take advantage of potential demographic complementarities between low fertility economies such as Japan and Republic of Korea and Singapore on the one hand, and those economies where share of working age population to total population is still rising such as Indonesia, India, and the Philippines.

The urgency of pension reforms has increased, but the 2008 global crisis has made this task even more complex; primarily due to its adverse impact on the medium term growth and fiscal sustainability, and considerably less benign environment for generating returns from pension assets.

The paper argues that each Asia-Pacific economy would need to construct a pension reform package suited to its policy objectives, and economic, fiscal, and institutional capacities. Major elements of such a package for each economy would include a differing mixture of greater

competence or professionalism in performing core functions of provident or pension fund organizations; parametric and systemic reforms; budget financed retirement income transfers; creating the labor market environment in which a part of retirement income can be obtained by the elderly from remunerative economic activities; converting home equity into retirement income streams; and using the microfinance sector to develop micro-pension products. Healthcare measure and habits which enable individuals to resist the onset of old age diseases should acquire greater prominence, if elderly are to be able to participate in remunerative economic activities.

In constructing context specific pension reform packages, the Asia-Pacific economies would need to pay considerable attention to, and be open to innovations in pension design and delivery systems. The reversibility issue in pension design would also need to be addressed. Construction and maintenance of robust databases, strong analytical capabilities, appropriate organizational structures and mindsets, and understanding of the subtleties of pension economics (particularly sustainability over a long time-horizon, the tyranny of seemingly small numbers exerting a powerful impact on pension scheme viability) will also be needed. It is vital that provident and pension fund organizations publicly communicate to stakeholders stochastic actuarial assessments providing long-term projections of the impact of changes in demographic, labor market, and other variables on the sustainability of current pension arrangements. The importance of social pensions financed from the budgetary resources, requiring fiscal and public service delivery capacities, would need to be recognized.

As the single most important macroeconomic variable in social resilience is medium term trend in economic growth, which is widely shared among the population groups, the task of sustaining such growth without undermining environmental and social capital of the societies merits serious consideration. This will require rethinking current assumptions about economic growth which assume ever rising consumption of goods and services. As the nature of growth and growth processes become more context specific, greater emphasis on developing indigenous research capacity, including in pensions policies, and the willingness of the policymakers to incorporate relevant research findings into pension design, processes, delivery systems, and governance structures will be essential.

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Social Resilience, Means-testing, and Capital Taxation – Reflections on Economic Paradigms

Cagri Kumru[*] and John Piggott[**]

1. Introduction

Throughout the developed world, pay-as-you-go (PAYG) social security has been the backbone of retirement income support for most of the 20th century. Over the last two decades or more, however, governments everywhere have retreated from their unsustainable promises, as they try to balance adequate retirement benefits against manageable tax burdens and fiscal stress. The trigger for this tension has been demographic shift. Pay as you go plans worked well when labor forces were always growing relative to retired populations. The prototypical social security plan is a Ponzi scheme in which ever- increasing human resources are required for sustainability.

Retirement financing has become the battleground for social resilience. It is imperative that at least the less well-off elderly receive government assistance, since they have few resources, neither human capital nor financial or real assets. But funding all the retired adequately requires tax rates on the working population that will test social cohesion. Most governments have coped with this by reducing benefits surreptitiously – reducing survivor benefits, for example, or altering indexation arrangements. Such changes provide short-term political relief, but do little in the long term to buttress social resilience – the beneficiaries of survivor benefits, for example, are likely to be among the oldest and poorest in the retired pension community.

With this scene setting in mind, this paper re-visits means-testing as a policy option. Means-testing has a surprisingly bad name among policy makers world-wide. The main reason for summary rejection of this policy paradigm is that the marginal tax rates faced by those from whom a benefit is being withdrawn are usually very high. But we will argue that this has been overblown, and that, in fact, the distortions and adverse impacts on consumer choice from a means tested program may be less than that associated with a typical social security program.

The case for means-testing has been strengthened in recent years not only by the imperatives of demographic transition, but also by new analytic insights that indicate that a means tested program may in fact be second-best optimal. If this is true, then means-tests, which, when they do crop up, are typically very crude, will require detailed attention to optimize their design impact. Means-test design has received virtually no attention either by academic researchers or by policy-makers, and their potential has not yet been anywhere near realized.

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We begin in section 2 by describing the retirement income system of one of the very few economies in the world to embrace means-testing – Australia. Australia has lower public pension outlays, as a proportion of GDP, than any other developed economy. In 2006, Australia's public pension spending was 3.5 % of the GDP while the average public pension spending of the OECD countries was 7.2% of the GDP (OECD, 2009). Section 3 offers an intuition for why means tests might dominate more traditional social security paradigms, based on what might be termed classic arguments. In section 4 we introduce some new analytic insights to further support our case. Finally, section 5 concludes.

2. The Australian Approach to Retirement Transfers[1]

For more than a century, the mainstay of retirement income support in Australia has been the Age Pension. Introduced in 1909, it has served as the social welfare safety net for the elderly and has provided a major source of retirement income for most retired people. In 2007 around 77% of the retired of eligible age received some Age Pension – while just over half of new male entrants were paid at the full rate, 56% of new women entrants were paid at the full rate. However, only 13.3% of pension recipients relied solely on the Age Pension (Harmer, 2008).

The Age Pension is payable to women aged 62 years and over, and to men aged 65 years and over. (The eligibility age for women is being increased to age 65 by the year 2014). Claimants must also satisfy certain residency qualifications. It is means-tested by either a person's income or assets, whichever determines the lower rate of pension, and is automatically indexed twice yearly. A higher rate of pension is payable to a single person than to each member of a married couple. Since 1997, indexation has been against the greater of the growth of the Consumer Price Index (CPI) and male average earnings. The Age Pension is subject to personal income tax but a pensioner tax rebate applies which fully exempts full-rate pensioners from income tax and provides partial exemption for part-rate pensioners.

In July 2009 the Age Pension amounts were $A14,614.60 pa for single people (around 25% average male earnings) and $A12,207 pa (around 20% average male earnings) for each of a married couple.

Means-testing

The Age Pension has been means-tested since its inception. Initially both an income test and a separate property (assets) test applied. The annual rate of pension was reduced on a pound for pound basis once earnings exceeded a free area and also by one pound for every ten pounds of the value of property (including the family home) above a second free area. In December 1912 the family home was made exempt from the property test, and remains so.

The means tests remained largely unchanged until the late 1960s, when the reduction of the income test withdrawal rate from 100% to 50% in 1969 marked the commencement of a period of

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[1] This section has been adapted from Bateman and Piggott (2003).

liberalization. In the 1972 Federal election campaign, both major parties undertook to abolish means testing for the Age Pension. Following this election the pension free amounts were doubled and, by 1975, the means tests had been abolished for those aged 70 and above. By 1976 the assets test was abolished.

This represented the highpoint of liberalization of the Age Pension means tests. In 1978 tightening of the means tests commenced when partial means testing was reintroduced for persons aged 70 or more. By the mid-1980s, means testing on both income and assets was again being applied to all retirees.

Recent policy has reflected an increased emphasis on targeting, with an attempt to simplify the administrative burden.[2] Under current rules (as of July 2009) the income test the Age Pension is withdrawn at the rate of 40 cents for each dollar of private income in excess of a free area of $A138 fortnightly (for single pensioners) and $A240 fortnightly (for a pensioner couple). The assets test operates to reduce the Age Pension by $A1.50 per week for every $A1,000 of assets above a statutory threshold: $A171,750 for a single homeowner, $A243,500 (partnered homeowner), $A296,250 (single non-homeowner) and $A368,000 (partnered homeowner). As noted earlier, the test paying the lower rate of Age Pension applies (Harmer, 2009).

Means testing has ensured that a high proportion of government transfers are received by the poorest aged, thereby generating significant redistribution (Bateman et al. 1994). It has also helped to keep the aggregate value of transfers modest.

For some time now, successive governments have maintained the single rate Age Pension at a minimum of 25% of male average earnings.[3] Recently, this rate was increased to 27.7%. Compared with other rich developed economies, these magnitudes are favorable for safety net payments, but fall far short of the payments promised under typical public earnings-related pension schemes.

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[2] The thrust of the simplification is the extension of 'deeming' for financial assets. That is, income to be tested under the income test is determined by applying a statutory (deemed) rate of return to the capital value of financial assets. 2009 deeming rates are 3 per cent for the $41,000 of financial assets held by a single pensioner or $68,200 for a couple, and 4 per cent on amounts above this.
[3] Increases flow-on to the partnered rate.

Table 1: Features of the Age Pension [a]

Established	1909
Eligibility	Residency
	Age (males age 65, females age 62 [b])
	Means-tested (income and assets)
Funding	General revenues
	PAYG
Amounts	Single rate - $A14,614.60 pa
	Partnered rate - $A12,207.00 pa
	(Subject to income and assets means-tests)
	Indexed to greater of growth of CPI and male average earnings.
Other benefits	Rent allowance, concessional pharmaceutical benefits, public transport, public utilities etc.
Taxation	Pensioner tax rebate fully exempts full rate age pensioners from income tax, partial exemption for part rate pensioners
Means-tests	*Income test:*
	Pension withdrawn at the rate of 40c for each $A1 of private income in excess of a free area of $A138 fortnightly (single rate), $A240 fortnightly (married rate).
	Assets test:
	Pension withdrawn by $A1.50 per week for every $A1,000 of assets above thresholds:

	Single	Married
Homeowner	$A171,750	$A243,500
Non homeowner	$A296,250	$A368,000

Thresholds and limits indexed to annual movements in the CPI

Part pension based on whichever test determines the lower rate of pension

(a) The dollar amounts are for July 2009.

(b) Until recently the eligibility age for women was age 60. An increase to age 65 is being implemented over the period 1995 to 2014.

Second pillar support – the Superannuation Guarantee

The Superannuation Guarantee was introduced in 1992, following compliance problems identified with the inclusion of superannuation in industrial awards. The Superannuation Guarantee mandates employers to make superannuation (retirement saving) contributions on

behalf of their employees to superannuation (pension) funds of their choice[4]. Employers that fail to do so are subject to the Superannuation Guarantee Charge. The superannuation contributions are placed in individual accounts in private superannuation funds and invested on behalf of the employees. The guarantee is essentially a guaranteed payment to a superannuation fund of 9% of earnings. In the last budget, the Government foreshadowed an increase of this mandated contribution to 12%.

3. Means-testing – A Conceptual Approach[5]

Like any other tax-financed financial transfer, retirement income transfers impact on incentives at two points in economic transactions: when the tax is levied, and when the transfer is received. These two points of price distortion must both be taken into account in assessing the economic efficiency effects of a tax-transfer policy.[6]

To capture both these points of intervention, however, it is necessary to adopt an economy-wide conceptual framework. Indeed, there are complex interactions between effective marginal tax rates facing those eligible to receive transfers, those not eligible, and those who are being taxed to finance it. The problem is also complicated by dynamic inter-temporal effects: the perspective of benefiting from a transfer during old-age might affect decisions about labor supply and savings during active life. So, individuals who would not be eligible for a transfer if the transfer program did not exist would become eligible for a transfer because the program is in place. In fact, even if the transfer is not targeted, individuals might have incentives to change labor supply and savings rates over the life-cycle, simply because their endowments have been enhanced by this entitlement.

The usual place to start when assessing the incentive effects of retirement income transfers and social assistance programs in general, is to look at the effective marginal tax rates (EMTRs) facing potential beneficiaries. Targeted programs can induce large EMTRs and can reduce incentives to work and save for individuals close to the "eligibility line." Because efficiency costs, or excess burdens increase disproportionately with EMTRs, their estimation is a natural focus for analysis. There are, however, potentially important tradeoffs between the EMTR, the number of people affected by the targeting, and other explicit taxes in the economy. We discuss these issues next.

Assume for the moment that we wish to compare a targeted with a universal social pension. First, while a means tested pension will impose high EMTRs on those at the margin of eligibility, where withdrawal of the pension is operative, many individuals potentially impacted by a universal pension will be unaffected by a targeted pension. The rate of withdrawal of the means tested pension, sometimes called the taper rate or claw-back, will impact on this. The lower the

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[4] Superannuation is analogous to private retirement saving and superannuation funds are analogous to pension funds. These terms may be used interchangeably throughout the paper.
[5] This material draws heavily on Piggott *et al*. (2009).
[6] For a discussion of links between redistribution and incentives see also Robalino *et al*. 2008.

taper rate, the lower will be the EMTR, but the more people will be affected.[7] Second, as the taper rate (and the associated EMTR) is reduced, the overall revenue requirement of the program will increase, and this will require higher tax rates to be applied to others in the economy, probably workers. If they already pay high taxes, as in developed economies, then the same argument about disproportionate efficiency costs of high marginal tax rates will apply, offsetting the EMTR reduction among pension recipients. If the economy is less developed, with low tax rates, it is likely that the tax imposition will retard the development of the formal sector – or affect employment levels when programs are financed through pay-roll taxes (the common approach in the case of minimum pensions). Overall, the efficiency impact of the two designs will be a somewhat subtle trade-off between keeping a low EMTR for potential beneficiaries and keeping the tax-burden of the economy at affordable levels.

Figure 1 captures these effects graphically. The upper panel of the figure maps gross income, y_g (on the horizontal axis) into net income, y_n (vertical axis). M gives the level of minimum income available under the assistance scheme.[8] A 100% taper, that is, dollar for dollar withdrawal of the transfer with increments in gross income, is represented by the horizontal line MA. A 50% taper is represented by MA'. For an individual at any level y_g^* the cost of the pension is given by the vertical distance between the 45 degree line and the relevant disposable income line, MA or MA'. The fiscal cost of the program, however, will depend on the number of recipients, whose frequency is mapped in the lower panel. While the frequency distribution shown is illustrative, it is consistent with available evidence. The revenue cost increases dramatically as the taper rate is reduced, necessarily requiring increases in distortionary taxes elsewhere in the economy. Moreover, the income effect generated among those not affected by the claw-back can still change behaviors regarding labor supply, savings, and retirement.

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[7] This point was first made by Blinder and Rosen (1985). Sefton *et al.* (2008) makes the same point in the context of means tested pensions in the UK.

[8] Depending on the nature of the scheme, this may be guaranteed to all, all above a certain age, or only to those enrolled in a social security program.

Figure 1: Means-tested Transfers

Disposable income (y_n) (Private pensions)

+

Benefit

A'

M

Y_{g*}

Private income (y_g)

$F(y_g)$
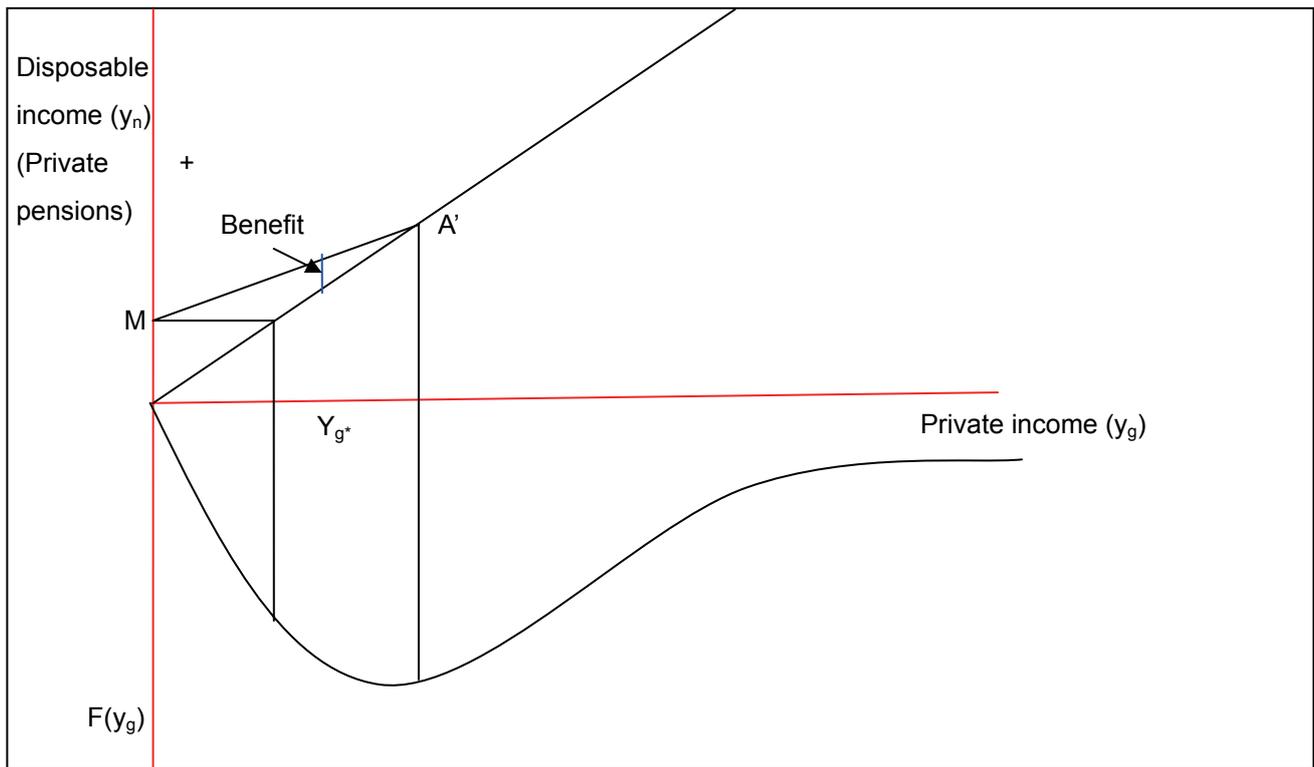
Implications of Means-tested Pension Program in a Large Scale OLG Model

In a recent paper, Kumru and Piggott (2010) study a stylized UK-type means-tested pension program, to quantify the effects of means testing on economic aggregates and social welfare. They develop a large scale stochastic closed economy overlapping generations model that incorporates a model-equivalent representation of the UK tax and transfer system. In the model individuals face mortality and idiosyncratic income risks and they face borrowing constraints in an incomplete market setting. Hence, the means-tested pension program has an insurance role in the model. Although the insurance benefits provided by the means-tested program is welfare enhancing, the program creates distortions on individuals' saving and labor supply decisions. In particular, a decrease in the taper rate increases the tax burden on workers and makes them heavily dependent on the public retirement in their old age. In contrast, an increase in the taper rate decreases the tax burden and encourages individuals to save more for their retirement. Yet, although these two effects positively affect workers' saving and labor supply decisions, an increase in the taper rate leads old individuals to decumulate their asset holdings as early as possible to receive more pension benefits.

They show that the existence of another pension program in the economy (the UK has an earnings-dependent PAYG financed pension program as a second tier) affects the aggregate and welfare implications of the means-tested pension program. In particular, they show that when there is another pension program, individuals decumulate their asset holdings less rapidly than when there is only means-tested pension program in the economy. Therefore, an increase in the

taper rate creates more positive impact on economic aggregates. They conclude that in this environment, a 100% taper rate is optimal.

In a related paper, Sefton *et al.* (2008) assess the quantitative implications of the UK's means-tested program in a simpler environment than that of Kumru and Piggott (2010). In particular, they consider the effects of a recent policy reform applied in the UK that reduced the marginal tax rate on private income of means-tested retirement benefits from 100% to 40%. They conclude that policy reform encourages poor people to save more and delay retirement but has the opposite effect on richer households. Since Sefton *et al.* (2008) analyze the means-tested pension program in isolation by assuming away the earnings-dependent pension program, the negative effects of the 100% taper rate on after retirement asset decumulation is over-emphasized.

It is clear from both Sefton *et al.* (2008) and Kumru and Piggott (2010) that analysis of means-tested pension program is complex, and results can be affected from the simplifications made in the model. Both studies clearly show that higher taper rates positively affect higher income groups' saving and labor supply decisions while they negatively affect lower income groups' economic decisions. But the extent of the negative impact crucially depends on the availability of other sources of public retirement income.

Empirical Evidence on Behaviour

The empirical evidence on the impacts of means-tested programs is limited.[9] In the US, Neumark and Powers (1998, 2000) empirically analyze the effects of the means-tested pension program of the US, the Supplemental Security Income (SSI) program, on individuals' labor supply and saving decisions. They show that an increase in SSI benefits results in a reduction in aggregate labor supply and savings because potential participants of the program, in particular those who are close to retirement age reduce their savings and labor supply.

In a similar vein, Disney and Smith (2002) empirically analyze the behavioral implications of the UK's pension program. They show that abolition of the earnings test raises working hours of older male workers by around 4 hours a week, with a lesser impact on women's behavior.

In developing economies, findings are even less settled. Ardlington *et al.* (2007) analyze the South African means tested pension, received by most blacks. While the standard result of reduced labor supply held for workers resident in the household, the ability of households receiving a pension to help its younger members find work elsewhere offset this effect. As they suggest:

"If social transfers allow households to overcome credit constraints, enabling households to bankroll potential migrants or potential work seekers who need financial support to look for jobs, then social transfers like the pension may promote employment and help households to break out of poverty traps." (Page 2).

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[9] Piggott *et al.* (2009) provide a brief overview.

4. Some New and Relevant Analytical Insights

The case for means testing, and the more sophisticated development of means tests, has been given new impetus over the last two decades by new analytical work on optimal taxation.

The received wisdom since the 1980s has been that it is inefficient to tax capital. This result has been challenged by number of writers: the zero capital income taxation result might not hold if there is market incompleteness and/or the life-cycle framework is used. Alvarez *et al.* (1992), Erosa and Gervais (2002) and Garriga (2003) show that it might be optimal to tax capital when the lifecycle framework is used. In particular, Erosa and Gervais (2002) prove that it is optimal for a government to tax or subsidize interest income. The reason is simple: Individuals' optimal consumption-work plan is not constant over the life-cycle. As a result, the government always wants to use age-varying consumption and labor income tax rates. If it is not possible to condition tax rates on age, a positive capital income tax rate can be a substitute for age-conditioned consumption and labor income tax rates.

Conesa *et al.* (2009) quantitatively characterize the optimal capital and labor income tax by using an OLG model in which individuals face uninsurable idiosyncratic income shocks and permanent productivity differences. They find that the optimal capital income tax rate is significantly positive at 36 percent. This result is not surprising. In the absence of truly age-based consumption and labor-income tax rates, the positive capital income tax rate is the second best solution and hence, it should be positive. Nakajima (2008) extends Conesa et al. (2009)'s work by adding housing into the model to compare whether and how the optimal capital tax rate differs between the model with housing and without housing. He showed that the optimal capital tax rate in the model with housing is 13%, substantially lower than the Conesa rate.

It is interesting that the idea of age based taxes has not been further developed in a policy setting. This is possibly because in the US, such a tax would be regarded as discriminatory. In fact, however, age based programs do exist – the US Medicare program is one example. In Australia, older people are entitled to a personal income tax offset which effectively changes the rates of personal income taxation.

The most important implication of the studies above, however, is that means testing now has a positive rationale. This is because an age pension means test on assets, or capital income, is exactly a tax on capital. Moreover, it is better targeted than a generic capital income tax, because it directly addresses the complementarity between retirement saving and retirement leisure. Further, the age based tax literature suggests that means test withdrawal rates could be far better tailored than they currently are. Taper rates could vary with the value of wealth, and also the age of the pension recipient. This is an important research program which has barely begun. But it may hold the key to resolving the tension between providing adequate income to the retired, and keeping the associated fiscal requirement under control.

5. Conclusion

Demographic transition is rendering earnings-dependent PAYG financed public pension programs unsustainable at the levels of benefit traditionally promised. Therefore, both academic economists and policy-makers are increasingly interested in alternative ways of providing old age income. Means-tested pension programs offer one possible solution to providing old age-income by reducing distortions on individuals' saving and labor supply decisions. Although theoretical and empirical analyses of means-tested pension programs have been neglected by economists for a long time, they have been successfully implemented by a few economies including Australia and the UK.[10]

Recent theoretical developments shed light on a further role of means-tested pension programs as a proxy for the optimal age-dependent consumption and labor income tax. This in turn implies that means-tested pension programs are not only a less burdensome way of proving benefits to retirees, but also a good proxy for optimal consumption and labor taxation.

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[10] The earliest analysis of the means-tested pensions –to the best of our knowledge- was provided by Feldstein (1987). Sefton *et al.* (2008) and Kumru and Piggott (2010) carried Feldstein's early research to more realistic environment at the expense of the analytical tractability.

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Social Issues and Policy Agendas in Korea

Hyungpyo Moon[*]

1. Introduction

The Korean society has gone through a number of changes and faced several new challenges since the foreign exchange crisis in 1997. As for the change in the role of the government, the government has put forth enormous efforts for the past decade to increase its social expenditure which had been disregarded during the period of high growth. The size of social expenditure today recorded a rapid annual growth rate of 13%, as shown in Table 1. As a result, social expenditure grew nearly four-fold in the past decade.

The basic framework of Korea's social security system was finalized during this period, and many new systems were adopted, such as the Employment Insurance in 1995, and the launch of the National Basic Livelihood Security System in 2000. More recently, Korea reinforced its social safety net through the Basic Old-age Pension (2008) and Long-term Care Insurance (2007) for the elderly. Not only that, in the context of 'Workfare,' it also adopted the Earned Income Tax Credit (EITC) and the public childcare system.

Despite the government's efforts to increase social expenditure Korea's social safety net has not sufficiently fulfilled its role in ensuring economic security and upward social mobility of various vulnerable groups in the society. Many loopholes and blind spots are still prevalent within the social safety net. On the other hand, the continuous deterioration of income distribution and the rapid pace of population ageing in recent years increased social demands for a more complete social security system.

Under this background, this short paper aims to suggest a new social policy direction to the present Korean policymakers. First, I will briefly go over the current social issues and problems in Korea and discuss the meaning and agendas of new social policy, followed by suggestions on the principles and challenges that should be emphasized in the process of developing and implementing the policy. The specific issues in pension coverage are also included in the later part of the paper.

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〈Table 1〉 Changes in Social Expenditure

(unit: trillion won, %)

Category	'98	'03	'08	'09	Annual growth rate		
					'08	'09(est.)	'99~'09
Social expenditure [1] (A)	21.0	38.0	67.3	79.6	12.5	18.3	12.9
Consolidated government expenditure[2] (B)	115.4	164.3	235.8 (262.8)	275.9 (301.8)	12.4 (10.8)	17.0 (14.8)	8.2
A/B(%)	18.2	23.1	28.5	28.9			

1) Expenditures in health care · welfare, social security, housing, etc. based on consolidated public sector finance (=gross expenditure-loan collection)
2) ( ) denotes the amount of gross expenditure
* Source : Ministry of Strategy and Finance. Republic of Korea.

2. Current Social Issues and Problems

Rising income inequality

Despite the rapid increase in social expenditure, Korea's income inequality has continued to deteriorate since the mid-1990s. As shown in Figure 1, the Gini coefficient rose sharply from 0.275 in 1996 to 0.321 in 2008. Moreover, the relative poverty rate, which is the proportion of households with less than 50% of median income, increased even faster from 9.3% to 14.3% over the same period. Such a drastic change raises a concern now that the momentum of equitable growth, which the Korean society has been long boasted, particularly, during its development decades, might come to an abrupt end because of the advent of the information era, globalization, and structural changes in the labor market.

〈Figure 1〉 Changes in Gini Coefficient and Relative Poverty Rate

The deterioration of income distribution is mainly attributable to the failed trickle-down effect from the economic growth into poor households. According to data released by the Korea National Statistics Office, the real disposable income of poor households, especially those in the lowest 20% in the income decile, has stagnated since the crisis in 1997 as shown in Figure 2. The deterioration also has weakened the foundation of middle-income class, stating that the proportion of the middle class, which is households with 50%~150% of median income, has fallen by more than 10 percentage point from 68.7% in 1996 to 56.4% in 2008.

Given that a large middle class is crucial to sustaining social stability and balanced growth, such a large fall should inevitably lead to weakening the foundation of social integration. Furthermore, continued deterioration in income distribution in spite of the increasing social expenditure implies that existing welfare expansion policy, which focuses on simple income transfer, might not be enough to substantially reduce poverty and restore the middle class under the changed conditions as today.

<Figure 2> Income Growth Rate of the Bottom 20% Households
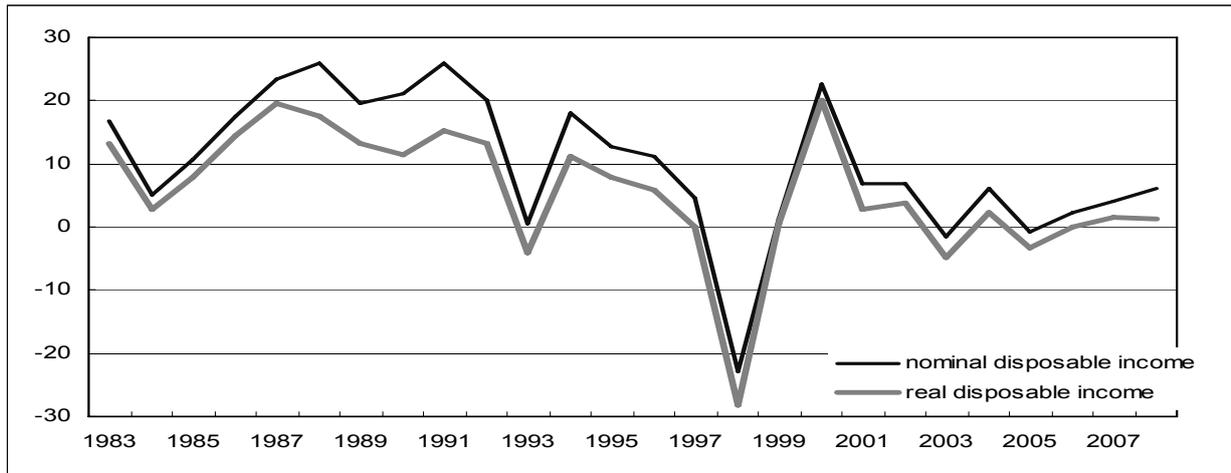
Weakening social mobility

Another concern is the decline in social mobility and the subsequent weakness in economic dynamism in Korean society. In particular, the failing public education contrast to booming private education has widened the educational gap among income classes, resulting in the intergenerational transmission of poverty. For example, high-income households spend 10 times more on private education than low-income households, and students from high-income households turn out to record higher scores by more than 30 points in the National Scholastic Aptitude Test, compared to those from low-income households. (Moon, ed. [2009]) Along with this, as Table 2 shows, there is a growing gap of wage and job security between labor union vs. non-union, large company vs. SME, and regular workers vs. non-regular workers. This dual structure of the labor market serves as an additional factor that has limited the upward mobility among income classes.

<Table 2> Dual Structure of Labor Market

	Labor union ∩ Large company ∩ Regular worker	Non-union ∩ SME∩ Non-regular worker
Average monthly salary (thous.won)	3,257 (100)	1,138 (34.9)
Working duration (year)	12.3	1.7
UI take-up rates (%)	77.7	32.3
Number of employees (thous.people)	1,144 (7.1%)	4,347 (27.0%)

Source: Economically Active Population Survey Additional Survey, Mar. 2009.

Despite the increase in relative poverty, Korea's social safety net has not sufficiently fulfilled its role in preventing and extricating from poverty. The expansion of social insurance so

far has been highly centered on regular workers; hence its protection for temporary and self-employed workers is very weak. For instance, at present, the Employment Insurance subscription rate of non-regular workers is only 39% and more than 6.5 million of the National Pension is delinquent insurers. (See Table 3). Furthermore, there are a large number of poor households with no access to the benefits of the National Basic Livelihood Security System, and the "all-or-nothing" type of comprehensive pay system is also pointed out as a problem that greatly reduces the incentives to work in order to extricate from poverty.

〈Table 3 〉 Narrow Coverage in Social Insurance Programs

Category	Uncovered Areas
National Pension	5,107 payment-exempt insurers and 1,526 delinquent insurers (2 years) as of 2007
National Health Insurance	2,130,000 households exempt from paying contribution as of 2006
Long-term Care Insurance	3.1% beneficiary rate as of 2008
Employment Insurance	34.8% unemployment benefit payment as of 2007, 39% subscription rate of non-regular workers as of 2008
Industrial Accident Compensation Insurance	Excluding majority of non-regular workers

Source: Moon, ed. [2009]

Ageing society

Along with the issues mentioned above, Korea's low fertility rate, among the world's lowest, and rapidly ageing population increasingly threaten as serious social issues. In particular, an insufficient support system available for women to rear children while simultaneously pursuing a working career, overly excessive costs of private education, and prevalent discrimination in the workplace for married women are obstacles that restrain both fertility and women's labor participation rate.

As shown in Figure 3, Korea's elderly dependency ratio is expected to rise by almost six times from 12.6% in 2005 to 72% in 2050. Rapid ageing population will not only undermine the growth potential by reducing labor supply and savings, but also will substantially put additional pressure on supporting the elderly. This phenomenon of ageing population is likely to serve as a stumbling block for Korea to join the ranks of developed economies. The rapidly ageing society carries ominous warnings for Korea such as a decline in growth potential, decrease in the working population, and surging demand for welfare expansion including medical care and public pension provision, among others.

A rapidly ageing population will also make old age income security more important, while at the same time, significantly affecting public pension finance. In this regard, Korea now faces two major policy challenges—that of enhancing the role of the old age income security system as early as possible and, at the same time improving the financial sustainability of the public pension

system. These two policies, however, could potentially clash. For example, in the case of overemphasizing the function of public pension as a social protection measure, a rapidly ageing population could undermine the system's sustainability. On the other hand, if Korea focused mainly on stabilizing pension finance, its function for old age income security could weaken.

<Figure 3 > Demographic Changes in Korea : Forecasts

3. Directions for New Social Policy

Objectives

The Korean society, today, is faced with new challenges such as deteriorated income distribution, declining social mobility, low fertility rate, and ageing population. Further, increasing instability in various social sectors calls for the government to move beyond the existing ex-post, residual, and passive attitude in its social policy stance and to intervene in a more active and preemptive manner. In particular, there is an urgent need to preemptively build and invest in the foundation to enhance human capacity, potential, and will in order to overcome poverty and revive the middle-income class.

Under this context, the current Korean government launched "Human New Deal" in March 2009 and has declared its strong will to protect the middle class from erosion, promote new entries, and foster future entrants through comprehensive measures that focus on the middle class.

The term "Human New Deal" has not been coined exactly, yet, but in a broad sense, it could be interpreted as social policy for preemptive social investment and system improvement with an aim to build competency to counter potential risk factors in individual life cycle and enhance individual progress. (Moon (ed.) [2009])

New social policy should put an emphasis on 'investment in human.' In other words, the core value of social policy in the future should be to embody "integrated society pursuing shared growth" through building a foundation to strengthen the capacity of all members of the society in order to actively participate in the knowledge-based economy of the 21st century. The objectives of the new social policy are to establish a society with a large middle class as the foundation for social stability and balanced growth, a society that guarantees equal opportunity and high upward mobility of social strata, and a society with a sustainable and broad-based growth potential.

Strategies

In order to accomplish these policy goals of new social policy, there are three driving strategies to pursue. First, since sustainable and endogenous economic growth requires the accumulation of human capital resources, the social policy needs to focus on preventive intervention in poverty and income inequality through preemptive investment that aims to enhance competency-based human resources. In doing so, it is important to strengthen non-cognitive skills such as endurance, motivation, self-control, etc. as well as to foster cognitive skills through education and training. (Heckmen and Krueger [2002]) Also, to lessen human capital inequality, intensive focus should be put on the low-income class through investment on human capacity development so that equal opportunity will be guaranteed to all income levels.

Among these preventative and investable approaches, one of the most important would be the investment on children. As pointed out by numerous studies, childhood poverty leads to poor school performance and inferior social and economic status later in life. Therefore, new social policy needs to considerably strengthen early intervention programs to heighten human capital development of children from poor families. "Head Start" of the US and "Sure Start" of the UK are some of the good examples.

Second, a user-oriented integrated approach is needed. Existing social policies on welfare, education, labor, etc. are provider-oriented, which caused efficiency loss, frequent overlaps and omissions. Even the method of financial support is provider-oriented as well, weakening the performance incentives. The educational policy, in particular, was implemented by the principle of input equality, undermining the performance incentives of teachers and schools, which serve as factors for the collapse of public education and expansion of private education.

In order to solve these problems, we need to focus on the enhancement of comprehensive human capacity, such as intelligence, social, and emotional aspects, through integrated care, education and training services. It is also necessary to make financial assistance available through a direct Voucher method to users in order to expand their selection choices as well as to improve the service quality of provider institutions through healthy competition.

Third, because each life cycle of each individual differs, risks faced and development stages of each individual differ as well, and hence, the role of the government for each individual will differ. Therefore, we need to put concerted efforts on accurately identifying different risk factors in different stages of life such as preschool, school, productive age and old age so that step-by-step customized services will be available.

As mentioned earlier, in order to correct deficiencies in human capacity due to poverty, early intervention beginning in infancy and pre-schooling is most effective. Accordingly, the strategic investment scheme of new social policy should put its priority on early intervention such as in the preschool stage for substantial development in human capacity.

4. Major Policy Agendas

Under the basic concept of new social policy, mentioned above there are four major policies I would like to suggest for implementation in each sector.

Firstly, in order to pursue a broader growth through restoring the middle class, it is crucial to reinforce social safety net which would improve economic security and upward mobility. As the Hamilton Project from the Brookings Institution [2006] states, a proper social safety net will surely help each individual to recover from economic difficulties and also it will encourage people to invest in the uncertain future through start-ups or taking vocational training programs. In other words, it will function as a "springboard for a better future." In this regard, Korea needs to expand the coverage of social insurance as the primary social safety net and that of public assistance as the secondary safety net. Particularly, policy measures should be prepared to encourage those excluded from social insurance to actively signing up by the subsidizing insurance premium for low-income and non-regular workers and self-employed to the coverage.

Specific policy measures that need to be considered include,
- Health Insurance: expanding its coverage and approving loans for medical bills for unemployed.
- Employment Insurance: subsidizing the insurance premium for low-income workers and pending approval on including self-employed to the coverage.
- National Pension: pending insurance-matching support measures for low-income atypical workers.
- Long-term Care Insurance: improving access for the near poor elderly.
- National Basic Livelihood Security program: In order to strengthen the incentives to escape poverty, allowances for medical, housing, education, etc. should be separately provided for a certain period of time to past recipients who are no longer eligible for the benefit.

Secondly, it is important to guarantee equal education opportunity through the quality improvement of public education and reduction in the cost of private education. To strengthen performance of teachers and schools, it is important to establish a student-oriented teacher evaluation system, strengthen schools' autonomy and accountability, and expand the rights of

student/school selections. To reduce the cost of private education, which is the main culprit for excessive burden of the middle-income households and their low rate of fertility, it is necessary to enhance the quality of public education, improve the school entrance system, and prevent excessive growth of the private academic institute industry.

Along with this, to provide equal opportunity of education, it is necessary to implement mandatory infant education, support more after-school programs, provide more education funds, and launch "Lifelong Learning Account" projects. Further, it is also important to integrate education and childcare programs as well as strengthen their quality along with providing more flexible working hours for woman workers, considering their rise in the labor market.

Thirdly, as for welfare service, it is necessary to strengthen poverty prevention and social mobility through aggressive early investment policies, which allows for equal opportunity at the starting line. To that end, it is important to expand the Dream Start project nationwide, which is an ongoing program that integrates healthcare, childcare, and welfare focusing mainly on the children from low-income areas. In addition, it is necessary to implement the Healthy Start program which provides house-to-house health services to households with infants and toddlers.

Efforts are needed to prevent the fall into poverty due to temporary financial adversity and support should be strengthened to help people in need to escape poverty through jobs. To that end, it is necessary to expand the coverage and scale of emergency support programs for sudden accident, sickness, or business closure. It is necessary to implement the Self-reliance Support program which incorporates a self-help project, social employment, and micro-credit programs. It is also necessary to expand EITC to strengthen work incentive, and to adopt an earnings disregard system to the unemployment benefit.

Lastly, a core challenge to restoring the middle class is job creation. Hence, policies that promote quality and creation of jobs should be pursued as well as sustained. To put it another way, under the premise that the government does not create jobs but ultimately jobs are created by private investment, it is necessary to consistently implement measures that alleviate the dual structure of the labor market, upgrade labor management relations, correct unfair trade practice, and enhance productivity of service industries.

To boost employee productivity, it is important to develop their fundamental competency and support career development. To that end, more tax benefits should be provided for education and training, and voluntary on-the-job-training and selective training programs by employees in the private sector should be encouraged. It is also necessary to come up with active measures to encourage hiring of female workers as part-timers so that they can manage both work and family. Consistency is also needed to streamline laws and regulations to correct gender and age discrimination practices in the labor market.
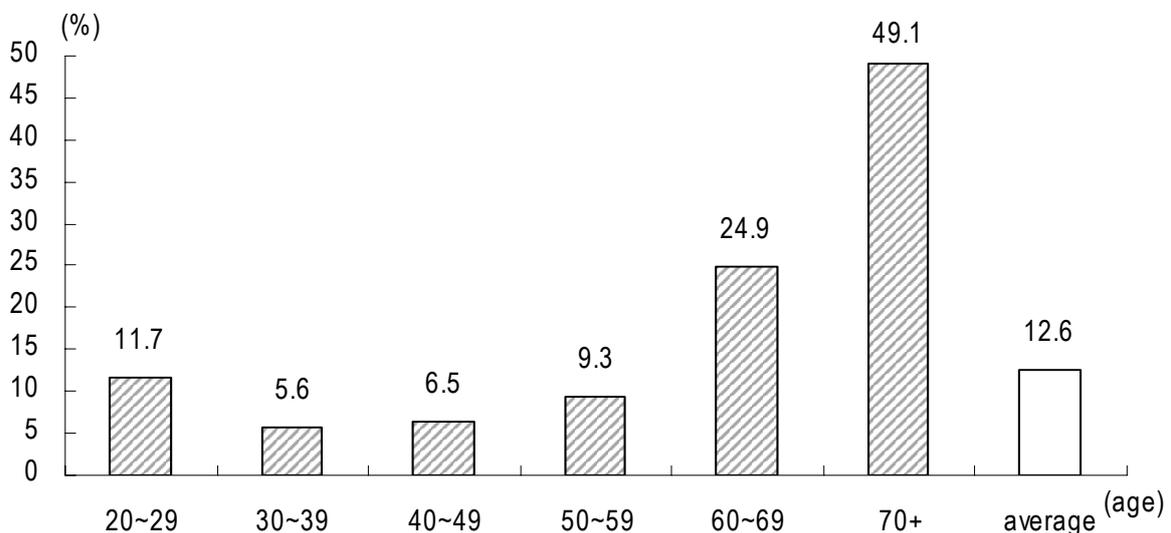
5. Issues in Pension Coverage[1]

Narrowness of the pension coverage

Despite the continuous economic growth, deep poverty in the elderly population in Korea still remains as a very critical problem. As demonstrated in Figure 4, when the relative poverty line is set at 40% of the average household income, about one fourth of the households with a 60 or older household head and around half of the households with their head aged 70 or over expectedly fall in the poverty category. This figure is two times and four times higher, respectively than the average poverty rate of the whole society. Likewise, Korea's poverty rate of the elderly households is highest among the OECD member countries and the relative income gap between working families and elderly households is also widest (Whitehouse [2008]).

The reason for the elderly poverty rate can be easily understood by looking at the composition of income sources of elderly households as seen in Table 4. As the table shows, the private transfers account for the largest part, 25.8%, of the total income source of elderly households in Korea while the public pension amounts for only 12.8%. This clearly contrasts with the fact that the public pension plays the most important role as a major income source for the elderly population in other advanced economies. Furthermore, even the sum of the public transfers including public assistance and other social welfare subsidies still accounts for less than 20%, showing a lower proportion than the private transfers. This tells us that a majority of elderly households are financially dependent on their offspring, which has been the tradition.

<Figure 4> Poverty Rates by Ages of Household Heads in Korea1 (2006)

Note: 1) Poverty line is set at 40% of the median income and the number of households is converted by applying an equivalence scale.
Source: Korea National Statistical Office, 「National Household Survey」 (2006).

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[1] This section partly relies on Moon [2009].

<Table 4> Composition of Income Sources of Elderly Households1

(Unit: %)

Income source	Payroll income	Business income	Asset income	Private transfers	Pubic transfers		Non-ordinary income	Total
					Public pension	Others		
	22.8	9.7	10.9	25.8	12.8	7.8	10.1	100.0

Note: 1) Based on the households with a 65-year-old or over household head.

Source: Korea National Statistical Office, 「National Household Survey」 (2006).

The insignificant role of the public pension is basically due to the fact that Korea's public pension system has a very short history. In the case of the National Pension Scheme, it was first introduced to payroll workers in 1988 and expanded to self-employed in 1999. Therefore, a majority of participants have not reached the minimum participation period (10 years), and even if they receive their pension benefits, the amount is not so sufficient to lift them out of poverty in many cases. Making matters worse, those who were already older than 60 when the scheme was first introduced as well as dedicated housewives have not been given any opportunity to participate in the scheme.

Another problem in the application of the National Pension is that many of the participants do not actually pay contributions. As seen in Table 5, 5.1 million participants, or 28% of the total, are classified as exempt payers, meaning they are given a grace period for the time being because they cannot afford to pay contributions. Even more serious is that the number of those people is on the rise recently. Many of them fall into the poor or near poor class, so a substantial number of those exempt payers will continue to have difficulties in securing the right to receive their pension in the future.

<Table 5> Current Status of National Pension Exempt Payers

(Unit: thousand, %)

	Total participants	Workplace participants	Regional participants	Exempt payers
2005	17,074 (100.0)	7,951 (46.6)	4,489 (26.3)	4,634 (27.1)
2006	17,691 (100.0)	8,605 (48.6)	4,150 (23.5)	4,936 (27.9)
2007	18,212 (100.0)	9,149 (50.2)	3,956 (21.7)	5,107 (28.0)

Source: National Pension Service.

Policy implications

The narrow coverage of the National Pension, or the issue, the so-called "pension blind spot," has been raised as one of the current social issues along with the long-term financial insecurity. Recognizing this issue, the Korean government put forth its effort to expand the pension coverage and compliance of the challenging groups. Besides building up the administrative ability to detect the actual income of temporary or daily workers and the self-employed, more radical policy measures are currently under active discussions. One of such policy options would be the provision of a contribution subsidy to atypical workers with low income. The main purpose of a contribution subsidy would be to prevent the potential old-age poverty in advance, rather than providing ex-post financial support after people become actually poor in the latter stage of their life.

Contribution subsidy can be considered as a pre-emptive social investment, as it will alleviate poverty among the elderly in the future. It is also a policy option which costs much less compared to the financial burden of the introduction of non-contributory universal basic pension. Therefore, it would be worthwhile to provide financial incentives for voluntary participation in the pension plan to the low-income class such as atypical workers and poor self-employed, before we jump into the implementation of more drastic structural reform of the Nation Pension.

Currently, many atypical workers are not paying their contributions mainly because neither workers themselves nor their employers have enough incentives to participate in the pension plan. Thus, in designing the subsidy scheme for atypical workers, it is important that it should provide incentives both to workers to voluntarily participate in the National Pension, and to employers to convert the individually insured workers into workplace-based insured. One way to achieve this

goal would be relieving the contribution burden partly from both workers and their employers.

6. Conclusion

Undoubtedly, the social safety net, if properly designed, plays a crucial role in ensuring economic security and social mobility of each individual in a society. In particular, its importance is growing with increasing various economic risks due to the recent global financial crisis and rapid population ageing, among others. However, the social safety net in Korea is still not sufficient enough to play the role of ensuring economic security and preventing poverty due to its short history and narrow coverage. Hence, it is imperative that the Korean government should place a top priority in strengthening the basic social safety net in order to protect the middle class from erosion and promote new entries.

The reinforcement of the social safety net can also help increase consumption demand and promote economic recovery, as it will generally reduce the precautionary motive for savings. It does not seem desirable to me, however, to expand the social safety net for the purpose of boosting domestic consumption. Since expanding the social safety net not only takes time but also is very costly, it would be a less effective measure for economic stimulus compared to other traditional macroeconomic, both fiscal and monetary, tools. The causality should be the other way around; consumption increase is the result of, not the purpose of, a strengthened social safety net.

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Development of Pension Arrangements and Future Pension Policy Issues in Japan

Noriyuki Takayama[*]

1. Introduction

In the past, families and occupational schemes on a private basis were the major old-age safety net in Japan. The principal social security pension program was introduced during the World War II. It had developed gradually under the period of high-speed economic growth. Its development looked like a dividend from economic growth. An enormous shift of the population from farmers to salaried-men took place during the rapid growth period, along with longer life expectancy. The household size has become smaller and smaller on average. The rise and the fall of private enterprises have been very common in this period. These factors forced a major source of old-age income to shift from families and occupational schemes to social security pension programs.

The future demographic and economic situations of Japan will make the current, generous social security pensions hard to maintain, however. It is still an open question whether or not Japan will manage to contain the increasing social security pension cost, while assuring its people stable lives over the whole life-cycle.

This chapter first explains changes in Japan's social security pension programs.   Second, it discusses future pension policy options in Japan.

2. Changes in Japan's Social Security Pension Program

Japan had six social security pension programs covering different sectors of the population. The earliest plan was established in 1890; the most recent, in 1961. The earliest plan was for military servants, which asked no individual contributions. It was totally financed by general revenue. The scheme was then expanded to civil servants. The old-age benefit for military and civil servants was based on the final salary and its benefit level was generous from the outset.

The principal program mandatory for private sector employees is the Kosei-Nenekin-Hoken (KNH), which was enacted in the wartime in 1942. Old-age pensions of the KNH were forced to suspend immediately after the end of the war and the KNH contribution rate was reduced from 11% to 3%. The KNH was rebuilt in 1954 shifting from an earnings-related pension to a two-tier benefits system with flat-rate basic benefits.

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2.1 High-speed Growth Period

The social security pension system was and is to be reformed at least every five years. In the early stages, the KNH benefit level was not charming yet, and for the old-age retirees at that time a lump-sum retirement benefit provided on a private basis by their employers was often of much more significance. On the other hand, pension benefits for civil servants were considerably higher. This difference induced "gap-decreasing" adjustments in benefit levels between private and public sector employees. Drastic improvements in the KNH old-age benefits were taken place in 1965 and in 1973; the replacement ratio in gross wage terms was increased to 40% and then to 60%. In 1973 the updating of past salary together with the benefit indexation enabled retired people to afford to manage in their old-age with the generous KNH benefits. In the meantime, there happened the sharp decline in the real significance of their lump-sum retirement benefits provided privately by their employers.

Under the KNH, equal percentage contributions are required of employees and their employers. The 3% contribution rate had been gradually increased and the total percentage went up to 7.8% in 1973.

At the outset, the KNH was established as a defined-benefit plan on a fully funded basis. It was initially regarded as a compulsory saving program to prevent inflation. Its finance shifted gradually from funded to pay-as-you-go. Currently the KNH has a reserve fund of about 128 trillion yen in March 2010. KNH contributions used to be accumulated in a reserve fund to be invested in social overhead capital for the construction of highways, railways, bridges, airports, and other public projects.

Before 1961 the self-employed, people engaged in agriculture/forestry/fishery, the unemployed, persons with no occupation, and employees working in small firms were still excluded in the social security pension system. The Kokumin-Nenkin (KN) Law was put into effect in April 1961, embracing all the people, previously uncovered, under social security. The participation in the KN has been compulsory for everyone (even for the jobless persons) between 20 and 59 years old.

The basic structure of the KN is a flat-rate basic benefit and a flat-rate contribution on an individual basis. One-third of the KN benefits were financed by subsidy through general revenue. The full old-age benefit of the KN was payable initially after 25 years of contributions from age 65, although an actuarially reduced or increased benefit could be claimed at any age between 60 and 70. The transitional KN old-age benefit with a special 10-year-contribution requirement began to be paid actually in 1971. A majority of the elderly came to enjoy receiving this special benefit, which contributed to making the public aware of a significant role of social security pensions in old-age income security. "Go and Go" policies were immediately adopted. The benefit formula of the KN had been revised to be more and more generous. Meanwhile automatic indexation of the KN benefit was also enforced in 1973.

2.2 Period of Diminished Expectations

The KN started with a very small contribution, which was politically difficult to increase. The KN soon faced severe difficulties in financing benefits. An enormous shift of the population from farmers to salaried-men during the rapid growth period obliged some revenue-sharing scheme between employees' and non-employees' pensions to be necessary. The scheme was established in 1986, and since then, the first-tier basic flat-rate benefits of all the pension systems have been financially integrated. Currently the flat-rate pension benefit is financed on a fully pay-as-you-go basis. The 1986 reform has changed some requirements of the KN; the full old-age pension is payable after 40 years of contributions, provided the contribution were made before 60 years of age. There have been introduced special transitional provisions for those born after 1926 with at least 25 years of coverage. They can receive the maximum pension even with fewer contribution years, provided they had been contributing since 1961.

It should be noted that those covered by the KNH (and the other employee pension systems) are not required to make individual contributions to the KN, while the KNH itself is responsible for the financial participation in the integrated first-tier, flat-rate basic pensions.

Since the 1986 reform, if the husband has the contribution deducted from his salary and placed in the KNH, his dependent wife has been automatically entitled in her own name to the flat-rate basic benefits, and she has not been required to make any individual payments to the public pension system. Through this, the women's right for pension has been comprehensively established.

The 1986 reform included another advance in the flat-rate disability pensions. A dependent child of age less than 20 got to be entitled to the flat-rate basic benefits in case of disability. Though the medical check was (and is) very strict, the handicapped children largely came to be supported by the social security pension system and not by the special welfare program.

Through the 1986 pension reform, the accrual rate for the earnings-related component of the KNH old-age benefits was to be reduced gradually from 1.0% per year to 0.75% cohort by cohort. The reductions corresponded to the longer average contribution years of the younger cohorts. On average, each cohort was expected to receive 30% of his career average monthly real earnings as the earnings-related component.

The future demographic situations of Japan were getting darker and darker; the total fertility rate (TFR) showed an unexpected sharp decline from 1975 and the current level in 2009 is 1.37. There is still little sign that the TFR will stabilize or return to a higher level. Japan's total population began to fall from 2005, reaching 45% of its current level by 2100. On the other hand, life expectancy was steadily increasing. Consequently, the proportion of the elderly (65 years and above) for Japan was 22.7% in 2009 and became the front runner in the world. It is expected to reach 30% by 2020 and more than 40% around 2050. In the 1990s, the Japanese economy changed dramatically, too, when the asset bubble finally burst. The colorful dreams that Japanese youth have placed in their economy would be likely to be destroyed.

Both demographic and economic factors in the future will probably impose greater stresses on social security pension programs which are based on pay-as-you-go defined-benefit financing. The biggest political issue in the Japanese pension system was when to start benefit payments. The pension age was 60 years for workers in the 1990s. The government had proposed twice in 1979 and 1989 to raise the eligibility age for all workers to 65. The proposal was turned down by the Diet both times since trade unions and opposition parties were strongly against the bill.

In summer 1993, the political situation changed dramatically. The Liberal Democratic Party (LDP), which had been ruling Japan ever since the end of the Second World War, fell from power. It was replaced by a coalition of opposition parities (excluding the Japanese Communist Party). It was this coalition that prepared the 1994 legislation.

The approved legislation guaranteed that the tier-2 earnings-related benefits for retired employees between 60 and 64 will be paid without any reduction. The tier-1 basic benefits for this age group were to be phased out by stages (between 2001 and 2013 for men), and eventually nobody under 65 will receive full basic benefits (the phasing out of basic benefits for female employees will be delayed by five years starting only in 2006).

Up to October 1994, benefits were adjusted in line with the hikes in gross wages, but since 1994, they have been in net wages.

In December 1998, the government decided to increase existing pension benefits in fiscal year 1999 to reflect only changes in the CPI over the previous calendar year, though fiscal year 1999 was previously anticipated as seeing net-wage indexation of existing pension benefits after a five-year interval.

In July 1999, the government submitted the 1999 pension reform bill to the parliament and the bill was passed through it in March 2000. Its main points are as follows:

a) Earnings-related benefits are to be reduced by 5 per cent; specifically, the current annual accrual rate of 0.75 per cent is to be decreased to 0.7125 per cent from fiscal year 2000.

b) Both the flat-rate basic benefits and the earnings-related pension benefits once paid are to be CPI-indexed after age 65 from fiscal year 2000.

c) The normal pensionable age for earnings-related old-age benefits is to be increased step by step from age 60 to 65 for men from fiscal year 2013 to 2025. The phasing out of earnings-related old-age benefits for female employees in their early 60s will be delayed by five years starting only in 2018. In exchange, those between 60 and 64 will become eligible for newly provided advance payment, at a reduced rate, out of the earnings-related benefits. The rate of reduction will be 0.5 per cent by one month (6 percent by one year). If a person begins to receive the advance payment from age 60, his/her benefit level will be 70 per cent of the normal amount.

d) An earnings test for those aged 65 to 69 is to be introduced from fiscal year 2002 (currently Japan has no such test for them). Increases in earnings-related old-age benefits for delayed retirement between ages 65 and 69 are to be abolished accordingly.

e) Employers are to be exempted from paying their share of social security pension contributions for their employees on child-care leave from fiscal year 2000.

f) The monthly standard earnings base for social security pensions is upgraded to the 98,000 to 620,000 yen range from October 2000.

g) The benefit/contribution base is to be shifted from monthly standard earnings to annual earnings including semi-annual bonuses from fiscal year 2003. The shift is to be adjusted to induce no changes in aggregate income from contributions in 2003.

h) The rebates on contributions for contracted-out schemes are to be frozen from fiscal year 1999.

i) A 50 per cent reduced flat-rate contribution for the non-employees is to be newly introduced from fiscal year 2002. This is mainly for low-income groups. Their basic benefit will be two-thirds of the full amount. Students aged 20 and over are to be able to postpone paying in their flat-rate contributions for ten years at the most. They are, however, to be eligible for the full basic disability benefit during years of non-payment.

By these measures, aggregate pension benefits will be reduced by 20 per cent by 2025. As a result, the contribution rate for the KNH will peak by 2025 at 25.4 per cent, instead of 34.5 per cent anticipated without any reforms (the rate estimated on the basis of monthly standard earnings). The flat-rate monthly contributions for non-employee people will peak by 2021 at 18,500 yen (instead of 26,400 yen) at 1999 prices.

2.3 The 2004 Pension Reform

The administration of Prime Minister Koizumi Jun'ichirō submitted a set of pension reform bills to the National Diet on February 10, 2004, and they were enacted on June 5. This section will describe the gist of the approved reforms and explore issues that remain to be addressed.

Salaried workers are, as a rule, enrolled in the KNH, which is part of the public pension system. Contributions under this plan have since October 1996 been set at 13.58% of annual income, paid half by the worker and half by the employer, but the newly enacted reforms raise this rate by 0.354 percentage points per year starting in October 2004. The rate rises every September thereafter until 2017, after which it will remain fixed at 18.30%. The portion paid by workers will accordingly rise from the existing 6.79% of annual income to 9.15%.

For an "average" male company employee earning JPY360,000 a month plus annual bonuses equivalent to 3.6 months' pay, contributions will increase by nearly JPY20,000 a year starting this October 2004, and by the time they stop rising in September 2017, they will have reached just under JPY1.03 million a year, and the share paid by the worker will be just over JPY514,000. This comes to 35% more than the current level of contributions.

Those who are not enrolled in the KNH or another public pension scheme are required to participate in the KN, which provides just the so-called basic pension. (The basic pension also forms the first tier of benefits under the KNH and other public pension system.) Contributions under this plan will rise by JPY280 each April from the current JPY13,300 per month until they

plateau at JPY16,900 (at 2004 prices) in April 2017. The actual rise in KN contribution is adjusted according to increases in general wage levels.

In addition, the government increased its subsidies for the basic pension. One-third of the cost of basic pension benefits is paid from the national treasury; this share was to be raised in stages until it reaches one-half in 2009.

Lower Benefits Despite Higher Contributions

Benefits under the KNH consist of two tiers; the flat-rate basic pension, which is paid to all public pension plan participants, and a separate earnings-related component. The latter is calculated on the basis of the worker's average preretirement income, converted to current values. Until now, the index used to convert past income to current values was the rate of increase in take-home pay. Under the 2004 reform, though, this index will be subject to a negative adjustment over the course of an "exceptional period" based on changes in two demographic factors, namely, the decline in the number of participants and the increase in life expectancy. This period of adjustment is expected to last through 2023.

The application of the first demographic factor will mean that benefit levels will be cut to reflect the fact that fewer people are supporting the pension system. The actual number of people enrolled in all public pension schemes will be ascertained each year, and the rate of decline will be calculated based on this figure. The average annual decline is projected to be around 0.6 percentage points.

Introducing the second demographic factor, meanwhile, will adjust for the fact that people are living longer and thus collecting their pensions for more years; the aim is to slow the pace of increase in the total amount of benefits paid as a result of increased longevity. This factor will not be calculated by tracking future movements in life expectancy; instead, it has been set at an annual rate of about 0.3 percentage points on the basis of current demographic projections for the period through 2025. Together, the two demographic factors are thus expected to mean a negative adjustment of about 0.9 points a year during the period in question.

How will these changes affect people's benefits in concrete terms? Let us consider the case of a pair of "model" KNH beneficiaries as defined by the Ministry of Health, Labor, and Welfare: a 65-year-old man who earned the average wage throughout his 40-year career and his 65-year-old wife who was a full-time homemaker for 40 years from her twentieth birthday. In fiscal 2004 (April 2004 to March 2005), this model couple would receive JPY233,000 a month.

How does this amount compare to what employees are currently taking home? The average monthly income of a salaried worker in 2004 is projected to be around JPY360,000, before taxes and social insurance deductions. Assuming that this is supplemented by bonuses totaling an equivalent of 3.6 months' pay, the average annual income is roughly JPY5.6 million. Deducting 16% of this figure for taxes and social insurance payments leaves a figure for annual take-home pay of about JPY4.7 million, or JPY393,000 a month.

The JPY233,000 provided to the model pensioners is 59.3% of JPY393,000. But this

percentage, which pension specialists call the "income replacement ratio," will gradually decline to an estimated figure of 50.2% as of fiscal 2023 (assuming that consumer prices and nominal wages rise according to government projections by 1% and 2.1% a year, respectively). Over the next two decades, then, benefit levels will decline by roughly 15% by comparison with wage levels.

The revised pension legislation stipulates that the income replacement ratio is not to fall below 50% for the model case described above, and so the exceptional period of negative adjustment will come to an end once the ratio declines to 50%. This provision was included to alleviate fears that benefits would continue to shrink without limit.

How will the reforms affect those who are already receiving their pensions? Until now, benefits for those 65 years old and over were adjusted for fluctuations in the consumer price index. This ensured that pensioners' real purchasing power remained unchanged and helped ease postretirement worries. But this cost-of-living link will effectively be severed during the exceptional period, since the application of the demographic factors will pull down real benefits by around 0.9 points a year. In principle, however, nominal benefits are not to be cut unless there has also been a drop in consumer prices. Once the exceptional period is over, the link to the consumer price index is to be restored.

Provisions for Working Seniors and Divorcees

People aged 60-64 who are receiving pensions and also have wage income have up to now had their benefits reduced by a flat 20%, regardless of how much or little they earn. This rule has been abolished so as not to discourage older people from working. But these people will still be subject to the current rule that if the sum of wages and pension benefits exceeds JPY280,000 a month (after factoring in annual bonuses), the pension benefits are to be cut by 50% of the amount in excess of this level.

Workers aged 70 and over, meanwhile, have been exempt from paying into the KNH, even if they are still on a company's payroll. And they have not had their benefits reduced no matter how much they earn. Beginning in April 2007, though, their benefits were reduced if they were high-income earners. Those receiving more than an equivalent of JPY480,000 a month in wages and pension benefits will have their benefits cut by 50% of the amount in excess of this level. This is a rule that currently applies to those aged 65 to 69, and it will be maintained for this age group. The over-70 group will still be entitled to the full amount of the basic pension, and they will continue to be exempt from paying contributions.

Divorced wives were not legally entitled to any portion of their former husbands' earnings-related pension benefits, but this changed under the revised legislation. Couples who divorce after April 2007 are able to split the rights to the earnings-related portion of the husband's pension that accrued during their marriage. The wife is able to receive a share of up to 50% of these rights; the actual share is to be determined by agreement between the two. For rights accruing after April 2008, moreover, a full-time homemaker is able to automatically receive half of her husband's

benefits in case of divorce by filing a claim at a social insurance office. Underlying this rule is the assumption that even though the contributions are paid in the husband's name, the wife has provided half of the couple's livelihood through her work as a homemaker. (Note that the provisions for working husbands and dependent homemaker wives apply conversely in cases where a home-maker husband is dependent on the wife.)

Widowed spouses younger than 30 and without children under the age of 18 had been entitled to lifelong benefits under the survivor's pension scheme (based on the earnings of the deceased spouse). After April 2007, however, they receive benefits for no longer than five years.

Workers taking child-care leave are exempt from making pension contributions, and to prevent a decrease in their future benefits due to this period of nonpayment, they are treated as having continued their full payments, even when they have no income. This special exemption was claimed for up to one year after childbirth, but starting in April 2005 the period was extended until the child reaches age three.

Also from April 2005, parents who change their working arrangements to put in shorter hours so as to care for children under age three and who take a corresponding cut in pay will be treated as having worked full time and earned a full salary. Actual contributions during this three-year period, though, will be based on the lower earnings.

Additional Adjustments

As a rule, a person cannot simultaneously receive more than one public pension. But the recent reforms have created an exception. People with disabilities who had gainful employment and paid pension contributions from April 2006 were entitled to not only their basic disability pension but also the earnings-related component of the old-age pension or survivor's pension. This measure is designed to encourage employment among people with handicaps.

Participants in the KN who have low incomes currently pay either half of the regular contributions or none at all. There was a finer tuning of payment exemptions starting in July 2006, when low-income earners also were exempt from paying one-quarter or three-quarters of the regular contributions.

The reform covered private pension plans as well. The upper limit of the amount that could be put aside each month under company-funded defined-contribution pension plans was raised from JPY36,000 to JPY46,000 in cases where there was no other corporate pension plan and from JPY18,000 to JPY23,000 in cases where there was another plan in effect. The ceiling on monthly installments under individually funded defined-contribution plans for salaried workers was raised from JPY15,000 to JPY18,000 where there was no corporate pension coverage, while the cap for the self-employed remained unchanged at JPY68,000. The higher ceilings for private plans were designed to make up for the anticipated smaller benefits of public old-age schemes.

3. Future Pension Policy Issues

Social insurance payments in Japan already exceed the amount collected in national taxes,

and contributions to the pension system are by far the biggest social insurance item. If this already huge sum is increased by more than JPY1 trillion a year, as the government plans, both individuals and companies are bound to change their behavior. Government projections of revenues and expenditures, though, completely ignore the prospect of such changes.

Companies will likely revamp their hiring plans and wage scales to sidestep the higher social insurance burden. They will cut back on recruitment of new graduates and become more selective about midcareer hiring as well. Many young people will be stripped of employment opportunities and driven out of the labor market, instead of being enlisted to support the pension system with a percentage of their income. And most of the employment options for middle-aged women who wish to reenter the work force will be low-paying ones. Only a few older workers will be able to continue commanding high wages; there is likely to be a dramatic rise in the number of aging workers who will be forced to choose between remaining on the payroll with a cut in pay or settling for retirement. Many more companies will either choose or be forced to leave the KNH, causing the number of subscribers to fall far below the government's projections and pushing the system closer to bankruptcy.

The jobless rate on the whole will rise. The Ministry of Economy, Trade, and Industry has estimated that higher pension contributions will lead to the loss of 1 million jobs and boost the unemployment rate by 1.3 points. The government plan to increase pension contributions annually up to 2017 will exert ongoing deflationary pressure on the Japanese economy. For the worker, a rise in contribution levels means less take-home pay; as a result, consumer spending is likely to fall, and this will surely hinder prospects for a self-sustaining recovery and return to steady growth.

Another problem with increasing pension contributions is that they are regressive, since there is a ceiling for the earnings on which payment calculations are based and unearned income is not included in the calculations at all.

One major objective of the reforms is to eventually eliminate the huge excess liabilities of JPY500 trillion in the balance sheet of the KNH. The plan is to generate a surplus equal to this amount by (1) hiking contributions, (2) increasing payments from the national treasury, and (3) reducing benefits. But the combination of higher contributions and lower benefits will mean the future participants will end up getting back less than they pay into the system. It is estimated that their benefits will amount to only about 80% of their contributions. This is hardly likely to encourage people to participate. Higher contributions will further alienate younger workers from the pension system and deepen their distrust of politics.

As noted above, those who are already receiving their pensions will see their benefits decline in real terms by an average 0.9% per year. The government scenario sees consumer prices eventually rising 1% a year and take-home pay 2.1% a year. This means that the model beneficiary who began receiving JPY233,000 a month at age 65 in 2004 will get roughly JPY240,000 at age 84 in 2023; nominal benefits, in other words, will remain virtually unchanged

for two decades, despite the fact that average take-home pay of the working population will have risen by over 40%. The income replacement ratio, which stood at nearly 60% at age 65, will dwindle to 43% by the time the model recipient turns 84. The promise of benefits in excess of 50% of take-home pay does not apply, therefore, to those who are already on old-age pensions.

The so-called demographic factors are likely to continue changing for the foreseeable future. The government itself foresees the number of participants in public pension plans declining over the coming century: The estimated figure of 69.4 million participants as of 2005 is expected to fall to 61.0 million in 2025, 45.3 million in 2050, and 29.2 million in 2100. This corresponds to an average annual decline of 0.6% through 2025, 1.2% of the quarter century from 2025, and 0.9% for the half century from 2050. In other words, the decline in the number of workers who are financially supporting the public pension system is not likely to stop after just two decades.

The 2004 reform, though, adjusts benefit levels in keeping with the decline in the contribution paying population for the next 20 years only; the government's "standard case" does not foresee any further downward revisions, even if the number of participants continues to fall. If the government really anticipates an ongoing decline, there is no good reason to abruptly stop adjusting benefit levels after a certain period of time. Sweden and Germany, for instance, have adopted permanent mechanisms whereby benefit levels are automatically adjusted for fluctuations in demographic factors.

The decision to keep the model income replacement ratio at 50% at the point when pension payments commence represents, in effect, the adoption of a defined benefit formula. Maintaining both fixed contributions on the one hand and defined benefit levels on the other is not an easy task, for there is no room to deal flexibly with unforeseen developments. The government will be confronted with a fiscal emergency should its projections for growth in contributions and a reversal in the falling birthrate veer widely from the mark.

The government based its population figures on the January 2002 projections of the National Institute of Population and Social Security Research. Under these projections, the medium variant for the total fertility rate (the average number of childbirths per woman) falls to 1.31 in 2007, after which it begins climbing, reaching 1.39 in 2050 and 1.73 in 2100. Actual figures since the projections were released have been slightly lower than this variant, and there are no signs whatsoever that the fertility rate will stop declining.

If the government is to keep its promise on an upper limit for contributions and a lower limit for benefits, the only policy option it will have in the event of a financial shortfall will be to raise the age at which people begin receiving benefits. The reform package makes no mention of such a possibility; the drafters of the bills no doubt chose to simply put this task off to a future date.

In fiscal 2009 the share of the basic pension benefits funded by the national treasury was raised from one-third to one-half. This means that more taxes will be used to cover the cost of benefits. Taxes are by nature different from contributions paid by participants in specific pension

plans, and there is a need to reconsider the benefits that are to be funded by tax revenues.

The leaders of Japanese industry tend to be quite advanced in years. For the most part, they are over the age of 65, which means that they are qualified to receive the flat-rate basic pension. Even though they are among the wealthiest people in the economy, they are entitled to the same basic pension as other older people hovering around the poverty line. Using tax revenues to finance a bigger share of the basic pension essentially means asking taxpayers to foot a bigger bill for the benefits of wealthy households as well. For an elderly couple, the tax-financed portion of the basic pension will rise from JPY530,000 a year to JPY800,000. If a need arises to raise taxes at a future date, who will then actually agree to pay more? Few people will be willing to tolerate such wasteful uses of tax money.

On 30 August 2009, there was a dramatic change in the political arena of Japan. The LDP fell down from power, and it was replaced by the Democratic Party. The new administration plans to implement a drastic pension reform by 2013, including an introduction of a minimum pension funded by consumption tax, with integrating all the existing earnings-related pension systems to a unified one. The concrete reform contents still remain to be drafted.

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

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

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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

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[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 there 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.

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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.

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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

Trend of Livelihood Assistance
(Administrative reports of social welfare)

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

Distribution of the annual income of the households of municipal NHI

(NHI SURVEY 2007
N=25,539,350 households, 25.5% (6,513,950 households) had no income)

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 million × 9.1% + 29,500 yen × 4 = 300,000 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

others
11.5%

none
20.4%

HCSOO
6.7%

EHI
5.9%

NHI
55.5%

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) × (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 × P × N. Finally the % of the premium waived for the households exceeding the cap (EF) is R - (0.26/P) × R - (Q × P × 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

Distribution of the product of (% household exceeding the cap x % of premium of the household not exceeding the cap)
source: NHI administrative report 2007, N=2262, national average=0.26

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

Trend of Gini coefficient

(source: Income Redistribution Survey.
The original Gini coefficient was the lowest between 1972–81,
but the accuracy of the survey was hindered because of declining sample size.)

Legend:
- Sample size (right axis)
- Before distribution
- after redistribution
- after tax
- after social security

Y-axis (left): Gini coefficient
Y-axis (right): Sample size

X-axis years: 1962 1967 1972 1975 1978 1981 1984 1987 1990 1993 1996 1999 2002 2005 2008

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

Income redistribution of all health insurance
(source: MHLW Income redistribution survey 2008. Health care benefit is the aggregate average of 2002, 2005, and 2008.)

Income-specific health care benefit is the aggregate average of the three surveys to maintain accuracy.

■ health care benefit
■ contribution (TAX+PREMIUM)

household annual income (in 10,000 yen)

> 1,000
950～1,000
900～950
850～900
800～850
750～800
700～750
650～700
600～650
550～600
500～550
450～500
400～450
350～400
300～350
250～300
200～250
150～200
100～150
50～100
< 50

contribution<-- (in 10000 yen)-->health care benefit

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

Income redistribution of NHI
(source: MHLW Income redistribution survey 2008. Health care benefit is the aggregate average of 2002, 2005, and 2008.)

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

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.

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[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 China[2]

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.

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[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	2000	2006
	1990		2006		1990		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

Growth ratio of per capita GDP of 2000 to that of 1990:
per capita GDP (2000) / per capita GDP (1990)

Reduction in U5MR between 2000 and 1990:
U5MR of 2000 - U5MR of 1990

Growth ratio of per capita GDP of 2005 to that of 2000:
per capita GDP (2005) / per capita GDP (2000)

Reduction in U5MR between 2005 and 2000:
U5MR of 2005 - U5MR of 2000

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

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[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	Hospital Beds	Beds in Townships and
	(per 1,000 population)		(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

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[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 China[5]

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

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[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.

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[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

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[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

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[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 Systems[9]

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.

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[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

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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).

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[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.
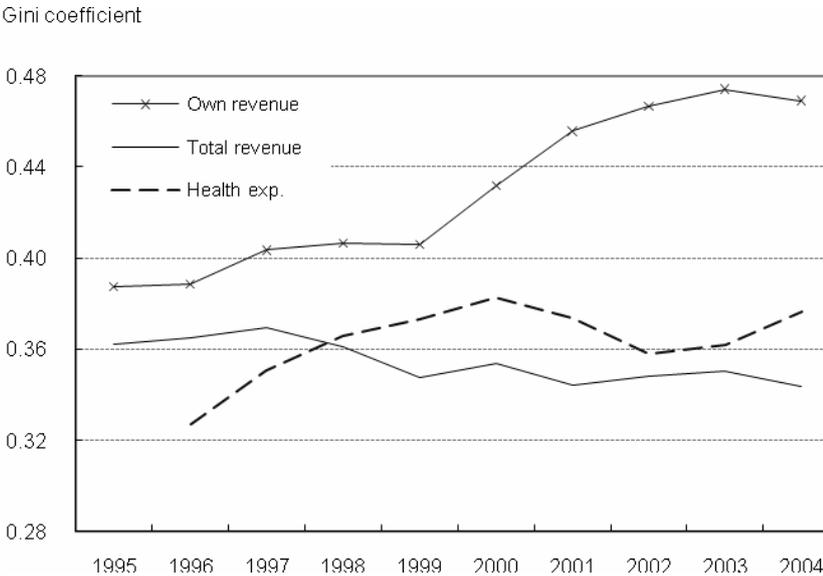
Intergovernmental fiscal transfers

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,

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[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 subsides, 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

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[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.

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3. Unemployment Insurance System

Employment Structure and Unemployment Insurance in East Asia: Establishing Social Protection for Inclusive and Sustainable Growth

Yasuhiro Kamimura[*]

1. Why We Need Unemployment Insurance for East Asia

East Asian economies, surrounded by other APEC (Asia-Pacific Economic Cooperation) economies, have deepened their economic interdependence over the past few decades. Recent free trade agreements and economic partnership agreements among economies help confirm market integration in the region. As Stiglitz (2001: x) points out, "free international trade allows a country to take advantage of its comparative advantage, increasing incomes on average, though it may cost some individuals their jobs." Free trade may bring about social instability through unemployment, in parallel with economic prosperity.

Social instability brought about by unemployment is not merely a domestic problem; it is also a region-wide issue, for domestic social tension can easily lead to international tension. Polanyi (1944: 219) writes that "the strain which sprang from unemployment might induce foreign tension. In the case of a weak country this had sometimes the gravest consequences for its international position. Its status deteriorated, its rights were disregarded, foreign control was foisted upon it, its national aspirations were foiled. In the case of strong states the pressure might be deflected into a scramble for foreign markets, colonies, zones of influence, and other forms of imperialist rivalry."

Each government is responsible for coping with social instability, not just for domestic integration but also for improving the sustainability of regional economic cooperation. Moreover, it is not just each government but also the region as a whole that is responsible for addressing the issue. It is therefore advisable and reasonable that improvements to the region's social protection system be discussed at the APEC 2010 Summit. Unemployment insurance and related schemes will comprise some of the essential points of the discussion.

In the following sections, I will examine the theoretical definition of "unemployment" (Section 2). Then, I will go through related schemes and argue that unemployment insurance is the best among them and an essential part of a social protection system (Section 3). After glancing through the characteristics of labor markets in East Asia (Section 4), I will explore why some economies have unemployment insurance while others do not (Section 5). I will concentrate my analysis on 11 economies, without excluding other APEC economies from the discussion. I will

also evaluate the existing unemployment insurance schemes and point out their inadequacies, especially in terms of coverage (Section 6). In the conclusion (Section 7), I will stress the importance of regional cooperation in upgrading social protection systems.

2. A Theory of Unemployment

What does the term "unemployment" mean? As a real-world issue, how should we cope with it? Okochi (1952), the leading social policy scholar in postwar Japan, provides a good starting point. His perspective covers both developed and developing economies, for when he wrote his theory, Japan was a developing economy that was on the verge of experiencing a high-growth era. He stressed three aspects of the concept of unemployment.

First, unemployment denotes that a worker who does not have his own means of production has lost his workplace. If he has his own workshop, land, or store, he cannot be unemployed. In such a case, if that worker cannot earn enough money to live, he is called "poor" or "underemployed," but he is not "unemployed" in a precise sense (ibid.: 9).

Second, the idea of unemployment presumes that the unemployed worker retains his willingness to work. It implies that he shares a characteristic of modern wage workers that Weber calls "the spirit of capitalism." Such a worker should not be idle and should make every effort to earn his own bread (ibid.: 12).

Third, if a worker cannot find a job that suits his skill or ability set, it can be said that he is "unemployed." In economies where unemployment insurance is inadequate, dismissed workers may be ready to accept whatever job is possible. If they get a new job that is not appropriate to their skills, however, it is a kind of unemployment, in the sense that they are misallocated from the viewpoint of the efficiency of the whole of industrial society (ibid.: 16).

How do these three points relate to our current issue? The first point suggests that only employed workers can be unemployed. Self-employed workers such as farmers or petty traders cannot, by definition, be unemployed. Their problems related to poverty or underemployment cannot be solved with unemployment insurance. Other measures such as industrial policy or education policy should be put in place to improve their lives. Even in this case, however, unemployment insurance will at least reduce the uncertainty of workers in the formal sector.

The second point reminds us of discouraged workers. In developing economies, dismissed workers may go back to their home village and join the family business as unpaid workers. As such, they may not appear to be unemployed. Even in developed economies, dismissed female workers and older workers are sometimes discouraged from seeking a new job; instead, they rely on their families. For these people, active labor market policies such as training programs are more suitable than unemployment insurance.

The third point implies a merit of unemployment insurance. If there is an adequate unemployment insurance scheme in place, dismissed workers can retain their skills until they find a suitable job that makes use of their abilities. If their skills are outdated, they can undergo

training to acquire new skills that are suited to their abilities. In either case, unemployment insurance is helpful for the unemployed in maintaining or upgrading their skills; this is good not just for them but also for the efficiency of the whole of an industrial society.

3. Unemployment Insurance and Its Related Schemes

Besides unemployment insurance, other compensation schemes related to unemployment are severance pay, unemployment insurance savings accounts, unemployment assistance, and work programs (Berg and Salerno 2008: 81).

Severance pay is a benefit paid by the employer to the employee upon termination of the employment contract (ibid.). If all employers were honest and generous when dismissing employees, the function of severance pay would be similar to unemployment insurance. In reality, however, the employer of a bankrupt company may run away without offering severance pay to employees. Nonetheless, it is better than nothing. Economies like Malaysia, the Philippines, and Indonesia, neither of which have unemployment insurance, mandate severance pay (ILO 2010, Asher and Mukhopadhaya 2004).

Unemployment insurance savings accounts are private savings accounts that workers can draw on in the case of job loss (Berg and Salerno 2008: 81). They contain no risk-pooling mechanism. They are not very helpful for the most vulnerable of the unemployed, that is, those who have not accumulated sufficient savings prior to becoming unemployed (ibid.). Chile has this type of scheme, in which accumulated contributions are paid out upon job separation (OECD 2010: 134).

Unemployment assistance is a means-tested benefit program that helps workers in greatest need (Berg and Salerno 2008: 81). Australia and New Zealand have developed this type of scheme, instead of unemployment insurance (Palme et al. 2010). Economies such as Germany use this type of scheme to support job seekers who cannot receive benefits from unemployment insurance (Toda 2010). In Japan, it has been discussed as a second-tier safety net between unemployment insurance and social assistance in supporting job seekers (Hamaguchi 2010).

Work programs also self-select from the neediest groups by paying wages that are at or below the minimum wage in exchange for public work, such as building roads, schools and clinics (Berg and Salerno 2008: 82). When combined with skills training, such programs resemble those enacted by active labor market policies.

Among these four schemes, the first two are meager alternatives to unemployment insurance; the latter two are complements rather than alternatives to unemployment insurance. After all, unemployment insurance is an essential part of social protection systems in promoting inclusive and sustainable growth in East Asia.

4. Varieties of Labor Markets in East Asia

Before examining unemployment insurance, we should outline the varieties of labor

markets in East Asia. There are similarities as well as differences in this respect among East Asian economies. The most striking similarity is that they have maintained low unemployment rates until recently. The most salient differences concern each economy's economic level and the sector-based structure of its labor market. If you apply convergence theory, however, it can be interpreted that each economy is proceeding on the same road, but is currently at a different point. On the other hand, some divergent characteristics in each labor market, such as those pertaining to the employment rates of young mothers and the elderly, cannot be explained by convergence theory.

Figure 1 compares the unemployment rates before and after the Asian economic crisis of 1997–98. Before the crisis, most economies other than the Philippines and Malaysia had achieved nearly full employment. After the crisis, most economies other than Malaysia, Thailand, and Vietnam experienced a rise in unemployment. Of course, we should be careful with the different definitions of unemployment in each economy. For example, the unemployment rate in Thailand is a figure that excludes the "seasonally inactive labor force"; this workforce component becomes sizeable during the agricultural off-season. On the other hand, the unemployment rate in Indonesia after 2000 includes discouraged workers (Dhanani et al. 2009: 54). Obviously, Thailand's rate is underestimated, while that of Indonesia is overestimated. In any case, the unemployment problem in East Asia has emerged since the economic crisis.

Figure 1:   Unemployment is a new experience for East Asia

Data Source: ILO, *Key Indicators of the Labour Market*

Figure 2:   Different phases of industrialization

Data Sources: UNDP, *Human Development Report 2007/2008*. For Chinese Taipei, Directorate
General of Budget, Accounting and Statistics, *Statistical Yearbook of the Republic of China
2007*. For China, National Bureau of Statistics of China, *China Statistical Yearbook 2008*.
For the EU economies, OECD, *StatExtracts* (data for 2005).

The significance of unemployment, however, varies depending on the sector-based structure
of each economy. In agrarian economies, underemployment and poverty rather than
unemployment may be the central problems, whereas industrial economies likely have many
workers who need traditional types of unemployment insurance. In post-industrial economies, the
scheme should bear the characteristics of active labor market policy that make it suitable for the
knowledge economy. As figure 2 shows, while there are some post-industrial economies in the
region, such as Japan, Korea, and Chinese Taipei, most East Asian economies seem to still be in
the industrialization process. (Black dots represent East Asian economies; white dots, as a
reference, represent EU member countries. Chinese provinces are represented by "+." Here I
would like to stress China's internal disparities.) Some of the coastal provinces of China, such as
Zhejiang, Jiangsu, and Tianjin, seem to be at the peak of the industrial stage and are worthy of the
name "Workshop of the World" (Kamimura 2010: 90). Thus, it is time to introduce or strengthen
unemployment insurance in such economies.

Figure 3:   Different labor-market structures

Data Sources: For Japan, Statistics Bureau, *Labor Force Survey 2009*. For Singapore, Ministry of
Manpower, *Report on Labour Force in Singapore 2009*. For Chinese Taipei, Directorate
General of Budget, Accounting and Statistics, *Manpower Survey 2009*. For Korea, National
Statistical Office, *Economically Active Population Survey 2008*. For Thailand, National
Statistical Office, *Report of the Labor Force Survey 2009*. For Vietnam, ILO, *Vietnam
Employment Trends 2009* (data for 2007).

Figure 3 illustrates that there are certain people who work as employees, even in largely
agrarian economies such as Vietnam. Of course, sector-based distribution varies from economy to
economy. It is difficult to introduce unemployment insurance for self-employed workers or unpaid
family workers; however, even in economies where the agricultural sector dominates, there are
certain unemployment insurance needs.

It is worth noting here that, to date, there is a dearth of comparative study into labor markets
in East Asia, at least upon which social policy arguments can be based. Figure 4 suggests that
there are different types of labor markets in East Asia. Differences here cannot be explained away
by economic levels or by any other single factor. This kind of divergence requires further
investigation.

Figure 4: Different types of labor market?

Data Source: ILO, *Key Indicators of the Labour Market*

5. Structure Does Not Explain the Lack of Unemployment Insurance

There are economies that have unemployment insurance schemes: Japan, Chinese Taipei, Korea, Thailand, China, and Vietnam. There are also economies that do not have unemployment insurance schemes: Hong Kong (China), Singapore, Malaysia, the Philippines, and Indonesia. What explains the differences between them? The purpose of the following analysis is not to criticize the latter set of economies; every economy has its own philosophy and measures to cope with unemployment. I would like to suggest, however, that sharing experiences among economies is useful in removing misunderstandings concerning structural barriers to the introduction of unemployment insurance schemes.

Figure 5:   Economic level does not matter

GDP per capita (US$, 2005)

Data Sources: UNDP, *Human Development Report 2007/2008*. For Chinese Taipei, Directorate General of Budget, Accounting and Statistics, *Statistical Yearbook of the Republic of China 2007*.

Some people believe that only rich economies can afford unemployment insurance. That is not the case, however. Figure 5 compares the economic levels of economies that have unemployment insurance (white bars) and those that do not (black bars). Both sets include rich and not-so-rich economies. Obviously, one cannot conclude that economic level matters with regard to unemployment insurance provisions.

Some people may worry that unemployment insurance discourages the unemployed from searching for work and eventually increases the overall unemployment rate. This is not the case in East Asia, however. Figure 6 shows that unemployment rates in economies that have unemployment insurance are not necessarily higher than those in economies that do not. Note that the high rate in Indonesia and the low rate in Thailand are due to different definitions of "unemployment" in each economy, as discussed.

Figure 6:   Social protection does not cause unemployment

Data Sources: ILO, *Key Indicators of the Labour Market*. For Vietnam, ILO, *Vietnam Employment Trends 2009*.

Some people may think that agrarian economies like Indonesia and the Philippines do not need unemployment insurance, for two reasons. One is that self-employed farmers do not need unemployment insurance if they have their own land; the other is that dismissed workers in agrarian economies can go back to their home village and rely on their family. As discussed in previously, however, there are employees even in agrarian economies, and not all dismissed workers can rely upon their family. Figure 7 shows that some agrarian economies like Vietnam, Thailand, and China have already introduced unemployment insurance. Moreover, Japan was a highly agrarian economy when it introduced unemployment insurance in 1947. Thus, the size of an economy's agricultural sector is not a structural barrier to its introduction of unemployment insurance.

To conclude, structural barriers do not interfere with the introduction of unemployment insurance. Whether or not unemployment insurance is feasible depends upon an economy's philosophy and political leadership, rather than its structural conditions.

Figure 7:   Agriculture and introduction of unemployment insurance

Data Sources: ILO, *Key Indicators of the Labour Market*. For Japan (when unemployment
     insurance was introduced), Statistics Bureau, *Labor Force Survey*. (However, the data is for
     1953, not for 1947.) For Chinese Taipei, Directorate General of Budget, Accounting and
     Statistics, *Manpower Survey 2009*. For China (2007), National Bureau of Statistics of China,
     China Statistical Yearbook 2008. For Vietnam, ILO, *Vietnam Employment Trends 2009*.

6. Existing Unemployment Insurance Is Not Necessarily Effective

How do existing unemployment insurance schemes function in Japan, Chinese Taipei, Korea, Thailand, China, and Vietnam? Are the existing schemes effective, especially in terms of coverage? Comparisons make it possible to detect and improve weak points in each economy.

General Description

As Table 1 shows, Japan introduced unemployment insurance relatively early, as part of postwar reforms. China introduced it following the start of economic reforms. Korea and Chinese Taipei each introduced it after democratization, and Thailand and Vietnam each introduced it only recently.

Table 1: Unemployment insurance in East Asian economies

	Japan	China	Korea	Chinese Taipei	Thailand	Vietnam
First implementation (Current law)	1947 (1974)	1986	1995	1999 (2002)	2004	2007
Type of program	Social insurance	Local government-administered social insurance	Social insurance	Social insurance	Social insurance	Social insurance
Covered persons	Employees	Employees of urban enterprises and institutions	Employees	Employees	Employees	Employees
Qualifying conditions	12 months of insurance during the last 24 months.	12 months of insurance; must be involuntarily unemployed.	6 months of insurance during the last 18 months; must be involuntarily unemployed.	12 months of insurance; must be involuntarily unemployed.	6 months of insurance during the last 15 months.	12 months of insurance during the last 24 months.

Data Source: International Social Security Association, *Social Security Country Profiles* (www.issa.int/aiss/Observatory)

Unlike the schemes in the other economies studied, unemployment insurance in China is run by local governments, and only employees of urban enterprises are covered. Okochi's aforementioned theory of unemployment teaches us that unemployment insurance need not cover those who have their own means of production. Farmers who have their own land need not be covered, for example. Employees who work in rural areas, however, should be covered under a certain scheme.

In each of China, Korea, and Chinese Taipei, benefits are provided only to those who are "involuntarily unemployed." The differences between "voluntary" and "involuntary" unemployment are not clear, however; it is difficult to generate a precise demarcation between the two categories. It is therefore advisable to include both categories of unemployed workers in the scheme.

Contributions and Benefits

As Table 2 indicates, contribution rates vary among economies. The highest two are those of China and Vietnam, the two socialist economies in the study sample, while the lowest is that of Chinese Taipei. Table 3 shows the benefits; the benefit rate in most economies is proportional to the former average earnings of the unemployed, while in China it is a flat rate that is determined by the local government. The duration of benefits in China is longer than in the other economies.

Table 2:   Contributors to unemployment insurance

	Japan	China	Korea	Chinese Taipei	Thailand	Vietnam
Employee	0.5%	1.0%	0.45%	0.2%	0.5%	1.0%
Employer	0.9%	2.0%	0.7～1.3%	0.7%	0.5%	1.0%
Government	Subsidies	Subsidies	None	0.1%	0.25%	1.0%

Data Source: International Social Security Association, *Social Security Country Profiles* （www.issa.int/aiss/Observatory）

Table 3:   Unemployment insurance benefits

	Japan	China	Korea	Chinese Taipei	Thailand	Vietnam
The amount of benefit	50 to 80% of the insured's average daily wage; The minimum daily benefit is 1,656 yen. The maximum daily benefit is 7,775 yen.	Higher than the local public assistance benefit but lower than the local minimum wage.	50% of the insured's average daily earnings. The minimum daily benefit is 22,320 won. The maximum daily benefit is 40,000 won.	60% of the insured's average monthly earnings.	50% of the insured's average daily wage for the involuntarily unemployed, 30% of the insured's average daily wage for the voluntarily unemployed. The maximum daily benefit is 250 baht.	60% of the insured's average monthly earnings.
The duration of benefit	3 to 11 months	12 to 24 months	3 to 8 months	6 months	6 months in any 1 year for the involuntarily unemployed, 3 months in any 1 year for the voluntarily unemployed.	3 to 12 months.
Exchange rate	US$1.00 = 105.52yen.	US$1.00 = 6.94yuan.	US$1.00 = 1028.50won.	US$1.00 = 30.40NT$.	US$1.00 = 38.49baht.	US$1.00 = 16,245dong.

Data Source: International Social Security Association, *Social Security Country Profiles* （www.issa.int/aiss/Observatory）

Legal and Effective Coverage

The most important matter with respect to unemployment insurance schemes is how many people are protected from the economic uncertainty caused by unemployment. Table 4 reveals the real function of each scheme. *Legal Coverage* refers to the ratio of insured persons as a percentage of the total labor force (Scholz et al. 2010: 345). Rates vary from economy to economy; the highest is that of Japan, while the lowest two are those of Vietnam and Thailand.

It is misleading, however, to conclude that unemployment insurance in these latter two economies is not useful. As shown earlier, Vietnam and Thailand each has a large agricultural sector, and so there are many self-employed workers for whom unemployment insurance would not be suitable. If we take the ratio of insured persons to all employees (i.e., *Covered Employees*), there we find an unexpected proximity: the rates of Vietnam and Thailand are almost similar to that of Korea. We can guess that the schemes of these economies have a significant role in the formal sector, at least.

Table 4:   Unemployment insurance coverage

	Japan	China	Korea	Chinese Taipei	Thailand	Vietnam
Legal Coverage (Insured/Labor force)	56.1%	4.7〜54.4% (varies among provinces)	38.5%	49.9%	24.4%	11.8%
Covered Employees (Insured/Employees)	64.3%	NA	56.0%	65.0%	54.8%	52.3%
Effective Coverage (Beneficiary/Unemployed)	22.9%	11.7〜74.2% (varies among provinces)	NA	23.7%	6.7〜17.7% (varies among months)	0.7%

Data Sources: Calculated by the author based on national statistics (2007 for China, 2008 for other countries).

For the rates of Thailand, I am grateful to Professor Yasuhito Asami for providing the data.

When it comes to *Effective Coverage*, which is the ratio of the beneficiaries to all those unemployed (ibid.), the picture changes. Rates are quite low across all the economies studied. Compared to other advanced economies, even the rates of Chinese Taipei and Japan are ranked at the bottom. The rates of European economies such as the United Kingdom, France, and Sweden are above 50%, and Germany's rate is almost 100% (Scholz et al. 2010: 349).

Goishi (2009) points out that the decline in effective coverage in Japan can be explained by increases in non-regular employment and long-term unemployment in that economy. Moreover, there are some vulnerable groups such as young workers who are not effectively covered by the existing scheme. As figure 8 shows, more than half of young workers in Japan, Korea, and Chinese Taipei are legally covered by unemployment insurance. As figure 9 reveals, however, their effective coverage in Japan and Chinese Taipei (possibly in Korea also) is quite low. Unemployment insurance in these economies is inadequate for coping with current "youth problems" (Kamimura, forthcoming).

Figure 8:   More than half of young workers are legally covered

Insured / Labor Force (%, by age, 2008)

Japan, Korea, Chinese Taipei plotted by age group from 20~24 to 55~60.

Figure 9:   Young workers are not always covered effectively

Beneficiary / Unemployed (%, by age, 2008)

Japan, Chinese Taipei plotted by age group from 20~24 to 55~60.

Data Sources for figures 8 and 9: For Japan, Ministry of Health, Labour and Welfare, *Yearbook of Employment Insurance Program 2008*. For Korea, Korea Employment Information Service, *Employment Insurance Statistics Yearbook 2008*. For Chinese Taipei, Council of Labor Affairs, *Labor Insurance Statistics Yearbook 2008*.

Figure 10:   Diversity of legal and effective coverage

Here it is appropriate to note diversities in legal and effective coverage among the provinces of China. As figure 10 shows, while the legal coverage (horizontal axis) is lower than 30% in most provinces, the effective coverage (vertical axis) varies widely among the provinces. One may guess that, in some provinces with high effective coverage, unemployment insurance is a kind of privilege for the former employees of state enterprises. If this is true, Chinese unemployment insurance also seems inadequate for supporting those who truly need help.

7. Conclusion

There are two conclusions. First, it is possible for Hong Kong (China), Singapore, Malaysia, the Philippines, and Indonesia to consider introducing unemployment insurance or strengthening other schemes that would suit their situation. As noted above, the choices that each economy makes depend upon the economy's philosophy and political leadership rather than structural conditions. The economies that already have unemployment insurance can provide technical cooperation. Unilateral assistance is, however, inappropriate in an era of regional cooperation. Each economy can freely draw lessons that are learned through comparative study. It is useful to compare the merits and demerits of relatively advanced systems of Japan, Korea, and Chinese Taipei as well as to learn from the experiences of economies with similar labor market structures.

For example, it is advisable for Indonesia to investigate the policies and practices of Thailand if it is looking to introduce an unemployment insurance scheme.

Second, for economies that already have unemployment insurance, it is recommended that they reform the schemes that cover people who really need social protection. The most important challenge is to increase the effective coverage of unemployment insurance. It is advisable to extend legal coverage to non-regular workers, and it is also worth considering a combination of unemployment insurance with an unemployment assistance scheme. The problems that Japan, Korea, and Chinese Taipei face are not totally different; these economies can compete with each other in proposing policies to increase effective coverage, and in more fully developing active labor market policies. Such competition would be beneficial not only for the economies involved but also for other economies. To promote policy innovation, it is essential to compile comparable and longitudinal data; for this purpose, it is expected that the StatsAPEC will be upgraded to the level of the Eurostat in the EU.

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Unemployment Insurance in Thailand: Rationales for the Early Introduction in a Second-Tier Newly Industrializing Economy

Yasuhito Asami[*]

I. Introduction

Unemployment insurance (UI) has often been considered as a "luxury good" that only rich economies can afford. Thailand, however, introduced UI in 2004. By examining Thailand's experience with UI, this paper argues that newly industrializing middle-income economies can also have UI without putting a burden on the government's coffers or hurting their overall international competitiveness. It also argues that, if properly designed and managed, UI can facilitate timely adjustments to a volatile global economy, and reduce political tension, especially in small middle-income states with an open economy like Thailand.

As we will see in detail later, Thailand's UI scheme has been generating healthy annual surpluses since its start in 2004. Involuntarily laid-off workers can receive 50% of their monthly salary for six months after losing their jobs, if they worked and contributed to UI for at least six months prior to their job interruption, while those who resign voluntarily can receive 30% of their salary for three months. Employers and employees are required to equally contribute 0.5% of each employee's salary to UI, while the government contributes 0.25% of the salary. With this arrangement, it is very unlikely for Thailand's UI scheme to run a deficit, unless a large portion of the fund is used for other purposes than UI benefits to the eligible unemployed workers.

The duration and amount of UI benefits in Thailand are kept shorter and lower than those in most of the developed economies. But even with such limited benefits, the UI scheme in Thailand alleviated the plights of unemployed workers, at least to some extent, when the Thai economy was hit hard by the worldwide economic downturn in 2009.

In the book that won the 1986 Woodrow Wilson Foundation Award for the best book on government, politics, and international affairs, Peter Katzenstein (1986) argued that small states in Europe, such as Netherlands, Belgium, Austria, Sweden, Norway, Denmark, and Switzerland, have achieved and maintained a high level of economic prosperity by pursuing a different set of policies from big states like the United States, Britain, France, and Japan. He wrote:

> For the small European states, economic change is a fact of life. They have not chosen it; it is thrust upon them. These states, because of their small size, are very dependent on world markets, and protectionism is therefore not a viable option for them. ... Instead, elites in the small European states, while letting international markets force economic adjustments,

choose a variety of economic and social policies that prevent the costs of change from causing political eruptions. They live with change by compensating for it. ... Their strategy differs profoundly from the liberal and statist principles that inform the political choices and structures of the large industrial states. (Katzenstein 1986: 24)

Thailand, as well as other second-tier NIEs, such as Malaysia and the Philippines, is facing a similar situation to the small states in Europe studied by Katzenstein. Though their population size is larger, the size of their GDP is even smaller than that of "small" states in Europe. Like their counterparts in Europe, "small" second-tier NIEs are very dependent on world markets. Protectionism is not a viable option for them, either. They therefore cannot escape from the volatility of the global market. Many of Southeast Asian economies, especially Thailand, learned a bitter lesson on how politically disastrous and socially painful the adverse effect of the increasingly precarious global economy can be, when the region was ravaged by the Asian financial crisis in 1997.

If neither protectionism nor a retreat from the global economy is a viable option, small second-tier NIEs have only two options: 1) to implement social policies that prevent the costs of economic fluctuation and structural change from causing political eruptions as small states in Europe did, or 2) to strengthen the power of the government vis-à-vis various societal groups so that the government can force those who suffer from the adverse impact of the precarious global economy to withstand the pain without any pain-killers, as some authoritarian states did. This paper argues that the first option is less risky and less painful than the second one in many of the cases, and also that UI is a useful and relatively inexpensive tool to reduce the social pain associated with economic adjustments imposed by international markets.

However, as Milan Vodopivec, a World Bank specialist on UI, pointed out, the "standard OECD-style" UI program is unlikely to function well in the developing economies "faced by large informal sectors, weak administrative capacity, large political risk, and environment prone to corruption" (Vodopivec 2009: 1). The UI scheme in Thailand differs from those in European economies on some of the important aspects. Now that a number of other middle-income economies, such as Malaysia and the Philippines, started considering the introduction of the UI programs seriously[1], it will be meaningful to examine Thailand's six-year experience with the UI scheme to draw some policy implications for other second-tier NIEs.

II. Overview of Thailand's Unemployment Insurance

II-1 Coverage

Unemployment insurance (UI) was introduced in Thailand in 2004 as a part of the social security system. The social security system started in 1991. Though the Social Security Act

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[1] Interviews with officials in the Philippines' Social Security System in July 2009, and in Malaysia's Social Security Organization in March 2010.

promulgated in 1990 had provisions on unemployment insurance, its implementation was postponed until 2004. When the social security system started in 1991, it covered only those who worked in the formally registered business enterprises with 20 or more employees. The coverage expanded to the workplace with 10 or more employees in 1993, and further extended to include all the regular employees in the formal sectors regardless of the size of the workplace in 2002. The participation in the social security system is compulsory for all the private employees in the formal sectors with a few exceptions[2]. There are provisions (namely, articles 39 and 40 of the Social Security Act) for those who are not a regular employee in the formal sectors to voluntarily participate in the social security system. But, as their participation is not compulsory and they are required to pay a much higher amount of contributions if they are to participate, the number of insured persons who are not a regular employee in the formal sectors has remained small.

As of March 2010, the number of people insured by the social security system in Thailand is 9,443,629, out of which 8,744,795 or 92.5% are private employees in the formal sectors. Unlike other social security benefits, such as old-age pension and maternity benefit, those who are not a regular employee in the formal sectors are not allowed to join in the UI scheme. Therefore, the number of the people under the UI scheme as of March 2010 is 8,744,795 and it occupies about one-quarter of the total labor force in Thailand. The vast majority of the workers not covered by UI are farmers, workers in the informal sectors, and irregular workers, whose income is generally lower than that of regular workers in the formal sectors.

II-2 Unemployment Benefits and Qualifying Conditions

A. Qualifying Conditions

Only those who meet the following qualifying conditions are entitled to receive unemployment benefits[3].

1) The insured must have worked and paid contribution to the Social Security Fund for at least six months in the 15 months before unemployment.

2) The insured must be registered with the Government Employment Service Office (ESO), and report his/her work status at least once a month, be ready to participate in skill development or job training programs arranged by the Department of Skill Development, and accept any suitable job offer made by the ESO.

3) An interruption of employment must not be a consequence of (a) a job violation, (b) a serious criminal act by the insured.

4) The insured must not be receiving the Old Age Pension benefit simultaneously.

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[2] Employees of foreign governments or international organizations as well as temporary and seasonal workers are not required to participate in the social security system. Companies with superior employee benefit schemes already established before the establishment of the social security system were also granted exemption upon request. Civil servants and employees of state enterprises are under separate and more benevolent benefit schemes.

[3] Article 78, Social Security Act.

B. Unemployment Benefits

The monthly unemployment benefit for those who are involuntarily unemployed is equal to 50% of the insured's average monthly salary in the highest paid 3 months in the 9 months before unemployment, and they can receive it for up to six months in any one year. For those who are voluntarily unemployed, the monthly benefit is equal to 30% of their average salary, and they can receive it for only three months in any one year.

C. Contribution Rate

Insured workers are required to pay 0.5% of their monthly earnings as a contribution to UI, and employers are also required to contribute 0.5% of their employees' salaries to UI, while the government contributes 0.25% of workers' salaries. It should be noted, however, that the maximum monthly earnings for contribution calculation purposes are set at 15,000 baht. Therefore, the amount of workers' monthly contribution does not exceed 75 baht, even if their salary is higher than 15,000 baht.

D. The Number of Unemployment Benefit (UB) Recipients

Table II-1 shows the number of unemployment benefit recipients in December of each year since the start of UI in Thailand and that of the first six months of 2010. As clearly shown in the table, the number of the recipients has been increasing.

An increase in the first four years is mainly attributable to workers' growing familiarity with UI. It is reported that, in the first few years of the implementation of UI, a number of qualified unemployed workers failed to receive unemployment benefits because they were not familiar with the procedures they had to go through to get UB (Chutima 2008).

The upsurge in 2009 was caused by the adverse effects of the abrupt downturn of the global economy triggered by the collapse of some of the leading financial institutions in the United States. The constant increase of the unemployment benefit recipients, however, seems to have stopped in 2010, partly because the Thai economy started recovering despite political turmoil caused by the pro-Thaksin red-shirt protesters in the first half of 2010, and also because most of the workers in the formal sectors have already become well familiar with the UI regulations[4].

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[4] UI was spotlighted when the Abhisit administration announced that the Social Security Office would temporarily extend the duration of unemployment benefits for involuntarily laid-off workers from six months to eight months as a part of the economic stimulus package to mitigate the adverse impact of the global economic slowdown in July 2009. The Social Security Office repeatedly broadcasted TV ads on this temporary extension.

Table II-1: Number of Unemployment Benefit Recipients 2004-2010

(unit: person)

	(1) UB Recipients	(2) Insured Persons	(1)/(2)
Dec. 2004	15,722	7,434,237	0.2%
Dec. 2005	28,021	7,831,463	0.4%
Dec. 2006	39,902	8,225,477	0.5%
Dec. 2007	56,581	8,537,801	0.7%
Dec. 2008	71,951	8,781,262	0.8%
Dec. 2009	139,165	8,779,131	1.6%
Jan. 2010	117,210	8,662,410	1.4%
Feb. 2010	104,793	8,704,302	1.2%
Mar. 2010	121,794	8,744,795	1.4%
Apr. 2010	119,755	n.a.	n.a.
May 2010	111,780	n.a.	n.a.
Jun. 2010	128,071	n.a.	n.a.

Source: Social Security Office

E. The Ratio of Unemployment Benefit (UB) Recipients to the Number of Unemployed

Table II-2 shows the ratio of UB recipients to the total number of unemployed in the first six months of 2010. In the Labor Force Survey conducted by the National Statistical Office, those who are in the labor force are classified into the three categories, namely, employed, unemployed, and seasonally inactive. As shown in Table II-3, about 30-40% of Thailand's labor force work in the agricultural sector, and the number of those who work in the agricultural sector fluctuates considerably; It increases in the planting (mid-May to August) and harvesting (November to December) seasons, and decreases in the dry season (February to mid-May). The annual fluctuation in 2009 was more than 4 million. Therefore, they have a relatively large number of seasonally inactive persons in the dry seasons.

If we take into the consideration that only regular workers in the formal sectors are covered by UI, and UB lasts only for six months[5], the ratio of UB recipients to unemployed is impressively high, though it still leaves much room for improvement.

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[5] The extension of the duration of unemployment benefits from six to eight months explained above applies to those who were laid-off between January 1 and December 31, 2009. For those who were laid-off after January 1, 2010 can get the UB only for six months.

Table II-2: Ratio of Unemployment Benefit (UB) Recipients to Unemployed 2010

(unit: person)

	(1) UB Recipients	(2) Employed	(3) Unemployed	(4) Seasonally Inactive	(1)/(3)	(1)/(3+4)
Jan. 2010	117,210	37,040,000	530,000	230,000	22.1%	15.4%
Feb. 2010	104,793	38,270,000	380,000	290,000	27.6%	15.6%
Mar. 2010	121,794	37,600,000	380,000	320,000	32.1%	17.4%
Apr. 2010	119,755	37,260,000	450,000	420,000	26.6%	13.8%
May 2010	111,780	37,020,000	590,000	460,000	18.9%	10.6%
Jun. 2010	128,071	38,100,000	460,000	190,000	27.8%	19.7%

Source: Social Security Office & National Statistical Office

* Own-account workers, including famers, are classified into "employed" in the above table.

Table II-3: Monthly Fluctuation in the Share of Agricultural Employment

(unit: thousand persons)

	(1) Agriculture	(2) Employed Persons	(1) / (2)
Jan. 2009	12,000	36,200	33.1%
Feb. 2009	11,190	36,670	32.5%
Mar. 2009	12,000	36,570	32.8%
Apr. 2009	11,890	37,060	32.1%
May 2009	13,310	37,510	35.5%
Jun. 2009	15,560	38,360	40.6%
Jul. 2009	16,010	38,790	41.3%
Aug. 2009	15,050	38,300	39.3%
Sep. 2009	14,550	37,800	38.5%
Oct. 2009	13,720	37,660	36.4%
Nov. 2009	14,660	38,330	38.2%
Dec. 2009	15,550	38,540	40.3%

Source: National Statistical Office

* Fishery is not included in Agriculture

** Own-account workers are included in "employed" persons

II-3 Financial Sustainability

As shown in Figure II-1, the unemployment rate in Thailand has not been very high even in the period of economic slowdown. As Thailand's UI covers only the regular workers in the formal sectors, which constitute about one-fourth of total labor force, however, the unemployment rate in the informal sectors does not directly affect the balance sheets of the UI scheme. It is the ratio of unemployment benefit recipients to those who pay contributions to UI that directly determines the balance sheets of UI. As we have already seen in Table II-2, this ratio has never exceeded 2%.

As the contribution rate is set at 0.5% for employees and employers, and 0.25% for the government, the Social Security Office receives 1.25% of each insured person's salary as their contribution every month. If we assume that there is no difference in the wage distribution between laid-off workers and those who were not laid-off, and also that a half of unemployed workers lose their job involuntarily and the remaining half voluntarily, the total amount of UB will be $0.4\alpha\beta/(100-\alpha)$, where α represents the percentage ratio of UB recipients to the insured workers, and β the sum of all the insured workers' salaries, while the total amount of the contribution will be 0.0125β. The total amount of UB, $0.4\alpha\beta/(1-\alpha)$, exceeds the total amount of contribution, 0.0125β, only when α is larger than $12.5/4.125 \fallingdotseq 3$. In reality, the average wage of the laid-off workers tends to be lower than that of non-laid-off workers, because those who receive higher salaries, in general, tend to have better job security. It should also be noted that, as we will see later, the "voluntarily" unemployed workers far outnumbers involuntary ones in Thailand. Therefore, the break-even-point we calculated by assuming no difference in wage distribution and the equal numbers of voluntary and involuntary unemployment, is probably lower than the real figure. As shown in Table II-2, the ratio of UB recipients to the insured persons in Thailand has been much lower than this "lower-than-real" breaking point.

Figure II-1: Unemployment Rate in Thailand 2001-2009

Source: National Statistical Office

Figure II-2 compares the real amount of UB and that of UI contribution in the past five years. Thailand's UI scheme has been recording large surpluses since its start in 2004. Before the introduction of UI, some academics and business leaders argued that, the introduction of UI would increase an unemployment rate, because some workers would rather remain unemployed to get unemployment benefits than seek a new job. They also warned that, without an effective mechanism to distinguish genuinely unemployed workers from disguised ones, UI would run a

deficit[6]. As shown in Figure II-1, the introduction of UI in 2004 did not increase an unemployment rate in Thailand, and it did not run a deficit even when the Thai economy was hit very hard by the global economic slowdown in 2009.[7]

Figure II-2: Contribution-Benefit Ratio of the Unemployment Insurance Scheme 2004-2008

Source: Social Security Office, *Annual Report 2008*, p. 39.

Table II-4 shows the wage distribution of the insured workers. The workers whose monthly salary exceeds 15,000 baht are included in the wage range of 14,001 to 15,000 in this table, because the maximum monthly earnings for contribution calculation purposes are set at 15,000 baht.

As shown in Table II-4, about three quarters of the insured workers are receiving less than 10,000 baht a month. The minimum wage in Bangkok and surrounding provinces is about 200 baht a day[8]. A six-days-a-week work with the minimum wage will yield a monthly income of about 5,000 baht. As involuntarily laid-off workers can get 50% of their salaries as an unemployment benefit, only those whose monthly income exceeds 10,000 baht can get a higher-than-the minimum-wage unemployment benefit. Or in other words, according to Table II-4, the amount of unemployment benefit for three quarters of the insured workers will be lower than the minimum wage, even if their unemployment is involuntary.

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[6] See, for example, the article titled "Wijai Chi Prakan Wang-ngan Dab Song Khom, 'Rabob Khomun Huai' Kongthun Thangtaek," in *Prachachat Turakij*, January 6, 2003.
[7] Thailand's GDP growth rate dropped from 2.5% in 2008 to -2.3% in 2009.
[8] The minimum daily wage is set at 206 baht in Bangkok and Samutprakan, 205 baht in Nakhonpathom, Nonthaburi, Pathumthani, and Samudsakhon, and 204 baht in Phuket. About 60% of the insured workers live in these seven provinces.

Table II-4: Number of Insured Persons by Wage and Sex (December 2008)

unit: person

Wage (Baht)	Male	Female	Total
Total	4,395,974	4,383,157	8,779,131
1,650	133,855	157,473	291,328
1,651 - 2,000	47,868	50,458	98,326
2,001 - 3,000	153,219	155,005	308,224
3,001 - 4,000	260,967	288,749	549,716
4,001 - 5,000	542,062	647,337	1,189,399
5,001 - 6,000	676,784	814,504	1,491,288
6,001 - 7,000	547,357	518,349	1,065,706
7,001 - 8,000	364,533	335,522	700,055
8,001 - 9,000	264,757	237,355	502,112
9,001 - 10,000	201,733	181,577	383,310
10,001 - 11,000	138,599	137,577	276,176
11,001 - 12,000	112,279	103,684	215,963
12,001 - 13,000	85,763	78,033	163,796
13,001 - 14,000	71,294	64,771	136,065
14,001 - 15,000	794,904	612,763	1,407,667

Source: Social Security Office, *Social Security Statistics 2008*, p.35.

There is also an upper limit for the amount of unemployment benefit. The maximum monthly earnings for contribution/benefit calculation purposes are set at 15,000 baht. So as far as the calculation of UI contribution and benefit is concerned, those who receive a higher-than-15,000-baht monthly salary are regarded as just receiving 15,000 baht a month. That means, no matter high their salary is, 7,500 baht (50% of 15,000 baht) is the upper limit for monthly unemployment benefit.

As for voluntary unemployment, even the richest worker would not be able to get a higher-than-the minimum-wage unemployment benefit. No matter how high their salary is, if their unemployment is voluntary, they can get only 4,500 baht a month (30% of 15,000 baht), which is lower than the minimum wage.

The comparison of unemployment benefit and the minimum wage reveals that unemployment benefit in Thailand is not designed to cover all the expenses during unemployment. It is designed just to partially alleviate their plights. For most of the insured workers, they cannot expect to rely solely on unemployment benefits for their survival even in their first few months after their job loss.

Table II-5 and II-6 show the durations and amounts of unemployment benefits paid for each category of workers from July 2004 to December 2005. Both tables show a very clear positive correlation between the amount of salary and the duration of UB. Those whose salary is low tend

to receive UB for a shorter period. It should be noted that the average monthly salary of those who received UB for only one month is almost equal to the minimum wage level[9], while the average monthly salary of those who received UB for three months or longer is well above the minimum wage level. It is difficult for the workers whose salary is at the minimum wage level or slightly higher to remain unemployed for more than two months, because their UB is below the subsistence level, and not many of them have enough savings to live on for many weeks. Table II-5 and II-6 imply that a low level of UB, especially for those whose salary is at the minimum wage level, gives the unemployed workers a strong incentive to look for a new job.

Table II-5: The Duration and Amount of Unemployment Benefits (UB) Paid to Voluntarily
Unemployed Workers (July 2004 – December 2005)

Duration	No. of Recipients	%	Average Amount of UB	Average Monthly Salary
1 month	24,357	26.7	1,478 baht	4,927 baht
2 months	25,057	27.4	1,941 baht	6,470 baht
3 months	41,923	45.9	2,345 baht	7,817 baht
total	91,337	100.0	2,003 baht	6,677 baht

Source: Worawan, *et. al.*, (2006: 79)

Table II-6: The Duration and Amount of Unemployment Benefits (UB) Paid to Voluntarily
Employed Workers (July 2004 – December 2005)

Duration	No. of Recipients	%	Average Amount of UB	Average Monthly Salary
1 month	4,232	13.1	2,323	4,646
2 months	2,993	9.2	3,340	6,680
3 months	2,249	6.9	3,819	7,638
4 months	2,417	7.5	3,953	7,906
5 months	3,693	11.4	3,853	7,706
6 months	16,833	51.9	4,186	8,372
total	32,417	100.0	3,784	7,568

Source: Worawan, *et. al.*, (2006: 70)

II-4 Voluntary and Involuntary Unemployment

As shown in Table II-7, according to the classification by the Social Security Office, those who were involuntarily laid-off occupy about one-third of all the benefit recipients. Some Thai academics claim that those who quit their job voluntarily should not be entitled to any unemployment benefits, and warn that the large share of voluntarily unemployed workers would

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[9] The minimum daily wage in outer provinces is lower than that in Bangkok and its vicinity. The lowest minimum wage is 151 baht in Phayao, Phijit, Prae, and Maehongson.

put unnecessary financial burden on the social security system[10]. On the other hand, labor union leaders and workers' rights advocates argue that many of those who are classified as "voluntarily" unemployed by the Social Security Office are, in fact, laid-off involuntarily[11].

Table II-7: Number of UB Recipients Classified by the Benefit Claims

(unit: person)

	Laid-off	%	Voluntary Resignation	%	End of Employment Contact	%	Total
Dec. 2004	5,432	34.6	8,102	51.5	2,188	13.9	15,722
Dec. 2005	9,074	32.4	14,821	52.9	4,126	14.7	28,021
Dec. 2006	14,767	37.0	22,427	56.2	2,708	6.8	39,902
Dec. 2007	20,470	36.2	33,573	59.3	2,538	4.5	56,581
Dec. 2008	21,926	30.5	45,545	63.3	4,480	6.2	71,951

Source: Social Security Office, *Social Security Statistics 2008*, Nonthaburi: Social Security Office, p.79

Though it is difficult to estimate how prevalent it is for employers to "force" their employees to "voluntarily" resign, judging from the field researches this author conducted in Thailand in the past two decades, it would be safe to say that such practices are not "rare," especially in the small- and medium-sized companies. One of the most common reasons for some employers' preference of forced or solicited "voluntary" resignation to outright lay-off is their aversion to providing severance pay to departing employees. Thailand's Labor Protection Law stipulates that the employer must provide severance pay when he/she fires his/her employees (Article 118). The amount of compulsory severance pay varies from 30 to 300 days' pay, depending on the length of the period for which a fired employee worked (Article 118). But the employers are not required to provide a severance pay, when an employee "voluntarily" resigns.

It is also reported that the criteria used by the Social Security Office staff to distinguish involuntary lay-off from voluntary resignation are sometimes not so transparent. In July 2009, more than 200 former employees of NMB Minebea Thai staged a demonstration in front of the Angthong branch of the Social Security Office (SSO). Those 200 workers had a dispute with the SSO's Angthong branch regarding the classification of their unemployment status, for several months. According to a newspaper report, 2,700 workers were dismissed from NMB Minebea Thai at the beginning of 2009. Although all the dismissed workers who went to register at the other branch of the SSO were classified as involuntarily laid-off, and received 50% of their salary for six months, those 200 workers who registered at the Angthong branch were classified as voluntarily resigned, and given only 30% of their salary for three months. After those 200 workers staged a demonstration for three hours, the director of the SSO's Angthong branch reluctantly

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[10] For example, see Aphichart (2006), Somchai & Pat (2009: 16), and Kriengsak (2007)
[11] For labor leaders' views, see Thai Journalist Association (2006).

agreed to reclassify them and increased their unemployment benefit.[12]

II-5 Job Placement and Skill Development

Active unemployment policies, such as job placement and skill development, are embedded in Thailand's UI scheme. Those who receive unemployment benefits are required to report at least once a month to the Government Employment Service Office. However, only a small fraction of the unemployment benefit recipients attend skill development programs arranged by the Department of Skill Development.

According to the statistics released by the Department of Employment, out of 31,867 unemployment benefit recipients who got a new job between July 2004 and December 2005, only 4,246 workers, or 13.3%, got a new job through the Government Employment Service Office, and the remaining 27,621 workers, or 86.7%, found a new job by themselves (Worawan, *et. al*., 2006: 78).

Many workers complain that skill development programs arranged by the Department of Skill Development do not match their needs and market demand (Wasana, 2006). Their programs are so unpopular that only 198 unemployment recipients attended the programs between July 2004 and December 2005 (Worawan, *et. al*., 2006: 78, Bundit 2005: 14).

In almost all the developed economies, active unemployment policies are embedded in the UI scheme. But, in newly industrializing middle-income economies with a limited administrative capacity in job placement and skill development, like Thailand, we cannot expect those active unemployment policies to be very effective. Except for Bangkok and its vicinity, each province has only one Employment Service Office. If unlimited resources in terms of budget and personnel were available, it would be recommendable to spend those resources to increase the number of the Employment Service Offices and improve the quality of skill development programs. But if we take into consideration the very limited amount of available resources and what Milan Vodopivec called "environment prone to corruption" (Vodopivec 2009: 1), it does not seem advisable to spend a lot of resources on those active employment policies in the early phase of the UI scheme[13]. For the early phase of the UI scheme, it would be better to concentrate on the quick and fair disbursement of unemployment benefits, efficient and accurate collection of contribution, and the financial stability of the scheme.

III. Fallacies of the Conventional Arguments against the Early Introduction of UI

As shown in Table III-1, when Korea and Chinese Taipei introduced UI in the latter half of the 1990s, the vast majority of their labor force worked in the non-agricultural sectors. But Thailand introduced UI when more than one-third of its labor force was in the agricultural sector.

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[12] "Panakngan Minebea Ji So. Po. So. Angthong Jai Chotchoei Wang-ngan 50%," *Krungthep Turakit*, July 9, 2009.

[13] In June 2009, the National Anti-Corruption Commission unanimously decided to file a criminal charge against a former director-general of the Social Security Office for irregularities in the rental contract of computers with a private company, which cost 2.8 billion baht (*Krungthep Turakit*, June 16, 2009).

Because of the large number of farmers as well as own-account and unpaid family workers, less than half of Thailand's labor force were employees at the time of the introduction of UI, while employees occupied about two-thirds of the labor force in Korea and Chinese Taipei. Thailand's GDP per capita in 2004 was less than one-fourth of that of Korea and Chinese Taipei in the latter half of the 1990s. Although Malaysia surpasses Thailand in all the three indices shown in Table III-1, UI has not been introduced in Malaysia, yet.

Table III-1: Comparison of the Level of Economic Development at
the Time of the Introduction of Unemployment Insurance
(Korea, Chinese Taipei, Malaysia, Thailand, the Philippines)

	GDP per capita	Agriculture / Labor Force	Employee / Labor Force
Chinese Taipei (1999)	US$13,535	8.1 %	70.6 %
Korea (1995)	US$11,779	11.8 %	62.6 %
Malaysia (2004)	US$ 4,898	13.3 %	74.6 %
Thailand (2004)	US$ 2,479	41.2 %	43.8 %
Philippines (2004)	US$ 1,040	31.7 %	52.1 %

Source: International Monetary Fund, World Economic Outlook Database, 2010
International Labor Organization, LABORSTA (http://laborsta.ilo.org/)

* UI was introduced in Korea in 1995, and in Chinese Taipei in 1999. Malaysia and the
Philippines have not introduced UI, yet.

It was not until they felt acute "social pain" caused by the Asian financial crisis in 1997 when the Thai government started seriously considering the introduction of UI[14]. ILO wrote in one of their reports published in 2001:

> The recent Asian financial crisis has made it clear that unemployment insurance schemes could have played a substantial role in coping with the unacceptable levels of hardship caused by rapidly escalating unemployment. They would also have helped to limit the collapse of consumer demand and business confidence which made the crisis much more acute than it would otherwise have been. (ILO 2001, 52)

But the Chuan administration (Nov. 1997 – Feb. 2001) took a very cautious attitude toward the introduction of UI. The business leaders also expressed their concern with the adverse impact of the introduction of UI on the already badly weakened economy (Worawan, *et. al.*, 2006: 49-50). The main reasons raised by opponents of the introduction of UI are: 1) fiscal constraints of the government, 2) possible abuse of the system in the absence of effective monitoring mechanisms,

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[14] Thailand's GDP shrank 10.5 percent in 1998.

and 3) untimely and harmful burdens on employers[15]. Six years of relatively successful operation of UI in Thailand, however, show that these obstacles and problems are not insurmountable.

III-1 Fiscal Constraints of the Government

If UI is designed to cover all the unemployed with a sufficient amount of allowance for their survival no matter how long they remain jobless, it will put a very heavy burden on the government's coffer, for sure. Infeasibility of such a "perfect" form of UI, however, does not mean that any forms of UI are infeasible in developing economies. With limited coverage (about 25%) and small benefits (not more than 50% of the salary) only for a short period (not longer than 6 months), the UI scheme in Thailand has been operating in surplus since its start in 2004, as we have seen in the previous section of this paper.

Even when an unemployment rate is high, the ratio of unemployment benefit (UB) recipients to the insured can be kept low by limiting the coverage of UI. To illustrate this point, let us examine a very simplified hypothetical case, where 1% of workers are laid-off every month and all the laid-off workers remain jobless for 10 months. Under this hypothesis, the unemployment rate would reach 10% in ten months, and remain there from the 11th month on. If UI covers all the unemployed, the ratio of UB recipients to the insured would be 1:9. However, if UI covers only the first three months of unemployment, this ratio would drop to 1:30[16]. With this 1:30 ratio, it is not difficult to avoid a deficit in the UI scheme even if a contribution rate for employees and employers is set at a modest level.

Relatively short duration of UB is recommendable not only for a financial reason, but also for social fairness. As Table II-5 and II-6 in the previous section showed, those who remain jobless for a longer period tend to have a higher pre-unemployment salary than those who remain jobless for a shorter period. It is because those who are in dire poverty cannot afford to remain jobless for a long period, for they have very small, if any, savings to rely on. A similar view is expressed in a report written by World Bank experts when they examined the pros and cons of the introduction of UI in the Philippines:

> The peculiarity of developing economies like the Philippines is that unemployment is more common among non-poor workers, that is, members of more prosperous households are more than proportionally represented in the ranks of the unemployed. For example, in 1997, of the households whose heads were not employed only 12.1 percent were poor, in comparison to a 25 percent poverty incidence in general. It therefore seems that given the country's present level of economic development, members of less prosperous households

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[15] Opponents of the introduction of the UI in the Philippines have also made similar arguments. See, for example, Esguera, Jude H., Makoto Ogawa, and Milan Vodopivec (2002) and Manasan (2009). Counter-arguments against such oppositions in the Philippines can be found in Weber (2010).

[16] From the 11th month on, 90% of labor force would be employed and obliged to pay contribution to UI. If UI covers only the first three months of unemployment, 30% of the unemployed would get unemployment benefits, while the remaining 70% would be disqualified.

cannot afford to stay unemployed for a prolonged period of time. They try to cushion the loss of earnings by opting for low productivity jobs instead of not working at all while they continue to pursue more adequate job opportunities. (Esguerra, Ogawa, and Vodopivec 2002: 9)

If we take into consideration the limited resources the governments in the developing economies have and the wide spread poverty among farmers and peasants in the rural areas as well as those who work in the urban informal sectors, it might not be justifiable to provide too benevolent UB to regular workers in the formal sectors. However, if regular workers in the formal sectors are given no protection when they lose their job and no other option than to seek refuge in the informal economy or go back to the rural areas, it will make over-supply of labor in those sectors worse, and those workers' skills obtained from their work in the formal sectors might be wasted. The first two or three months are often a critical period for not-so-affluent dismissed workers to find a new job in the formal sector again. To provide UB to them for the first few months of unemployment would not only alleviate their plights but also prevent their skills from being wasted.

It should also be stressed that UI in Thailand has been generating a large amount of surplus as shown in Figure II-2 in the previous section. As UI in Thailand is established as a part of the social security system, which also provides old-age pension, maternity benefit, child allowance, invalidity benefit, funeral benefit, and medical insurance, the surplus generated by UI is put into the Social Security Fund together with surpluses in the other fields of the social security system. The social security system in Thailand has been making over-all surplus since its start in 1991. Figure III-1 shows the investment portfolio of the Social Security Fund in 2008.

Figure III-1: Investment Portfolio of the Social Security Fund (2008)

Source: Social Security Office, *Annual Report 2008*, p. 44.

If we regard state enterprises are a part of the government, Figure III-1 shows that 73.23% of the investment made by the Social Security Fund went to the government's coffer. As the total amount of investment the Social Security Fund made in 2008 was 567,906 million baht, it means

that 415,878 million baht went to the government's coffer from the Social Security Fund in 2008 in exchange for treasury bills, government bonds, the central bank's bonds, and state enterprise bonds.

The total amount of contribution UI collected in 2008 was 10,222 million baht (Social Security Office 2009b: 38) with one-fifth of them from the government. That means, in 2008, the government paid 2,044 million baht as their contribution to UI. The total amount of unemployment benefit payment in 2008 was 2,437 million baht. Therefore the amount of UI's current surplus was 7,785 million baht. If we assume that 73.23% of this surplus was spent on the bonds issued by government agencies, it means that 5,701 million baht, which is much larger than the amount of the government's contribution to UI, went to the government agencies from UI in exchange for various forms of bonds.

The government expenditure on staff and equipment for the operation of UI is excluded from the above calculation, and the government will eventually have to pay back those bonds. The above calculation, however, shows that, even if the government pays contribution to UI, if the contribution rate is kept low, it will not put a burden on the government's coffer, at least in the short-run.

III-2 Possible Abuse of the System in the Absence of Effective Monitoring Mechanisms

The combination of a large informal sector and weak administrative capacity makes it difficult to prevent abuse of the UI system. When the Thai government started seriously considering the introduction of UI in 1998, the social security system in Thailand only covered workers in the business enterprises with 10 or more employees. ILO recommended the Thai government to expand the coverage of the social security system and include all the regular workers regardless the size of companies they work before the introduction of UI, so that they can monitor the employment status of workers more effectively (Worawan, *et. al.*, 2006: 49). The coverage of the social security system was expanded in 2002, and it became compulsory for all the regular workers in the formal sectors to enroll in the social security system. However, even after the expansion of the coverage in 2002, the social security system covers less than 30% of Thailand's labor force. Most of those who are not covered by the social security system are farmers, own-account and unpaid family workers, and those who work in unregistered workplaces in the informal sectors.

As it is difficult for the Social Security Office to know who works in the informal sectors, the dismissed workers can continue to get UB even after they start working in the informal sectors or in the paddy fields. Though some Thai academics expressed serious concerns about the possibility that such illegitimate UB claims might put an unbearable burden on UI, it turned out that adverse effects of illegitimate UB claims were not as big as they worried.

In a sense, Thailand's UI is designed on the assumption that many of UB recipients would do a part-time job in the informal sector during the period for which they receive UB. UB for

voluntarily unemployed workers is set at 30% of their salary. Without doing some part-time job in the informal sector, it is difficult for many of them to survive. In addition, the provision of UB for voluntarily employed workers lasts for only three months. As the average income of the regular workers in the formal sector is higher than that of those who work in the informal sector, many of workers who lost their job in the informal sector try to find a new job in the formal sector. Some of them succeed, while others fail.

For those who successfully find a new job in the formal sector, it is difficult to continue to receive UB after they get a new job, because once they start working in the formal sector, the Social Security Office will be informed of their new employment status. According to Table II-5 and II-6 in the previous section, 54.1% of those who received UB as voluntarily unemployed workers stopped receiving UB before the third month, and 48.1% of those who received UB as involuntarily laid-off workers stopped receiving UB before the six month. Many of those who stopped receiving UB before the UB duration expires are probably those who found a new job in the formal sector again within three or six months[17].

Many of UB recipients do a part-time job in the informal sector, but not many of them do a full-time job in their first few months after their dismissal from the formal sector, because they prefer to spare enough time for job seeking activities. Though the amount of UB is not large enough to cover all of their daily expenses, they can survive by combining it with their income from a part-time job in the informal sector.

It should also be noted that the qualifying condition for UB regarding the duration of the enrollment in the social security system is quite generous. If one works and pays contribution to UI for six months in the 15 months before unemployment, one can get UB, as explained in the previous section. In the un-irrigated areas, which constitute the vast majority of farmlands in Thailand, farmers have little to do in the dry season, which starts in February and ends in mid-May. If they go to work in the city for three months from mid-February to mid-May, and work in their farmland for the rest of the year, and do the same thing in the second year, they can get UB when they quit their job in the city in the second year, because by the time they go back to their farmland in mid-May in the second year, they will have worked for six months in the 15 months before "unemployment." No reliable statistics are available on how prevalent these practices are. But judging from the amount of UB paid each year, it does not seem that such practices are so rampant. There are many farmers who come to work in the city during the dry season. But it is very hard for them to find a full-time job in the formal sector. Most of them work in the informal sector, or work as a part-time or irregular worker in the formal sector. Therefore, not so many of them can enroll in the social security system.

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[17] Some of them stop receiving UB, even when they cannot find a new job in the formal sector. One of the most common reasons is travelling cost to the Government Employment Service Office (ESO). As there is only one Employment Service Office in most of the outer provinces, traveling costs can become prohibitively high for those who live far from ESO. See for example, Wasana (2006).

III-3 Harmful Burdens on Employers and the Economy

Like in many other economies with UI, employers are also obliged to pay contribution to UI in Thailand as well. Though the contribution rate is as low as 0.5% of employees' salaries, it puts some burden on employers, for sure. Therefore, it is not surprising at all that business leaders in Thailand lobbied against the introduction of UI, when the Thaksin administration showed much stronger willingness to introduce UI than the previous administrations. On November 13, 2003, when the Social Security Office was scheduled to start collecting contribution for UI in less than two months, Federation of Thai Industries, Thai Bankers' Association, and Thai Chamber of Commerce jointly submitted a petition to the Thaksin administration to postpone the implementation of UI, and make an amendment to exclude voluntarily unemployed workers from UB recipients and also to abolish the mandatory severance pay in exchange for the introduction of UI (Bundit 2004: 14). But the Thaksin administration rejected their requests, and started collecting contribution in January 2004 as scheduled without making any amendment.

Though employers showed their dissatisfaction with some provisions in the UI regulations, they did not deny the societal needs of UI, and did not oppose the implementation of UI so strongly. The biggest reason for their weak resistance was the low rate of contribution, which was set at 0.5% of employees' salary with the maximum monthly ceiling amount at 75 baht (about US$2.5) per employee. With this small amount, its adverse impact on the profitability of their businesses is limited. Another important reason was employers' awareness of the importance of some forms of a social safety net.

As shown in Figure III-2, the Thai economy was hard hit by the Asian financial crisis in 1997, and political and social turmoil ensued. In the early 2000s, there was widely shared consensus that the adverse impact of financial crisis would have been smaller if they had had a proper social safety net. Thailand's export-dependent economy is susceptible to the fluctuation of the global economy. Without an effective social safety net, economic downturn caused by an external shock is likely to trigger a vicious circle. The number of workers who are laid-off or afraid that they might be laid-off increases, and those workers will reduce their consumption expenditure to the very minimum. The decline of domestic demand will further dampen the economy, and it will result in more lay-offs and deepen political and social turmoil, which will scare away foreign investment. The decline in foreign investment will make an already bad economic situation much worse.

But if UI can alleviate workers' sense of fear about their uncertain future to a certain extent by providing UB for the first several months of their unemployment, the decline of domestic demand will be mitigated[18]. Having learned a bitter lesson from the financial crisis in 1997 and unprecedented economic slump in 1998, many of employers in Thailand came to realize the importance of a social safety net for workers.

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[18] UI's role as an alleviator of the decline of domestic consumption in the time of economic downturn was emphasized in the statement made by the Social Security Office on February 7, 2007, which is downloadable at http://prasitwiset.is.in.th/?md=content&ma=show&id=245

IV. Policy Implications

Thailand's six-year experience with UI shows that the implementation of UI, if properly designed, is not only feasible but also desirable even at the relatively early stage of industrialization. Because of the differences in the size of the informal sectors, administrative capacity, and economic affluence, however, the standard OECD-type UI is unlikely to function well in second-tier NIEs. We can draw a number of policy implications from Thailand's experience to figure out a more suitable form of UI for second-tier NIEs.

(1) Modest Unemployment Benefits

Unemployment benefits (UB) do not have to be so generous. Provision of 50% of the salary for the first three to six months can make a significant difference in alleviating the plights of the unemployed workers. By making the duration shorter and the amount smaller, UI can maintain surpluses even with a low contribution rate. By lowering a contribution rate, we can reduce the burden on employers and weaken their opposition to the introduction of UI.

The presence of the large informal sector, high labor mobility between rural and urban areas, and limited administrative capacities make it difficult to prevent those who start working in the informal sector after losing a job in the formal sector from receiving UB. In the second-tier NIEs, UI should be designed on the more realistic assumption that many of UB recipients will do a part-time job in the informal sector while they look for a new job. If the amount of UB is set at 50% of the salary, those workers whose income was just a little above the subsistence level would not be able to survive by solely relying on UB. But if they can supplement their income by doing a part-time job in the informal sector, they can continue to look for a more decent job, preferably in the formal sector, for several more months.

Small amount and short duration of UB give unemployed workers a strong incentive to look for a new job seriously. Needless to say, not all the unemployed workers will be able to find a decent new job in the formal sector within several months, no matter how hard they look for it. Some of them might go back to the rural areas, and others might take a full-time job in the informal sector. If they do so, it is very likely for their income to decline. In order to prevent it, one may feel like making the duration of UB longer. But we should also take into consideration the fact that, in developing economies, a large number of people are working in the agricultural sector or in the informal sector without ever receiving UB, because they have never worked in the formal sector. To continue to provide UB for a very long period to those who used to work in the formal sector, while providing nothing to those who have never worked in the formal sector might not be socially justifiable.

(2) Limited Effectiveness of Active Unemployment Policies

Skill development programs run by the Thai government have been ineffective. Only a small fraction of the UB recipients attends government-sponsored skill development programs,

because most of workers know that those programs would not improve their prospect of getting a new decent job much. The government agencies in Thailand do not seem to have comparative advantage to the private sector in the field of skill development. If we take into consideration the limited administrative capability of the Department of Skill Development and widespread corruption in those government-sponsored skill development programs, it does not seem worth spending much budget on them.

For developing economies where government agencies in charge of workers' skill development have insufficient administrative capabilities and susceptibility to corruption, active unemployment policies are unlikely to work well, and it would be better to concentrate on the improvement of the efficiency and transparency in contribution collection and benefit payment of the UI scheme, at least in the first decade of its implementation.

(3) Severance Pay

Like many other developing economies, Thailand made it mandatory for employers to provide severance pay to laid-off workers. When Thailand started considering the introduction of UI seriously in the early 2000's, some of the World Bank experts recommended the Thai government to abolish the mandatory severance pay system. Their recommendation was supported by the three main business organizations in Thailand. But the proposal to abolish mandatory severance pay in exchange for the introduction of UI was strongly opposed by labor organizations (Bundit 2004: 10). The populist government led by Thaksin Shinawatra decided to keep the mandatory severance pay system even after the introduction of UI.

As shown in Table IV-1, the amount of mandatory severance pay differs depending on the length of employment before lay-off. For those who worked for more than six years under one employer, the amount of severance pay would be larger than that of UB. Weakness of the severance pay system, however, is its susceptibility to moral hazard by employers. Severance pay is mandatory only when workers are laid-off involuntarily without any misconduct. As explained in the second section, it is not rare for employers to force their employees to "voluntarily" resign in order to avoid severance pay. Those who work in profit-making large-scale companies with stable and less oppressive labor relations are likely to get severance pay in a full amount when they are laid-off, while their counterparts in smaller companies operating in the red with more oppressive labor relations are less likely to get it.

Table IV-1: Mandatory Severance Pay

Length of Employment	Severance Pay Entitlement
More than 120 days but less than one year	30 days pay
Not less than one years but less than three years	90 days pay
Not less than three years but less than six years	180 days pay
Not less than six years but less than ten years	240 days pay
Not less than ten years	300 days pay

Source: Article 118, Labor Protection Law 1988

As there are significant overlaps in coverage, the mandatory severance pay system should be integrated into UI in the long run. But the abolishment of mandatory severance pay at the time of the introduction of UI might complicate the negotiations on the design of UI. If the monthly amount of UB is set at 50% of their pre-lay-off salary, workers would not agree with the abolishment of mandatory severance pay unless UI provides UB for at least 20 months to those who are laid-off after having worked for more than 10 years, because mandatory severance pay to them, that is 300 days' pay, is equivalent to UB of 50% of their monthly salary for 20 months. But if UB is to be provided for 20 months to those who have worked for more than 10 years, and for 16 months to those who have worked for not less than six years but less than 10 years, the UI's contribution rate for employers and employees must be much higher. It will not be an easy task for the government to persuade employers and employees to agree with such a high contribution rate. To start UI with modest UB without abolishing mandatory severance pay might be a practical way to introduce UI at an early stage of industrialization.

(4) Timing of the Introduction of UI

Thailand introduced UI seven years after the Asian financial crisis. As shown in Figure III-1 in the previous section, the Thai economy started recovering in 1999, and GDP growth rate reached an impressive 7.1% in 2003. It was in 2003 when the Thai government made its final decision on the introduction of UI, and they started collecting contribution in January 2004.

The economic crisis in 1997 changed the public perception of unemployment considerably. It was not only low-educated factory workers but also a large number of high-educated white-collar workers in the banking and financial sectors who lost their job suddenly. Many people came to view unemployment not as a consequence of lack of diligence and ability but as a consequence of macro-economic turbulence often caused by the volatile global economy.

Widely shared awareness of the necessity of a social safety net facilitates the introduction of UI. But it is often infeasible to start collecting contribution when many businesses are struggling just to stay afloat. In hindsight, the year 2004 happened to be the best timing for Thailand to introduce UI. The Thai economy was in a good shape, but people's memory about social pain

caused by economic turmoil in 1997/98 was still vivid. The Thai economy was hit hard again by the turbulences in the global economy in the last quarter of 2008, and the number of lay-offs increased in 2009. But social pain was at least partially alleviated by UI this time. The large amount of surplus accumulated by the UI scheme during the four years of the operation of UI before the economic slowdown in the last quarter of 2008 made employees as well as political leaders confident about the sustainability of UI even in the time of economic slump.

Thailand's experience seems to imply that the best timing for other second-tier NIEs to introduce UI is when their economy is recovering from the economic slowdown caused by the turbulences in the global economy.

(5) Political Attractiveness

It should also be noted that the introduction of UI is likely to raise the popularity of political leaders who play a prominent role in its implementation. The labor minister as well as his deputies received a lot of media attention when they made a statement on their plans to introduce UI. It was under the Thaksin administration that the detailed design of UI was finalized and the final decision to introduce UI was made. UI started paying UB to the unemployed in July 2004, only seven months before the scheduled general election in February 2005. Though the introduction of UI was not the only reason behind it, the incumbent government party led by Thaksin won an unprecedented landslide victory by getting more than two-thirds of the seats in this election[19].

(6) Role of International Organizations

One of the strongest supports for the introduction of UI came from inside the Ministry Labor and the Social Security Office, partly because they learned the effectiveness of UI from the experiences of other economies, such as Korea and Japan[20], and partly because they hoped the introduction of UI would increase the amount of budget and the number of personnel allocated to their agencies.

Their proposal to introduce UI, however, was not so warmly welcomed by other government agencies, especially the Ministry of Finance, and faced a cool response from business associations when they started advocating its introduction in 1998. Many of the bureaucrats in other ministries and business leaders had a negative view on UI. They had an impression that UI is a very costly program. Some of them were afraid that UI might spoil the workers, and others thought that UI was one of the main reasons for European welfare states' economic failure, which Thailand should not repeat. In order to dispel those negative images, Thailand's Social Security Office asked various international organizations, such as International Labor Organization, World

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[19] As for the analysis of political factors behind the introduction of UI, see Worawan, *et. al.*, 2006: 57-60.
[20] Interview with officials at the Social Security Office in August 2009. Thailand's UI has more similarity to those in Korea and Japan than to those in Western Europe. Korea accepted study teams from Thailand several times, and Japan International Cooperation Agency sent a number of Japanese specialists to provide technical assistance in the designing process of, as well as in the initial stage of implementation of, Thailand's UI.

Bank, and Japan International Cooperation Agency to conduct a feasibility study.

The feasibility studies conducted by those international organizations turned out to be a very effective tool for the Ministry of Labor and the Social Security Office to persuade other government agencies and business leaders to agree with the introduction of UI. One of the feasibility study reports submitted by ILO wrote: "the contribution rate necessary to finance a modest unemployment insurance scheme would in the long run be less than 1 per cent of earnings," (ILO 2001, 52) and played an important role in reshaping the perception of UI in Thailand.

Thailand's experience suggests that the advocates of UI in other second-tier NIEs might also be able to use feasibility studies and policy advices by international organizations as an effective tool to change their opponents' perception of UI.

(7) Once-and-for-All Chance

A caveat must be mentioned at this point. If properly designed and properly managed, UI can maintain its financial sustainability and alleviate the plights of the unemployed even in newly industrializing economies. But that also means that UI might become financially unsustainable and might not mitigate the sufferings of the unemployed much, if improperly designed and/or improperly managed. Risk of ending up with having improperly-designed and/or improperly-operated UI is not small in many of developing economies.

Once improperly designed UI is introduced, or once the UI scheme is seriously plagued with corruption and inefficiency in the first several years of its operation, the public will lose their confidence in UI, and both employers and employees will start resorting to all means available to evade the payment of their contribution to UI. The morale of the staffs in charge of UI will also deteriorate, and the abuse of the UI scheme by unqualified claimants will also become rampant.

In this sense, the introduction of UI is a once-and-for-all chance. If a proper UI scheme is successfully installed, it will do a lot of good things. But if not, it may do more harm than good. To make it worse, once it is installed, it is difficult to uninstall. However, it should also be added that, though the introduction of UI is a risky endeavor, it is more risky for small export-dependent second-tier NIEs to face the volatility of the global market without having UI.

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Employment Insurance and
Active Labor Market Policies in Chinese Taipei

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I. Introduction

The financial crisis erupted in 2008 and is considered by many economists as the worst one since the Great Depression in the 1930s; it has not only resulted in the collapse of financial institutions, but also triggered seriously rising unemployment around the world. A senior economist, Mr Gyorgy Szirzczki, in the ILO's Regional Office for Asia and the Pacific said: "It is estimated that as many as 100 million people in Asia could be unemployed this year". However, "Few countries in the region have an adequate unemployment insurance scheme, especially those in the so-called "informal economy". "So, in extraordinary times like we are now experiencing, extending social protection becomes critical", stated Ms Sachiko Yamamoto, the ILO's Regional Director for Asia and the Pacific[1]. Therefore, in June 2009 during the International Labor Conference, ILO member states adopted a 'Global Jobs Pact', i.e., one global policy instrument addressing the social and employment impact of the international financial and economic crisis, centering on investments, employment and social protection.

In line with ILO Global Jobs Pact, the APEC Leaders' Meeting of 2009 in Singapore also addressed the risks of job crisis and got back on the track with the creation of decent work[2]. Initiated by the bubble real estate market in the U.S. and the collapse of Lehman Brothers in the first half of 2008, the world has encountered the financial crisis since the latter half of 2008 with a declining gross domestic product (GDP)[3] and then a higher unemployment rate. Under such circumstances, every economy, including Chinese Taipei, has tried to revive its economy and alleviate the suffering of unemployment. In terms of employment and social policy, a mechanism of (un)employment insurance and active labor market policies (ALMPs) play the core roles to support the income of the unemployed and assist reintegration into employment.

[1] Data Source: The Economic Crisis in Asia: It's about real people, real jobs. 26 June 2009. Retrieved http://www.ilo.org/global/About_the_ILO/Media_and_public_information/Feature_stories/lang--en/WCMS_108585/index.htm

[2] Data Source: Asia-Pacific Economic Cooperation (APEC) Economic Leaders' Meeting 2009-ITUC/APLN Statement, A Priority: tackling the Financial and economic crisis. Singapore, 14-15 November 2009. Retrieved from http://www.ituc-csi.org/asia-pacific-economic-cooperation.html?lang=en

[3] From the composition of GDP=C (consumption) + I (investment) + G (government expenditure) + X (exports) − M(imports), GDP has declined significantly since C, I, X and M have declined substantially.

Although the global economy has started to recover recently, the labor markets have not improved too much (ILO 2010). The unemployment rate in Chinese Taipei is still very high despite the joining of Chinese Taipei to the World Trade Organization (WTO) in 2002 and the stable recovery of the current economy in Chinese Taipei after the impacts of the global financial crisis on job opportunities. The Chinese Taipei government is facing the challenges of how to shorten the recovery time in employment due to the high unemployment rate. The problems of unemployment and the structures of job opportunities are significantly affected by the seasons of school graduation and the entry into the Economic Cooperation Framework Agreement (ECFA). As a result, it is very difficult for Chinese Taipei to go back to the era of full employment and low unemployment. By contrast, Chinese Taipei society and government need to deal with challenges posed by globalization and population ageing and the following issues of the high rate of the unemployment and repeat unemployment as well as the largely worsening income distribution between the rich and the poor (Chou 2010a).

The short-term rate of unemployment exceeded 2% and remained below 2% in the rest of the period during two periods of the oil crisis in the 1980s. The unemployment rate has increased in Chinese Taipei since 1996 and exceeded 2%. In 2002, the unemployment rate in Chinese Taipei reached 5.17% due to global recession. In addition, the rate of unemployment exceeded 6% in July, August, and September 2009 and 0.64 million persons were unemployed in 2009 due to the global financial crisis in 2008. The average rate of unemployment reached 5.85% in 2009 which broke the historical record of the past five decades.

Recession is not a new experience for the international community. OECD economies had adopted a variety of strategies to fight against the high unemployment rate in the 20th century. For example, in the 1970s, some OECD economies adopted the early retirement option and lowering requirements of disability benefits (OECD 2009: 16). In the 1990s, France, Germany and the U.S. provided a subsidy to re-employed workers of the part earnings differential between current and previous jobs if compensation for the current job was lower. Finland and France lowered their unemployment benefits to promote reemployment while Korea relaxed its coverage of unemployment insurance to help unemployed workers. (OECD 2006: 57)

As for reactions to the financial crisis in 2008, OECD economies mostly adopted providing vocational training to unemployed and employed workers, promoting labor demand, creating short-term employment opportunities, and assisting in job search (OECD 2009: 11). In assessing various policies, OECD (2009) pointed out that governments shall adopt various measures to assist unemployed older workers, youths, and new entrants; fiscal sustainability under unemployment benefits extension and unemployed workers who were not covered by unemployment insurance would be challenges of the social security system; related policy shall integrate measures of social assistance; the effectiveness of requiring the unemployed's responsibility of an active job search decline with depression; creation of public works would encounter the problem of rationing; short-time work schemes of subsidizing workers' incomes

under shrinking work hours had to be kept short-term for efficiency; employment subsidy of hiring vulnerable groups did not reveal a significant positive effect; non-discriminated ALMPs shall be promoted to immigrants to attract and integrate immigrants; ALMPs shall be adjusted timely, aiming at target groups and keeping temporary, to avoid the negative effect of reentering the traditional labor market.

Encountering an unprecedented higher unemployment rate due to the financial crisis in 2008[4], Chinese Taipei has adopted[5] a variety of employment and social policies to fight against it as well. Scholars may be interested in the following issues.

1. What were the unemployment problems in Chinese Taipei for the past decades and during the global financial crisis?

2. What has been the historical development and the actual conditions of employment insurance as well as their political/economic implications in Chinese Taipei?

3. What are the current active labor market programs available in Chinese Taipei and their effects?

4. What are the existing challenges of Chinese Taipei's employment insurance and the policy suggestions?

The Employment Insurance (EI) in Chinese Taipei has contributed partly to ease the unemployed person's economic hardship during recessions and has been amended in reaction to the financial crisis. Other ALMPs have been provided through the Employment Services Act with the Employment Stabilization Fund which is collected from employers of (low-skilled) foreign workers. Therefore the EI and ALMPs related to the Employment Services Act will be explored primarily. To cope with recent changes and future challenges, the social safety net, in particular the EI, in Chinese Taipei shall have a better framework to keep the resilience of the society of Chinese Taipei. Thus some suggestions will be provided in the final section.

This article concentrates on the analysis of unemployment problems and public policy. Contents of collective bargaining or individual bargaining are ignored because the trade unions do not have significant bargaining power and individual bargaining is difficult to be detected.

II. Features of the Labor Market in Chinese Taipei

Due to the global financial crisis, Figure 1 shows that the economic growth rate in Chinese Taipei has become negative (-0.8%) since the third quarter of 2008 and dropped to -9.06% in the first quarter of 2009. Although the economic growth rate has become positive since the fourth

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[4] The unemployment rate in Chinese Taipei increased from May 2008 (3.81% in April 2008 was the lowest level), surpassed 5% in December 2008, surpassed 6% in July 2009, reached a record high of 6.13% in August 2009, declined since then and was 5.68% in January 2010. The exports and imports in Chinese Taipei had declined from September 2008 to December 2009 and the GDP has declined from the fourth quarter of 2008 to the third quarter of 2009.

[5] In order to boost GDP, Chinese Taipei also issued a consumption coupon of NT$85.6 billion to all residents in January 2009, increased NT$84.6 billion government expenditure on public construction projects, and promoted trade and initiated the ECFA (Economic Cooperation Framework Agreement) negotiation with China to stimulate exports.

quarter of 2009, the relative unemployment rate did not improve too much in Chinese Taipei, that is, jobless growth. Jobless growth was defined as economic growth while maintaining or decreasing the level of employment.

Figure 1. 2008-2010 GDP Growth Rate and Unemployment Rate in Chinese Taipei
Source: Directorate-General of Budget, Accounting and Statistics, Executive Yuan

Figure 2 mainly explains the increasing number of recipients of UI benefits in Chinese Taipei during the global financial crisis. It shows that the number of recipients of UI benefits showed significant growth as compared to the previous year during the global financial crisis. However, these unemployed persons in Chinese Taipei could at least get their basic protections of income security owing to the Employment Insurance Act.

thousands

Figure 2. Number of the Recipients of UI Benefits (changes over the previous year)
in Chinese Taipei, 2007-2009

Source: Directorate-General of Budget, Accounting and Statistics, Executive Yuan

Figure 3 shows that the cause of the early two periods of high unemployment rates in Chinese Taipei was the oil crisis (1983 and 1985) and the unemployment rate afterwards remained below 2% until 1996 (2.6%). After that, the unemployment rate reached the peak twice in 2002 and 2009 due to a change of structures and transitions of Chinese Taipei's industrial structures and the global financial crisis (Chou 2010a).

Figure 3. Historical Trends of Unemployment Rates in Chinese Taipei, 1978-2010

Source: Directorate-General of Budget, Accounting and Statistics, Executive Yuan (2010)

Chinese Taipei has been a member of the WTO since January 2002 and promoted a higher

degree of globalization. The growth of trade with China across the Strait is the most significant development in recent years[6]. This section briefly depicts Chinese Taipei labor market from features of labor force, employment, unemployment, and work compensation.

2.1 Labor Force

The number of civilian population aged 15 years and over and the labor force grew steadily in the long-run even during the financial crisis (Figure 4). They were 18,855,000 and 10,917,000 persons in 2009, respectively. Nevertheless, persons older than 65 years old showed a growing trend (Figure 5) which was estimated to result in an increasing dependency ratio[7]. Total dependency ratio was about 37.8% in 2008 and was projected to increase to 45.1% by 2023 and then expected to increase to 91.2 % in 2056. The implications of population ageing on the labor market and productivity for the case of Chinese Taipei could also be referred to Chou (2010b).

Figure 4. Number of Civilian Population 15 Years Old and Over and Labor Force

Source: Council of Labor Affairs website, labor statistics.

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[6] More than 40% of exports and imports are across the Strait.
[7] Dependency ratio is defined as (population of 14 years or under + population of 65 years or over) / (population of 15-64 years) *100.

Figure 5. Population 65 Years Old and Over in Selected Major Economies

Sources: 1. United Nations, World Population Prospects: The 2008 Revision;
2. Population Projections for Chinese Taipei Areas: 2008 ~ 2056 (2008), Council for Economic Planning & Development, Chinese Taipei

(a) Trend of Labor Force Participation Rate

The LFPR had a relatively low level in 2001 (57.23%), then increased until 2008 (58.28%) and declined in 2009 (57.90%) due to the financial crisis (Figure 6). The LFPR and the unemployment rate changed in opposite directions during Aug. 2008-Nov. 2009 (left part of Figure 5) which reflected a discouraged workers effect. The LFPR by gender showed a declining male LFPR (66.40% in 2009) and an increasing female LFPR (49.62% in 2009) (Figure 7) reflecting the effect of promoting female employment by government over two decades[8]. The expansion of service sectors and the increasing number of dual-income and dual career families has also partly explained the increase of female labor force participation rates.

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[8] Some may argue that females are a reserved labor force (claiming that females will participate in the labor market more under a recession and retreat from the labor market in a boom), yet females may not encounter a better employment environment without government assistance.

Figure 6. Unemployment Rate and Labor Force Participation Rate

Source: Council of Labor Affairs website, labor statistics.

Figure 7. Labor Force Participation Rate by Gender

Source: Council of Labor Affairs website, labor statistics.

Concerning the LFPR by age group, the age group of 25-44 presented the highest LFPR (84.19% in 2009), the age group of 45-64 the second (60.25% in 2009), the age group of 15-24 the third (28.62% in 2009), and the age group of 65 or over the lowest (8.05% in 2009). During the financial crisis, the age group of 25-44 kept   increasing the LFPR (83.81% in 2008), while

age groups of 15-24 (30.17% in 2008), 45-64 (60.83% in 2008) and 65 or over (8.10% in 2008) were declining (Figure 8). These showed that the financial crisis was a setback to the LFPR of age groups of 15-24, 45-64 and 65 or over.

Figure 8. Labor Force Participation Rate by Age Group

Source: Council of Labor Affairs website, labor statistics.

Concerning the LFPR by education, college and above showed the highest LFPR (68.40% in 2009), high school the second (62.61% in 2009), and junior high the least (41.67% in 2009), which were closely related to the increase of educational level over time and the reducing numbers of young workers due to a lower fertility rate. During the financial crisis, the LFPR of college and above kept increasing (68.18% in 2008), junior high and below kept decreasing (42.87% in 2008), while high school decreased (63.64% in 2008, 62.61% in 2009) from its peak in 2007 (63.95%) (Figure 9). Hence high school was the victim group of the financial crisis in terms of LFPR.

Figure 9. Labor Force Participation Rate by Education

Source: Council of Labor Affairs website, labor statistics.

(b) Number of (Low-Skilled) Foreign Workers

Due to declining LFPR, low fertility rate, NT dollar appreciation, increase of educational level, and the enactment of the Labor Standards Act, a labor shortage of low-skilled workers had become an issue in the late 1980s. In reaction to alleviate the labor shortage, Chinese Taipei has opened its door to (low-skilled) foreign workers since 1989. The number of foreign workers had increased rapidly to 351,016 persons by the end of 2009. During the financial crisis, the number of foreign workers decreased from the peak of 374,147 persons in July 2008 to the lowest 341,484 persons in June 2009, primarily due to the reduction of foreign workers hired in manufacturing (194,258 persons in July 2008, 158,728 persons in June 2009) (Figure 10)[9].

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[9] Possible reasons include the market mechanism (layoff some foreign workers and nationals at the same period) and government policy to restrict new hiring of foreign workers.

Figure 10. Trend of Foreign Workers

Source: Council of Labor Affairs website, labor statistics.

2.2 Employment/Unemployment

Under globalization, the labor demand in Chinese Taipei has changed fast and promoted polarization. Skilled jobs a decade ago may become low-skilled ones because of deskilling or contracting out overseas. In searching for flexibility, there is a growing share of contingent (non-standard, atypical) workers, particularly dispatched workers and a routine to rotate work-sites around the world. Nondiscrimination has been highlighted for decades, but employers' demand for flexibility may cause avoiding such social responsibility.

On the supply side, a significant amount of low-skilled foreign workers have been hired (357,937 persons in the end of 2007, 351,016 persons in the end of 2009)[10]. Low-skilled nationals may face a more competitive labor market than before and they prefer local jobs while afraid of migration due to asymmetric information. The capacity of colleges has expanded fast so that a lot more college graduates are supplied to the market each year which results in larger new entrants' unemployment. In the following, number of employed, employment by class of workers, nonstandard workers, and unemployment rate are analyzed.

(a) Number of Employed

The number of those employed in the tertiary sector has grown the fastest over the past three decades and reached its peak in 2008 (3,540,343 persons). The number of those employed in the industrial sector has grown slower over the past three decades yet reached its peak in 2008

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[10] The number of low-skilled foreign workers had increased to 359,583 persons in June 2010 (Council of Labor Affairs 2010: 176).

(3,048,257 persons) as well. Both declined in 2009 (3,446,509 persons in the tertiary sector and 2,884,127 persons in the industrial sector) due to the financial crisis. The number of those employed in the primary sector has shrunk over the past three decades and reached its bottom in 2008 (535,000 persons), but it increased in 2009 (543,000 persons) to absorb some urban unemployed (Figure 11).

Figure 11. Number of Employed in Three Sectors

Source: Number of employed in the industrial and the tertiary sectors are collected from www.dgbas.gov.tw, number of employed in the primary sector are collected from Council of Labor Affairs website, labor statistics.

Disabled person employment peaked in 2006 (187,602 persons), lowered significantly to 134,432 persons in 2007 (no data is available for 2008) and increased to 163,112 persons in 2009 (Figure 12). It seems that disabled person employment does not suffer from the financial crisis, which increment may be related to governmental specific programs to promote employment of vulnerable groups. As for aborigines, their employment peaked in Dec. 2005 (207,493 persons), then declined up to Sept. 2009 (198,950 persons) and increased in Dec. 2009 (203,412 persons) (Figure 13). Hence aboriginal employment suffered from the impact of the financial crisis until Sept. 2009.

Figure 12. Disabled's Employment and Monthly Wages

Source: Council of Labor Affairs website, labor statistics.

Figure 13. Aboriginal Employment and Average Wage

Source: Council of Aboriginal Affairs website, *Surveys of Aboriginal Employment*.

(b) Employment by Class of Workers

Regarding employed persons by class of workers, it can be detected that private employees are the largest group, growing in the long-run and peaking in 2008 (6,945,000 persons), number of employers or self-employed the second, peaking in 2000 (2,036,000 persons) then declining

until 2009 (1,802,000 persons), number of government employees the third, peaking in 2000 (1,027,000 persons) then declining but varying (low points observed in 2000, 2002 and 2007) to increase in 2008-2009 (958,000 persons in 2008) and peaking in 2009 (1,040,000 persons), and the number of unpaid family workers the least, declining since 1987 and reaching its lowest level in 2009 (588,000 persons) (Figure 14).

Over the period of 2007-2009, it is found that private employees varied (6,803, 6,945 and 6,850 thousand in 2007-2009 respectively) that employers or self-employed (1,919, 1,882 and 1,802 thousand in 2007-2009 respectively) and unpaid family workers (641, 619 and 588 thousand in 2007-2009 respectively) declined while government employees increased (932, 958 and 1,000 thousand in 2007-2009 respectively). These trends imply that various programs of ALMPs adopted in recent years may have attracted other class workers to migrate into the public sector.

Figure 14. Employed Persons by Four Classes of Workers

Source: Council of Labor Affairs website, labor statistics.

(c) Nonstandard Workers

Nonstandard workers, particularly dispatched workers, have grown rapidly and that has raised concern[11] in recent years. According to enterprises, dispatched workers can be utilized to substitute permanent hiring in an uncertain recovery to preserve resilience. As recovery becomes certain, dispatched workers with good performance may be recruited to permanent positions. According to the surveys conducted by the Directorate-General of Budget, Accounting and Statistics (DGBAS), the number of nonstandard workers increased steadily with 368,000

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[11] For example, reasons for dispatched workers prevail, how dispatched workers rights can be protected effectively, whether a Dispatched Act shall be enacted (the CLA proposes currently to amend the Labor Standards Act to cover the phenomenon of dispatched workers).

part-time workers and 517,000 temporary or dispatched workers in 2009, which grew from the figures in 2008 (311,000 part-time workers and 498,000 temporary or dispatched workers) (Figure 15).

Figure 15. Number of Nonstandard Workers

Source: www.dgbas.gov.tw, *Manpower Utilization Survey Report*.

(d) Unemployment Rate

Unemployment rate is used as the indicator of unemployment here. The unemployment rate in Chinese Taipei had surpassed 2% since 1996 and then 4% since 2001. The former one pushed the start of offering UB under the Labor Insurance in 1999 while the latter promoted the enactment of EI Act in 2003. The unemployment rate reached its peak in 2002 (5.17%), then declined to 3.91% in 2007, increased to 4.14% in 2008, and reached a new high of 5.85% in 2009 (Figure 16).

The unemployment rate revealed its relatively lowest level in April 2008 (3.81%), increased from May 2008, surpassed 5% in December 2008, surpassed 6% in July 2009, reached its highest (6.13%) in August 2009, declined thereafter, and was 5.74% in the end of 2009 [12] (www.dgbas.gov.tw). Comparing with the LFPR[13], the impact of the financial crisis may be more striking if comparing August 2009 to August 2008[14].

The high record of the unemployment rate during the financial crisis induced amendment of the EI Act in May 2009 to extend UB and provide an employment stabilization clause. Moreover, the unemployment rate in Chinese Taipei has started to increase since May 2008 (3.81% in April

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[12] The unemployment rate declined further to 5.14% in June 2010. President Ma had claimed to lower the unemployment rate to be below 5% by the end of 2010 in February 25, 2010. This goal is equivalent to reducing unemployment of 240,000 persons from the figure in Jan. 2010.
[13] The LFPR reached its highest in August 2008 (58.53%), declined thereafter, down to 57.70% in April 2009, increased from May 2009 (57.76%) and was 58.11% in December 2009. (www.dgbas.gov.tw)
[14] Such comparison may avoid seasonal factors as well.

2008 was the lowest level), surpassed 5% in Dec. 2008, and surpassed 6% in July 2009 (6.07%). Unemployment rate is a traditional indicator of the business cycle; however, the Chinese Taipei government did not detect the message of recession until Oct. 2008 when the furlough prevailed.

Figure 16. Trends of Employment, Unemployment and Unemployment Rate

Source: Council of Labor Affairs website, labor statistics.

Looking into the unemployment rates by education level, high school has the highest level (4.31%, 4.34% and 6.19% over the period of 2007-2009, respectively), college and above the second (4.00%, 4.21% and 5.57% over the period of 2007-2009, respectively), and junior high or under the third (3.22%, 3.76% and 5.84% over the period of 2007-2009, respectively) (Figure 17). The unemployment rate of junior high or under was higher than that of college and above in 2009, which may be ascribed to government policy leaning to promote employment of those in college and above.

Figure 17. Unemployment Rates by Education

Source: Council of Labor Affairs website, labor statistics.

The unemployment rates by gender show that males have presented a higher level systematically than females since 1996. Over the period of 2007-2009, female unemployment rates were 3.72%, 3.83% and 4.96%, respectively, while male unemployment rates were 4.05%, 4.39% and 6.53%, respectively showing that the gender gap enlarged[15] during the financial crisis (Figure 18). Such observation may be a result of actively promoting female employment by government.

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[15] Say, 4.05/3.72=1.0887, 4.39/3.83=1.1462, 6.53/4.96=1.3165.

Figure 18. Unemployment Rates by Gender

Source: Council of Labor Affairs website, labor statistics.

As for the unemployment rates by age group, the age group of 15-24 had the highest level (10.65%, 11.81% and 14.49% over the period of 2007-2009, respectively), the age group of 25-44 the second (3.86%, 4.02% and 5.93% over the period of 2007-2009, respectively), the age group of 45-64 the third (2.24%, 2.54% and 3.90% over the period of 2007-2009, respectively), and the age group of 65 or over the lowest (0.16%, 0.17% and 0.13% over the period of 2007-2009, respectively) (Figure 19). These revealed that the age group of 45-64 increased its unemployment rate with the largest proportion over the period of 2007-2009[16], the age group of 25-44 the second[17], and the age group of 15-24 the third[18]. Moreover, age groups of 15-24, 25-44 and 45-64 had a higher unemployment rate due to the financial crisis while that of the age group of 65 or over declined; the latter might be a result of the discouraged workers effect.

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[16] 3.90%/2.24%=1.741.
[17] 5.93%/3.86%=1.536.
[18] 14.49%/10.65%=1.361.

Figure 19. Unemployment Rates by Age Group

Source: Council of Labor Affairs website, labor statistics.

Disabled person's unemployment rate remains high constantly, with a peak revealed in 2000 (20.93%), the lowest level appeared in 2005 (14.55%), then it increased to 16.70% in 2007 and further to 17.30% in 2009 (Figure 20). In combination with the increment of disabled person employment, it is inferred that the disabled transfer their status between non labor force and labor force.

Figure 20. Disabled Person's Unemployment Rate

Source: Council of Labor Affairs website, labor statistics.

Aboriginal unemployment and unemployment rate reached the lowest level in Dec. 2005 (unemployment was 9,263 persons, unemployment rate was 4.27%), then increased gradually in Sept. 2009 (unemployment was 19,306 persons, unemployment rate was 8.85%) and declined in Dec. 2009 (unemployment was 16,053 persons, unemployment rate was 7.31%) (Figure 21). These imply that aborigines suffered increasing unemployment rates before the financial crisis and became worse off during the financial crisis.

Figure 21. Aboriginal Unemployment, Unemployment Rate and Non labor Force

Source: Council of Aboriginal Affairs website, *Surveys of Aboriginal Employment*.

2.3 Work Compensation

In the financial crisis, the furlough has been adopted gradually by enterprises as a substitute for layoffs. The phenomenon of the furlough became a concern by the mass media in October 2008 and resulted in a tracing survey by the government. The number furloughed was 202,000 persons, mostly (71.4%) in enterprises with 500 or more workers in December 2008 (http://file.ejob.gov.tw/Uploadfiles/4642.doc). The number climbed to the highest 238,000 persons in March 2009 (Aug. 17, 2009, United Evening News), and then declined to 144,000 persons in April 2009 (Shin 2009:10), 66,709 persons in August 2009 (Aug. 17, 2009, United Evening News) and 10,000 persons in the end of 2009 (Feb. 25, 2010, DGBAS News Brief).

The financial crisis has lowered work compensation. The average wages of employees in the industrial and tertiary sectors and the manufacturing showed a decreasing trend from August 2008 to August 2009. The decreased proportions were 4.00% (1-39827/41486) and 9.74% (1-36524/40466), respectively. Additionally, the proportions of regular wage in the industrial and tertiary sectors and the manufacturing were not stable. For example, the proportions were 88.14% and 85.47% in August 2008, 90.09% and 89.21% in August 2009, and 84.78% and 81.16% in

December 2009. However, over the period of 1999-2009, Chinese Taipei GDP increased by 17.5%, but the average wage in the industrial sector decreased by 4.3%, so it was claimed that workers' compensation did not keep up with economic growth.

Employees' average monthly wages by industry showed a growing trend, up to 2008 when the financial crisis occurred. Among them, the industrial sector (NT$43,302), the manufacturing (NT$43,169) and the banking and insurance (NT$75,732) presented their peak in 2007, while the tertiary sector (NT$45,450) and the computer, electronic and optical products manufacturing (NT$49,754) had their peak in 2008 (Figure 22).

Figure 22. Employees' Average Monthly Wages by Industry
Source: DGBAS website, www.dgbas.gov.tw.

Wages for disabled persons (Figure 12) and aboriginals (Figure 13) were lower than the levels of the general society (Figure 22). Before the financial crisis, work compensation in Chinese Taipei showed a bonus-inclined trend, namely, regular wage proportion decreased while irregular wage proportion increased over time. For example, the regular wage proportions of the industrial and tertiary sectors and the manufacturing declined over the period of 2003-2007 and reversed their direction in 2008-2009. That of the computer, electronics and optical products declined over the period of 2002-2007 and reversed its direction in 2008-2009. That of the banking and insurance declined over the period of 2005-2008 and reversed its direction in 2009 (Figure 23). The irregular wage proportions reflected the opposite trend (Figure 24). Increasing irregular wage proportion might be ascribed to strategic human resource management adopted by enterprises in reaction to increasing nonwage personnel costs. Under the financial crisis,

enterprises presented more resilience to a lower irregular wage (hence a lower irregular wage proportion and a higher regular wage proportion) to alleviate the impact of depression.

Figure 23. Employees' Regular Wage Proportion

Source: DGBAS website, www.dgbas.gov.tw.

Figure 24. Employees' Irregular Wage Proportion

Source: DGBAS website, www.dgbas.gov.tw.

Income distribution is another concern. The Gini coefficient in Chinese Taipei revealed an

increasing trend since 1980 (0.278), reached its peak in 2001 (0.350), declined thereafter to 0.340 in 2007 and 0.341 in 2008 (no data is available for 2009 yet) (Figure 25).   Thus the financial crisis seems to make income distribution worse a little bit.

Figure 25. Gini Coefficient in Chinese Taipei

Source: DGBAS website, www.dgbas.gov.tw.

III. Overview of the Employment Insurance

This section sketches the evolution and features of the Employment Insurance and the role of the Employment Services Act.

3.1 Historical Development of Employment Insurance in Chinese Taipei

When the provision of Labor Insurance Act was passed in 1958, it was supposed to enact the unemployment benefits within the shortest period. However, it was not implemented since unemployment problems did not become problems and social concerns in the society at that time. Council of Labor Affairs (i.e., Ministry of Labor), established in 1989, has drafted the Unemployment Insurance Act and has been long ignored by the Legislative Yuan. However, the unemployment rate has started to be over 2% from 1996 (see also Figure 3) and the absence of unemployment insurance has been seriously questioned by labor groups. Therefore, the Legislative Yuan firstly passed "Implementing Methods of Unemployment Benefits" as part of Labor Insurance Act on December 28, 1998 and it was in 1999 when Chinese Taipei first started to provide unemployment benefits for unemployed. It was not until 2003, when the Employment Insurance Act (to correspond to the global trend of Active Labor Market Policy) was independently enacted, through temporary financial support from the Labor Insurance (Chou 2010a).

The employment system was amended in April 2009 in order to adapt to the global crisis, unemployment problems and ageing population. It raised beneficial ages of insured persons from 60 years old to 65 years old, added the middle-aged and older adults aged 45-65 and physically

and mentally disabled persons to beneficiaries, as well as extended unemployment pay to nine months. In addition, the limit of unemployment pay was 60% of monthly insured salary for the general unemployed persons and could be added an extra 10% to 20% if the general unemployed persons had family to foster.

Maintenance of people's income is facing a significant unsafe and unstable status due to global and Chinese Taipei economic changes. Those unemployed persons who receive full unemployment pay and still can not get jobs may be reduced to poverty, when unemployed persons and long-term unemployed persons are continuing to increase. In addition to current systems of the unemployment pay, the government should provide unemployment assistance or other subsidies. In most of the current OECD economies, unemployment pay includes two levels, as the beginning stage of unemployment pay based on the principles of social insurance and the longer spells of unemployment based on basic survival needs of social welfare protections to provide unemployment assistance or basic income protections (Schmid and Reissert 1996).

3.2 Evolution of the Employment Insurance

Over the past decades, Chinese Taipei has encountered a trend of ageing and declining fertility rate. For example, the proportion of population over 65 years old had passed 7% in 1993 and increased to 10.63% in 2008, and the fertility rate per thousand decreased from 15.07 in 1997 to 8.3 in 2009 (www.cepd.gov.tw). These contributed to an ageing labor force, smaller labor supply growth, and a potential labor shortage. Moreover, Chinese Taipei has evolved into a democratic society since the lifting of the Martial Law in 1987 and further integrated into globalization when it joined the World Trade Organization in January 2002 (under the name of TPKM). Therefore, lobbying for particular interests has become more prevalent and the demand for a better social safety net has been gradually enhancing[19]. In addition to expecting a better designed pension system[20] and comprehensive medicare system[21], workers in Chinese Taipei anticipate to have sound employment safety.

In the 1990s, Chinese Taipei provided some ALMPs (such as placement services, vocational training, and employment promotion programs to vulnerable groups) solely through the Employment Services Act[22]. Before 1995, the unemployment rate in Chinese Taipei had been below 2%, so employment safety had rarely been an important issue. The unemployment rate had surpassed 2% since 1996, so the demand of unemployment benefits had strengthened. Hence

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[19] Including the enactment of the Labor Retirement Pension Act in 2005 to substitute for the retirement payment system stipulated in the Labor Standards Act and the amendment of the Labor Insurance Act in April 2009 to offer pensions.
[20] For example, due to the ageing demographic structure and employers' preference to hire younger workers, older workers maintain a larger lobby pressure after they have suffered a higher unemployment rate. Additionally, under globalization, Chinese Taipei enterprises have evolved industrial up gradation as a time lapse which results in occupational position polarization such that low-skilled workers become more vulnerable to unemployment because they are less capable to migrate for employment and having fewer options to be promoted for employment through occupational training.
[21] Particularly the National Health System has been implemented since March 1995.
[22] The Employment Services Act was enacted in 1992 mainly to manage the hiring of low-skilled foreign workers.

some unemployment benefits were offered through the Labor Insurance Act in 1999[23]. However, as the qualification had been too strict and the unemployment rate had surpassed 4% since 2001, the Employment Insurance Act was enacted in 2003 to provide better designed unemployment benefits.

Facing the significant impact of the financial crisis outburst in 2008, the Employment Insurance Act was amended in April 2009 (to be effective since May 2009) to extend unemployment benefits (from six to nine months maximally) for older workers (defined as more than 45 years old), the disabled (defined as qualifying for the national standards), and the unemployed, offer extra payment to dependents (10% of insured wage to each dependent, 20% in maximum), as well as stipulate an employment stabilization clause and an emergency clause of extending unemployment benefits (from six to twelve months maximally) to all unemployed[24]. But the implementation of the employment stabilization clause and the emergency clause are still pending on a severe environment because the economy has been recovered from March 2009. Furthermore, whether better benefits of the Employment Insurance may or may not promote a lower unemployment rate, a longer duration of unemployment and/or a higher labor force participation rate depend on an empirical study of time-series.

3.3 Current Features

3.3.1 Coverage of the Employment Insurance

All national (including a native's spouse who has obtained the status of permanent resident) employees within the age of 15-65 are required to join the EI compulsorily. Foreigners are not allowed to join the EI because (low-skilled) foreign workers are in full employment and foreign professionals are capable to take care of themselves[25]. Insurees of the Labor Insurance through occupational trade unions are not allowed to join the EI because their unemployment status is very difficult to verify. However, some insurees of the Labor Insurance through occupational trade unions are actually employees of units (enterprises or institutes) with four or less workers (so called micro-enterprise) or employees with unstable employment. Disqualifying their joining the EI has been debated for a decade.

Not all non-regular employees or employees in units with four or less workers would join the EI. Since all employees shall join the EI, non-regular employees are covered by the Act. Yet

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[23] The Labor Insurance Act enacted in 1958 includes the category of unemployment insurance in Article 2. But the unemployment insurance under the Labor Insurance Act has never been implemented until 1999.

[24] In the same amendment, Parental Leave Allowance was offered and insurees' maximum age was increased from 60 to 65. But both are not regarded as a measure to fight against recession. In essence, offering Parental Leave Allowance is one of President Ma's presidential campaign commitments and has been treated as welfare to parents (female in particular) while increasing insurees' maximum age is a corresponding amendment with the pension qualification stipulated in the Labor Insurance Act.

[25] Once low-skilled foreign workers were unemployed, either the government would help them to find a new job or the foreign workers would have to fly back to their mother economies. Foreign professionals may be unemployed but they are regarded as capable to get another job or migrate back to their home economy for support, so their unemployment is not an issue to be concerned.

some employers of non-regular employees do not observe the Act[26]. Furthermore, employees in units with four or less workers are required to join the EI even though they are not required compulsorily to join the Labor Insurance. However, it has been estimated that 70% of units with four or less workers and 60% of their employees did not join the EI in 2006 (Lan and Chen 2009: 103-104). Such defects are due to ineffective inspection and monitoring[27].

The grand total of the insured in the EI grew over the period of 2003-2007 (5,024,816 persons in 2003), declined in 2008 and increased again in 2009 (5,584,169 persons) (Figure 26). The decline in 2008 obviously was a result of the financial crisis while the increment in 2009 probably was a result of special governmental programs (ALMPs) to promote employment in reaction to the financial crisis as the Chinese Taipei government required enterprises which hired subsidized workers to ask them to join the EI. The insured in the EI by gender showed that there were more male than female and that the proportion of male/female revealed a declining trend (figures over the period of 2005-2009 were 1.065, 1.060, 1.061, 1.053 and 1.046). The decline of male/female proportion from 2008 to 2009 might be partly a long trend and partly a result of ALMPs favoring female employment.

Figure 26. Insured in the Employment Insurance Grand Total and by Gender

Note: There were no statistics by gender in 2003 and 2004.

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[26] For example, employers may offer life insurance to part-time workers as a substitute, ask dispatched workers to participate in the Labor Insurance through occupational trade unions to avoid the requirement of joining the Employment Insurance or do not offer the Employment Insurance to temporary workers claiming the feature of an unstable job.
[27] These proportions may be biased because they are the end of year figure divided by the average of year figure.

Source: Bureau of Labor Insurance website, *Statistics Annals of Bureau of Labor Insurance*,
http://www.bli.gov.tw/sub.aspx?a=FcGrI9gVwyc%3d.

The insured in the EI by age group showed that the group of 25-44 years old was the majority (3,262,409 persons and 64.93% in 2003, 3,680,314 persons and 65.91% in 2009) with a growing trend, the group of 45-60 years old also showed a growing trend (1,020,806 persons and 20.32% in 2003, 1,285,463 persons and 23.02% in 2009[28]), but the group of 15-24 years old declined (741,601 persons and 14.76% in 2003, 562,426 persons and 10.07% in 2009) (Figure 27). Since the qualification of employment insurance is the records of attending insurance beyond one year, for those first-entry young unemployed workers, current employment insurance could not provide assistance (Chou 2009).

Figure 27. Insured in the Employment Insurance by Age Group

Source: Bureau of Labor Insurance website, *Statistics Annals of Bureau of Labor Insurance*,
http://www.bli.gov.tw/sub.aspx?a=FcGrI9gVwyc%3d.

The insured in the EI by size of work unit showed that persons insured in each size increased over the period of 2005-2009[29], but the proportion insured in most sizes decreased except in sizes of 1-4 persons and 500 or more persons. For example, size of 1-4 persons was 512,637 persons (9.55%) in 2005 and 534,605 persons (9.57%) in 2009, size of 5-99 persons was 2,504,643 persons (46.65%) in 2005 and 2,561,466 persons (45.87%) in 2009, size of 100-499 persons was 1,015,916 persons (18.92%) in 2005 and 1,029,728 persons (18.44%) in 2009, and size of 500 or more persons was 1,336,082 persons (24.88%) in 2005 and 1,458,370 persons (26.12%) in 2009. Calculating in different sizes, size of 1-99 persons was 3,017,280 persons

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[28] Due to the amendment of increasing the maximum age of participants in the EI in May 2009, there were 55,966 persons (1.00% of grand total) of 60-64 years old.
[29] Data of 2003-2004 are not available.

(56.20%) in 2005 and 3,096,071 persons (55.44%) in 2009, while size of 1-199 persons was 3,452,725 persons (64.31%) in 2005 and 3,559,304 persons (63.74%) in 2009. (Figure 28).

It is interesting to highlight the figures of size of 1-4 persons, which was 512,637 persons (9.55%) in 2005, 524,254 persons (9.62%) in 2006, 527,552 persons (9.58%) in 2007, 529,241 persons (9.76%) in 2008, and 534,605 persons (9.57%) in 2009. The peak proportion of 9.76% in 2008 was consistent with the earlier inference that special ALMPs programs adopted after the financial crisis requiring participants to join the EI might have encouraged the growth of insured with respect to the size of 1-4 persons in the EI.

Figure 28. Insured in the Employment Insurance by Size of Work Unit

Source: Bureau of Labor Insurance website, *Statistics Annals of Bureau of Labor Insurance*, http://www.bli.gov.tw/sub.aspx?a=FcGrI9gVwyc%3d.

Comparing to total employees who shall have joined the EI, coverage rates of the EI over the period of 2003-2009 were 85.02%, 85.42%, 84.24%, 82.44%, 80.96%, 78.05% and 81.52%, respectively (Table 1). These proportions[30] showed a declining trend till 2008. Possible reasons included that employers and employees wanted to save the premium and lacked comprehensive inspection. The increased coverage rate in 2009 might have resulted from the special ALMPs programs adopted in 2008-2009 requiring participating workers to join the EI in order to get a subsidy.

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[30] These proportions may be biased because they are the end of year figure divided by the average of year figure.

Table 1. Coverage Rates of the Employment Insurance in Chinese Taipei (2003-2009)

Year	(1) Number of persons participating in Employment Insurance (end of year figure) (Persons)	(2) Number of employees in the private sector (average of year figure) (Persons)	(3)=(1)/(2)
2003	5,024,816	5,910,000	85.02%
2004	5,242,310	6,137,000	85.42%
2005	5,369,278	6,374,000	84.24%
2006	5,447,373	6,608,000	82.44%
2007	5,507,865	6,803,000	80.96%
2008	5,420,549	6,945,000	78.05%
2009	5,584,169	6,850,000	81.52%

Sources: Council of Labor Affairs (2009), www.dgbas.gov.tw.

3.3.2 Premium and Benefits of the Employment Insurance
(a) Premium of the EI

The EI premium has been 1% (which can be raised to 2% when necessary by the Act) of insured wages (which range from NT$17,280[31] to NT$43,900 and are consistent with the Labor Insurance) since 2003. The insured wages usually are lower than actual earnings because only regular earnings will be taken into account. In December 2008, among 5,420,549 insured, 19.65% were insured at NT$17,280 or below, and 23.26 % were insured at NT$43,900. In December 2009, among 5,584,169 insured, 20.28% were insured at NT$17,280 or below, and 22.86 % were insured at NT$43,900. And the average insured wages over the period of 2007-2009 were NT$29,539, NT$29,756 and NT$29,525, respectively.[32] Hence the insured wages might only have lowered just a minor amount due to the financial crisis because they were usually lower than actual earnings.

(b) Qualification of Unemployment Benefits

To be qualified for unemployment benefits, the insured shall obtain evidence of being involuntarily unemployed, have accumulated a one year tenure of EI prior to three years of unemployment, and register for a job search through Public Employment Service Institution (PESI). Employees of a fix-term contract can apply if they could not be reemployed after one month from the date of contract termination, when their contract period was more than six months prior to one year from the date of contract termination.

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[31] NT$17,280 has been the minimum monthly wage effective from July 2007.   Part-time or daily workers may be insured at a level lower than NT$17,280.
[32] Figures are available in Council of Labor Affairs (2010a).

To obtain evidence of being involuntarily unemployed from employers may become an issue of labor disputes because employers are reluctant to take responsibility stipulated in other laws. In particular, the Labor Standards Act empowers severance payment to involuntarily unemployed and the ESA penalizes significantly (from NT$30,000 to NT$150,000) the employer who does not notify the authority prior to ten days of severance. Due to the financial crisis, there were more layoffs and then more labor disputes. The number of labor disputes per month increased to over 2,000 cases in August 2008, reached its highest (3,066 cases) in March 2009, and declined to the relatively lowest (2,093 cases) in November 2009 (Council of Labor Affairs 2009, 2010a)[33]. According to the experience of labor dispute conciliators, some unemployed workers simply demand evidence of being involuntarily unemployed issued by their employers in order to be qualified for unemployment benefits. The phenomenon of furlough[34] that has prevailed since October 2008 may be a result of employers' shying away from regulation requirements of involuntary unemployment.

Requiring involuntarily unemployed to register for a job search through PESI has revived the function of PESI since 2003 because PESI had been relatively vulnerable in competing for business with private employment service agencies. However, under the requirement of EI, two-thirds of PESI personnel have to be ascribed to handle unemployment verification. Due to the financial crisis, such pressure has become more severe.

(c) Unemployment Benefits of the EI

There are five kinds of benefits offered in EI, namely, UB, ERA, VTLA, NHIPS and PLA. Since being qualified for PLA is not related to unemployment, only the first four will be discussed here.

Concerning the acquisition of UB, there is a 14-day waiting period. Within this period, PESI will refer employment or vocational training to UB applicants. After an unsuccessful effort of PESI, involuntarily unemployed can get their UB. Moreover, the unemployment status has to be verified by PESI every month and the unemployed are required to search for a job twice per month. The payment of UB is 60% of average insured wage (which is calculated as average of insured wages prior to six months) per month up to six months. Older workers and disabled can get UB up to nine months[35]. For those who have qualified dependents they can get an additional 10% of insured wage per person up to 20%. Once UB quota is used up, the insured has to accumulate one year tenure of EI again prior to being qualified for the next round of UB. Suppose UB was applied twice within two years and the first UB was claimed to its maximum months,

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[33] Yearly labor disputes over the period of 2007-2009 were 19,729, 24,540 and 30,385 (Council of Labor Affairs 2010a: 48).

[34] At the beginning, the employer can pay workers any wage under furlough. Later, under the pressure of trade unions, the Council of Labor Affairs amended its position and required employers to pay at least the minimum wage under furlough in Oct. 2008.

[35] The extension of unemployment benefits to older workers and disabled workers revealed a concept of treating older workers as disabled. In a similar vein, a scholar has suggested to treat persons who do not possess digital techniques and English as disabled (Isenberg 2002: 306-319).

then the maximum months of the second UB is halved. Additionally, the emergency clause of UB extension allows the CLA to extend UB for all insured up to 12 months under conditions of huge unemployment or other emergent situation due to recession.

The VTLA is designed to encourage the involuntarily unemployed to participate in full-day[36] vocational training, which is free of charge to the involuntarily unemployed, in order to enhance their human capital. The amount of VTLA is 60% of average insured wage (prior to six months, the same as UB) and up to six months. Hence VTLA can perform as an extension of UB. The unemployed need to get a referral from PESI in due cause to be qualified for VTLA.

ERA is designed to encourage earlier reemployment and can be claimed after three months of reemployment if the involuntarily unemployed were reemployed prior to using up their maximum UB. Claiming ERA is equivalent to claiming UB but the amount of ERA is half of unclaimed UB. Those who are afraid of being unemployed again in a short period may not apply for ERA. The benefit of NHIPS will be provided automatically by the Bureau of Labor Insurance once the status of the involuntarily unemployed was verified for the insured. The involuntarily unemployed who are receiving UB or VTLA can also obtain full support of their own and their dependents' NHIPS. The NHIPS is important because some unemployed may try to save such premium and shy away from clinics and hospitals when they get sick.

Furthermore, an employment stabilization clause of wage subsidy for the furlough phenomenon can be adopted once specified conditions are met in the future. The wage subsidy is 50% or 70%[37] of the reduced wage which must be reduced for at least 20% and at most 80% of the insured wage up to twelve months. The activated specified conditions are UB proportion (UB applicants/Persons of Insured in the EI) which reaches 2.2% for three consecutive months and the unemployment rates of the whole society do not decline. These are strict because even in the worst months during the financial crisis, UB proportion had reached only 2.19% for two months, which might be the result of governmental intervention. Yet strict conditions avoid a lenient subsidy to preserve the fiscal sustainability of the EI.

Amendments of UB extension to older workers and the disabled, providing dependents' benefits, an employment stabilization clause, and an emergency clause of UB extension can be regarded as a redistribution of property rights (Cooter and Ulen 2000). The EI may alleviate problems of cyclical unemployment through its automatic benefit payment mechanism, but not so much for structural unemployment. Older workers' unemployment may have a high proportion in the structural unemployment. In practice, most of the unemployed prefer to get UB from the beginning without bothering to get an employment or vocational training referral. Since not much obligation has been imposed on the unemployed,[38] it has been observed that younger unemployed

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[36] A full day training is defined as a training period for more than one month, four or more sessions per week, four or more hours per daily session (night sessions are excluded) and more than 100 training hours per month.

[37] Subsidy of 70% applies to a situation when work hours were reduced and 16 hours of vocational training per month was implemented.

[38] Some scholars claim that current obligation requirements have been too burdensome to encourage active job search efforts.

were more eager to search for a job than older unemployed. This may also be due to the unemployed's expectation of employers' preference. Perhaps extending UB longer to unemployed vulnerable groups had better be substituted by VTLA extension or be combined with other measures to guarantee a better reemployment effect.

Moreover, no prior tenure was required to be qualified for VTLA and that around one-eighth of VTLA recipients were "professional" vocational training participants who had no willingness to be employed. Such unwelcome behavior has been alleviated by limiting one chance within two years, strict screening for the training class, and employment record tracing conducted by the CLA.

The payment amount and proportion trends of UB are displayed in Figure 26, and the trends of ERA, VTLA, NHIPS and PLA are displayed in Figures 29 and 30. The payment proportions of UB, ERA, VTLA and NHIPS out of all payments in December 2009 were 66.58%, 11.16%, 3.70% and 4.68%, respectively,[39] which declined from the figures in 2008 due to the share of PLA. All four payments (UB, ERA, VTLA and NHIPS) showed a significant increment in 2009(Figure 29-31). [40]

Figure 29. Payment Amount and Proportion Trend of UB under Employment Insurance

Source: Council of Labor Affairs website, labor statistics.

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[39] The proportion of PLA was 13.90% in December 2009.
[40] The PLA started in May 2009.

Figure 30. Four Payment Amounts Excluding UB under Employment Insurance

Source: Council of Labor Affairs website, labor statistics.

Figure 31. Proportions of Four Payments Excluding UB under Employment Insurance

Source: Council of Labor Affairs website, labor statistics.

(d) Wage Subsidy in Hiring Unemployed

A wage subsidy regulation (Employment Promotion Subsidy) to promote hiring unemployed has been specified according to the EI Act, in which employers who hire specified unemployed, including consecutively unemployed for more than three months, consecutively

unemployed for more than 30 days of vulnerable groups[41], and female reentrants after more than two years out of the labor market due to family reasons, for at least three months may apply for a wage subsidy up to NT$12,000 (NT$8,000, NT$10,000 or NT$12,000) per head per month for 12 months. Suppose the work hours were less than the specified level, the subsidy would be up to NT$65 (NT$45, NT$55 or NT$65) per hour. The subsidy is welcomed by some local SMEs and dispatching companies.

(e) Fiscal Sustainability

To maintain a sound financial status of the EI is important[42] because other social insurance (such as the Labor Insurance, the Farmers' Health Insurance and the National Health Insurance) is in severe deficit. At the beginning of the enactment of the EI Act in 2003, NT$35.3 billion was appropriated from the Labor Insurance Fund. In 2008, right before the outburst of the financial crisis, the EI Fund had a surplus of NT$100 billion that the CLA decided to return NT$35.3 billion to the Labor Insurance Fund.

The premium receivable of the EI over the period of 2003-2008 had surpassed the real insurance benefit payments with a surplus of at least 10.3 billion each year. But the situation reversed to reveal a deficit of 6.54 billion in 2009 due to the high unemployment rate of UB payment after the financial crisis. Other payments increased significantly in 2009 as well. The big surplus over the period of 2003-2008 was the reason of PLA[43] being enacted through the EI Act and extension of UB and dependents' benefits being amended in May 2009. The PLA was estimated to cost 3.6 billion (13.9%) a year by the payment figure of Dec. 2009. Additionally, 10% of the yearly premium and accumulative surplus will be ascribed to employment stabilization measures. Hence the government has to be aware of the fiscal sustainability of the EI in the future, particularly if the unemployment rate remains high.

It is also interesting to discuss the management of the EI Fund. About one-third of the EI Fund can be used to invest in the stock market to accrue a better return and support the Chinese Taipei Stock Index. However, invested stocks are picked simply in consideration of rate of return. There are no clear ethics requirements (such as Corporate Social Responsibility) imposed on the objects of invested stocks. The CLA may ameliorate the management of the EI Fund by establishing such ethics standards.

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[41] The definition of vulnerable groups here is wider than the stipulation in the ESA.

[42] Several EU economies have suffered from the threat of state insolvency in 2010. For example, government deficit in Greece was 12.7% of GDP in 2009, when Greece tried to reduce government expenditure substantially to alleviate such threat it encountered several strikes initiated by its people in 2010.

[43] Offering Parental Leave Allowance through the EI Act had been debated because it was estimated to cost 8 billion per year. Fortunately, estimating from the figures of payment over the period of May-December 2009, it might just cost 3.6 billion per year.

Table 2. Premium and Payments of Employment Insurance (2003-2009)

Year	(1) Premium Receivable (NT$)	(2) Real Insurance Benefit Payments (NT$)	(3)=(1)/(2) (%)	(4)=(1)-(2) (NT$)
2003	16,260,940,000	5,972,625,000	272.26%	10,288,315,000
2004	17,082,766,000	4,457,978,000	383.20%	12,624,788,000
2005	17,814,770,000	5,423,489,000	328.47%	12,391,281,000
2006	18,658,809,000	6,151,731,000	303.31%	12,507,078,000
2007	19,281,118,000	6,837,552,000	281.99%	12,443,566,000
2008	19,679,573,000	8,243,843,000	238.72%	11,435,730,000
2009	19,466,889,161	26,005,177,404	74.86%	-6,538,288,243

Sources: Council of Labor Affairs (2010), www.dgbas.gov.tw.

3.4 Role of the Employment Services Act

The EI covers only the insured. The unemployed who are not covered by the EI may seek support from the ESA. The benefits provided by the ESA include Vocational Training Living Allowance (up to 6 months, the same name as in the EI Act), public works referral, etc. These benefits are rather discretionary and have been concentrated on specified vulnerable groups (details may refer to section 4.1) since 1992. The resource of these measures is the ES Fund, the collection of the Employment Stabilization Fee from the employers who hire low-skilled foreign workers specified by the ESA. Since the introduction of foreign workers has caused worry to threaten the job opportunities for local people of Chinese Taipei, the ESF is used to promote nationals' employment and foreign workers' management (including inspectors' wage subsidy, subsidy to foreign workers' leisure activities). The ESF is important to the CLA which has only 1.2 billion available for use per year[44].

Part of the EI premium collected and all the Employment Stabilization Fee collected from the employers of low-skilled foreign workers are put together in the ESF and used on workers' benefits. The ESF amounts to NT$10 billion per year currently. In 2008, the EI premium appropriated to the ESF was 8.18 billion and the Employment Stabilization Fee collected was 2.03 billion, while the amount used for nationals' employment promotion was 10.12 billion (90.32% of total expenditure[45]) and for management of low-skilled foreign workers was 813.6 million (7.26% of total expenditure).

IV. Active Labor Market Policies

This section discusses the scope of vulnerable groups, programs of ALMPs, foreign workers

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[44] The CLA has a NT$60 billion annual budget but most of it is ascribed to specific purposes (*Taiwan Labor Quarterly*, March 2009, p.43).
[45] There was a deficit of 240.5 million in 2008.

policy, and the fiscal conditions related to ALMPs.

4.1 Vulnerable Groups

Who are vulnerable groups? Starting from 1992, vulnerable groups were defined as female bread-winners, older workers, disabled, aboriginals and members who were in the labor force in a low-income family by the ESA, while ex-prisoners were assigned as a vulnerable group on March 2, 2005. In practice, ALMPs apply further to victims of domestic violence, youths (age 29 or under) and new immigrants (who have not received citizenship).

The definition of vulnerable groups in the ESA was extended in April 2009 due to the financial crisis in 2008. Firstly, "female bread-winners" was amended as "sole bread-winners" to cover "male" bread-winners. Secondly, long-term (more than one year) unemployed were amended as a new group. Other groups remained as before. In the ALMPs adopted by other departments in the central government in 2009 due to the financial crisis in 2008, college graduates within three years (youths) and unemployed PhDs[46] are treated as vulnerable groups as well.

4.2 Programs of ALMPs

Over the past two decades, various measures of ALMPs, including advantageous referral of jobs and training in Public Employment Services Institute, better VTLA, better wage subsidy, advantageous consideration in subsidized public works, and business establishment assistance, have been adopted by the CLA constantly to promote employment for vulnerable groups. Under the financial crisis, various measures of ALMPs still offer assistance priority to vulnerable groups.

After the outburst of the financial crisis, the CLA has provided the Getting to Work Immediately Program (GWIP), the Short-term Employment Skill Promotion Program (STESPP), and the Skill-Plus Program (SPP)[47] since October 2008 by using the ESF. Other departments provide ALMPs, too. The most expensive one is the College Graduates Practical Training Program (CGPTP). These four programs are evaluated in the following.

(a) Getting to Work Immediately Program

The GWIP was a wage subsidy program implemented from October 22, 2008 to December 2009. It intended to offer a wage subsidy to employers (private enterprises or nongovernment organizations) which hired native workers who were consecutively unemployed for at least three months or involuntarily unemployed (for those employees covered by EI). The target group was relaxed later (Nov.11, 2008) to cover unemployed workers (with evidence) who did not participate in EI yet had their Labor Insurance through trade unions, fishermen unions or farmers unions.

In order to be qualified for the subsidy, employees shall work at least 32 hours per week (20

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[46] Due to some private colleges being on the brink of bankruptcy, PhDs find it relatively difficult to find a teaching or research position in school, so they are treated as a vulnerable group.
[47] Similar programs had been adopted around the world (Messenger 2009).

hours per week for disabled). The subsidy was NT$10,000 per person per month up to 6 months. Each enterprise could apply for subsidized personnel up to 30% of its workers (up to 3 persons for units with 10 or less workers) who were insured under the Labor Insurance. The maximum number of persons being subsidized at the beginning of the program (Oct. 22, 2008) was set for 10,000, and amended to unlimited on Dec. 5, 2008. At the beginning, most employers applying for the GWIP were micro enterprises. At the time, the GWIP was originally scheduled to be ended in April 2009, but the CLA extended the program to the end of 2009. At the same time, the target groups were extended to cover new entrants and victims of natural disasters who were unemployed. And the subsidy rose for hiring vulnerable groups (wage subsidy increased to NT$12,000 per head per month, and an additional employment training allowance of NT$5,000 per head per month was offered). The final number subsidized through the GWIP was 70,000 persons by the end of 2009. The GWIP cost was estimated to be 3 billion and was financed by the Employment Stabilization Fund.

The GWIP requires employers to continuously hire the target groups after the subsidy is expired, so some employers may recruit them even without a subsidy. Such behavior may be natural and will make the GWIP look successful, but will result in a disadvantage to vulnerable groups. This is the so called "creaming off" effect (O'Higgins 1997). Nonetheless the GWIP has been welcomed by both employers and employees.

The Chinese Taipei government proposed a draft of Industrial Renovation Act empowering the government to decide at its discretion to offer a wage subsidy to SMEs in hiring workers in February 2009. The subsidy amount was NT$10,000 up to six months and another six months for hiring older workers. Such effort tended to make the essence of GWIP into law and lower the unemployment rate. However, this Act is pending on the discussion in the Legislative Yuan and its effectiveness on reducing the unemployment rate requires empirical study in the future. Yet in order to identify accurate target groups, a well defined program and implementation is required to avoid possible defects (such as the displacement effect, deadweight loss, creaming off).

When the GWIP expired in December 2009, the CLA offered a wage subsidy program (Employment Sailing Program), especially applied to older workers, long-term unemployed, disabled, victims of domestic violence, and aborigines. In it, employers hiring the mentioned unemployed could receive a subsidy of NT$17,280 (the minimum wage level) for the first three months and a subsidy of NT$10,000 for the nine months thereafter. But the employers had to continuously hire these workers after the subsidy expired. The subsidy quota of each employer was 30% of employees or 100 persons.

Disabled labor force showed a significantly high unemployment rate of 17.30% in 2009 (Figure 17, Bureau of Employment and Vocational Training 2009: IX). Hence in December 18, 2009, the CLA announced a wage subsidy program (Hiring Disabled's Plus Counselling Subsidy Program) particularly to assist enterprises which hire the disabled. In it, enterprises which hired the disabled might apply for a wage subsidy up to NT$12,000 for 12 months (regular program is

NT$10,000 up to 12 months). For enterprises which hired more than three disabled they might apply additionally for a coach counseling subsidy up to NT$6,000 per head per month.

(b) Short-term Employment Skill Promotion Program

The Short-term Employment Skill Promotion Program (STESPP) was initiated in December 22, 2008 and ended in December 2009 to subsidize the enterprise training expenditure up to 70% in order to promote inside-enterprise training during a slack time and to enhance their competitiveness afterwards. The budget was 299.4 million and expected to involve 30,000 workers. The STESPP also intended to improve the quality of training, so it incorporated the adoption of the Chinese Taipei TrainQuali System (TTQS) in a multi-stage subsidy. Any enterprise applying for the subsidy must follow the TTQS Scoreboard to conduct training evaluation[48] to qualify for 50% of the subsidy. After an on-site visit, qualified enterprises could receive another 10% of the subsidy. Enterprises possessing other specified merits (such as more than 17% of trainees were older workers, Excellent Friendly Worksite Award winners, Manpower Renovation Award winners) could get an additional 10% of the subsidy.

Such requirements are relatively strict. For example, by March 2009, there were 2,095 applications, but only 59.2% were qualified for the subsidy. Possible reasons included that SMEs did not have experience of inside-enterprise training, that many enterprises were not familiar with the TTQS, and no upper limit of the subsidy amount was set such that further applications had to be denied due to running out of budget.

In reviewing the implementation of the STESPP, the Tainan Vocational Training Center (which is one of seven units handling the STESPP) pointed out that most employers and workers were satisfied with the program and agreed that such program could enhance workers' employability, but employers needed to upgrade their concept of human capital investment and improve their knowledge of the TTQS while workers' participation willingness could be enhanced if the training was linked to wage or promotion. For the program *per se*, the information system shall be ameliorated, requirement of paper documents could be substituted by e-file, and employability of different industries shall be analyzed in advance to have a better design of training contents.

(c) Skill-Plus Program

The Skill-Plus Program (SPP) was initiated on February 2, 2009 and ended in October 2009 to subsidize training expenditure fully (up to NT$950,000 for SMEs and NT$1.9 million for LEs) to enterprises that were under a furlough (defined as having a bilateral agreement between employer and employee to reduce work hours more than 16 hours per month[49]) and Vocational

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[48] The TTQS Scoreboard is specified by the Bureau of Employment and Vocational Training and the training evaluation includes steps of Plan, Design, Do, Recheck and Outcome.
[49] This was amended on March 4, 2009. In the first month, furlough qualification was defined as reducing work hours more than 16 hours biweekly.

Training Living Allowance (by the ESA, whose offer has the same name as in the EI Act) to workers (NT$100 per hour, up to 100 hours per month for six months) who joined the training at least 24 hours per month in order to promote inside-enterprise training during a slack time and enhance workers' employability and their earnings. The budget was 15.97 billion and was expected to involve 168,000 workers. To be qualified for the subsidy, the enterprises shall conduct on-the-job training (in work days, from 8am to 8pm and 2-8 hours each day) and maintain employment of 99% of workers. Each training class shall have at least 8 workers. Enterprises (limited to 5) might jointly conduct the training. In the end, enterprises in manufacturing were more willing to join the SPP than the tertiary industry.

According to a survey of 260 employers and 1,097 employees, both employers and employees welcomed the SPP. Employers agreed that the SPP could encourage workers to join training, assist workers' living expenses, and promote more stable industrial relations; while employees agreed on the effect of promoting more stable industrial relations but not in assisting workers' living expenses. Region, size and the proportion of VTLA/ amount of reduced wage showed a significant differential in perception of effects. For example, workers in the central and southern Chinese Taipei, enterprises of smaller sizes and workers with a higher proportion of VTLA/ amount of reduced wage confirmed more on the positive effect of the SPP. (Sin 2010)

(d) College Graduates Practical Training Program

As shown in Figure 17, the unemployment rate for the college educated and above is increasing after 2008. By simply looking at the 15-24 age group, the unemployment rate of university educated and above degree is the highest (Chou 2010a). The CGPTP was initiated by the Department of Education in April 2009 to assist youth's employment[50] for one year (originally to be ended in September 2010) with a budget of NT$12.1 billion (NT$11.5 billion was used up by February 2010). In the CGPTP, the Department of Education provided a monthly subsidy of NT$22,000 for wages (employers were free to provide a higher wage, but most provided the same wage such that the subsidy becomes a 100% subsidy) and up to NT$4,190 for social insurance to enterprises which hired unemployed college graduates who graduated within the period of 2006-2008. The maximum length of the subsidy was one year and the quota was set for 33,500 persons with a NT$12.1 billion budget. To prevent concentration of hiring, each enterprise was limited to hire 30% of its workers and up to 350 persons. For enterprises with workers less than 10, a maximum 2 workers might be hired. The placement services were conducted by the Department of Education at the beginning. But the result was inefficient due to inexperience and frequently amending the contents of the program. So the CLA

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[50] The unemployment rates in Chinese Taipei over the period of 2003-2008 were 4.99%, 4.44%, 4.13%, 3.91%, 3.91% and 4.14%, respectively. But the corresponding unemployment rates of college or above graduates over the age of 15-24 were 9.49%, 10.67%, 10.68%, 10.47%, 10.96% and 12.54% while that of college or above graduates over the age of 25-29 were 5.66%,5.47%, 5.57%, 5.95%, 5.98% and 6.42% (www.dgbas.gov) and both were higher than the figure of the whole society.

stepped in in July 2009 to smooth such implementation and quickly complete the task.

The huge quota was provided ample employment opportunities to vulnerable college graduates under the financial crisis and was welcomed by the society. However, some criticisms have been raised. For example, the wage subsidy lowered the market wage because the monthly wage of NT$22,000 prevailed (May 11, 2009 *United News*), such program displaced labor demand for other kinds of workers (particularly older workers and part-time workers, April 9, 2009 *Free Times*) and laid off originally employed college graduates (July 9, 2009 *United News*). Private colleges displayed a higher willingness than public colleges to assist their graduates participating in the program that resulted in a differential effect among different colleges. Workers' attitudes would vary. The result might be more effective if there were multi-levels of wage subsidy for graduates of different majors.

Suppose there were no displacement effects, the CGPTP would have decreased the number of unemployed workers by 33,500 persons and lowered the unemployment rate by 0.31% (33,500/10,917,000). The expected goal might be achieved to some extent because the unemployment rate had declined from the highest level in August 2009 (Figure 14). Additionally, the average wage of the industrial and tertiary sectors declined from 2008 to 2009 (Figure 19). These may not be ascribed completely to the CGPTP, but the program may have contributed partly to these phenomena.

The Department of Education decided to extend the CGPTP because 80% of employers claimed that they would continue to hire these subsidized workers and the unemployment rate was still higher than 5%. In the extended CGPTP, the subsidy will be reduced to NT$10,000 per head for six months in maximum and a total budget of NT$1.8 billion will be appropriated.

To sum up, Chinese Taipei spent NT$36.25 billion (including the GWIP of NT$4.16 billion and the CGPTP of NT$12.1 billion) on employment promotion in 2008-2009 after the financial crisis (*Laborer*, No.155, April 30, 2010, p.7). In 2010, the CLA planned to spend NT$16.63 billion on employment promotion in 2010 (April 16, 2010 News) and the extended CGPTP would cost NT$1.8 billion. Unfortunately, there was no grand total figure gathered for the whole nation systematically and it was disciplined by the Control Yuan on May 5, 2010.

There are plenty of programs available at the same period which may fit for different employers flexibly and cause a preferential choice among various programs by potential employers. Hence some redundancy may be observed. Furthermore, consecutive short-term employment promotion programs usually are detected and revealed as a long-term program and violate the principle of a short-term program and cause some dependency phenomena (dependency of unemployed and employers on a government subsidy).

4.3 Foreign Workers Policy[51]

Treating foreign workers policy as part of ALMPs may be arguable, but they are usually blamed in a recession for stealing nationals' jobs (Simon 1989) and may be utilized as a reserved labor force to counteract business cycles (Calavita 1994). Particularly, the huge number of (low-skilled) foreign workers in Chinese Taipei makes such policy important in fighting against nationals' high unemployment rate.

The number of foreign workers in Chinese Taipei decreased from 365,060 persons in the end of 2008 to 351,060 persons in the end of 2009, but the majority appeared in the manufacturing industry (from 185,624 persons in the end of 2008 to 165,790 persons in the end of 2009) (Council of Labor Affairs 2010). This was due to the market mechanism and intended government policy. Regarding to the market mechanism, some employers would layoff foreign workers before they layoff nationals while some would partly layoff foreign workers when they layoff nationals. And some foreign workers would ask to go back to their mother economies voluntarily due to fewer chances of overtime earnings[52].

As for related government policy, before the financial crisis, enterprises in the manufacturing industry might hire foreign workers for jobs of specific production procedures[53] and a specific timeframe[54]. There were three quotas (20%, 18% and 15% of nationals) set for different categories (A, B and C) of enterprises, respectively, while re-recruitments were not included, so the maximum limit was 35% of nationals hired. During the financial crisis, some legislators suggested to hire nationals by priority and reconsider the foreign workers policy (Legislative Yuan 2009: 91-94).

Under such pressure, the CLA has adopted several adjustments to reduce foreign workers. In January 2009, the CLA extended the grace period to hire foreign workers once employers had obtained a permit of hiring from six months to one year. In February 2009, the requirement to recruit nationals in advance of hiring foreign workers was extended from 21 days to 30 days. Starting from March 2009 (to the end of 2009), the CLA prohibited hiring foreign workers for specific timeframe jobs and integrated the number of re-recruitment into the calculation of a quota and lowered the maximum limit to be 20% of nationals hired.

Observing the monthly figures of foreign workers hired in the manufacturing industry, the highest number (195,268 persons) appeared in October 2008 while the lowest number (158,728 persons) appeared in June 2009. It is inferred that, though both the market mechanism and the government policy led to a lowered number of foreign workers, the government policy did not

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[51] We concentrate on discussing low-skilled foreign workers policy because their number surpasses significantly the number of skilled foreign workers (foreign professionals), which was 27,319 persons in the end of 2008 and declined to 25,909 persons in the end of 2009.

[52] Foreign workers depend on overtime earnings to save money because they usually have to pay lump intermediary fees.

[53] Specific production procedures have been categorized as an abnormal temperature operation, dust operation, poisoned gas operation, organic solvent operation, chemical processing, nonautomatic operation and other specific production procedures. They are so called 3D (demanding, dirty or dangerous) or 3K (*kitsui, kitanai or kikem*) jobs.

[54] Specific timeframe has been categorized as within the timeframe from ten o'clock in the evening till six o'clock in the morning, production operation work hours last at least one hour. It usually refers to jobs with three shifts per day.

react in time. In fact, the government encounters a dilemma in adjusting its foreign workers policy because the CLA can collect the Employment Stabilization Fee (ESF) from employers who hire foreign workers. The ESF is used mostly to finance ALMPs for the unemployed according to the ESA.

4.4 Fiscal Sustainability

Fiscal conditions were important in offering unemployed benefits and financing particular programs. For example, the central government controlled most budgets such that few local governments could offer extra benefits to unemployed workers. Those local governments that offer extra benefits may be relatively minor because of insufficient budget. For example, Taipei City government provides children an educational subsidy to involuntarily unemployed workers. Kaohsiung City government provides Caring Allowance to unemployed workers. Taipei County government provides a job-search transportation subsidy to unemployed job searchers.

To have a stable source, to finance programs of ALMPs (and the EI) is quite important as a huge deficit over the long-term may cause a setback to economic growth and require the necessity of a budget shrink eventually. In Chinese Taipei, one of the primary sources of ALMPs is the ESF, the collection of the Employment Stabilization Fee paid by employers in hiring (low-skilled) foreign workers. The ESF accounts for more than 10 billion per year and such mechanism may lead to a dilemma in reducing excessive (low-skilled) foreign workers and create an atmosphere of depending on foreign workers for the society. To reduce the dependency on hiring (low-skilled) foreign workers, a more balanced budget will be a better substitute of fiscal source. Nevertheless, the budget deficit in Chinese Taipei was 125 billion in 2009 and is expected to increase to 189 billion in 2010, which was 8.1% and 10.9% of the total budget respectively and was 0.97% (1,250/129,105) of GDP in 2009.

VI. Conclusion and Suggestions

This section summarizes features of policy resilience in Chinese Taipei as a conclusion and provides some suggestions to enhance social resilience.

5.1 Features of Labor Policy in Chinese Taipei

Policy implications derived from features of the labor market in Chinese Taipei include the following. Low female LFPR induces measures to promote female employment in the long-run, but declining male LFPR has not attracted equivalent attention and effort. Low-skilled foreign workers have performed as a reserved labor force to some extent that they have been hired to alleviate labor shortage, but some of them were laid off during the financial crisis. Higher unemployment rates encouraged the offer of UB in 1999 and the enactment of the EI in 2003. Constantly high level of unemployment rates for vulnerable groups nourishes specific ALMPs on targeted groups. Declining employment and a higher unemployment rate during the financial

crisis raised initiatives of various ALMPs.

In terms of variety, Chinese Taipei is no less than other economies because the Chinese Taipei government learns from advanced economies. For example, the EI Act provides unemployment benefits, and various ALMPs are adopted by discretionary decision. Discretionary programs are short-term (up to one year) but new programs will be offered if the unemployment rate is still severe. However, the effectiveness of EI and the individual program of ALMPs may be different with respect to features of labor demand, labor supply and institutional factors. The coverage of the EI is related to the features of the Labor Insurance and is around four-fifth of employees. Status of non-labor force and unemployed may not be discerned clearly in practical operation because both do not join the Labor Insurance.

5.2 Features of Social Resilience in Chinese Taipei

Under the impacts of the financial crisis, declining labor demand, increasing unemployment rate, and declining work compensation have become big challenges to the Chinese Taipei government in promoting employment. In the process of employment promotion, four features of resilience have been observed.

(a) High Proportion of SMEs

Chinese Taipei has a quite high proportion (more than 96%) of SMEs which hire a significant portion of workers (more than 67%). For example, the number of SMEs was 1,234,749 (97.70% of all enterprises) and hired 7,903,000 workers (69.20% of all enterprises) in 2008 (Table 3). In the financial crisis, large enterprises suffered more than SMEs did. Yet the high proportion of SMEs in Chinese Taipei could absorb a significant amount of unemployed to alleviate the happening of labor market disaster.

Table 3. Number of and Workers Hired by Small and Medium Enterprises

	Number of Enterprises			Workers Hired (Thousand)		
	SMEs	All Enterprises	SMEs/ All Enterprises	SMEs	All Enterprises	SMEs/ All Enterprises
1980	-	-	-	-	4,215	-
1981	-	-	-	-	4,289	-
1982	701,839	711,326	98.67%	-	4,366	-
1983	696,438	706,526	98.57%	-	4,511	-
1984	719,440	731,610	98.34%	-	4,709	-
1985	716,224	727,230	98.49%	-	4,761	-
1986	737,350	751,273	98.15%	-	5,000	-
1987	743,274	761,553	97.60%	3,603	5,350	67.35%
1988	773,511	791,592	97.72%	3,671	5,436	67.53%
1989	778,042	798,865	97.39%	3,752	5,567	67.40%
1990	794,834	818,061	97.16%	3,787	5,597	67.66%
1991	825,556	850,679	97.05%	3,869	5,666	68.28%
1992	871,726	900,801	96.77%	4,019	5,856	68.63%
1993	901,768	934,588	96.49%	4,145	6,009	68.98%
1994	932,852	969,094	96.26%	4,305	6,160	69.89%
1995	991,615	1,012,212	97.97%	4,434	6,260	70.83%
1996	1,003,325	1,024,360	97.95%	4,353	6,286	69.25%
1997	1,020,435	1,043,286	97.81%	4,449	6,423	69.27%
1998	1,045,117	1,069,116	97.76%	4,536	6,555	69.20%
1999	1,060,738	1,085,430	97.73%	4,587	6,624	69.25%
2000	1,070,310	1,091,245	98.08%	4,664	6,745	69.15%
2001	1,078,162	1,098,185	98.18%	4,636	6,727	68.92%
2002	1,104,706	1,130,525	97.72%	4,682	6,771	69.15%
2003	1,146,352	1,171,780	97.83%	4,754	6,898	68.92%
2004	1,164,009	1,190,176	97.80%	4,903	7,131	68.76%
2005	1,226,095	1,253,694	97.80%	5,047	7,335	68.81%
2006	1,244,099	1,272,508	97.77%	5,186	7,542	68.76%
2007	1,236,586	1,266,050	97.63%	5,383	7,735	69.59%
2008	1,234,749	1,263,846	97.70%	5,469	7,903	69.20%

Source: Ministry of Economic Affairs, Small and Medium Enterprises Department, *Small and Medium Enterprises White Paper*, various issues.

(b) Role of the Employment Insurance

Unemployment benefits of the EI were extended in May 2009 due to the financial crisis and provide UB for at least six months (up to six months for general insured and up to nine months for older and disabled unemployed), plus 6 months of VTLA (so UB plus VTLA are up to 15 months), NHIPS and ERA. In the future, an employment stabilization clause and emergency clause may extend UB to 12 months under strict conditions. The EI coverage rate has been 82% while self-employed and many workers in micro enterprises are not covered.

(c) Complementary Role of the Employment Services Act

The ESA plays a complementary role to the EI whose coverage is not comprehensive to all workers. So the EI offers unemployment benefits to the insured while the ESA offers various ALMPs to those whose EI benefits have expired and those who are not covered by the EI. In particular, six months of VTLA under the ESA (so unemployment benefits of the EI plus the ESA are up to 21 months) and various employment promotion measures can be offered to unemployed vulnerable groups. Such complementary role lets the CLA provide more variety of programs to fight against unemployment in the financial crisis.

(d) Huge Number of Low-skilled Foreign Workers

Huge number of low-skilled foreign workers in Chinese Taipei contributes a significant amount of the Employment Stabilization Fee to the ESF and finance to various ALMPs to promote nationals' employment. Additionally, foreign workers play as an absorber counteracting to the business cycle such that national's unemployment rate does not vary too much.

5.3 Suggestions

Potential obstacles of the EI or ALMPs in Chinese Taipei include availability of labor demand, preference of employers, workers' attitudes, fiscal sustainability, and the framework of regulations. Some amelioration may be considered as follows.

(a) With respect to the Employment Insurance

The EI Act shall be preserved as social insurance rather than as welfare to maintain its fiscal sustainability. The premium may be amended to be experienced-rated in order to offer fair benefits. Supposing that the extension of UB for unemployed older workers and the disabled by the EI Act can be substituted by the extension of VTLA may be better because VTLA is more active than UB. Also, for the first entry young unemployed workers without insurance records, how to provide better help is also a concern. In the future, the EI Act and the ESA may be integrated into the Employment Security Act and pave the way for a social security system (further integrating social assistance). Anyhow, social assistance benefits provided through the EI

Act had better be financed by the government (the U.S. does so in its Social Security Benefits) to preserve a sound fiscal condition.

Including employment stabilization and emergency UB extension clauses are good for discretionary actions because resilience is required for the emergent environment with sufficient fiscal capability. However, according to past democratic experience in Chinese Taipei, any benefit may be too lenient when fiscal capability allows. As for the stabilization clause, its qualification of action promulgated in May 2010 may be too strict. Anyway, a new subsidy may be provided to nationals for migration (relocation) employment either domestically or overseas in order to enhance mobility and react better to globalization. Current regulation that accommodates localization for reemployment shall be amended as well. Furthermore, more efforts shall be made on promoting all workers in micro-enterprises to join the EI in order to enjoy the benefits offered.

(b) With respect to ALMPs

A variety of ALMPs may provide more choices to stakeholders, but it may cause confusion as well. In the future, easily discernable names and contents shall be offered to promote communication. Additionally, the government shall prepare for the worst situation and design reaction programs in advance to avoid frequent amendments after programs have been pronounced. Any department which intends to adopt programs of ALMPs shall consult with the CLA in order to avoid serious defects. Furthermore, assisting the unemployed to go back to school for advanced study can be included as an option of ALMPs in order to upgrade workers with a low educational level. Finally, budget distribution among governments can be reviewed to let local governments play a more important role in implementing ALMPs in order to possess flexibility.

(c) With respect to Immigration Policy

As for the ESA, the Employment Stabilization Fee shall be increased to some extent to reduce the incentive of hiring foreign workers and collect more fees for financing reemployment programs if foreign workers were hired.

The number of foreign spouses migrating into Chinese Taipei may affect the unemployment rate because foreign spouses perform as if quasi-(low-skilled) foreign workers. Hence the government shall design a clearer immigration policy, which may better be implemented directly by the Executive Yuan or the Bureau of Immigration rather than the CLA (or the Department of Labor in the future) because it requires multi-faceted consideration.

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Employment insurance system in Korea and recent revision[1]

Myoung Jung Kim[*]

1. Introduction

The Employment Insurance System of Korea has been enforced since 1995. It prevents unemployment, encourages the vulnerable and the jobless to stay in the labor market and supports human resources development of companies. Korea could recover from massive unemployment following the financial crisis of 1997 quite quickly thanks to the Employment Insurance System, and the country is overcoming the global recession of recent years with the plan. The financial crisis that has started in the U.S.A. in 2008 affected Korean economy again. The unemployment rate at the second quarter of 2009 reached 3.8% and the GDP growth rate on the first quarter of 2009 fell to -4.3%. However the recent trends of the unemployment rate (3.5%, the second quarter of 2010) and the GDP growth rate (7.2%, the second quarter of 2010) seem to recuperate from the bottom It may be said that labor market policy of the Korean government mainly on the employment insurance gave an effect to some extent. However, the Korean labor market still has a lot of problems, increasing of non-regular worker, aging of the labor force, lack of the work life balance policy and difficulty of the labor market participation of the woman, increase of the unemployment rate of the youth and so on. Therefore, it is necessary for the Korea government to carry out more active labor market policy including the Employment insurance system.

This paper is aimed at introducing the contents of the employment insurance system in Korea and recent revision.

(1) History of EIS in Korea

It was in the early 1970s that the Korean Government began to discuss the need for an unemployment insurance system to provide temporary financial assistance for the unemployed.

When the second oil shock and political turmoil hit the Korean economy in 1979, the economy recorded a negative economic growth rate, and the unemployment rate reached 7.5 percent in 1980. The high unemployment in the early 1980s forced the Korean government to consider introducing the unemployment insurance system. But most Koreans were opposed to introducing the unemployment insurance system because they believed it would weaken the job search efforts of the unemployed, thereby resulting in a higher unemployment rate. Moreover, many people thought the time was not yet right mature for Korea to introduce the unemployment

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insurance system because the Korean economy was not strong enough to implement it. Hence, the Korean government decided not to introduce the unemployment insurance system during the 1980s.

In the process of discussing the unemployment insurance system in 1981, however, Korea achieved a very important social consensus on the direction of the Korean system. This was that the Korean government should not seek to address unemployment with cash benefits. Rather, the important thing was to prevent unemployment itself through stable economic growth and an efficient labor market system. In this respect, they agreed to name the future Korean system the Employment Insurance System rather than the Unemployment Insurance System.

In 1990, the Korean government assigned several public research institutes to design a specific area of the Seventh Five-Year (1992- 1996) Economic and Social Development Plan. The Korea Labor Institute was in charge of designing labor policies for the year 1992-1996. It recommended the government to introduce the Employment Insurance System and provided an outline of the Korean system. The Government reviewed the proposal from the Korea Labor Institute and held several public hearings. It later confirmed that most people supported the proposal. On August 23, 1991, Korean government finally decided to introduce the Employment Insurance System during the mid-1990s.

On March 9, 1992, the government decided to ask the Korea Labor Institute to design a detailed Korean Employment Insurance System. At the government's request, the Korea Labor Institute launched the Employment Insurance Research Commission on May 18, 1992. The Commission was composed of 28 scholars, and observers from the government, management and labor were invited to participate in the discussion process of the Commission. The role of the Commission was to design the Korean Employment Insurance System in detail and carry out the necessary research. The Commission studied the unemployment insurance systems and experiences of many developed economies, as well as Korea's labor market conditions. After one year of research and a series of workshops and seminars with representatives from the government, labor, management and academia, the Commission presented its research findings and policy recommendations to the government on May 18, 1993, under the name, Proposed Employment Insurance System for Korea.

Table 1 Background

	Revised contents
May.1992	The unemployment insurance research project group is set up in Korea Labor Institute
Dec.1993	Employment Insurance Act established
Jul.1995	Employment insurance system introduced
Oct.1998	Application enlarged to all business office employing employees more than one
Nov.2001	Child support and Maternity allowance included
Dec.2002	Application enlarged to daily workers

Source: Employment Insurance System Internet Service, http://www.ei.go.kr/index.jsp

The government then collected opinions of various strata of society through public hearings, created the Employment Insurance Bill based on the Commission's recommendations and submitted it to the National Assembly in September 1993. The National Assembly passed the bill unanimously on December 1, 1993, promulgating it on December 27, 1993. The Employment Insurance Law was put into effect on July 1, 1995, and the unemployment benefits, which require at least a year's contribution by the insured, became operational from July 1, 1996.

Table 2 Enforcement fiscal year and contribution rate of social insurance
in Japan and Korea

	Medical Insurance		Industrial Accident Compensation Insurance		Employment Insurance	
	Japan	Korea	Japan	Korea	Japan	Korea
Introduce	1927	1977	1947	1963	1974	1995
Contribution Rate	Union：7.317% Government： 8.2%	5.08%	0.54%	0.70%	1.1%	1.15%
	Public Pension		Nursing Care Insurance			
	Japan	Korea	Japan	Korea		
Introduce	1941	1988	2000	2008		
Contribution Rate	Employees' Pension Insurance： 15.35%	9%	1.13%	Amount of Medical Insurance× 4.7%		

Notes: 1）Industrial Accident Compensation Insurance：weighted average、
2）It is different depending on the type of business.

Source: Machiko Osawa, Myoung-Jung Kim (2010) *Globalization and Increasing Non-regular Employment :A Comparison of Japan and Korea: The Japanese Journal of Labour Studies*. No.595.

It is considerably late at the introduction time of a social insurance system in South Korea compared with Japan. The Korean government decided to set the contribution rates low to spread the system. As a result, the social system of low cost and low benefit is still maintained in Korea (Table 2).

(2) Structure of the Employment Insurance System
It can be said that the Korean Employment Insurance System is a compulsory social insurance system. Therefore, all employers and employees in the covered enterprises should pay an insurance premium regardless of their willingness, and they are entitled to receive grants or unemployment benefits from the Employment Insurance Fund.

Korean Employment Insurance System is composed of four sub-programs: Unemployment Benefit, Job Stabilization Program, Job Capability Development Programs, and Mother Protection Program.

Unemployment Benefit aims to stabilize living conditions and promote early reemployment of displaced workers by providing unemployment compensation. For those who are taking vocational training for reemployment, who have found new employment in a relatively short period of time, or who are actively seeking work, there are financial benefits in

EIS. This financial incentive system is to induce recipients of unemployment benefits to participate in retraining programs and actively seek new employment.

Job Stabilization Program seeks to prevent massive layoffs and expedite transfers, reorientation and adjustment when sudden changes in the industrial structure or technology result in extensive corporate restructuring, and to promote utilization of job seekers' skills and interests by providing accurate information on the labor market.

Job Capability Development Programs seek to foster and stimulate lifelong vocational training and job skill development. JCDP provides financial incentives to encourage individual firms to invest in employee training, thereby improving labor productivity, employment stability, marketability of workers and firm competitiveness.

Figure 1 Structure of the Employment Insurance System

Maternity Protection Program was adopted in November 2001. Childbirth leave benefit is intended to ensure a minimum level of protection for pregnant workers before and after child delivery (including miscarriage and stillbirth) and to support employment stability of women workers by funding employee wages during the leave and thereby relieving their employers of a financial burden. Childcare leave benefit is to fund employee wages while a working father or mother is on leave to take care of his/her child, in order to ensure that the employee sustains employment while being absent from work for a parenting purpose. The structure of Korea's EIS is shown in Figure 1.

2. Coverage and Contribution rate

(1) Coverage

Employment Insurance System of Korea is a compulsory social insurance system. In principle, all workers are to be covered by Employment Insurance System of Korea. All employers and employees in the covered enterprises should pay an insurance premium regardless of their willingness, and they are entitled to receive grants or unemployment benefits from the Employment Insurance Fund.

When the Employment Insurance Act ("EIA") was first promulgated, the UB applied to businesses or work places with 30 employees or more , and Employment Stabilization Plan (ESP) and Job Capability and Development Programs (JCDP) applied to those with 70 employees or more, considering the various types of employment and administrative difficulties,

JSP and JCDP were extended to businesses and work places with five employees or more from 1 July in 1998, then all workplaces with 1 employee or more were be covered by EIS from 1 October in the same year. Further, the EIS had been extended to incorporated businesses in the agriculture, forestry, fishery, and hunting sectors with five or less employees, and to construction works of any size from previous coverage which included only those works with total construction costs of 340 million won or more (however, construction works undertaken by an individual with total construction costs of 20 million won or less are not included). From 1 January 2006 some self-employed people employing 5 people or less (including   those who are not employing anyone), selected on the basis of his/her income and other considerations, may take advantage of the Act in regard to the JSP and JCDP with himself/herself as the beneficiary. From 18 September 2008 the Act has been extended to construction works for buildings with total floor area of 100 m^2 or less, and to renovation works for buildings with total floor area of 200 m^2 or less. The process of expanding EIS is summarized in Table 3. However, certain workers are excluded from Employment Insurance System.

Those are: ①Workers employed in companies with four or less employees in agriculture, forestry,   fishery, an hunting industries, ②Workers employed on construction with extremely small scale, ③Illegal foreign workers, ④Government and private school employees, ⑤ Part-time temporary workers, ⑥Workers employed in household services, ⑦Other persons determined by presidential decree.

Table 3 Extended Coverage of Employment Insurance in Korea

Type	Coverage						
	95.7.1	97.7.1	98.1.1	98.3.1	98.7.1	98.10.1	04.1.1
Unemployment Benefits （Number of Regular Employees）	30 or more	30 or more	10 or more	5 or more	5 or more	1 or more	1 or more
Employment Stabilization Program and Skills Development Program （Number of Regular Employees）	70 or more	70 or more	50 or more	50 or more	5 or more	1 or more	1 or more
Construction Business （Total Construction Price in Million Won）	40,000 or more	44,000 or more	34,000 or more	34,000 or more	3,400 or more	340 or more	20 or more

(2) Insured enterprises and employees

With the expansion of EIS coverage, the number of employees and enterprises actually covered is increasing. The actual number of covered employees that paid their EIS premiums and registered at the public employment offices as insured employees was 4.2 million in 1995, 5.3 million in 1998, 8.1 million in 2005, and 9.4 million in 2008 (see Figure 2).

Figure 2 Trends of Insured Employees and Enterprises

When we look at the weight by size of business, we see enterprises with less than five employees　was high at 73.3%, while the more the scale of the enterprise becomes big, the more a ratio to occupy in all enterprises lowers (see Table 4).

Table 5 shows the coverage rate of the Employment Insurance by Sex and Age, and Table 6 the details of the trend in the insured in difference industries.

Table 4 Trend of the insured and insured enterprises by size of business

Distinction		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total	Insured Enterprises	693,414	806,962	825,531	845,910	1,002,638	1,148,474	1,176,462	1,288,138	1,424,330	1,385,298
	Insured Employees	6,747,263	6,908,888	7,171,277	7,203,347	7,481,618	7,965,597	8,436,408	8,941,639	9,271,701	9,653,678
less than 30	Insured Enterprises	646,671	758,105	775,398	790,735	950,830	1,093,023	1,123,939	1,231,373	1,363,722	1,321,033
	Insured Employees	2,698,595	2,908,387	3,065,153	2,960,023	3,224,133	3,419,124	3,583,529	3,845,206	3,981,777	4,175,814
30~99	Insured Enterprises	32,605	34,814	36,195	39,469	37,199	39,215	37,217	40,741	43,495	46,410
	Insured Employees	1,096,996	1,105,230	1,177,615	1,198,683	1,202,713	1,302,212	1,360,679	1,451,734	1,507,162	1,569,506
100~499	Insured Enterprises	11,927	12,101	12,311	13,968	12,990	14,104	13,343	13,951	14,876	15,481
	Insured Employees	1,347,329	1,346,776	1,393,392	1,433,684	1,442,824	1,533,872	1,591,233	1,650,132	1,724,782	1,755,488
500~999	Insured Enterprises	1,288	1,161	1,041	1,114	1,055	1,362	1,270	1,304	1,427	1,497
	Insured Employees	415,260	424,456	451,622	404,937	423,815	498,543	501,021	504,062	541,444	550,503
more than 1000	Insured Enterprises	923	781	586	624	564	770	693	769	810	877
	Insured Employees	1,189,083	1,124,039	1,083,495	1,206,020	1,188,133	1,211,846	1,399,946	1,490,505	1,516,536	1,602,367

Table 5 Trend of the coverage rate of the Employment Insurance by sex and age

unit:%、person

		2004	2005	2006	2007	2008
Total		100 (467,730)	100 (562,524)	100 (609,691)	100 (685,024)	100 (835,140)
sex	male	54.7	55.0	54.9	54.5	55.0
	female	45.3	45.0	45.1	45.5	45.0
age	below 19	0.2	0.2	0.1	0.1	0.1
	20~29	29.1	26.9	25.5	24.3	22.8
	30~39	30.3	29.1	29.1	28.6	28.5
	40~49	21.0	21.3	21.6	22.0	22.7
	50~59	15.8	16.8	17.7	18.4	18.9
	60~64	3.7	5.7	5.9	6.5	6.9

parenthesized figures represent number of persons with qualification to a recipient

Table 6 Trend in the insured in different industries

Industry												
Mining	15,067	16,023	16,391	16,147	16,250	16,364	16,148	16,703	17,985	17,856	17,670	15,990
Manufacturing	2,993,314	2,972,191	2,884,464	2,832,781	2,733,536	2,664,762	2,666,714	2,633,976	2,665,078	2,483,266	2,234,072	2,062,832
Electricity,Gas,and running water	64,474	64,485	63,246	62,459	60,975	58,697	57,148	56,545	55,440	55,170	53,625	53,493
Construction	644,483	637,769	609,522	585,551	576,152	562,957	574,021	529,516	508,811	465,937	364,157	232,823
Sales	988,681	950,015	898,381	854,793	786,078	755,805	764,395	711,644	664,576	582,920	457,208	256,211
Food & accommodation	228,562	219,542	196,454	180,234	162,020	159,956	175,525	177,940	167,599	150,405	106,943	67,597
Transportation	568,416	558,107	534,065	508,491	487,922	477,619	494,807	492,519	492,611	471,166	445,532	405,786
Communication	84,003	84,245	83,443	83,506	81,354	82,127	86,937	86,140	93,485	80,902	83,500	82,711
Finance & insurance	428,829	416,996	399,551	387,079	383,511	386,536	386,099	377,860	389,633	385,358	378,562	394,093
Real estate & lease	285,767	279,428	265,084	234,145	217,674	196,160	188,737	186,850	181,982	171,755	151,376	91,581
Business facility management service	1,466,327	1,367,426	1,230,486	1,072,161	976,900	855,643	823,207	772,955	708,512	567,724	456,025	335,283
Education service	275,640	259,934	243,278	232,652	207,095	192,562	182,011	161,251	146,150	96,408	62,335	13,287
Health and & Social welfare	674,813	592,394	509,886	438,110	387,172	348,184	325,216	299,441	270,198	247,583	217,664	127,417
Entertainment,culture,sports	122,385	117,316	110,951	103,837	95,961	90,882	88,831	82,545	75,930	66,300	59,444	53,023
Other public individual service	304,278	307,763	286,535	264,165	243,551	226,067	218,682	205,562	194,140	172,054	142,070	64,848
Other industrty	200,033	181,448	170,579	175,640	133,756	108,543	103,042	96,777	95,342	21,588	20,826	12,032
not classifiable	1,948											
Total	9,385,239	9,063,301	8,536,966	8,063,797	7,576,856	7,203,347	7,171,277	6,908,888	6,747,263	6,054,479	5,267,658	4,280,430

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(3) Contribution rate

When Korea introduced EIS on July 1, 1995, the contribution rate for the Unemployment Benefits was 0.6 percent (0.3 percent from employees and 0.3 percent from employers) of the total payroll, that for the Employment Stabilization Program was 0.2 percent, and the Skills Development Program has a differentiated rate based on the size of the firm between 0.1 percent and 0.5 percent.

However, the financial crisis of Korea in November 1997 resulted in a high unemployment rate and a sharp increase in expenditures for unemployment benefits and active labor market programs. So Korea increased the contribution rate of each program from January 1, 1999. As of 1999, the contribution rate for the Unemployment Benefits is 1.0 percent (0.5 percent from employees and 0.5 percent from employers), and that for the Employment Stabilization Program is 0.3 percent. The contribution rate for the Skills Development Program is between 0.1 percent and 0.7 percent of the total payroll depending on the size of the firm.

The ESI contributions were lowered on Jan. 1, 2003 so as to make both employers and employees feel less burdened. The contribution rate for the Unemployment Benefits went down from the previous 1.0 to 0.9 percent (0.45 percent from employees and 0.45 percent from employers); and the rate for the Employment Stabilization Program decreased from the previous 0.3 to 0.15 percent. On Jan. 1, 2006, the contribution rates for the Employment Stabilization Program and the Skills Development Program were integrated into a single rate. Consequently, as of 2006, the integrated contribution rate is between 0.25 percent and 0.85 percent of the total payroll depending on the size of the firm. Each program in Korea's EIS has its own rate of contribution. The sum of contribution rates in each program cannot exceed 3.0 percent of the total payroll. The contribution rate of each program is determined within the limit of contributions considering the financial situation of the Employment Insurance Fund and the prospects of economic and labor market situations.

Table 7　Contribution rate of Each Program

		Contribution Rate (in percent out of total payroll)	
		Employees	Employers
Unemployment Benefits		0.45	0.45
Employment Stabilization Program · Skills Development Program	Less than 150 employees	–	0.25
	150 or more employees(priority enterprises)	–	0.45
	150〜999 employees (exclusion of priority enterprises)	–	0.65
	1000 or more employees	–	0.85

3. Employment Insurance Plan

(1) Unemployment Benefits

Unemployment Benefit (UB) supports workers who lost their job by paying him a benefit so that he/she can support himself/herself and their family. It helps the worker to find a new job which is appropriate considering his/her ability and aptitude. UB also helps setting up the employment policy by supplying the relevant government office with the information on movements of the work force.

Unemployment Benefits are comprised of the Job-seeking Benefit (JSB) and Allowance to Promote Employment (APE). The former is the core of the unemployment safety net, designed to stabilize the livelihood of the unemployed and their families during unemployment, thereby facilitating active and unobstructed job-seeking activities. The latter supports to foster and stimulate reemployment of the insured individuals receiving JSB by providing constructive and effective job research assistance.

1) Job Seeking Benefit ("JSB")[2]

JSB is the most basic and important payment among UB. It is paid to stabilize the livelihood of the unemployed while he/she seeks a job. In order to receive JSA, the claimant must satisfy the prescribed qualifying and eligibility requirements. The outline of the qualifying requirements and eligibility conditions for JSB are as follows.
— The claimant's insured employment period should be at least 180 days out of the 18-month base period preceding the day of job separation.
— The claimant must register at the public employment office as a job seeker right after his/her job separation, and request JSA within the 1-year feasible period.

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[2]　JSB includes Sick Benefits(SB) and Extended Benefit(EB).

— The claimant is out of work but remains willing to and able to work, and is actively seeking new employment to the best of his/her ability.

— The reasons for job termination should not be of a nature that would disqualify the claimant from receiving unemployment benefits, such as voluntary unemployment without good cause, discharge for misconduct, etc.

JSB is paid in principle from the day after the date of leaving the job when the applicant is recognized as having satisfied the requirements. The payment is made for the days when unemployment is admitted up to the Prescribed Payment Period (as set down in section 48 in the EI Act) during the Receiving Period of 12 months. The Prescribed Payment Period means the days when a person can receive JSB for one Receipt Qualification. It is currently set between the minimum of 90 days and the maximum of 240 days. It is determined according to the age and insured period of the person who is qualified to receive the JSB.

UB payment amount in year 2009 was 3,582.2 billion Won, showing an increase by 45.3% from the previous year's payment sum of 2,466.1 billion Won. The number of beneficiaries was 1,273,432 showing a 32.4% increase from the previous year's 311,704.

Table 8 The insured period of JSB

		before 2000.1.1					after 2000.1.1				
		insured period					insured period				
		less than 1year	less than 3years	less than 5years	less than 10years	more than 10years	less than 1year	less than 3years	less than 5years	less than 10years	more than 10years
age	below 25		30	60	90	120					
	below 30	60	60	90	120	150	90	90	120	150	180
	below 50	60	90	120	150	180	90	120	150	180	210
	over 50	60	120	150	180	210	90	150	180	210	240

Table 9 Record of job seeking benefit ("JSB") payment

unit:person,million won

Distinction	2005		2006		2007		2008		2009	
	Beneficiaries	Sum paid	Beneficiaries	Sum paid	Beneficiaries	Sum paid	Beneficiaries	Sum paid	Beneficiaries	Sum paid
JSB	684,863	1,602,614	753,713	1,833,320	838,487	2,116,268	961,718	2,466,164	1,273,432	3,582,156

The Benefit Qualified Person may receive the Sick Benefit (SB) in substitute for JSB while he/she is not able to get employed for more than seven days because of sickness, injury, or childbirth during the benefit payment period. As SB is paid instead of JSB, its amount is the same as that of JSB, and may be paid up to the number of unpaid days during JSB payment period. When SB is paid, it is regarded that JSB payment is made.

①Sick Benefits

The Benefit Qualified Person may receive the Sick Benefit (SB) in substitute for JSB while he/she is not able to get employed for more than seven days because of sickness, injury, or childbirth during the benefit payment period.

As SB is paid instead of JSB, its amount is the same as that of JSB, and may be paid up to the number of unpaid days during JSB payment period. When SB is paid, it is regarded that JSB payment is made.

SB payment in 2009 was 9.0 billion Won, increased by 2.1 billion Won from the 63 billion Won paid in the previous year, and the number of beneficiaries was 248 people, reduced by 91 people (58.0%) from 157 people in the previous year.

Table 10 Sickness benefit payment record

(unit:people,million won)

Distinction	2005	2006	2007	2008	2009
Beneficiaries	502	225	217	157	248
Amount paid	5,839	5,785	6,326	6,896	8,966

②Extended Benefits

a. Payment Extended for Training ("PET")

PET was designed to assist re-employment of the benefit recipients. Under this program, the head of the Job Center makes a direction to a benefit qualified person to receive job training and, at the same time, the benefit qualified person is paid with an extended payment of JSB. PET is paid during the training period not exceeding two years 100% of JSB.

The applicant, in order to receive PET, must satisfy the following requirements:

→ It is regarded that receiving JCDT will help him/her get another job

→ He/she does not have a national skill qualification certificate recognized in the National Skills Qualification Act and his/her current skill has is not demanded by businesses

→ He/she did not receive any JCDT during the last one-year period

→ He/she could not get a job though he/she had applied more than three times for the jobs recommended by the head of the Job Center (this requirement was introduced on 30 April 2008).

Payment amount for the PET in year 2009 was 166 million Won, showing an increase of 40 million Won (31.7%) compared to 126 million in the previous year.

b. Individual Extended Benefit ("IEB")

Individual Extended Benefit is designed to assist the livelihood of the BQP who do not find a job until JSB payment ends and has family to support. It is paid to the BQP up to 70% of the JSB for the period extended up to 60 days.

The payment made as IEB in year 2009 was in the sum of 7,685 million Won, increased by 7,321 million Won (2,205.1%) compared to payment of 332 million Won in the previous year.

Table 11 Record of payment extended for training and Individual extended benefit

Distinction	2005		2006		2007		2008		2009	
	Beneficiaries	Sum paid	Beneficiaries	Sum paid	Beneficiaries	Sum paid	Beneficiaries	Sum paid	Beneficiaries	Sum paid
Payment extend for training	19	22	30	61	39	88	52	126	59	166
Individual Extended Benefit	266	239	603	658	673	812	260	332	5,162	7,685

2) Allowance to Promote Employment ("APE")

①Early Re-Employment Allowance ("ERA")

Early re-employment allowance (ERA) is designed to encourage the benefit recipients to look for a job diligently. ERA is paid to a benefit qualified person who gets employed before exhausting the prescribed payment period for JSB.

ERA is paid when the following requirements are all satisfied:

→ It is certain that the employment would last more than six months

→ The employment is not by his/her last employer or a person related to the last employer nor the one that was promised before reporting the unemployment.

→ The applicant has not received ERA within two years before the employment date.

The amount of ERA paid in year 2009 was 517.1 billion Won, showing an increase of 125.5billion Won (32.0%) from 391.6 billion Won paid in the previous year.

Table 12 Payment record of early re-employment allowance

(unit:people,million won)

Distinction	2005	2006	2007	2008	2009
Beneficiaries	99, 925	121, 238	147, 694	174, 408	221, 399
Amount paid	143, 209	234, 116	310, 475	391, 613	517, 083

②Job Capability Development Allowance ("JCDA")

Job Capability Development Allowance (JCDA) may be paid to a benefit qualified person on top of JSB when he/she receives job training as directed by the head of a Job Center.

JCDA is paid to a benefit qualified person when he/she receives job training as directed by the head of the Job Center on the days he/she received the job training, etc., during the days when JSB is to be paid (Rule 88 of the Rules). JSB is determined and noticed by the Minister of Labor taking into account of the costs necessary to attend job training such as expenses for food and travel. JCDA was paid to 166 people in the sum of 14.8 million Won.

Table 13 Payment record of job capability development allowance

(unit:people,million won)

Distinction	2005	2006	2007	2008	2009
Beneficiaries	87	139	176	176	166
Amount paid	7	13	16	23	14.8

③**Allowance for Seeking Job in Remote Place ("ASJRP")**

The head of the Job Center may pay Allowance for Seeking Job in Remote Place (ASJRP) when a benefit qualified person seeks a job in a remote place as advised by the Job Center, and the amount to cover the expenses for the travel and accommodation relating to the job seeking activities in the remote place.

ASJRP is paid when a benefit qualified person satisfies all of the following requirements
→ The job seeking activity must start after expiring of the waiting period as set in Rule 49 of the Employment Insurance Rules
→ The expenses related to job seeking activities are not paid by the business owner the benefit qualified person is visiting or, if paid, the amount paid by the business owner is less than the amount of ASJRP
→ The distance between the benefit qualified person and the work place he/she is visiting for the job seeking activity is more than 50 km.

Table 14 Payment record of the allowance for seeking job in remote place

(unit:people,million won)

Distinction	2005	2006	2007	2008	2009
Beneficiaries	69	46	29	68	55
Amount paid	2.53	1.62	1	2	2

④**Moving allowance**

A benefit qualified person may receive moving allowance (MA) when he/she moves home upon employment or to receive job training, etc., as directed by the head of the Job Center.

Moving Allowance shall be paid when the benefit qualified person gets employed or gets training after expiration of the waiting period and the head of the Job Center covering the benefit qualified person's resident area acknowledges that moving of residence is necessary. However, Moving Allowance shall not be paid if the benefit qualified person's employment is for a period less than one year.

Table 15 Payment record of moving allowance

(unit:people,million won)

Distinction	2005	2006	2007	2008	2009
Beneficiaries	296	347	347	376	468
Amount paid	42	50	47	100	330

(2) Job Stabilization Program

The Job stabilization program ('JSP') is designed to secure employment stability of employees and to assist the businesses with their employment adjustments. The JSP is composed of four sub-programs: Job creation assistance program, Job adjustment assistance program, Promotion of employment of the vulnerable, and employment promotion facilities assistance program.

The JSP has expended: 267.7 billion Won in year 2005 in construction of the Job Centers' own buildings and in activation of the Job Creation Assistance Plan; 608.2 billion Won in year 2006 upon promulgation of new plans, securing the infrastructure for job security such as construction of Job Experience Complex, activation of the Subsidy for Promotion of New Employment and the Assistance to Job Creation Program, making a 127.2% increase compared to the previous year; 845.6 billion Won in year 2007 upon activation of the Subsidy for Job Stabilization, increasing by 62.5% compared to the previous year; and 825.8 billion Won recording a 23.4% reduction compared to the previous year as a consequence of expanding the requirements for the Subsidy for Promotion of New Employment application.

Figure 3 Amount of payments under the JSP over the years

1) Support for Employment Creation

The support for employment creation was created by an agreement signed by the government, the businesses, and labor on 10 February 2004, namely, "Social Pledge to Create Jobs." The purpose of the support for employment creation is to provide assistance to the

businesses that have created jobs through reduction of working hours and/or transition into the shift work system.

— Subsidy to assist the SMEs reducing working hours: 4 billion 959 million Won to 681 work places in 2008.

— Subsidy for changing into shift work plan: 12 billion 106 million Won to 52 work places in year 2008.

— Subsidy to SMEs for improving the work environment: 27 billion 762 million Won to 1,470 work places in year 2008.

— Subsidy to SMEs for employing workers with special knowledge and/or   skills: 41 billion 938 million Won to 4,221 work places in year 2008.

2) Support for Employment Adjustment

The purpose of the support for employment adjustment program is to prevent unemployment, and reduce the burden of management for the businesses by supporting job adjustment of the struggling businesses.

①Subsidy for employment retention:

Subsidy for employment retention encourages employers to maintain employment and avoid laying off employees in the process of employment adjustment. An employer is qualified for the Subsidy for Employment Retention when he/she satisfies all of the following conditions:

- In the process of employment adjustment, layoffs are inevitable.

- An employer has guaranteed continued employment by taking proper measures for employment retention.

- An employer has reported the employment retention plan to the public employment office, and the measures for employment retention have been carried out according to the plan.

- Before and during the measures for employment retention are implemented, there should be no reduction of employees.

The subsidy for employment retention paid 32 billion Won in year 2004, and 30 billion Won in year 2008. However, it paid 310 billion Won in year 2009 because of the financial crisis.

Table 16 Annual payments of the subsidies for employment retention

(unit : million won)

Distinction	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09
Number of Payment	3,466	8,027	4,176	4,590	4,629	4,519	4,434	4,425	4,274	44,190
Number of recipients	148,499	257,431	152,384	119,127	104,124	97,962	92,545	84,856	88,012	941,674
Amount paid	29,399	55,977	32,729	27,388	32,047	30,919	33,565	32,533	30,642	310,224

②Subsidy to encourage Job Change

The subsidy to encourage job change is paid to the business owner who; submits a plan to assist his/her employees with their change of jobs, has obtained approval of the plan, and provides job change services in accordance with the plan.

The subsidy for the service to assist job change paid 1.4 billion Won in year 2004, 1.5 billion Won in year 2005, 1.5 billion Won in year 2006, 2.4 billion Won in year 2007, and 2.8 billion Won in year 2009.

Table 17 Annual subsidy payments under the job change assistance program

(unit : million won)

Distinction	'01	'02	'03	'04	'05	'06	'07	'08	'09
Number of Payment	5	21	16	31	28	38	21	29	49
Number of participants	679	7,408	583	2,696	1,440	1,845	1,875	1,482	1,537
Amount paid	43	432	641	1,428	1,514	1,522	2,441	1,531	2,792

③Subsidy to encourage re-employment

The subsidy to encourage re-employment program was designed to encourage re-employment of the workers who were laid off when the businesses they had worked for were experiencing hardship but have become necessary again after economic recovery. This program pays subsidies to the business owners who re-employ the workers who used to work for them. The subsidy amount under this program is 400,000 Won (300,000 Won for big corporations) per each re-employed worker for six months.

The subsidy to encourage re-employment paid 300 million Won in 2004, 800 million Won in 2005, 900 million Won in 2006, 800 million Won in 2007, and 700million Won in 2008.

3) Support for Employment Promotion

The purpose of the support for employment promotion is to promote the employment of the vulnerable such as the aged, long time job seekers, the disabled, and female household heads

who are particularly in a difficult position to find a job under the ordinary conditions of the labor market.

①Subsidy to encourage employment of the Aged

The plan pays the subsidy to encourage employment of the aged. It is for the business owners who employ the aged over a certain ratio, continue employing old people, or re-employ the aged.

Table 18 Annual payments of the subsidy to encourage employment of the aged

(unit : million won)

Distinction	2000	2001	2002	2003	2004	2005	2006	2007	2008
Number of business	50466	61790	66565	70793	63972	48760	48424	53691	54023
Number of recipients	225,711	251870	270,902	308,874	266,119	218,072	229,092	259,357	273,945
Amount paid	36758	41,620	39,980	46,236	41,299	33,988	36,025	40,880	48,062

The subsidy was paid to 273,945 people in 50,023 businesses. A total of 48,062million Won was paid. The amount paid as the subsidy to encourage continuous employment of retirees shows a steady increase from its introduction in February 2004:1,223 million Won in 2005, 1,764 million Won in 2006, 2,492 million Won in 2007, and 2,626 million Won in 2008.

②Allowance to supplement the peak wage plan

The peak wage plan was introduced to turn around such trend and provide the aged with secure employment as well as reducing the wage pressure on the businesses. This program pays 50% of the reduced amount of the wage of the workers taking part in the peak wage plan. It is provided to a worker whose employer guarantees his/her employment to a certain age of over 56 and the reduction amount is more than 10% of his/her peak wage.

The payment amount is increasing. Only 9.8% of the budget was executed in 2006. The allowance payment made in 2007 was 1 billion 538 million Won, being 19.5% of the budget of 7.9 billion Won. The allowances were paid to 584 workers in 214 work places in 2008, and the amount paid was 3 billion 32 million Won, taking up 90.2% of the budget. However, the number of businesses with 100 or more workers that have adopted the peak wage plan has not increased over the years. They were only 2.3% in July 2005, 4.4% in July 2006, and 5.8% of total work places employing more than 100 workers.

Table 19 Annual payment of the allowance to supplement the peak wage plan

(unit : million won)

Distinction	2006	2007	2008	2009
Work places	84	160	214	224
Workers	226	584	997	1,497
Amount paid	579	1,538	3,032	6,489

③Subsidy to promote childcare Leave

The subsidy is designed to assist the employers with the costs to maintain employment while the female employees take childcare leave or work reduced hours to take care of their babies. The cost required to maintain employment includes premiums of social insurances and the expenses related to employment of the replacement worker.

The subsidy is paid to the business owners; who give childcare leave to the employee or reduce working hours of woman workers with a baby for the period exceeding 30 days, and employ continuously a female worker for more than 30 days.

The subsidy for substitute workers has been paying the sum of 100~150,000 Won per month per person since its promulgation on 25 February 2004. The payment amount has increased to 200~300,000 Won per person per month on 1 January 2006 upon amendment to the Employment Insurance Regulations.

Table 20 Annual payment amount of the subsidy to promote childcare leave

Distionction	2001	2002	2003	2004	2005	2006	2007	2008	2009
Work places	542	461	802	1,330	1,551	2,011	2,424	3,754	4,771
					(55)	(194)	(435)	(810)	(1,109)
Workers	3,136	2,227	3,877	4,561	4,594	6,436	7,761	11,780	14,439
					(58)	(466)	(796)	(1658)	(1957)
Amount paid	2,804	2,836	5,255	6,733	7,217	9,815	12,373	18,378	23,896
					(64)	(392)	(1154)	(2488)	(3444)

④Subsidy to encourage new employment

An employer should meet the following requirements, in order to be a qualified recipient of the subsidy to encourage new employment:

— The employer has hired an insured worker who was registered at a public employment service office, such as the Employment Stabilization Center, for a job-seeking purpose, while being unemployed for a certain period of time. The qualifying period of unemployment depends on the nature of the unemployed worker, as shown in the table below; and

— The employer did not displace any of his/her employees for the purpose of employment adjustment, during the period from three months before newly hiring an insured worker to six months after such new employment.

The subsidy amount is 150~600,000 Won per employed worker per month. The subsidy is paid for one year for each employment. The amount paid as the subsidy to encourage new employment, which was promulgated in October 2004, was: 800 million Won between October~December2004, 84 billion won in year 2005, 172.1 billion won in year 2006, 218.7 billion won in year 2007, and 143.4 billion won in year 2008.

4) Aid to construction workers

The subsidy to stabilize employment of the construction workers was introduced in February 2004 which promotes the construction workers' joining the Employment Insurance. This subsidy is paid to the construction work owner who employs a manager for employment works who takes care of the jobs relating to the Employment Insurance such as the acquisition and loss of the qualification to insure the Employment Insurance by the construction workers. The subsidy amount ranges from 300,000 to 900,000 won per month depending on the volume of the management work.

5) Aid to childcare facilities in work places

The aid to childcare facilities in work places is prepared to provide easy access of female workers to childcare facilities. It provides support to the business owners who establish and operate childcare facilities in the work places owned by his/her business. It was expected that this program would reduce the burden of childcare from female workers and, as a result, contribute towards the employment and job security of the female workers.

①Subsidy to wages of the childcare teachers and others

The subsidy is paid to the business owner who sets up and operates, alone or together with other business owner(s), a childcare facility for his/her employees. The facility must be able to accommodate more than five children.

The subsidy for wages of the childcare teachers and others was paid to 636 facilities in the sum of 12,610 million won.

Table 21 Annual payments of the Subsidy to wages of the childcare teachers and others

(unit : million won)

Distinction	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Work places	357	340	322	345	401	449	537	607	636	751
Total number of beneficiaries	3, 496	1, 528	1, 511	1, 700	2, 262	2, 863	3, 854	4, 918	5, 976	6, 894
Amount paid	2, 483	2, 403	2, 483	2, 918	4, 128	5, 952	8, 106	10, 429	12, 610	14, 968

② Loan or subsidy of the costs to establish childcare facilities in workplaces

This program gives a loan or subsidy to the business owners for the costs to establish childcare facilities at their work places. The loan is up to 500 million won with an interest rate of

1% (2% for big corporations) per annum and may be used to pay the costs of construction, purchase, lease, upgrade, and repairing of the childcare facility. The loan may be repaid by equal installments over a five-year period starting after five years of a grace period. Further, free aid is given to cover the expenses relating to conversion of the facility and to consumables such as tools and furniture. The aid amount is up to 100 million (200 million for organizations) won for conversion of the facility and 50 million won for tools and equipment.

The loan was given to six work places that had established new childcare facilities in the sum of 1,777 million won. The aid for conversion of facilities and purchase of tools and furniture was paid to 31 work places in the sum of 2,351 million Won. It is expected that more endeavors will be made to expand the childcare facilities.

Table 22 Yearly record of the loan for establishing the childcare facilities in the work places

(unit : million won)

Distinction		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Loan	Number of work places	2	2	2	3	1	9	4	9	2	6
	Amount paid	98	125	450	811	150	2, 657	511	2, 700	300	1, 777

Table 23 Yearly payments of the free aid to establish the childcare facilities in the work place

(unit : million won)

Distinction		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Loan	Number of work places	2	1	-	16	22	20	33	21	27	31
	Amount paid	136	94	-	1, 120	1, 221	1, 393	3, 245	2, 675	3, 229	2, 351

(3) Job Capability Development Programs

The job capability development programs (the JCDP) are designed to assist the businesses and the workers to meet such challenge and endeavor to develop the workers' job capabilities. The programs also include assisting re-employment of job changers or unemployed people following restructuring, and enhancing the move of labor.

1) Aid to the Job Capability Development Training by the business owners

① Aid to the Job Capability Development Training
a. Subsidy for training costs

Subsidy is paid to the business owners who provide job training to the employees for the purpose of improving the employees' job capabilities. The training may be carried out by the

business owner or delegated to such institutions as the Corporate Training Center and other delegated training centers.

The subsidy for the Job Capability Development Training was paid to 3,654,216 people in the sum of 382.581 million won in 2008, showing an increase of 354,019 people and 41,657 million won from the previous year.

b. Subsidy for paid training leave

The subsidy is paid to the business owner who gives his/her employee of more than one year of (any employee working for businesses with less than 150 regular employees or the corporations to receive prior assistance) paid leave so that the employee could attend job training, and pays the wage, which is the same as or more than the ordinary wage, and the cost the employee needs to attend the training.

The number of recipients at work places with less than 300 employees in 2008 was 3,330, showing a 116.1% increase from the previous year. The ratio of SMEs among the total recipients had also increased by 21.6% from the previous year, making 35.7%.

c. Ceiling of the subsidy for JCDT and other training

The business owner can receive up to 100% of the individually calculated insurance premium for Job Security Plan and JCDP he/she has to pay in the relevant year (240% for the priority corporations).

When the business owner provides training to the workers employed by other than his/her own business, an additional subsidy of up to 80% can be paid. When the subsidy amount is less than the minimum subsidy amount set by the Minister of Labor, taking into account the size of the business and the nature of the industry, the subsidy amount is the minimum subsidy amount (currently 5 million Won).

②Loan for Training Facilities and Equipment

This loan is for business owners, business owners' organizations, workers' organizations, training corporations and institutions when they set up job training centers or purchase training equipment. The loan amount is up to either 6 billion won or 90% of the cost required, whichever is smaller. The details are as shown below.

― Interest rate
1% per annum for priority corporations, business owners' organizations, big corporations, participating SME training consortium
2% per annum for big corporations
4% per annum for workers' organizations, training corporations and institutions Term-Up to 10 years (repayment by installment in five years after five years of a grace period)

③Assistance to In-House Qualification Program

The purpose of the assistance to an in-house qualification program is to develop the workers' job capabilities and to promote the business's technologies by subsidizing the cost required to operate an in-house qualification program.

The payments under this program were 323 million won in 2008, showing an increase of 270 million won from the previous year.

Table 24 Payment records for Assistance to In-House Qualification Program

(unit : million won)

Year	2002	2003	2004	2005	2006	2007	2008
Subjects	35	38	29	27	19	28	29
Amount paid	172	254	251	248	115	270	323

2) Aid to small and medium enterprises

①Small and Medium Size Enterprise ("SME") Job Training Consortium Program

SME Job training program provides a subsidy for the cost of building infrastructure and the cost of trainings by the consortium comprised of SMEs and those institutions that are equipped with good quality infrastructures such as facilities, equipment, and programs required to carry out high quality job training.

The program was expanded by appointing 14 new organizations as the operators of the SME consortium, and 281,000 workers belonging to 112,000 SMEs took part in trainings provided under the JCDP in year 2008.

②Assisting Study Groups in SMEs

This program assists SMEs and Priority Corporations organizing study groups in order to increase their workers' job capabilities. The technique, consulting, and costs required for the study group are assisted.

③Assisting SMEs Trainings to Improve Core Job Capabilities

This program provides the opportunities to the owners and employees of SMEs and Priority Corporations to receive the best quality trainings provided by prominent training institutions free of charge, which they could not attend before because of high costs of the programs.

3) Assistance to the employed workers

①Allowance for Education Fee

The purpose of this program is to promote job capability development for workers in SMEs and the non-regular worker.

The following people may apply for and receive allowances under this program:

- Who belong to one of the following categories: Insured people of the Employment Insurance who are about to leave jobs involuntarily during training or within one month from completion of training, insured people of the Employment Insurance of 40 years of age or older, workers currently employed to businesses having less than 300 regular employees, fixed term employees, short term workers, daily workers, deployed workers, and self- employed people who have joined the Employment Insurance.

- Who has completed a course recognized as a JCDT course

- Who has attended more than 80/100 of class hours of the course.

- Who has paid the education fee out of his/her pocket.

The allowance has a ceiling of 1 million won per annum.

②Student Loan for Workers

Workers, who are insured to the EI, enter or are attending educational institutions higher than the Technical College as defined by the Technical College Act or Polytechnics established under the High Education Act or the Education for Life Act. However, workers who receive a full amount of the school fee as a scholarship, subsidy, or loan are not eligible for the loan.

Total amount of the loan in year 2009 was 99,075 million Won, increasing by 11.3 billion Won from the previous year.

Table 25 Amount of student loan given to workers

unit: won, 1000 people

| Year | Loan amount | Confirmed recipients | Average loan amount per person | Types of confirmed recipients | | | | | | | | |
| | | | | Study area | | Corporation | | Sex | | School type | | |
				Science and technology	Other	Priority Corp.	Big Corp.	Male	Female	2 year course	4 year course	Other
2002	52,186,786	24,443	2,135	12,182	12,261	14,878	9,565	14,234	10,209	15,321	9,122	-
				-49.8	-50.2	-60.8	-39.1	-58.2	-41.8	-62.6	-37.4	
2003	63,475,661	27,772	2,286	11,970	15,802	16,234	11,538	15,503	12,269	11,791	15,981	-
				-43.1	-56.9	-58.5	-41.5	-55.8	-44.2	-55.2	-44.8	
2004	74,798,812	30,978	2,415	11,798	19,180	18,242	12,736	17,059	13,919	12,070	18,908	-
				-38.1	-61.9	-58.9	-41.1	-55.1	-44.9	-39	-61	
2005	76,504,816	29,149	2,675	10,622	18,527	11,620	17,529	16,158	12,991	10,366	8,419	10,364
				-36.4	-63.6	-39.9	-60.1	-55.4	-44.6	-35.6	-28.9	-35.5
2006	81,641,937	28,342	2,881	10,372	17,970	16,845	11,497	15,668	12,674	8,971	19,371	-
				-36.6	-63.4	-59.4	-40.6	-55.3	-44.7	-31.7	-68.3	
2007	79,850,780	25,225	3,166	9,013	16,212	14,686	10,539	13,924	11,301	19,276	5,946	3
				-35.7	-64.3	-58.2	-41.8	-55.2	-44.8	-76.4	-23.6	0
2008	87,754,940	25,507	3,440	9,500	16,007(62.8)	14,557	10,950	14,377	11,130	19,274	6,232	1
				-37.2		-57.1	-42.9	-56.4	-43.6	-75.6	-24.4	0
2009	99,075,900	29,424	3,367	11,198	18,225	18,797	10,626	16,713	12,710	22,118	7,305	-
				-38.1	-61.9	-63.9	-36.1	-56.8	-43.2	-75.2	-24.8	

③Loan for Training Fee

This program provides loans to workers. The fee for trainings necessary for Job Capability Development is being offered.

— Recipients: Employed workers who are insured to the EI.

— Terms of Loan- Loan amount: All of the course fee of the JCDT (up to 3 million Won per annum)

— Interest: 1.5% per annum

— Repayment: by quarterly repayment one year after the one-year grace period.

④**Subsidy for Qualification Test Fee**

When a worker, who is insured to the EI, obtains two or more national qualifications, the costs of the tests for the qualifications are subsidized.

The following are the contents of the subsidy.

— Test fees, text book purchases and training course fees (100,000 Won).

— Assistance may be given up to a couple of times if the worker acquires two or more national skill qualifications.

4) Aid to the training of the unemployed

①**Training of Unemployed People who are Changing Jobs**

This program provides the people who were dismissed from work where the EI applies with the opportunities to take part in the training to acquire skills and knowledge useful to get another job.

The subsidy for training for the job changing of the unemployed in 2009 was paid to 148,963 people in the sum of 249,726 million Won, showing an increase of 88.8 billion Won (55.2%) from the previous year.

Table 26 Subsidy for training for the job changing of the unemployed

(unit: million won)

Distinction	2006	2007	2008	2009
Recipients	53,622	65,242	70,565	148,963
Amount paid	128,486	152,604	160,899	249,726

②**Training for Priority Occupational Areas**

It is expected that this program will:

— improve national competitiveness by raising skilled workers required for key industries and strategic industries of the country

— improve employment opportunities and job security of teenagers who do not proceed to higher education and the unemployed by providing them with the opportunities to receive JCDT. The people who can participate in this training assistance program are:

— Unemployed persons 15 years or older who have registered at the Job Center to find a job.

— Students in the third grade in the junior high school who are not planning to proceed to higher education.

Participants of the training for priority occupational areas are increasing every year. The allowance was paid to 20,530 people in the sum of 110,332 million won in 2009.

Table 27 Assistance to the training for priority occupational areas

(unit: million won)

Distinction	2005	2006	2007	2008	2009
Recipients	14, 743	21, 557	27, 072	22, 126	20, 530
Amount paid	83, 081	134, 614	149, 310	125, 487	110, 332

(4) Maternity Protection Program

The Maternity Protection Policies contain comprehensive policies answering to such social needs. They include prior and post childbirth leave, prohibition of overtime working and restriction on the night and/or weekend shift of pregnant women, prohibition of hiring female workers in hazardous and/or dangerous businesses, menstruation leave, and nursing hours.

1) Childbirth Leave Benefit

Benefit of leave before and after giving childbirth and benefit of leave on miscarriage or stillbirth (together shall be called Childbirth Leave Benefit (CLB)) are paid to the insured who satisfies certain requirements. It is an additional remuneration to an employed person.

CLB is paid when the following conditions are all satisfied:
― The insured must have been given a childbirth leave as prescribed in section 74 of the Labor Standard Act
― The insured period of the worker must be 180 days or over on the date when the   childbirth leave ends
― The insured person must apply for the benefit within 12 months from the date when the childbirth leave ends.

Childbirth Leave Benefit was paid to 70,560 people in the sum of 178,477 million Won in year 2009, showing an increase in the number of beneficiaries by 3.0% and the payment amount by 7.1% from year 2008.

Table 28 Annual payment record of Childbirth Leave Benefit

(unit:people,million won)

	Payees	Amount paid
2002	22,711	22,602
2003	32,133	33,522
2004	38,541	41,610
2005	41,104	46,041
2006	48,972	90,886
2007	58,368	132,412
2008	68,526	166,631
2009	70,560	178,477

2) Childcare Leave Benefit

Childcare Leave Benefit was introduced in November 2001. A worker who had a baby younger than three years of age (born after 1 January 2008) was able to take leave to take care of the baby for one year. Changes have been made to the program by amendment to the Act to Encourage Equal Employment of Men and Women made on 21 December 2007. After the change, the childcare leave may be taken for two separate periods and the leave period may be used to the end even if the worker's baby reaches the age of three during the leave period. Total leave period is one year.

Childcare Leave Benefit is for the worker who takes the childcare leave out of the Employment Insurance Fund. It pays a total of 500,000 Won per month. Childcare leave period used in year 2008 was 216 days by women and 191 days by men. Women took 25 days more than men for childcare.

Childcare Leave benefit is paid when the following conditions are all satisfied:
— The insured must have been given childcare leave for no less than 30 days as prescribed in the Act to Encourage Equal Employment of Men and Women
— The insured period of the worker must be 180 days or over on the date when the childcare leave begins
— The spouse of the insured, who is also insured, must not be given childcare leave for more than 30 days in regard to their same baby
— The insured person must apply for the benefit from one month after the beginning of the leave and before 12 months after the end of the leave.

Childcare Leave Benefit was paid to 35,400 people in the sum of 139,724 million Won in 2009, increased by 21.5% in terms of beneficiaries and by 42.0% in the payment amount.

Table 29 Annual payment record of Childcare Leave Benefit

(unit:people,million won)

	Payees			Amount Paid
	Total	Male	Female	
2002	3,763	3,683	78	3,087
2003	6,816	6,712	104	10,576
2004	9,303	9,122	181	20,803
2005	10,700	10,492	208	28,242
2006	13,670	13,440	230	34,521
2007	21,185	20,875	310	60,989
2008	29,145	28,970	355	98,431
2009	35,400	34,898	502	139,724

4. Revision of Employment insurance system in 2009

(1) The recent situation of the employment insurance system in Korea

The first half of 2009 showed a poor start falling into the negative growth rate compared to the previous years under the influence of the financial crisis in late 2008, but the full-fledged economic recovery was shown at the end of the year; showing signs of recovery and switched to positive economic growth plus an increase in imports and exports.

Most job reports of the labor market in 2009 were not good due to the impact of the financial crisis in late 2008. The number of employed was decreased by 72 thousand (-0.3%) with the employment rate of 58.6% with a decline over the previous year by 0.9%. Non-economically active population had increased by 447 thousand (2.9%) and the unemployed by 119 thousand due to the economic recession. Respectively, the unemployment rate had increased by 3.6%, 0.4% p.

In particular, the decrease in employment was visible mainly for non-wage workers. In the crisis, 247 thousand wage workers increased over a 319 thousand non-wage worker decrease and the decrease (-259 thousand) of the self-employed, which are vulnerable to a crisis, was the most prominent. Different aspects could be seen as a 383 thousand increase in commercial wage workers and a 22 thousand increase in temporary workers compared to a 158 thousand decrease in daily workers. The number of the young employed decreased largely compared to the previous year due to increasing uncertainty of the economy and reluctant hiring by companies and the employed at the age of 30s were also reduced a lot due to struggling construction and manufacturing businesses.

The unemployed were 889 thousand and it increased by 119 thousand (15.5%) over the previous year and the unemployment rate increased by 3.6%, 0.4% p. The unemployment benefit applicants increased greatly with their number passing above one million and its growth rate was

also high with 28.0% in 2009. It could be interpreted that the increase in the unemployment benefit applicants was due to the increase of the unemployed and it seems that the unemployed number is on the increase because of the economy.

In 2009, the number of the employment insurance insured has steadily increased with 9 million and 654 thousand (compared to 382 thousand of the previous year's, increased by 4.1%) with a greater increase margin and it's on the steady increase in spite of the recession. In terms of gender, female is (235 thousand, 7.0% compared to the previous year), in terms of age, the number of the insured elderly (60 years or older) and of elders (ages between 40 to 50) increased (14.6%, 8.4%p compared to the previous year) while the younger insurers (under 29 years of age) was on the decrease (-2.6%).

In 2009, employment insurance recipients were 5 million and 177 thousand (7.8% increase over 375 thousand of the previous year's) and it showed the steadily increasing trend with a continuous growing margin. Regarding gender, females were (262 thousand, 12.6%), for age, the holder numbers among the elderly (60 years or over) and of the elders (ages between 40 and 50) increased (18.5%), 59.5% compared to the previous year's) and the young (under 29) holder numbers decreased by (-3.0%) and the creasing gap was narrowed slightly. For each industry, the holder numbers increased among 'public administration, defense and social security administration industries' and 'health and social services industry and manufacturing industries' (318 thousand and 49 thousand respectively) and there was a decrease of 54 thousand (-4.8%) in the manufacturing industry.

In 2009, a number of people who lost the employment Insurance was 4 million and 723 thousand (compared to 313 thousand of the previous year, 7.1% increase) and the number is steadily growing but its increase gap was narrowed slightly. In terms of gender, females were (187 thousand, 9.9%), regarding age, the number of people who lost their insurance among the older (over 60) and of the elders (ages between 40 and 50) increased (compared to 25.3% of the previous year, 53.4%) and the number of young (under 29) people lost their insurance was on the decrease (-4.9%). For each industry, the number of people who lost their insurance increased in 'public administration, defense and social security administration industries' and 'health and social services industries' (248 thousand and 35 thousand respectively), and 59 thousand (-5.4%) decreased in the manufacturing industry. Specifically, the public administration, defense and social security industries had high numbers of increased new holders (248 thousand, 140.4%) and loss of holders (318 thousand, 165.7%) compared to the previous year.

(2) The main features and the results

1) Launch of the Employment Insurance Commission

In the meantime, the government has been revising the main points on the employment insurance in the employment policy committee according to 「the basic employment policy act」 but has made the employment insurance commission to perform its function by revising 「the

employment insurance law」. The employment insurance commission is the undisputed operating organization regarding the employment insurance and its 1st meeting was held on last July 1 after its official launch.

The employment insurance commission consists of four persons (total 16 persons) for each of employee representatives, user representatives, the government representatives and public service representatives with the secretary of Ministry of Employment and Labor as the chairman for rational management by converging opinions of the working groups and user groups. In 2009, a total of two meetings were held to vote for the employment insurance committee by laws, 2009 employment insurance fund management plan and the employment insurance law change plans, etc.

2) Installation of the Employment Insurance Evaluation Center

In 2008, the employment insurance law was revised to raise effectiveness of the employment insurance business through systematic assessments and evaluation results conducted by external specialized agencies to establish assessment and feedback systems and it was agreed to build and operate the employment insurance evaluation center from 2009.

It was prepared to specify the employment insurance evaluation center, but this did not work out as the external conditions were not met and therefore the assessment of 2009 employment insurance business was carried out as the previous method of selecting an external specialist agency without specifying the employment insurance evaluation center.

The assessment of 2009 employment insurance business was carried out by separating the general assessment and in-depth assessment, and the general assessment was conducted to prepare for the external evaluation including fund operation assessment (equipment division) carried out every year and the in-depth evaluation was carried out regarding outside issues pointed out by the National Assembly and necessary projects requiring system improvement for the general evaluation results.

3) Creation of the special filing period

「A law of special measures to promote reporting formation of insurance relationships in terms of the employment insurance and the accident compensation insurance」 was passed in the national assembly in December 2008. Accordingly, a special filing period was set from 1 May until July 30 2009 and small businesses and their workers, not signed up for the employment insurance, received exemption benefits for the past non-payments by voluntarily signing up for the insurance during this period among the small businesses.

4) Social safety net expansion secured for the global financial crisis

In 2009, the government had supported the job sharing as a nationwide movement and supported it intensively as loans support for living costs of the unemployed by changing the employment insurance fund operation plans.

The government secured social safety net expansion by supporting income for the unemployed workers through the job sharing and provided funding to support maintaining the employment through job shifting conversion, and raised the level of new employment subsidy support to strengthen support for vocational training for vulnerable groups including the unemployed and to stimulate employment for them.

5) System improvement efforts to consider the effectiveness of the employment insurance business

In 2009, system improvement plans were devised for the purpose of employment stability and stimulation for facilitating the employment insurance business to enhance the employment stability and maintenance of business requirements, and to promote women's employment for creating short jobs, etc. In details of the new employment stimulus subsidy, it prevented business losses by setting the highest limit of supporting scale and it promoted women's participation in the labor market by establishing an unlimited contract for short-term job creation projects. Social conflicts were resolved by reasonably adjusting fraud activity restriction standards regarding employment stability businesses and by strengthening support for vulnerable groups through easing the requirements for individual support. Finally, outside opinions of the effectiveness of business was positively reflected by greatly rearranging the early reemployment allowance system. The system was to prevent risks of business losses by setting strict payment requirements and standards and to increase the effectiveness of the project by reasonably adjusting the number of the payment days.

6) Unemployment payment for the self-employed temporary signing up plan submitted to the national assembly

Self-employment businesses are sources of economic vitality and it has the great impact on the national economy and the labor market as the new job creator but its social security net is lacking compared to other workers. Since the global financial crisis, self-employed businesses have been increasingly going out of business and this has been undermining the overall economy's growth potential, and therefore a discussion about the social safety net took place.

"T/F for the self-employed employment insurance plan" was established and operated by Ministry of Employment and Labor with participation from the relevant departments and organizations. After several rounds of meetings by sufficiently converging stakeholders' opinions, measures were confirmed for the employment insurance unemployment benefits regarding the self-employed. The government finalized amendment to the employment insurance law and submitted it to the national assembly on December 29, 2009.

7) Vocational ability development system conducted nationwide as a pilot scheme

The government has expanded training options for trainees, improved the quality of training by easing market entry barriers and restrictions in the training market and strengthened connection with employment support services with in-depth consultation and providing

information to enhance training performance and effectiveness of resource allocation, and therefore the government has expanded the pilot scheme of the vocational ability development system, which was operated in Daegu and Gwangju areas from September 20, 2008, across the nation. As a result of the pilot operation, the training course has become a modular training period, an average training period per person is 2.7 months and this is reduced by twice compared to the previous training period for the unemployed, 5.1 months. In addition, 280 billion won investment was made for the unemployed training and 119 thousand people were trained in 2009 but the vocational ability development system has provided employment training opportunities to more people with less budget of 57 billion investment for 116 thousand (annual number of persons basis).

8) Promotion of spreading peak wage system and preserved allowance system

The peak wage system and the preserved allowance system were planned to be operated temporarily until 2008 in the hope that the wage system was to be reformed over a short period of time when the peak wage system was introduced in 2006. However, in the situation with growing concerns about social problems due to the worsening ageing society and the retirement of baby boomers, the government announced to expand support for businesses to spread the peak wage system and it was switched to a permanent system through the employment insurance law enforcement order.

(3) Main achievements and features of the employment insurance fund

1) Policy directions of 2009

The goal of the employment insurance fund operation in 2009 was to prevent unemployment through the employment insurance programs, to promote employment, to enhance vocational skills development, to strengthen the role of the social safety net through stability to the lives of unemployed workers and job search assistance, and to support the active labor market policy. The detailed policy directions were set as follows.

First, unemployment prevention with a job security fund, employment opportunities for the active labor market policies to promote employment with strengthening the support for vulnerable groups including irregular and small business workers, and for reducing the number of unemployed youth.

Second, expand skills development opportunities for the most vulnerable workers including irregular and small business workers through specialized training programs for these workers.

Third, effectively support the individual self-directed worker for development of vocational skills through the consumer-oriented market-friendly professional development system (vocational competency development system suppository).

Fourth, the livelihoods of workers unemployed through unemployment compensation and early support by helping facilitate the return to the labor market due to high oil prices expected to actively respond to the uncertain economic situation.

Fifth, to enhance career interruptions for women's employment and expand support for custom jobs and promote job security for the elderly should continue to be supported.

Sixth, strengthen support for region-specific employment creation innovation of employment services by establishing a cooperation network between the public and the private sectors.

Seventh, strengthen capabilities of employment stability and employment insurance networks, including building a comprehensive professional experience hall for the advancement of employment support services to continuously promote the expansion of infrastructure.

2) Detailed achievements and features for each project

①Employment insurance coverage and tax

With respect to applying the employment insurance, the number of insured businesses decreased to 139 down by 2.7% compared to 142 of the previous year's by the end of 2009 due to the economic downturn and the number of insured people increased to 9.65 million up by 2.8% compared to the previous years. This figure is increased by 247.5% compared to 400 thousand in 1998 in terms of number of insured worksites and by 83% compared to 5.27 million in terms of number of insured people.

To make the employment insurance management work related to insured people effective and to enhance prevention effort for missing reports, the voluntary subscription special report period (May 1 2009~July 30 2009) was run with exemptions given to non-insured worksites and workers, even though they should have been insured for the employment and compensation insurances, and this contributed to improving signing up for the insurance.   In addition, new discovery and application efforts were made through establishing the search system by linking data between the National Tax Service data and related organizations.

Regarding the collection of insurance payment, insurance payment rates were 97.1%, increased by 0.7%p compared to the previous year's, the collected insurance payment was 4 trillion 216 billion and 400 million won increased by 5.4% over the previous year's and the collected insurance tax amount was 222.9 billion won by the end of 2009 and this showed an achievement of a 13.8% decrease compared to the previous year's through providing convenience to businesses in tax payment, efficient tax payment administrations and strengthened management for taxed insurance amount.

②Strengthened support for employment retention to spread job-sharing

In early 2009, the economic downturn became worse due to slowing sluggish domestic demand and exports under the influence of global economic crisis in the second half of 2008 and the bad employment condition escalated as the employment number decreased and

unemployment number increased. Some large companies in industries such as automobile manufacturing production scaled back or closed temporarily and because of this, the number of closed small and medium suppliers increased dramatically, and the employment instability increased among employees with expected huge scale employment adjustments, etc. Accordingly, the employment retention fund system was greatly improved and run in the aspect of the employment insurance to fully support prevention of unemployment and job security through job sharing. The employment retention fund system amendment plan is included not only in direction of the economy of 2009 but also in the main policies, its main details are as follows.

First, the job retention measures to minimize the burden on companies to raise the level of funding, job retention and mitigation requirements were supported (act enforcement amendment on March 12, 2009, and implementation rule amendment on April 1 2009).

Second, the employment insurance fund plan was modified by monitoring trends of the implementation of management plans for job retention and job retention action plan funding on a daily basis, and an amount expected to be limited to the supplementary budget was obtained through a full budget.

Third, to avoid the situation where the system is not used as the company does not know about it, a variety of promotions were carried out including radio advertisements and distributed brochures (60 thousand copies) and, especially a lot of effort was being made to increase the utilization of the system for small and medium enterprises.

Fourth, in consultation with related ministries, maintaining employment and providing support measures for companies with preferential treatment was performed.
* (Small and medium business policy fund priority) funding for small business policy, priority support for companies supporting the employment retention fund in supporting small and medium business policy fund priority support (SMBA), etc.

It is estimated that employment maintenance subsidies would play the leading role in 2009 for stabilizing employment and overcoming the employment risks in the unprecedented risks of the global economy and employment. Job retention grant in 2009 was 310 billion and 200 million won for 14,000 companies, and 941 thousand people and this was a 10-time increased amount compared with 30.6 billion won in 2008.

③Enhanced support for vocational training for the unemployed

Since the second half of 2008 in the aftermath caused by the global financial crisis to respond to large-scale unemployment and widespread unemployment in the budget to expand training, vocational training, one month earlier than in previous years was conducted. In addition, a special training has been established at polytechnic universities to help the unemployed youth who are struggling to find jobs in the situation of economic crisis. In particular, a new project was introduced for providing loans to ease the burden of the livelihood of the unemployed take part in vocational training with a low interest of (2.4%).

④**Unemployment benefit**

The unemployment benefit has expanded its function as a social safety net for livelihood support for the unemployed since the unemployment benefit system was introduced in 1995. Worsening economic situation, especially after the second half of December 2008, as the unemployment benefit applicants were increasing, the unemployed benefit of 116.4 billion won was paid to 1 million 301 thousand people through securing a supplement of 1 trillion 538 billion and 300 million won in 2009, and the number of recipients of unemployment benefits has also increased steadily through expansion of various systems in the meantime.

Since January 1 2004, after the unemployment compensation system has been applied to the daily workers, the number of daily workers, recipients of unemployment benefits has risen substantially each year. (3,635 people in 2004 → 26,215 people in 2005 → 40,200 people in 2006 → 54,769 people in 2007 → 82,939 people in 2009 → 139,236 people in 2009)

⑤**Employment support project for low birth rate, aging women and the aged**

* Changes in parental leave and subsidies: ('04), 6.7 billion won → ('05) 7.2 billion won → ('06) 9.8 billion won → ('07) 11.2 billion won → ('08) 15.9 billion won → ('09) 20.4 billion won.

* Alternative recruitment subsidies (supported since '07): ('07), 1.2 billion won → ('08) 2.5 billion won → ('09) 3.4 billion won.

Women workers numbering 70,560 who gave birth received maternity leave payments of 178.5 billion won and 139.7 billion won was given to 35,400 as parental leave payments for maternity and childcare leave, and administrative leave during the period of employment of women workers were promoting stability and livelihood support. Especially, activity rate of the employees on maternity leave was 50.2% in 2009 and this was increased by 7.7%p compared to 2008.

Employees' child care burden was eased by installing and running (Labor Welfare Corporation commissioned) public childcare facilities (16 locations) in small and medium businesses intensive areas and high-quality child care services were provided. Free conversion costs and equipment costs (27 locations, 3.2 billion won) and building installation and rent costs (2 offices, 300 million won) were supported for the employers installing child care facilities. In addition, labor costs and child care teachers (173 places, 12.6 billion won for 1,921 people) were supported to businesses running childcare facilities.

Also, in preparation for an ageing society, new start programs were established to support the field training program for the elderly and the peak wage system support was widened through the customized peak wage system consulting services for free advice and support for the elderly with an employment subsidy to establish a basis for the elderly to work for a long time, while even trying to improve social awareness through promotional activities for the elderly including an Age campaign, etc.

* Peak wage conservation benefits: ('08), 997 people, three billion won support → ('09) 1,497 people, 6.5 billion won support.

* Peak wage system consulting support: ('08), 35 corporations and labor organizations, 1.5 billion won support → ('09) 33 companies and labor organizations, 1.5 billion won support.
* Number of elderly employment subsidy beneficiaries increased: ('07) 259,357 people → ('08) 273,945 people → ('09) 274,849 people.

"Women newly back to work centers" were set in 72 locations in collaboration with Ministry of Gender Equality to promote employment for the unemployed women due to childcare and household responsibilities in 2009 with providing comprehensive employment support service linking the 「group counseling training programs ↔ job training and housewife internships ↔ careers advice and pot-management after employment」. Ministry of Employment and Labor has supported 3 billion and 285 million won to 10,955 trainees by operating a group counseling program and promoted women's participation in economic activities through post-employment management support with career advice.

5. Conclusion

To resolve the worsening situation of the labor market due to the economic downturn, each economic organization of the labor, private, public and governmental sectors in Korea reached a major agreement last February 23, 2009 and the social atmosphere of sharing work has been spread nationwide.

The Korean government has strengthened political public relations of sharing jobs to spread it as a nationwide movement on the one hand, and has expanded support for companies and workers to give substantial benefits to the participating companies. In particular, the support was raised for the participating companies in the job sharing with job retention efforts by keeping the wages for the workers from getting reduced income due to their shorter working hours and holidays, etc.

In addition, the vocational training for the unemployed has been strengthened to improve their working abilities and to raise a necessary functional and professional workforce for the future industry by allocating a supplementary budget for training former and newly unemployed staff and strengthening training for the core competencies between large and small-medium enterprises for their coexistence and cooperation. The Korean government has made efforts by expanding unemployment benefits and benefit plan requirements to improve the individual extension of unemployment benefits and social security employed in crisis situations to support the livelihoods of vulnerable groups in the program. They have expanded loans for the training cost of living for the unemployed to focus on the training during the training period.

The Korean government carried out various policies as above to avoid a mass unemployment situation during the financial crisis. However, the possibility of losing a job for non-regular workers who are used to having a bad working condition and low income level is getting higher. The ratio of the non-regular worker in Korea reached 34.9% in 2009. After losing their job, generally their chance of reemployment is not good during the recession period. It is

true that a large portion of that group of workers is still outside of the Employment Insurance system, so they are not getting most of the benefits from the system despite the high demand for the benefits. The Korean government passed protective legislation in 2007 targeting non-regular workers and is trying to mitigate growing job insecurity. However, the result does not yet appear. Thus it is necessary to improve the labor policies for the non-regular workers and to involve them into the safety net system. Korea government should carry out a more active labor market policy including an unemployment insurance system.

Employment Insurance and
Active Labor Market Programs in Japan

Naoki Mitani[*]

1. Introduction

The purpose of this paper is to show the actual status of Employment Insurance Scheme and Active Labor Market Programs in Japan as well as their historical developments and to shed some light on the related issues under the structural changes in the labor market, in order to share the Japanese experiences with other economies which are seeking to introduce an unemployment/employment insurance scheme or to improve it to augment the social resilience.

In the context of the global economic crisis, the Japanese economy fell into its deepest recession in the post-war era. Output contracted by around 6% in 2009, reflecting a plunge in exports and tight financial conditions. Accordingly, employment had to be adjusted and the unemployment rate soared. Thus, it is an important task to evaluate how Employment Insurance and Active Labor Market Programs responded to this crisis and contributed to the social resilience.

Second, the Japanese Unemployment/Employment Insurance has a history of over 60 years. The historical developments might be interesting especially for those economies in East Asia which plan to introduce the Unemployment Insurance.

Third, it would be also suggestive to shed light on the current issues of Employment Insurance Scheme in face with structural changes in the labor market, such as how to integrate non-standard employees into the safety net of employment.

The structure of the following sections is as follows. In the second section, the policy response to the crisis is discussed. In the third section, the features of the Japanese labor market are shown. The fourth section discusses the historical developments, institutional aspects, and issues relating to unemployment benefits of Employment Insurance. The fifth section shows the Active Labor Market Programs. The final section concludes.

2. Impact of the crisis on the labor market and policy responses

Unemployment rate (in seasonally adjusted series) has soared to the historical high 5.7% in July 2009 from 3.7% in December 2007. It decreased somewhat to 5.1% by the end of 2009. The number of the unemployed reached to 3.76 million (in seasonally adjusted series) in July 2009.

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Compared with other OECD countries, the increase in unemployment rate was relatively small although the output plummeted sharply after the beginning of the crisis. Chart1 shows the GDP growth rate and the changes in the unemployment rate in five OECD countries. Whereas the real GDP decreased by 7.7% from the first quarter of 2008 to third quarter of 2009, the unemployment rate increased by 1.3 percentage points to 5.1% during the same period in Japan. Among the five countries, Germany shows the least rise in the unemployment rate. The United States and United Kingdom experienced relatively larger rises in the unemployment rate in spite of the smaller reductions in GDP than Japan. The main reason for the relatively smaller rises in the unemployment rate in Japan and Germany is the large labor hoardings in these countries.

Chart 1 GDP Growth and Unemployment Rates

The deterioration of the Japanese labor market under the crisis was associated with large shedding of temporary workers or non-standard employees. The salient feature of the current recession is that the number of non-standard employees decreased for the first time. Chart 2 shows the changes in the number of standard employees and that of non-standard employees over the previous year from 1989 and onwards. The number of non-standard employees increased during the previous three recessions, while the number of standard employees decreased during the 1997-1999 recession and thereafter. After the Lehman shock in September 2008, the number of non-standard employees began to decrease only in the first quarter of 2009, whereas the number of standard employees began to decrease quickly. But the number of non-standard employees decreased by 470,000 persons (or 2.7%) over the previous year in the second quarter of 2009, much more largely than that of standard employees which decreased by 290,000 persons (or 0.8%) over the previous year in the same period.

Chart 2 Changes in employment by employment status (both sexes, difference over the previous year)

Source: Statistics Bueau, Labour Force Survey

According to the survey[1] conducted by the Ministry of Health, Labour and Welfare, the accumulated number of the non-standard employees who lost (or are going to lose) their jobs between October 2008 to September 2009 is 282,181, which consists of contract workers (49.7%), dispatched workers (16.3%), workers from subcontract firms (3.4%) and others (30.6%). The reasons for the loss of jobs are "expiration of contracts" (52.0%), "break of contracts" (42.3%) and "other reasons" (5.7%). Most of these workers (83.4%) worked (or are working) in the manufacturing sector before the job loss. This suggests that the de-regulation of the worker dispatching undertakings in 2004, which allowed firms in the manufacturing sector to employ dispatched workers with a contract duration less than one year (in 2007, the maximum contract duration was extended to three years), accounts for an important part of the large shedding of non-standard employees. Some of them lost their residence, together with their jobs, which was offered by companies. The proportion of the non-standard workers who lost their residence was 6.1% in December 2008 and it declined gradually to 2.1% in June 2010. It should be noted that 97.7% of the separated non-standard employees were insured by Employment Insurance and 90.9% were estimated to be qualified for unemployment benefits.

In response to the crisis, the Japanese government took various employment measures as follows[2].

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[1] This survey has been conducted each month through the hearing by the Public Employment Security Office to the firms in the district. The number is based on the June 2010 issue.
[2] The following is based on OECD (2009b).

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Measures to stimulate labor demand

public sector job creation

● public sector job creation was expanded for nursing, medical care, agriculture, environment, energy, tourism and the local community.

    reductions in non-wage labor costs

● temporary reductions in employer contributions to unemployment insurance schemes

    short-time work arrangements

● extension to coverage of short-time working to workers with less than six months of unemployment insurance coverage

● temporary increase in subsidy paid to employers for short-time working.

● temporary introduction of short-time work subsidies for firms maintaining employment by reducing over-time work in reaction to a sudden and temporary decrease in demand.

Re-employment measures and training

job-search assistance and activation measures

● planned increase in PES staff and counselors in FY 2009.

● increase in re-employment benefit for unemployed who find work quickly for three years.

training and work-experience programs and business start-up incentives

● extension of trial employment program to older unemployed over 65 years.

● provision of income support loan to unemployed not eligible for unemployment benefits to allow them to participate in training programs

Income support for job losers and low-income earners

● easing of employment insurance contribution requirement for fixed-term workers

● extend benefit duration for hard-to-employ job seekers for three years

● temporary creation of a living allowance for unemployed without access to employment insurance to take part in vocational training

● temporary subsidies for employers who continue to provide housing to dismissed workers and additional advice through PES for job losers with housing problems

Among these measures, the most important was the Employment Adjustment Subsidy scheme (EAS). The number of the establishments which applied was only 1,707 in December 2008, but it rose to 84,672 in October 2009. The number of the workers under this program reached to its peak 2,534,853 in April 2009 (Chart 3). The ratio of the workers under the program to unemployment was ranging around 60%～70%.

Chart 3 Number of Workers and Establishments under Employment Adjustment Program

Number of Workers(left scale)
Unemployment(left scale)
Number of Establishments(right scale)

(thousands)

Source: Ministry of Health, Labour and Welfare

The number of unemployment benefits recipients soared to 1.01 million in June 2009 and decreased to 0.67 million in May 2010 (Chart 4). The ratio of unemployment benefits recipients to the insured reached to 2.9% in June 2009 and then decreased to 2.0% in May 2010. The proportion of unemployment benefits recipients among the unemployed was 29.1% in June 2009 and decreased to 19.1% in April 2010.

Chart 4 UI Benefits Resipients

(%)

(thousands)

2.9
1012

Recipients (left scale)

Ratio of Recipiants/ Insured (right scale)

Source: Ministry of Health, Labour and Welfare

3. Features of the Japanese labor market

Salient features of the Japanese labor market are as follows.

First, long term employment practice is prevalent, especially in large firms. Table 1 shows the average tenures with current employers in six OECD countries. The average tenure for both sexes is longer in Japan, Germany, France and Italy than the United States and United Kingdom. The male tenure is the longest in Japan, followed by France and Italy. It is much shorter in the

United States and the United Kingdom. However, the Japanese female tenure is much shorter than in West European continental countries. It is slightly longer than in Anglo-Saxon countries.

It should be also noted that the average tenure has rather lengthened in Japan over the last twenty years.

Table 1. Average Tenures with Current Employers in Selected OECD Countries　　　　（year）

	Japan			US	UK	Germany	France	Italy
	1988	1998	2008	2008	2008	2008	2008	2008
Both sexes	10.6	11.6	11.6	7.1	8.3	10.8	11.6	11.3
Males	12.2	13.1	13.1	7.5	8.7	11.5	11.6	11.6
Females	7.1	8.2	8.6	6.8	7.9	10.1	11.5	10.8

Source ：　Japan: Ministry of Health, Labour and Welfare, Basic Survey on Wages

Structures, United States：BLS, Current Population Survey, January Supplement, 2008, Other countries：OECD.Stat

Second, OJT (On the Job Training) is relatively more intensive, especially in large firms. With the perspective of the long term employment relation, both employers and employees tend to invest intensively in firm specific human capital, and share the return to the investment or the rent. This in turn results in long term employment. Thus, the long term employment practice is complementary with intensive OJT. This is reflected in the relatively steep slope of age-earnings profiles (Hashimoto and Raisian (1985), Mincer and Higuchi(1988)). The skill formation is conducted mostly in the form of OJT as well as Off-JT(Off the Job Training). Typical workers in large firms accumulate the skills to detect the problems and solve them on the site, by experiencing various jobs in the workplace and through occasional Off-JT to learn the relevant knowledge. Thus, even production workers tend to acquire fairly high intellectual skills through long term OJT (Koike (1996)). This practice of intensive OJT is also complementary with firms' high propensity to hoard their skilled workers during the recession. Nonetheless, it is mostly limited to standard workers in large firms.

Third, the number of non-standard employees is increasing rapidly, especially among young workers, as well as female workers and older workers. In fact, the proportion of non-standard employees among all employees excluding executives of corporations rose from 19.7% in 1987 to 35.5% in 2007. Among non-standard employees, the proportion of regular non-standard employees, whose terms of contract are more than one year or unlimited, rose relatively faster (Chart 5). Such structural change is found not only in Japan but also in other OECD countries, especially in Western European continental countries. It is pointed out that the polarization of the labor market is mostly due to the structural changes such as technological changes (especially ICT), and the globalization of the economy, as well as the severe EPL (Employment Protection Legislation) in these countries. Nonetheless, in Japan, the proportion of non-standard employees

is increasing rapidly among youth and Japan has never experienced such deep dualization or polarization of the youth labor market since the mid-1950s, just before the High Growth Period. Thus, the social and economic systems so far have not been adjusted enough to such structural changes. The most important aspect of non-standard employment is that it does not provide young workers with enough training opportunities. In general, intensive OJT is rarely offered to non-standard employees. Consequently, age-earnings profile is flat. In addition, non-standard employment is fixed term or temporary. Moreover, it has been revealed that in Japan, those who are obliged to take non-standard jobs on the graduation from schools tend to be employed in non-standard jobs for a long period (state dependency). Thus, non-standard young employees tend to suffer from a poor economic situation as well as poor employment stability for a long period and it is pointed out that this may cause a low fertility rate and the future poverty problem.

Chart 5 Trends in the Proportion of Non-Standard Employees (Both Sexes)

Source: Statistics Bureau, Employment Status Survey

4. Employment insurance

4.1 Historical developments

The Unemployment Insurance Act was enacted in 1947 as one of the series of the postwar preparation of the labor legislation. In the same year, the Employment Stability Act was enacted. The main policy issues in this period were the recovery of the economy after World War Two and to cope with the increasing number of the unemployed. However, the function of the Public Employment Stabilization Offices (PESO) and the Unemployment Insurance did not meet enough with the necessity, because of the disorder of the labor market and the particularity of the unemployment in the post-war period, as well as the immaturity of the institutions. The PESO was

very busy over placing the laborers separated from the mining industry and the US Force stationed in Japan. The UI scheme has just begun, with the number of the benefit recipients being only 27,000 persons in 1948. In face of the large number of displaced workers due to the deflationary policy, the Law of Emergent Relief Measure for the Unemployed was enacted in 1949. The law stipulated the Relief Program for the Unemployed, in which the local governments employed the unemployed in public employment such as road construction and maintenance, drainage maintenance projects, or public building maintenance. Though the aim of the law was attained immediately, the intended effects phased out. In the early 1950's, the displaced workers were temporarily reemployed in the public employment program in the regions where disproportionately large displacement took place. But an unexpectedly large flow of older workers with little employability, the needy self-employed and newly entrant women entered into the program and piled up thereafter.

The high economic growth began in the mid-1950s. The employment in the industrial sector increased and absorbed the large flow of new graduates from junior and senior high schools and workers from the agricultural sector in rural areas. The active labor market programs in this period were (1) placement of new high school graduates, and (2) measures for structural unemployment such as those for the unemployed who left US forces stationed in Japan, mining industry, and the middle aged or older workers who lost their jobs and migrant workers from the agricultural sector. These measures consisted of employment subsidies to the employers who employed targeted unemployed workers, housing allowances for the migrants who found jobs in remote areas, and training associated with placement, etc. On the other hand, the number of workers who participated in the Relief Program for the Unemployed increased sharply. Most of them were previously self-employed or not in the labor force. They might become job-seekers because it was difficult to continue their traditional small businesses under the rapid industrial changes. In 1971, the new introduction to the Relief Program for the Unemployed was stopped. Thus, the employment policy changed dramatically from the traditional measures to provide temporary employment and absorb the unemployed into various programs such as a public employment program. In 1966, the Employment Measures Act was enacted to cope with structural unemployment. This Act systematized and extended to all industries the measures that emerged in the process of transformation of the industrial structure. It also regulated procedures for mass job reductions, including dismissal, and later led to policies strengthening employment security.

In 1974, the Employment Insurance Act was enacted. The main purpose of the Unemployment Insurance was "to stabilize the standard of living and employment of workers by providing necessary benefits for workers who are unemployed". The Employment Insurance Act added another one "to facilitate their job-seeking activities, as well as to prevent unemployment, redress the employment situation, increase employment opportunities, develop and improve the capacity of workers, and promote their welfare, so as to contribute to their employment security". In order to implement the above purpose, the Employment Insurance Act stipulated that the

Employment Insurance may, in addition to granting benefits for unemployment, undertake the following four services; services for the improvement of employment, services for the human resources development, services for the welfare of employment, and services for the stabilization of employment.

Initially, the Employment Insurance was planned to integrate the Active Labor Market Programs to the Unemployment Insurance Scheme in order to reduce the structural unemployment which persisted even under the full employment situation before the First Oil Price Shock. It was also planned to systematize and develop the stopgap labor market programs so far partially conducted in face of the structural changes due to the rapid economic growth and the symptom of the ageing of the population. In reality, the First Oil Price Shock occurred in 1973, when the initial Employment Insurance bill was aborted at the Parliament. But, as the economic turbulence increased, employers' associations and labor unions urged the government to take necessary measures and the employment adjustment subsidies, which had not been considered so important and appeared only at the end of the services for the welfare of employees in the initial bill of Employment Insurance, attracted these groups abruptly, because under the employment adjustment subsidy program the employers would be paid the half (for large firms) or two third (for small and middle firms) of the allowance for absence from work which the employer paid, when the firm was obliged to contract its business because of the economic downturn. The renewed Employment Insurance bill was quickly voted on and the Act was enacted in December 1974. Thus, services for employment stability (the fourth services) were newly created in the Act and among them the employment adjustment subsidy became one of the most important measures. The employment stability fund was created in the budget to finance the subsidy with mobility.

The structural changes, due to the strategies taken by firms after the Oil Shock such as drastic lean management, changes in undertakings, and introduction of new technologies, might give rise to large structural unemployment. To meet this situation, lots of measures were taken by trial and error in the Employment Insurance, especially in the four services. These measures were systematized, arranged and put together in 1980. In the 1980's, unemployment benefits scheme was reformed, reflecting the financial problem in the service granting benefits for unemployment due to the increase in the unemployment rate stemming from the structural changes in both supply and demand sides of the labor market. On the other hand, measures for the elderly were disproportionately reinforced mainly in services for the improvement of employment.

Ujihara (1989) pointed out the problems regarding the Employment Insurance Scheme in this period as follows. First, the four services were created in order to complement the service granting unemployment benefits and keep its sound finance by mobile and flexible application of measures, in the awake of sudden unemployment problems. This purpose was attained successfully to some extent in the second half of the 1970's. But once the measures were created, they tended to remain even after the necessity disappeared. Second, the measures in four services should be complemented by other policy measures, because the financial effects of the former

were limited as employers considered the whole costs and benefits of these measures. Third, the administrative procedures were conducted by the employees at the PESO. Thus, as the benefits scheme became more complicated, the administrative burden on the employees of the PESO became heavy and troublesome.

A financial upset in autumn 1997 triggered a sudden recession. As the unemployment rate began to soar at the beginning of 1998, the government incorporated measures for employment into its comprehensive economic measures of April 1998. And five consecutive employment packages were put in force from 1998 to 2002. Ohtake (2004) points out three principal courses of action in the measures in this period. First, they involve an expansion of the traditional policy of maintaining employment. A typical example includes raising the rate of subsidies for Employment Adjustment subsidy. Second, they are based on traditional policy involving the use of public works to absorb the unemployed and maintain employment. Third, they involve a new type of employment measure involving subsidies for job creation, such as the wage subsidies for firms newly hiring middle-aged and older workers, and new or extended subsidies for small and medium-sized enterprises that require human resources for new business conversions.

In addition, two new measures in this period are noteworthy. The one is the introduction of the Education and Training Benefits System, commencing in December 1998. This is epoch-making because it is a direct subsidy for individual workers, in contrast to previous labor market training measures which had been executed mainly through subsidies to organizations in charge of training. It can be seen as a kind of voucher system, because the subsidies are paid after completion of vocational training. The other is the measures for youth. They had been scanty, compared with other OECD countries, partly because the unemployment rate for youth had been relatively low. But under the long economic recession, the youth unemployment rate soared and the ratio of non-standard employees increased. Employment measures for youth were taken for the first time in 1999, though modest at the start. Thereafter they are expanded gradually.

A series of employment measures were implemented from 2002 to 2003, based on the Comprehensive Measures to Accelerate Structural Reform. The plan identified three principal policy targets. The first concerns responses to unemployment resulting from the liquidation of non-performing loans. The second concerns job creation. The third concerns re-vitalization of demand-supply adjustment in the labor market through private-sector involvement and responses to diverse forms of employment.

4.2 Institutional Aspects

The current Employment Insurance Scheme consists of granting benefits for unemployment and two services; services for stabilization of employment and services for developing human resources (Chart 6). Services for stabilization of employment are mainly those granting employment adjustment subsidies. Services for developing human resources consist of subsidies for training by employers and management of public training facilities, etc. The number of the

insured workers was about 37,840,000 and that of covered undertakings was about 2,020,000 in fiscal year 2008.

The qualifying conditions to be insured are as follows;

- The scheduled hours worked per week must be 20 hours or more.
- Must be expected to be employed for more than 31 days (The minimum expected length of employment for short-time workers and dispatched workers was shortened from 1 year to 6 months in 2009, and from 6 months to 31 days in 2010.)
- Must be employees younger than age 65.
- Voluntary coverage for employees in agricultural, forestry, and fishery establishments with less than five standard employees.
- Exclusions: Seasonal workers whose term of employment is four months or less.
- Special systems for seamen and civil servants.

Chart 5   Outline of the Employment Insurance Scheme

Source: The revised budget of the fiscal year 2009

Job applicants' benefits are classified to job applicants' benefits for general persons, job applicants' benefits for the elderly, job applicants' benefits for specially insured persons in short-term employment, and job applicants' benefits for insured day laborers, according to the targeted job applicants.

Job Applicants' Benefits for General Insured Persons

Job applicants' benefits for general insured persons consist of the following:

(i)   Basic allowance;

(ii)   Skill acquisition allowance;

(iii)   Lodging allowance;

(iv)   Injury and disease allowance.

The qualifying conditions for the unemployment benefit (basic allowance) are as follows;

● Must have at least 12 months of insurance during the last 24 months before unemployment (at least six months of insurance during the last 12 months for *specific qualified recipients* and *the qualified recipients who are separated for specific reasons,* see the next paragraph for the definitions).

● Must be registered with the Public Employment Security Office and be capable of, and willing to, work.

● Unemployment must not be due to voluntary leaving, serious misconduct, refusal of a suitable job offer, or nonattendance at vocational training (otherwise, the benefit may be limited to one to three months).

The rigid procedures to approve these conditions are implemented to avoid the moral hazard of job applicants.

The duration of benefits varies with age, tenure and reasons of separations, etc. (Table 1). In any case, it is designed to avoid frequent receipt of benefits that the longer the tenure of the insured, the longer the duration of benefits is. *The specific qualified recipients* are those who are obliged to be separated through bankruptcy or dismissal (excluding dismissal due to significant cause imputable to the accused themselves), etc. *The qualified recipients who are separated for specific reasons* are those who are separated because their fixed term labor contracts are not renewed or for other compelling grounds. The latter category of conditions to receive benefits for a longer duration was added in the Act amended in 2009 to ease the hardships of the unemployed who were non-standard workers.

Table 1 Duration of benefits (basic allowances)

	Duration of benefits for							
	(1) separated workers having specified recipient qualification or specific reason					(2) separated workers not falling under category (1)	(3)separated workers having difficulty finding a job	
	Age (years old)					All ages	Age (years old)	
Tenure (year)	Under 30	30–34	35–44	45–59	60–64		Under 45	45–64
Less than 1	90 days	90 days	90 days	90 days	90 days	–	150 days	150 days
1–4	90 days	90 days	90 days	180 days	150 days	90 days	300 days	360 days
5–9	120 days	180 days	180 days	240 days	180 days	90 days	300 days	360 days
10–19	180 days	210 days	240 days	270 days	210 days	120 days	300 days	360 days
20 or over	–	240 days	270 days	330 days	240 days	150 days	300 days	360 days

Source: Ministry of Health, Labour and Welfare

The premium of Employment Insurance is the payroll multiplied by the insurance premium rate in Table 2. The premium rate is 6/1000 for the insured worker and 9.5/1000 for employers in

general industries, of which 6/1000 is the contribution to unemployment benefits and 3.5/1000 is that to Two Services. The premium rate is higher in agriculture, forestry and fisheries, Sake brewing industry and construction. The premium rate is raised in FY 2010, reflecting the tight budget of the Employment Insurance due to the large increase in job seekers under the current financial crisis.

Table 2 Premium of Employment Insurance (as in April, 2010)

	General Services	Agriculture, forestry & fisheries, Sake Brewing Industry	Construction
Insured person	6/1000	7/1000	7/1000
Employer	9.5/1000	10.5/1000	11.5/1000
of which contribution to UB	6/1000	7/1000	7/1000
contribution to Two Services	3.5/1000	3.5/1000	4.5/1000
Total	15.5/1000	17.5/1000	18.5/1000

Source: Ministry of Health, Labour and Welfare

The daily amount of the basic allowance is an amount obtained by multiplying the daily amount of wages by a rate ranging from about 50 percent to 80 percent (the rate is higher, the lower the wages are). The daily amount of wages is obtained by dividing by 180 the total amount of monthly wages (excluding bonus, etc.) paid during the last six months before the separation from employment.

Job Applicants' Benefits for the Elderly

As mentioned above, the qualification condition to be newly insured excludes workers aged 65 years old or over. The person, who is already insured and is aged 65 years or over, receives a lump-sum payment of job applicants' payments for the elderly when he is unemployed.

Job Applicant Benefits for Specially Insured Persons in Short-term Employment

When persons employed seasonally and persons who are normally engaged in short-term employment (term of employment is less than one year) become unemployed, a special lump sum payment is made.

Job Applicant Benefits for Insured Day Laborers

There is a special system for day laborers, who are defined as persons who are paid by the day, or persons who are employed for a fixed period of employment of 30 or less.

4.3 Features of the Japanese Employment Insurance Scheme

Compared with other OECD countries, features of the institutional aspects of the Japanese Employment Insurance scheme are as follows[3].

(1) The qualification conditions to be insured include the lower limit of the expected duration of employment in addition to scheduled weekly hours worked and ages, etc.

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[3] This part is based on Higuchi(2010), who made an international comparison of six OECD countries: Japan, United States, United Kingdom, Germany, France and Sweden.

(2) Regarding the qualification conditions to receive UB, the payment is stopped when the beneficiary is re-employed, even if the hours worked are short and the wages are low in Japan. In other countries, payment is made for the partially unemployed.

(3) Employment Promotion Allowance is paid as an incentive for early re-employment when the beneficiary is employed before the expiration of the duration of UB in Japan.

(4) The replacement ratio is lower for the beneficiaries whose former wages were higher in Japan, while in other countries, it is the same regardless of the former wages. In Japan, the replacement ratio is constant for the whole period of payment, while in some countries, it decreases as the duration of UB becomes longer.

(5) The replacement ratio in Japan is not so low, as the gross wages before tax reduction are used to calculate daily wages and the UB is exempted from tax.

(6) There is no unemployment assistance scheme, which assures the income for the unemployed after the expiration of UB duration or those unemployed with no qualification for UB such as some non standard employees, even though the payment is lower.

(7) The proportion of UB beneficiaries among the unemployed (in the ILO definition) is relatively lower in Japan, compared with other countries[4]. It should be also noted that the proportion is decreasing gradually from 39.8% in FY1995 to 22.1% in FY2008. This is partly accounted for by the increase in the unemployed persons whose previous employment status was non-standard employees.

4.4 Public expenditures on labor market programs

Chart 7 shows the public expenditures on labor market programs (in ratio to GDP) in selected OECD countries on average for the period from 2003 to 2007. Several features are observed. First, Japan's ratio is much smaller than France and Germany, and as small as United Kingdom and United States. Especially, "out-of-work income maintenance and support" is much smaller in Japan. Second, "Training" is much smaller in Japan than France and Germany. Third, "PES and administration" is somewhat smaller in Japan than France, Germany and United Kingdom, but larger than United States. These observations suggest that the labor market policies are disproportionately concentrated in passive measures in Japan[5] as well as in the United States.

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[4] According to Higuchi (2010), Germany (87%), France (82%), United Kingdom (60%), United States (43%) are much higher than Japan (23%).

[5] Higuchi (2003) points out that one of the factors behind the relatively low public expenditures on ALMP is the large dependence on the public expenditures on infrastructure as an employment promotion measure during recessions after the World War II.

Chart 7 Public Expenditures on Labor Market Programs in Five OECD Countries (in percentage of GDP, average for 2003-2007)

- 90: Early retirement
- 80: Out-of-work income maintenance and support
- 70: Start-up incentives
- 60: Direct job creation
- 50: Supported employment and rehabilitation
- 40: Employment incentives
- 30: Job rotation and job sharing
- 20: Training
- 10: PES and administration

Source: OECD

4.5 Unemployment benefits

Unemployment benefits (UBs) are provided so as to protect individuals against the risk of unemployment. UBs offer replacement income to workers experiencing unemployment spells after having lost their employment.

Theoretical studies predict that the receipt of UBs negatively affects job search intensity and increases the reservation wages of job seekers and a large body of empirical studies support the standard prediction that greater generosities (higher level or longer duration) of UBs increase the duration of unemployment (Atkinson and Micklewright (1991), Krueger and Meyer (2002), OECD(2006), Kohara(2002, 2004)). Nonetheless, increased generosity of UBs during recessions may be necessary for the unemployed to find jobs under greater difficulties of finding jobs. It is pointed out that careful integration of UBs and ALMP, combined with close monitoring of the job search, can be effective in dampening disincentive effects brought about by generous UBs (OECD(2006)). In this regard, it is appreciated that the government increased recently the amount

of the employment promotion allowance, which the UB recipient can receive if he is employed early.

Furthermore, recent studies investigate whether UBs increase labor productivity by enhancing labor reallocation. Some empirical studies find a positive effect of UBs on labor reallocation. For instance, Boeri and Macis (2010) study the effect of reforms that introduced for the first time UB schemes in countries that previously did not have any such scheme. Using a large number of countries that had UBs throughout the period as a control group, they find that the introduction of benefits significantly increases between-industry job reallocation, although the estimated effect fades over time. OECD (2010) shows also the positive effects of the generosity of UBs on reallocation of workers, based on the difference-in difference OLS estimate.

4.6 Non-standard employees and Employment Insurance

Given the increasing share of non-standard employees, the Government extended the eligibility of Employment Insurance and eased qualifying conditions for UBs. The minimum expected length of employment for non-standard employees to be insured was shortened to six months from one year in 2009, and to 31 days from six months in 2010. The minimum total length of insurance for non-standard employees to be qualified for UBs was shortened to six months from 12 months in 2009. The duration of UBs for those non-standard workers, who are separated because their fixed term labor contracts are not renewed, became also as generous as *the specific qualified recipients* as those who are obliged to be separated through bankruptcy or dismissal in 2009.

In spite of the effort of extension of eligibility of Employment Insurance, there remain a certain category of unemployed workers and non-standard workers who are not covered, such as new school-leavers without a job. Thus, a new type of safety-net is now searched for this category of workers[6]. For instance, "Fund training" discussed below provides those who are not eligible for employment insurance benefits with training and living support during training. Or, some sort of social assistance may be necessary. In that case, the comprehensive measures should be considered in combination with other anti-poverty schemes.

5. Active Labor Market Programs

Chart 8 shows the budget for various ALMP. In general, they tended to decrease from the end of the 1990's to 2007. After the beginning of the crisis, the budget for EAS jumped to 667 billion yen in FY 2009 and 745 billion yen in FY 2010. The actual expenditure of EAS was about 654 billion yen in FY2009, which was ten times as large as the last peak of 65.7 billion yen in FY 1994.

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[6] Study Group of Employment Policy (2010).

Chart 8 Budgets for various ALMPs

Source: Ministry of Health, Labour and Welfare

5.1 Employment Adjustment Subsidies

Employment adjustment subsidy (EAS) is intended to preserve existing jobs at firms experiencing temporarily low demand due to changes in the economy, changes in industrial structures or other economic reasons, by encouraging temporary closure of a part or all of operations or temporary transfer of workers to other firms (*shukko*).

More concretely, the firm must satisfy the following three conditions to receive the subsidies.

(1) it must be covered by Employment Insurance.

(2) it must satisfy one of the following two conditions;

(i) the average sales or the average output for the recent past three months decreased by 5% over the previous three months or the same period of the previous year.

(ii) the average sales or the average output for the recent past three months decreased by 10% over the same period of the previous year and the current balance for the last period is a deficit.

(3) it closes temporarily a part or all of business (and conducts training during absence from work) or transfer workers temporarily (*shukko*).

The amount of subsidies is two third of daily wages or compensation for temporary closure of business and 4,000 yen is added if training is conducted during the suspension. It is two third of the wages which the sending employers paid in case of temporary transfer to other firms.

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The maximum duration is fixed as 300 days for three years.

EAS is a kind of public short-time program (STW) widely used in OECD countries. It is subject to deadweight and displacement effects that reduce their cost effectiveness. Deadweight loss occurs when EAS is paid for jobs that employers would have retained even in the absence of the subsidy, implying that this spending is a pure transfer which does not limit total job losses. Displacement effects can be said to occur when EAS preserves jobs that are not viable without the subsidy, even after business conditions recover. If these subsidies are maintained they lock workers in low productivity job matches and thus represent a barrier to job creation by firms with the potential to grow and efficiency enhancing labor mobility[7]. These potential efficiency costs are likely small during a recession, but they become more of a concern as the recovery takes hold.

OECD (2010) conducted an econometric analysis on the effects of STW on employment, hours worked and wages during the 2008-09 recession, using the data for the period 2003 Q1 to 2009 Q3 for 19 countries and four industries (manufacturing, construction, distribution and business services). According to the results of the analysis, (1) there is a clear evidence that STW schemes helped preserve permanent jobs during the economic downturn, while also increasing average hours reductions among permanent workers, (2) there is no evidence that STW schemes had a significant impact on the employment and average hours of temporary workers, (3) short-time work does not have a significant effect on the responsiveness of average wages to output, although the point estimate that real hourly wages are more strongly downward responsive to output declined in the presence of STW schemes is plausible; (4) the absolute jobs impact is estimated to have been particularly large in Japan and Germany. Short-time work is estimated to have reduced the loss of permanent employment by almost 400,000 in Japan and by over 200,000 in Germany.

Thus, EAS has contributed significantly to preserve permanent employment during the 2008-09 recession, while it has had little impact on employment of temporary workers. The policy response to the crisis has been towards placing a greater emphasis on expanding STW participation by easing the qualification conditions. This seems reasonable since many more viable jobs are at risk in a steep recession, while the social cost of locking workers in unviable jobs is temporarily lower since there is little prospect they could move quickly into more productive jobs. However, this may come at the expense of lower employment and job reallocation in the medium run, especially if support for temporary closure of operation is maintained for too long into the recovery.

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[7] Griffin (2010) contends that EAS reduces steady-state labor productivity by encouraging labor hoarding, and in some case, preventing the exit of least efficient establishments. By contrast, Chuma et al. (2002) found some positive effects on employment.

5.2 Training Policies

Employment Insurance Scheme has measures encouraging the job-seekers to take public vocational training. When a qualified recipient takes a course of public vocational training, etc., as directed by the Chief of the Public Employment Security Office, a skill acquisition allowance is paid for the period of said course and further, in that case, the basic allowance may be paid to the person for a period in excess of the prescribed duration of benefits.

The educational training benefits are paid to the insured workers or those who have been separated from employment take and complete educational training designated by the Minister of Health, Labour and Welfare as job related educational training necessary for employment security and promotion of job placement, to cover a part of the expenses which the persons paid to educational training institutions.

Public vocational training courses are (1) training for the separated (job-seekers, free), (2) training for workers, and (3) training for new school-leavers (charged). Both central government and local governments have training institutions. A part of training for the separated is entrusted to private training institutions.

Emergency Training-Employment Support Fund was created to provide those who are not eligible for employment insurance benefits with training (called as "Fund training") and living support during training. Training and living support allowances are paid as living support during training to a person who is not eligible for unemployment benefits, if he meets certain conditions and is trained as directed by the Public Employment Security Office. This measure is intended to support those job seekers who are new school leavers or separated from non-standard employment and are not eligible for unemployment benefits.

5.3 Employment policies for older workers

Employment continuation allowances are paid to older workers who continue to be employed after the mandatory retirement if wages drop largely[8]. This measure will be abolished gradually from 2012, since the Act Concerning Stabilization of Employment of Older Persons postulates that employers should provide older workers with employment opportunities after mandatory retirement age.

Various measures were implemented to encourage firms to employ middle-aged and older workers such as subsidies.

5.4 Measures for Work-Life Balance

Child Care Leave allowances (50% of the wages) or Nursing Leave allowances are paid to the workers who take child care leave or nursing leave and continue to be employed.

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[8] To be eligible for the allowances, the insured person (1) must be aged 60 years old or over and younger than 65 yeas old, (2) must have an insured period of 5 years or over, (3) the wages must be less than 75% of those at 60 years old, and (4) has not received UI benefits after 60 years old.

5.5 Employment measures for youth

Faced with the severe youth unemployment problems, various employment measures for youth have been introduced since the end of the 1990's.

- Trial Employment for Youth

  This is a subsidy to the firms which employ workers younger than 40 years old for three months as a trial to see whether they have aptitude or ability enough to be employed further.

- Special Subsidy for Standardization of Employment of Youth

  This is a subsidy to the firms which employ the young workers introduced by PESO as standard employees.

- Job Café

  This is a kiosk-type career service center for young people.

- Job card

  This is a document in which a worker's training and work experiences are recorded in order to facilitate the job matching and the career formation, etc.

6. Concluding Remarks

So far, Employment Insurance in Japan has played the expected role fairly well during the 2008-09 recession. EAS preserved a large number of permanent jobs, along with Germany which has shown good job performance by the use of STW (OECD (2010)). EAS is considered to be efficient when the adverse shock is sharp and covers all industries like the current one. Nonetheless, to avoid adverse effects on labor reallocation necessary for medium-term structural changes, the rigorous application of the eligibility rules is needed as the recovery progresses.

Second, the 2008-09 recession has revealed the instability of employment and the housing problems accompanied with unemployment among non-standard employees, whose employment share is increasing rapidly especially among youth. Comprehensive employment policy is needed to cope with the issue of non-standard employees, including the reform of UBs as well as the effective ALMP. If workers with a high unemployment risk who repeat employment and unemployment frequently are added to the insured of EI, the premium is necessarily raised. If it is not acceptable for other insured persons, either the premium should be determined depending on the risk of unemployment or the unemployment assistance scheme is needed to be introduced with the government general budget. In the latter case, it is necessary to implement measures to avoid moral hazard such as the frequent check of active job search activities or the inclusion of the participation to training into the qualification conditions for the benefits (Higuchi(2010)). In this regard, it is desirable to perpetuate the Emergency Training-Employment Support Fund measure[9], which supports the training and the living of the non-eligible unemployed.

Third, it should be noted that passive and active measures are complementary. The negative effects of UBs on the search effort or duration of unemployment are mitigated by adequate ALMP,

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[9] This measure is currently of a fixed term of three years.

especially activation measures. In addition, it would be also worth considering to adjust the UBs to the wages in the external labor market, since the wages offered to middle-aged job seekers are generally much lower than those in their former jobs, given the steep age-wage profile in Japan (Ohtake (1999)).

Fourth, ALMP is efficient when it is complemented by other measures. For instance, the extension of mandatory retirement age could be realized not only by subsidies of ALMP but also by the legislative reform.

Fifth, public employment creation measures have a risk to call in un-intended workers such as the self-employed or those from not in the labor force and the useless and undesirable program may last for a long time.

Sixth, since five successive Employment Packages in 1999, new measures have been implemented. It is necessary to evaluate these measures scientifically as well as to learn the experiences in other OECD countries.

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4. Macro Analysis

The Determinants of Saving Rates in the Developed and Developing Economies: The Impact of Social Safety Nets

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1. Introduction

It is often asserted that social benefits (social safety nets) will have a negative impact on the household saving rate because households will not feel the need to save (self-insure) if social benefits are adequate. Similarly, it is often asserted that financial development (an increase in the availability of credit or the relaxation of borrowing constraints) will have a negative impact on the household saving rate because households will not feel the need to save for precautionary purposes if they can borrow freely when necessary. This paper analyzes the determinants of saving rates in developed economies as well as developing economies with emphasis on the impact of social benefits (social safety nets) and social benefits. One purpose of the analysis in this paper is to see whether there is substitutability between social benefits and credit availability, which is plausible since both are risk-coping mechanisms that serve as a substitute for self-insurance (saving).

The paper is organized as follows: In section 2, we briefly survey the theoretical and empirical literature on the impact of social safety nets and credit availability on the household (private) saving rate; in section 3, we discuss our analysis of the determinants of the household saving rate in the developed economies (the member countries of the Organisation for Economic Co-operation and Development (OECD)); in section 4, we discuss our analysis of the determinants of the domestic saving rate in twelve developing economies of Asia; and section 5 concludes.

To summarize the main results of this paper, our analysis of the determinants of the household saving rate in the developed countries of the OECD finds that there are considerable and stable differences among countries in their household saving rates and social benefit ratios but that the latter can explain the former to only a limited extent. In particular, it finds that the age structure of the population and credit availability are more important as determinants of cross-country differences in the household saving rate than the social benefit ratio but that there is substitutability between credit availability and the social benefit ratio, with the impact of credit availability on the household saving rate being negative, as expected, when changes in the social

benefit ratio are small and positive, contrary to expectation, when changes in the social benefit ratio are large.

Our analysis of the determinants of the domestic saving rate in developing Asia during the 1965-2007 period finds that the main determinants appear to be the aged dependency ratio, income levels, and the level of financial development.   We project future trends in domestic saving rates in developing Asia for the 2011-2030 period based on our estimation results and find that the aging of the population will be the main determinant of future trends in domestic saving rates in developing Asia.   However, we find that there will not be a sharp decline in saving rates in developing Asia as a whole, at least during the next two decades, inasmuch as there will be substantial variations across economies in the speed and timing of population aging.

2. Survey of the Previous Theoretical and Empirical Literature

In this section, we briefly summarize the theoretical and empirical literature on the impact of the age structure of the population, social safety nets and credit availability on household saving.

Looking first at empirical studies that use cross-country data to analyze the impact of the age structure of the population on saving, numerous studies have found that the aged dependency ratio has a negative and significant impact on the household, private, and national saving rates (see Feldstein (1977, 1980), Modigliani and Sterling (1983), Horioka (1989), Li, Zhang, and Zhang (1987), Edwards (1996), Dayal-Ghulati and Thimann (1997), Bailliu and Reisen (1998), Loayza, et al. (2000), and Bosworth and Chodorow-Reich (2007) for recent examples).

Looking next at the theoretical literature on the impact of social saving nets on household saving, most of this literature has focused on the impact of public old-age pensions on household saving.   For example, the seminal paper on this topic (Feldstein (1974) showed that the impact of public old-age pensions on household saving is theoretically ambiguous.   On the one hand, the introduction of a public old-age pension system will induce households to save less because they no longer need to rely as much on their own savings to finance living expenses during retirement (the wealth replacement effect), but on the other hand, the introduction of a public old-age pension system will induce households to retire earlier, and this in turn will induce them to save *more* (the induced retirement effect).   The net impact of public old-age pensions on household saving will depend on the relative strengths of these two offsetting effects.   Moreover, Todo-Rovira and Perez-Amaral (1988) show that the impact of public old-age pensions on private saving will depend on people's expected real rate of growth of retirement benefits and that realistic estimates of this parameter imply a smaller depressing effect on private saving than found by Feldstein (1974).

The literature on the impact of other components of the social safety net on household saving rate is much scarcer but not non-existent.   For example, the seminal paper on this topic (Hubbard, Skinner, and Zeldes (1995)) demonstrates theoretically that social insurance programs

with means tests based on assets discourage saving by households with low expected lifetime incomes. Thus, not only public old-age pensions but also other components of the social safety net may have a negative impact on the household saving rate.

Looking next at previous empirical studies that use cross-country data to analyze the impact of social safety nets on household (or private) saving, the vast majority of these previous studies have focused on the impact of public old-age pensions on household saving, and most of them have found that public old-age pensions have a negative and significant impact on household saving. For example, Feldstein (1977, 1980) and Bailliu and Reisen (1998) obtain this finding for a sample of developed economies, while Edwards (1996) and Dayal-Ghulati and Thimann (1997) obtain this finding for a sample of developing economies. The major exceptions are Modigliani and Sterling (1983), who find that the impact of public old-age pensions on private saving is ambiguous because a smaller than expected wealth replacement effect is more than offset by a larger than expected induced retirement effect, and Horioka (1989), who finds that the impact of public old-age pensions on private saving is insignificant because neither of the two effects is significant.

Looking finally at previous empirical studies that use cross-country data to analyze the impact of credit availability on the saving rate, Loayza, et al. (2000) find using a sample of developed and developing economies that the ratio of domestic credit flow to gross national disposable income has a negative and significant impact on the private saving rate.

To summarize, most previous cross-country studies have analyzed the impact of public old-age pensions on household (or private) saving and obtain a negative and significant impact, but few cross-country studies have analyzed the impact of other social programs, and at least one study has found that credit availability has a negative and significant impact on saving.

3. An Analysis of the Determinants of Household Saving Behavior in the Developed Countries of the OECD

In this section, we discuss our analysis of the determinants of the household saving behavior in the developed countries of the OECD.

(1) Estimation Model

In this section, we describe the estimation model we use in our analysis.   The estimation model we use is as follows:

$$HHSR = a0 + a1*AGE + a2*SBR + a3*CREDIT + a4*SBR*CREDIT + u,$$

where HHSR = the household saving rate = the ratio of household saving to household disposable income (in percent)

AGE = the aged dependency ratio = the ratio of the aged population (the population aged 65 or older) to the working-age population (the population aged 20 to 64) (in percent)

SBR = the social benefit ratio = the ratio of social contributions and social benefits, other than social transfers in kind, receivable to net household disposable income (in percent)

CREDIT = the credit availability index = the ratio of private credit by deposit money banks and other financial institutions to GDP (in percent).

SBR*CREDIT = the cross-product of SBR and CREDIT

CREDIT is included as a proxy for the degree of financial development (or to put it another way, the availability of private credit or the prevalence of borrowing constraints).

(2) Data Sources

In this section, we describe the data sources of the variables used in our analysis.

(1) The source of the data on the household saving rate HHSR

The data on HHSR were taken from Annex Table 23: Household saving rates of *OECD Economic Outlook*, no. 86 (November 2009).

(2) The source of the data on the aged dependency ratio AGE and population POP

The data on AGE and POP were taken from Panel 2: Detailed Data of United Nations, Population Division (2008).

(3) The source of the data on the social benefit ratio SBR

The data used to calculate SBR were taken from Table 13: Simplified Accounts for Households and NPISH (Non-profit Institutions serving Households) of Organisation for Economic Co-operation and Development (2009) except that the 1995 data for all countries and data on Sweden for all countries were taken from the previous edition of the same, published in 2008. SBR was calculated by dividing line 10 (Social contributions and social benefits, other than social transfers in kind, receivable) by line 15 (Disposable income, net).

(4) The source of the data on credit availability CREDIT

The data on CREDIT were taken from Beck, Demirguc-Kunt, and Ross (1999) and the May 2009 update by the authors, available on-line at:

http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:20696167~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html

Of the 30 member countries of the OECD, data were available on all variables for the following 23 countries: Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Japan, the Republic of Korea, the Netherlands, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, the United Kingdom, and the United States. The necessary data were not available for Australia, Greece, Iceland, Luxembourg, Mexico, New Zealand, and Turkey. Moreover, data on

saving rates and social benefit ratios were not available for Ireland (1995 and 2000) and data on social benefit ratios were not available for Hungary (1995), Ireland (1995 and 2000), Japan (1995) and Spain (1995). Thus, the total number of observations was 64 or 67, depending on which explanatory variables were included.

(3) Descriptive Statistics

This section presents descriptive statistics on the variables used in our analysis. The descriptive statistics are shown in Table 1, and as can be seen from this table, there is enormous variation in all of the variables used in our analysis. HHSR, the household saving rate, averaged 7.74 percent and ranged from -1.90 percent (in Denmark in 2000) to 17.00 percent (in Italy in 1995). AGE, the age dependency ratio, averaged 24.11 percent and ranged from 9.43 percent (in the Republic of Korea in 1995) to 32.59 percent (in Japan in 2005). SBR, the social benefit ratio, averaged 27.74 percent and ranged from 8.40 percent (in the Republic of Korea in 2000) to 43.90 percent (in Denmark in 1995). Finally, CREDIT, our proxy for credit availability, averaged 96.15 percent and ranged from 14.87 percent (in Poland in 1995) to 195.29 percent (in Japan in 2000).

Table 1: Descriptive Statistics

	Mean	Std. Dev.	Minimum	Maximum
HHSR	7.74	4.41	-1.90	17.00
AGE	24.11	4.35	9.43	32.59
SBR	27.74	8.22	8.40	43.90
CREDIT	96.15	44.76	14.87	195.29

Note: Refer to the main text for variable definitions and data sources.

(4) Estimation Results

In this section, we present the estimation results. The results of the Hausman test indicated that the fixed-effects model was the correct model, and thus we present the results of the fixed-effects model, with the observations being weighted by the population of each country in 1995.

The results are shown in Table 3, and as can be seen from this table, the coefficient of AGE is negative (in the -0.85 to -1.00 range) and statistically significant at at least the 5 percent significance level, as expected, indicating that a one percentage point increase in AGE reduces the household saving rate by 0.85 to 1.00 percentage points. The coefficient of CREDIT is negative (in the -0.033 to -0.036 range) and statistically significant at at least the 10 percent significance level, as expected, indicating that a one percentage point increase in CREDIT lowers the household saving rate by 0.033 to 0.036 percentage points (if the cross-product of CREDIT and

Model	Constant	AGE	SBR	CREDIT	SBR*CREDIT	R-squared	F-stat.	No. of obs.
1	27.573	-0.846				0.408	22.590	67
	4.250	0.178				0.028	0.000	
	6.49	-4.75				0.000		
	0.000	0.000						
2	22.789	-0.847	0.197			0.258	2.770	64
	8.339	0.371	0.331			0.044	0.075	
	2.73	-2.28	0.59			0.007		
	0.009	0.028	0.556					
3	35.721	-1.003		-0.036		0.523	7.660	67
	7.189	0.263		0.016		0.021	0.002	
	4.97	-3.81		-2.16		0.000		
	0.000	0.000		0.036				
4	31.079	-0.980	0.151	-0.033		0.388	2.230	64
	11.376	0.449	0.266	0.018		0.025	0.099	
	2.73	-2.18	0.57	-1.81		0.002		
	0.010	0.035	0.575	0.079				
5	39.772	-0.993	-0.232	-0.103	0.0033	0.437	3.020	64
	12.225	0.444	0.371	0.039	0.0018	0.006	0.030	
	3.25	-2.24	-0.62	-2.66	1.89	0.001		
	0.002	0.031	0.537	0.012	0.067			

Note: The first figure indicates the estimated coefficient, the second figure indicates the standard error, the third figure indicates the z-value, and the fourth figure indicates the p-value. The first R-squared is within, the second R-squared is between, and the third R-squared is overall. The figure below the F-statistic is the p-value.

SBR is not included). The coefficient of SBR is positive and totally insignificant, indicating that it does not have a significant impact on the household saving rate. Finally, if the cross-product of CREDIT and SBR are included, the coefficient of CREDIT is negative and statistically significant, as before, but it increases in absolute magnitude (to -0.103) and its significance level also increases (to close to the 1 percent level), while the coefficient of the cross-product term CREDIT*SBR is positive (0.0033) and statistically significant at the 10 percent significance level. This implies that, in economies with no social benefits whatsoever, a one percentage point increase in CREDIT lowers the household saving rate by 0.103 percentage points and that a one percentage point increase in SBR reduces the impact of CREDIT (in absolute magnitude) by 0.33 percentage points. This implies that the impact of CREDIT will be zero when SBR changes by 0.103/0.33 = 3.12 percentage points, negative, as expected, when SBR changes by less than 3.12 percentage points, and positive, contrary to expectation, when SBR changes by more than 3.12 percentage points.

Thus, it appears that the age structure of the population and credit availability are more important as determinants of cross-country differences in the household saving rate than the social benefit ratio but that there is substitutability between credit availability and the social benefit ratio, with the impact of credit availability on the household saving rate being negative, as expected, when changes in the social benefit ratio are small and positive, contrary to expectation, when changes in the social benefit ratio are large.

Our results concerning CREDIT are consistent with the findings of Loayza, et al. (2000),

who find using a sample of developed and developing economies that the ratio of domestic credit flow to gross national disposable income has a negative and significant impact on the private saving rate.

(5) Conclusion

In this section, we presented cross-country data on household saving rates and social safety nets in the developed countries of the OECD and analyze the determinants of cross-country differences in household saving rates with emphasis on the impact of social safety nets, the age structure of the population, and borrowing constraints thereon.   To summarize the main findings of this section, we found that there are considerable and stable differences among economies in their household saving rates and social benefit ratios but that the latter can explain the former only to a limited extent, with the age structure of the population and borrowing constraints being more important as determinants of cross-country differences in household saving rates.

Perhaps one reason for our failure to detect a significant impact of social safety nets on the household saving rate is that we did not take account of the breakdown of social safety nets among the various categories.   For example, social assistance aimed at the poor might have a very different impact on household saving than a universal health insurance or public pension system.   One avenue for further research is to try breaking down social benefits into its various components.

4. An Analysis of the Determinants of the Domestic Saving Rate in the Developing Economies of Asia

In this section, we discuss our analysis of the determinants of the domestic saving rate in the developing economies of Asia.

Developing Asia has been characterized by high domestic and national saving rates almost across the board in recent years, and these high saving rates have made possible not only high levels of domestic investment but also large capital outflows (current account surpluses) (see, for example, the data presented in Park and Shin (2009)).   To put it another way, the developing economies of Asia have oversaved and underinvested, leading to large current account imbalances (surpluses), as asserted by Bernanke (2005) and others.

However, population aging is projected to occur at a rapid rate in developing Asia, which will presumably lead to a sharp decline in saving rates.   If so, the large current account imbalances (surpluses) that currently exist will go away by themselves without any need for government intervention.   However, if other factors, such as culture, financial sector development, or corporate sector saving, are the dominant determinants of saving rates, it is possible that saving rates will remain high in developing Asia despite the rapid aging of its population.

The purpose of this section is to present data on trends over time in domestic saving rates in twelve economies in developing Asia during the 1960-2008 period, to analyze the determinants of those trends, and to project trends in domestic saving rates in these same economies during the

next twenty years (2010-2030 period). The twelve economies included in our analysis include the People's Republic of China (PRC); Hong Kong, China; India; Indonesia; Republic of Korea; Malaysia; Pakistan; Philippines; Singapore; Chinese Taipei; Thailand, and Vietnam, which comprise 95 percent of developing Asia.

(1) A Survey of Previous Empirical Studies and Determinants of Saving

There have been many previous empirical analyses of the determinants of national and domestic saving rates using cross-section or panel cross-country data or time series data for individual economies, among them Modigliani (1970), Feldstein (1977, 1980), Modigliani and Sterling (1983), Horioka (1989), Edwards (1996), Dayal-Ghulati and Thimann (1997), Bailliu and Reisen (1998), Higgins (1998), Loayza, et al. (2000), Chinn and Prasad (2003), Luhrman (2003), International Monetary Fund (2005), Bosworth and Chodorow-Reich (2007), Ito and Chinn (2007), Kim and Lee (2008), Park and Shin (2009), and Horioka and Yin (2010). The present study is based most closely on Higgins (1998), Bosworth and Chodorow-Reich (2007), and Park and Shin (2009).

These studies suggest an important role for demographic variables based on the life cycle model. Looking first at the impact of the age structure of the population, since the aged typically finance their living expenses by drawing down their previously accumulated savings, the aged dependency ratio (the ratio of the aged population to the working-age population) should have a negative impact on the saving rate, and similarly, since children typically consume without earning income, the child dependency ratio (the ratio of children to the working-age population) should also have a negative impact on the saving rate. However, a lower child dependency ratio means fewer children to provide care and financial assistance during old age and hence the child dependency ratio could have a positive impact on the saving rate. Park and Shin (2009) and most other studies find that the aged dependency ratio and the youth dependency ratio both decrease the national saving rate, as expected. Moreover, they also find that life expectancy has a positive impact on the saving rate because a lengthening of life expectancy increases people's retirement spans and necessitates more saving for retirement and that the labor force participation rate of aged has a negative impact on the saving rate because an increase in the labor force participation rate of the aged shortens people's retirement spans and reduces the amount of saving needed for retirement.

A high growth rate of real GDP is another important factor, creating a virtuous cycle in which rapid income growth makes it easy to save, and high saving feeds back through capital accumulation to promote further growth. Bosworth and Chodorow-Reich (2007) as well as Park and Shin (2009) find that both contemporaneous and lagged real per capita GDP growth rates increase the national saving rate. Moreover, Park and Shin (2009) also find that the level of per capita income has a significant nonlinear or more precisely convex relationship with the saving rate in Asia, but Bosworth and Chodorow-Reich (2007) do not find a significant effect.

Aside from the demographic and GDP-related variables, financial development is also

considered to be a crucial factor, but the direction of its impact is ambiguous theoretically as well as empirically. For example, Loayza, et al. (2000) as well as Horioka and Yin (2010) find that it has a negative impact, while Park and Shin (2009) find that its impact is insignificant. Anecdotal evidence suggests that the relationship between financial development and saving rate can be nonlinear depending on the level of financial development. For example, Jha, et al. (2009) suggest that the greater availability of saving instruments and better accessibility to banks may promote *higher* saving, contrary to the negative impact found by Loayza, et al. (2000) and Horioka and Yin (2010). This paper investigates this possible nonlinear relationship between financial development and the saving rate.

Others argue that many of the developing Asian economies have underdeveloped public pension systems and social insurance systems more generally and that this encourages precautionary saving by households. Jha, et al. (2009) argue that the underdeveloped social insurance system is one of the factors that contributed to the recent rise in household saving in the PRC. Moreover, Horioka and Yin (2010) argue for a complementary relationship between the social benefit ratio and the level of financial development by analyzing the determinants of the household saving rate using panel data on 23 member countries of the OECD for the years 1995, 2000, and 2005, with a higher social benefit ratio reducing the negative impact of the level of financial development on the household saving rate.

Finally, the surge in corporate saving has gained increasing attention since the early 2000s, for example by ADB (2009) and others. Since households, particularly in Asia, have not reduced their saving enough to offset the increase in corporate saving, it has often been claimed that the increase in corporate saving has become an important determinant of private saving in recent years.

(2) Trends in the Domestic Saving Rate in Developing Asia

In this section, we discuss past trends in the domestic saving rate and in the determinants thereof in developing Asia. Throughout this paper, we use the real domestic saving rate, which is computed by subtracting the consumption and government shares of real GDP per capita from 100.

Figure 1 shows trends over time in the domestic saving rate, and as can be seen from this figure, trends over time vary substantially among the twelve economies considered here, but most economies in the region have saved substantial amounts during the past 40 years. Korea, Singapore, Malaysia, Thailand, and Chinese Taipei are the best examples. The domestic saving rates in these five economies rose sharply during the 1970s and 80s, exceeding or reaching close to 40% of GDP by the early 1990s. While the domestic saving rates of the economies of developing Asia declined in the late 1990s due to the Asian financial crisis, they then resumed their upward climb in the 2000s, reaching a new high except in the Philippines and Pakistan.

A milder but steady upward trend in domestic saving rates was observed in the PRC and India between 1970 and 2000, after which both countries experienced surges in their domestic

saving rates, partially driven by soaring corporate savings.[1]   The sharp increase in domestic saving rates, particularly in the PRC, in the 2000s has been blamed for the soaring global current account imbalances and hence for the global financial crisis that occurred in 2008.   Meanwhile, a few economies in developing Asia (such as Hong Kong (China), China, Indonesia, and the Philippines) have shown a moderate downward trend in their domestic saving rates since the early 1980s.   While domestic saving rates are still above 20% in Hong Kong (China), China and Indonesia, the already low saving rate in the Philippines declined to below 6% in 2003 before edging up slightly.[2]   Moreover, a few economies with very low domestic saving rates are noteworthy.   Vietnam, for example, showed negative domestic saving rates throughout the 1970s and 80s, until the country transitioned to a market economy in the 1990s.   Similarly, Pakistan's domestic saving rate was negative until the mid-1980s.

Figure 1: Real Domestic Saving Rate (% of GDP)

Source: Penn World Table version 6.2, authors' calculation (see Appendix Table 1)

Note: HKG=Hong Kong, China, IND=India, INO=Indonesia, KOR=Korea, MAL=Malaysia, PAK=Pakistan, PHI=Philippines, PRC=People's Republic of China, SIN=Singapore, TAP=Chinese Taipei, THA=Thailand, and VIE=Vietnam.

Various factors affected the trends in domestic saving rates described above.   First of all,

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[1] The saving rates of India and the PRC are greater in magnitude if one looks at a nominal measure.

[2] This declining trend is reversed for Indonesia if we look at a nominal measure such as that from *World Development Indicators* of the World Bank.   This is probably due to the high inflation rate Indonesia was experiencing during this period.

many of the economies in our sample experienced rapid demographic transition. Life expectancy rose sharply from an average of about 53 in the early 1960s to 73 in the late 2000s in the sample as a whole. Consequently, the aged dependency rate also increased from 6.5 to 10.2 percent on average during the same period. Population aging has been particularly significant in Hong Kong, China; Korea; Singapore; and Chinese Taipei. Meanwhile, the aged dependency rate has been declining somewhat in Pakistan and Vietnam. The youth dependency rate shows a uniform picture, declining in all of the economies in our sample, though to a lesser extent in Pakistan. The labor participation rate of the aged has generally been declining throughout the sample period while domestic saving rates have been increasing. While population aging has been progressing steadily, other factors have also come into play, obscuring the relationship between demographics and the domestic saving rate (Figure 2, Panels A and B).

Financial sector development, in particular, played a significant role in developing Asia. James, et al. (1989) discuss the role played by financial incentives such as raising interest rates on time and saving deposits in increasing the domestic saving rate when the financial system was still shallow in the 1970s in Korea and Singapore, for example. Financial deepening accelerated after the mid-1980s, driven by financial liberalization in many economies. The developing Asian economies in our sample recorded deepening of their credit markets exceeding 100% of GDP except in India, Indonesia, Pakistan, the Philippines, and Vietnam. As opposed to earlier financial incentives, financial deepening would be expected to contribute toward reducing the need for precautionary saving. Panel C in Figure 2 shows a possible nonlinearity. Moreover, these demographic and financial developments were accompanied by the continuing but uneven increase in per capita GDP and its growth rate, as shown in panels D and E in Figure 2.

Public spending such as social and/or pension benefits are also important as a factor driving up precautionary savings if they are insufficient and households are worried about their future livelihoods. Public expenditures on social services including spending on pensions as well as education and health services have generally been low in developing Asia, averaging less than 5% of gross national disposable income during the sample period, which is far lower than in the OECD countries where most economies spent more than 15% of GDP on social services and pensions as of 2005.[3] Moreover, expenditures on social services and pensions have not shown an obvious upward trend in most economies in developing Asia. Panel F in Figure 2 suggests that higher social services expenditures are associated with lower domestic saving rates. The next section tries to disentangle the impact of these various factors driving domestic saving rates in developing Asia.

(3) Estimation Results concerning the Determinants of Domestic Saving Rates

In this section, we present our estimation results concerning the determinants of domestic saving rates in developing Asia during the 1965-2007 period. We estimated both a country-

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[3] The sole exceptions are Mexico, Korea, and Turkey, whose ratios of public expenditures on social services and pensions to GDP are equivalent to those in developing Asia.

fixed-effects model and a random-effects model with robust standard errors, and following past studies such as Bosworth and Chodorow-Reich (2007) and Park and Shin (2009), the observations are five-year averages except for the most recent period which includes the years between 2000 and 2007. Thus, we have maximum of 8 observations per economy, and a maximum of 78 total observations. The reduced form estimating equation is given by:

$$SR_{i,t} = \beta_{0,i} + \beta_1 * AGE_{i,t} + \beta_2 * DEP_{i,t} + \beta_3 * LNGDP_{i,t} + \beta_4 * CREDIT_{i,t} + \beta_4 * X_{i,t} + u_{i,t}$$

where $= 1, \ldots 12$ (1=PRC (PRC), 2=HKG (Hong Kong, China), 3=INO (Indonesia), 4=IND (India), 5=KOR (Republic of Korea), 6=MAL (Malaysia), 7=PAK (Pakistan),

Figure 2: Domestic Saving Rate (% of GDP) versus Its Determinants

Source: See Appendix Table 1
Note: PWTSR = Domestic saving rate

8=PHI (Philippines), 9=SIN (Singapore), 10=THA (Thailand), 11=TAP (Chinese Taipei), and 12=VIE (Vietnam); and t=1, … 8 (1=1965-69, 2=1970-74, 3=1975-79, 4=1980-84, 5=1985-1989, 6=1990-1994, 7=1995-1999, and 8=2000-2007). $SR_{i,t}$ represents the real domestic saving rate in an economy i at time t; $AGE_{i,t}$ is the aged dependency ratio (the ratio of

the population aged 65 or older to the population aged 15-64); $DEP_{i,t}$ is a youth dependency ratio (the ratio of the population aged 14 or younger to the population aged 15-64); $LNGDP_{i,t}$ is the log of per capita real GDP; $CREDIT_{i,t}$ is the ratio of private credit from deposit money banks and other financial institutions to GDP; and $X_{i,t}$ is a vector of the other explanatory variables included in the estimation model.   Details concerning the variables used in our analysis can be found in Appendix Table 1.

Our estimation results are shown in Table 3 and 4.   The results are shown for seven specifications in panels 1 through 7 for both the fixed and random-effects models.   While the results of standard tests such as the Hausman specification test suggest the use of random-effects models, we show the results for both random and fixed-effects models.   This is because omitting country-fixed-effects seems to increase the residuals for some economies, such as the PRC, and because we are interested in knowing whether there are significant country-fixed-effects when explaining domestic saving rates.   When a country-fixed-effects model is estimated, the reference economy is PRC (i = 1).

All seven estimation models include the six variables, AGE and DEP, per capita real GDP (LNGDP) and its squared term (LNGDPSQ), and CREDIT and its squared term (CREDITSQ). Other macroeconomic variables, such as the growth rate of per capita real GDP (CHGDP), the inflation rate (INFL), and the nominal interest rate (INT) (or the real interest rate, RINT) as well as public expenditures on social services and pensions as a percent of Gross National Disposable Income (SSR) and fiscal balance as a percent of GDP (FISC) are then added in models 2 through 7.

As the tables show, our results are satisfactory and broadly consistent with those of previous studies.   Looking first at the basic models (models 1-3 in Tables 1 and 2), the coefficient of AGE (the aged dependency ratio) is negative and significant, as expected (-0.83 to -0.95 in the fixed-effects model and -1.55 to -1.69 in the random-effects model).   However, the sign of the coefficient of DEP (the youth dependency ratio) is not stable and it is totally insignificant in both the fixed-effects model and random-effects models, which is not surprising given the offsetting effects mentioned earlier.

Turning to the GDP-related variables, the coefficient of LNGDP (the log of real per capita GDP) is negative and significant, as expected, with its square term being positive and significant, suggesting a nonlinear (convex) relationship with the domestic saving rate, as was also found by Park and Shin (2009).

Turning to the financial variables, the availability of private credit exhibits a concave relationship with the domestic saving rate, with the coefficient of CREDIT (the ratio of private credit to GDP) being positive and significant and the coefficient of its squared term being negative and significant.   This nonlinear relationship indicates that financial development leads to a higher domestic saving rate up to a point, after which it works to lower the domestic saving rate, consistent with anecdotal evidence reported in Jha, et al. (2009).

As for the coefficients of CHGDP (the rate of change of real per capita GDP), INT (the nominal interest rate), INFL (the inflation rate), and RINT (the real interest rate), they are not significant in any model except that the coefficient of CHGDP is positive and significant in the random-effects version of model 5.

When FISC (the ratio of the fiscal balance to GDP) is added to the explanatory variables (models 3, 4, 6 and 7), its coefficient is positive, as expected, but it is significant only in the random-effects version except for model 6. Moreover, the coefficients of AGE and LNGDP become insignificant except for the coefficient of AGE in the random-effects version of model 3, and the coefficients of CHGDP, INT, INFL, and RINT remain insignificant except for the coefficient of INFL in the fixed-effects and random-effects versions of model 3 and the coefficient of RINT in the fixed-effects version of model 6.

When SSR (the ratio of public expenditures on social services and pensions to Gross National Disposable Income) is added to the explanatory variables (models 4 and 7), only the coefficients of the two credit-related variables are significant in the fixed-effects versions of models 4 and 7 while only the coefficients of the two credit-related variables and the coefficients of FISC and SSR are significant in the random-effects versions of models 4 and 7, with the coefficient of FISC being positive and the coefficient of SSR being negative, as expected.

Finally, the results of the fixed-effects models show that the country-fixed-effects are significant for most economies (except for Korea, Malaysia, and Singapore) with a significant negative sign when the PRC is taken as the reference economy, indicating a very high domestic saving rate in the PRC.

In sum, the main determinants of the domestic saving rate in developing Asia during the 1965-2007 period appear to be the age structure of the population (especially the aged dependency ratio), income levels, and the level of financial development except as noted above and moreover, the direction of impact of each factor is more or less as expected.

Table 3: Results of Fixed Effects Model

Model	AGE	DEP	LNGDP	LNGDPSQ	CREDIT	CREDITSQ	CHGDP	INT	INFL	FISC	SSR	RINT	R-squared	Obs
1	-0.95	-0.03	-43.13	2.92	14.48	-6.46							0.76	78
	0.41	0.07	8.82	0.53	5.17	1.87							1.00	
	-2.30	-0.41	-4.89	5.53	2.80	-3.46							0.97	
2	-0.89	0.06	-33.67	2.42	15.14	-6.26	0.13	-0.05	-0.02				0.69	70
	0.46	0.12	11.93	0.71	5.75	1.93	0.16	0.15	0.15				1.00	
	-1.92	0.51	-2.82	3.40	2.63	-3.25	0.85	-0.36	-0.16				0.97	
3	-0.57	0.05	-20.08	1.50	12.27	-4.50	0.17	0.16	-0.33	0.28			0.78	56
	0.43	0.09	13.09	0.76	6.29	2.12	0.20	0.17	0.14	0.21			1.00	
	-1.34	0.60	-1.53	1.96	1.95	-2.13	0.83	0.93	-2.37	1.31			0.98	
4	-0.18	-0.04	-23.60	1.46	19.19	-6.48	0.22	-0.30	-0.20	0.25	-0.67		0.82	35
	0.62	0.26	28.57	1.63	8.56	2.54	0.42	0.37	0.24	0.31	0.69		1.00	
	-0.29	-0.17	-0.83	0.90	2.24	-2.55	0.52	-0.79	-0.84	0.80	-0.97		0.99	
5	-0.83	0.05	-35.63	2.53	14.88	-6.25	0.16					0.03	0.69	70
	0.44	0.12	12.19	0.73	5.74	1.91	0.17					0.14	1.00	
	-1.88	0.41	-2.92	3.49	2.59	-3.27	0.93					0.21	0.97	
6	-0.40	0.05	-20.81	1.56	12.12	-4.58	0.23			0.26		0.30	0.77	56
	0.41	0.08	13.42	0.78	6.01	2.07	0.20			0.22		0.15	1.00	
	-0.99	0.60	-1.55	1.99	2.02	-2.21	1.13			1.20		1.96	0.98	
7	0.42	-0.03	-11.06	0.90	16.07	-6.22	0.04			0.38	-0.68	0.11	0.81	35
	0.67	0.25	25.29	1.49	7.62	2.53	0.33			0.33	0.67	0.26	1.00	
	0.62	-0.14	-0.44	0.61	2.11	-2.46	0.12			1.14	-1.02	0.44	0.98	

Note: The figures are the estimated coefficient (first row), the robust standard error (second row), and the z-value (third row). The country fixed effects are not shown to save is within, the second R-squared is between, and the third R-squared is overall.

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Table 4: Results of Random Effects Model

Model	Const.	AGE	DEP	LNGDP	LNGDPSQ	CREDIT	CREDITSQ	CHGDP	INT	INFL	FISC	SSR	RINT	R-sq	Obs
1	203.20	-1.58	-0.08	-46.79	3.15	15.35	-6.71							0.75	78
	49.34	0.47	0.08	10.74	0.63	5.95	2.19							0.68	
	4.12	-3.39	-0.95	-4.36	4.98	2.58	-3.06							0.74	
2	156.49	-1.55	-0.03	-37.31	2.64	14.78	-6.12	0.24	-0.12	0.01				0.67	70
	63.70	0.51	0.10	14.30	0.84	6.08	2.11	0.19	0.18	0.17				0.73	
	2.46	-3.07	-0.27	-2.61	3.14	2.43	-2.90	1.28	-0.68	0.05				0.77	
3	96.11	-0.78	0.04	-23.12	1.70	12.40	-4.69	0.21	0.12	-0.30	0.30			0.78	56
	67.86	0.45	0.09	14.69	0.83	5.77	1.91	0.20	0.18	0.16	0.17			0.70	
	1.42	-1.73	0.45	-1.57	2.04	2.15	-2.46	1.06	0.66	-1.92	1.77			0.70	
4	31.08	-1.42	0.12	-2.93	0.34	31.88	-10.68	-0.03	-0.94	-0.22	1.02	-0.94		0.65	35
	189.00	1.14	0.19	40.26	2.29	9.98	3.34	0.61	0.71	0.72	0.38	0.50		0.87	
	0.16	-1.25	0.60	-0.07	0.15	3.19	-3.20	-0.05	-1.34	-0.30	2.71	-1.87		0.82	
5	171.93	-1.69	-0.06	-40.65	2.85	14.63	-6.15	0.31					-0.04	0.66	70
	64.89	0.54	0.10	14.36	0.84	6.23	2.20	0.18					0.18	0.75	
	2.65	-3.15	-0.64	-2.83	3.39	2.35	-2.80	1.70					-0.22	0.78	
6	104.21	-0.79	0.02	-25.93	1.91	12.63	-5.00	0.32			0.30		0.23	0.76	56
	78.37	0.52	0.10	17.08	0.98	5.88	2.01	0.23			0.19		0.19	0.70	
	1.33	-1.52	0.20	-1.52	1.95	2.15	-2.49	1.38			1.54		1.19	0.70	
7	-32.11	-0.91	0.23	4.96	0.03	34.87	-11.71	0.04			1.04	-0.99	-0.09	0.52	35
	188.66	1.16	0.16	41.26	2.38	8.15	3.09	0.61			0.38	0.58	0.87	0.89	
	-0.17	-0.79	1.39	0.12	0.01	4.28	-3.79	0.07			2.74	-1.73	-0.10	0.79	

Note: The figures are the estimated coefficient (first row), the robust standard error (second row), and the z-value (third row). The first R-squared is within, the second R-squared is between, and the third R-squared is overall.

(4) Projections of Domestic Saving Rates for 2011-2030

In this section, we discuss our projections of domestic saving rates for 2011-2030. Comparing out-of-sample projections based on the random-effects and country-fixed-effects models suggests that the random-effects model does not perform as well as the fixed-effects model in fitting the domestic saving rate for a number of economies such as the PRC, Singapore, Pakistan, and the Philippines. The projections from the random-effects models underestimate the saving rates of the former two economies while overestimating those of the latter two economies. This is consistently true for all seven random-effects models. For the PRC, omitting the country-fixed-effect would yield a far lower saving rate of about 24% of GDP for the 2000-2007 period—10 percentage points lower than the actual rate. A possible explanation for the case of the PRC is omitted factors such as the increase in the corporate saving rate during this period (IMF, 2009) and/or the distorted sex ratio of those of marrying age (Wei, 2009). Another example of an obvious deviation of the fitted saving rate from the actual rate is the Philippines. The fitted saving rate based on the random-effects model does not seem to show the decline observed in the actual rate. The rapidly increasing coverage of the social security system has been suggested as one of the explanations for why this might be (Terada-Hagiwara, 2009). However, if one views these factors as being of a cyclical or temporary nature, as was apparently the case in the recent past, the random-effects model may in fact be a more suitable model for generating "long-term" projections. Thus, we generate projections using both models.

Our projections for the next two decades, 2011-2020 and 2021-2030, rely on the United Nations' (U.N.) projections of the age structure of the population (the aged and youth dependency ratios) and the GDP projections in Lee and Hong (2010). Since projections of financial development are not available, we assume that financial deepening progresses according to the level of per capita income. We first identify the income group of the 12 economies in the next two decades and then use the level of the credit to GDP ratio for the corresponding income group in 2008.[4]

Saving rate projections are generated for the periods 2011-2020, and 2021-2030 using the coefficients in both the fixed and random-effects variants of model 1. Table 5 and Figures 3 and 4 show future projections of domestic saving rates for the twelve economies in our sample.

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[4] Based on this assumption, the credit to GDP ratio will deepen to 130% by the 2021-2030 period in the PRC inasmuch as this economy is projected to belong to the high income group by then. Likewise, the credit to GDP ratio is assumed to deepen in Korea, Malaysia, and Singapore to 130% in the next two decades—a slight improvement relative to the recent past. The credit to GDP ratio is assumed to be 105% in the upper middle income group including Thailand and 46% in the lower middle income group including Indonesia, India, Pakistan, and the Philippines.

Table 5: Average Domestic Saving Rate Projections

	Country	PRC	HKG	INO	IND	KOR	MAL	PAK	PHI	SIN	THA	TAP	VIE
FE	2011-2020	39.0	31.9	25.9	19.1	41.8	47.8	9.6	16.5	55.2	32.4	25.1	20.0
	2021-2030	43.3	23.9	26.3	22.4	37.2	48.6	11.2	16.7	43.8	31.1	20.4	19.5
RE	2011-2020	28.4	37.7	22.5	23.5	31.5	40.4	22.3	23.3	37.9	25.7	27.2	21.8
	2021-2030	29.2	20.5	20.8	25.6	19.5	38.9	23.5	22.3	14.9	20.2	15.1	17.9

Source: Authors' calculation, Lee and Hong (2010), United Nations. World Population Prospects, The 2008 Revision, available at http://esa.un.org/unpp

Figure 3: Past and Future Domestic Saving Rates based on Fixed-Effects Model
2000-2007 (left bar, actual), 2011-2020 (middle bar, projection),
and 2021-2030 (right bar, projection)

Source: Authors' calculation, Lee and Hong (2010), United Nations. World Population Prospects, The 2008 Revision, available at http://esa.un.org/unpp

Figure 4: Past and Future Domestic Saving Rates based on Random-Effects Model
2000-2007 (left bar, actual), 2011-2020 (middle bar, projection),
and 2021-2030 (right bar, projection)

Source: Authors' calculation, Lee and Hong (2010), United Nations. World Population Prospects, The 2008 Revision, available at http://esa.un.org/unpp

The aging of the population appears to be the dominant determinant of future trends in domestic saving rates, and financial deepening to a lesser extent. As expected, domestic saving rates are expected to show a downturn by 2030 in the economies in which the aging of the population is expected to proceed the most rapidly. The projections based on the fixed-effects model show that the rapidly aging economies (Hong Kong, China; Korea; Singapore; and Chinese Taipei), where the aged dependency ratio is projected to reach close to or above 40% by 2030, will show a 6 to 12 percentage point decline in their domestic saving rates during the next two decades. The saving rate is projected to show a slight downturn by 2030 in economies in which the aging of the population is expected to proceed at a slower pace (Thailand), and it is projected to continue increasing or level off until 2030 in those economies in which the aging of the population is expected to proceed at the slowest pace (the PRC, Indonesia, India, Malaysia, Pakistan, Philippines, and Vietnam).

There are two economies, the PRC and Malaysia, which show opposite trends depending on which model we use. The domestic saving rates of these two countries are projected to decline from the 2000s to the 2020s if a random-effects model is used but are projected to continue increasing if a fixed-effects model is used. This is due to differences in the estimated coefficient of AGE, which is much larger in absolute terms when the random-effects model is used even though the coefficients of the other explanatory variables are relatively similar. Thus, the increase in the aged dependency ratio in these two economies is projected to cause a much larger decline in their domestic saving rates when the random-effects model is used than when the

fixed-effects model is used.

Our projections are broadly similar even if we assume that financial deepening does not progress as assumed, which confirms the importance of the demographic variables.[5]

The dramatic differences among economies in developing Asia in projected future trends in their domestic saving rates are not surprising because there is a 30 to 40 year gap in the timing of population aging in the 12 economies in the sample, as can be seen from Table 6. As a result of these dramatic differences in the timing of the demographic transition in the coming decades, the decline in domestic saving rates will not occur simultaneously in the economies of developing Asia but will rather be spread out over a half-century, with the decline in domestic saving rates in some economies being offset by the increase in domestic saving rates in other economies until at least 2040.

Table 6: Average Domestic Saving Rate Projections

Economy	The Year in which the Population Aged 65 or Older in the Total Population Reaches 14 percent	The Year in which the Demographic Bonus Ends
PRC	2020-25	2015
HKG	2010-15	2010
INO	2040-45	2030
IND	2050-55	2035
KOR	2015-20	2015
MAL	2040-45	2020
PAK	After 2055	After 2055
PHI	2050-55	2040
SIN	2015-20	2010
THA	2020-25	2010
TAP	2015-20	2018
VIE	2030-35	2020
Japan	1990-95	1990

Note: The demographic bonus is defined as the period during which the proportion of those aged 14 or younger falls below 30 per cent and the proportion of those aged 65 years or older remains below 15 per cent.

Source: The United Nations' (U.N.) projections available at http://esa.un.org/unpp, and the Statistical Yearbook for Taipei, China, available at http://www.cepd.gov.tw/ encontent/m1.aspx?sNo=0000063.

[5] If financial deepening does not progress and remains at the average level of 2000-2007 , the domestic saving rates of a number of economies such as Indonesia, India, Pakistan, and the Philippines will be higher than our projections by 1 to 3 percentage points, while the domestic saving rates in the PRC and Malaysia will be lower than our projections by 0.2 percentage points.

Moreover, the projected decline in domestic saving rates from the 2000s until the 2030s in the rapidly aging economies ranges from 6.0 percentage points (Chinese Taipei) to 12.9 percentage points (Singapore), which is about the same or larger than what other already aging economies such as Japan have experienced over the last 20 years. In Japan, the domestic saving rate declined from its peak of 39% in the late 1980s to 33% in the early 2000s, during which time the aged dependency ratio rose from 16% to 29%. The more pronounced decline in developing Asia's domestic saving rate might be due to the fact that aging is expected to progress more rapidly. Nonetheless, the fact that more than half (seven) of the economies in developing Asia are projected to show increases in their domestic saving rates suggests that the decline in domestic saving rates in developing Asia as a whole will proceed only gradually, at least until 2040, meaning, for better or worse, that global imbalances are not likely to be eliminated any time soon.

(5) Summary and Conclusions

In this section, we conducted an econometric analysis of the determinants of domestic saving rates in developing Asia during the 1960-2007 period and found that the main determinants of the domestic saving rate in developing Asia during the 1960-2007 period appear to be the age structure of the population (especially the aged dependency ratio), income levels, and the level of financial development, and moreover, that the direction of impact of each factor is more or less as expected.

We then projected future trends in domestic saving rates in developing Asia during the 2011-2030 period and found that the aging of the population will be the main determinant of future trends in domestic saving rates. However, we found that there will be substantial variation from economy to economy, with the rapidly aging economies showing a sharp downturn in their domestic saving rates by 2030 and the less rapidly aging economies showing only a moderate downturn or no downturn by 2030. Thus, it does not appear that there will be a sharp decline in saving rates in developing Asia as a whole, at least during the next two decades, meaning, for better or worse, that global imbalances are not likely to be eliminated any time soon.

5. Overall Conclusions and Policy Implications

In this paper, we found that the age structure of the population (especially the aged dependency ratio) and financial development (credit availability) are the most important determinants of saving rates in both developed and developing economies and that the development of the social safety net and income levels are also important in some cases.

Turning to the policy implications of our findings, our finding that there is not a clear relationship between social safety nets and saving rates implies that improving social safety nets will not necessarily reduce household saving rates and stimulate consumption, but doing so may be desirable in any case because it will obviate the need for households to worry about unexpected contingencies, retirement security, etc., thereby enhancing household welfare. Moreover, our finding that financial development is more important as a determinant of saving rates implies that

the development of capital markets (and the relaxation of borrowing constraints) will alleviate the need for precautionary saving (self-insurance), which is very inefficient, and serve as a partial substitute for the development of social safety nets, especially in economies with underdeveloped social safety nets, leading to lower saving, higher consumption, and higher household welfare. Thus, a two-pronged approach of simultaneously developing social safety nets and private capital markets may be the most effective way to enhance household consumption and welfare.

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Appendix: Table 1: Descriptive Statistics

Variable		Data source	Note
Real domestic saving rate	SR	Computed as 100-kg-kc. Heston et al., Penn World Table version 6.3 (PWT) 1/	kg is Government Share of Real GDP per capita , and kc is Consumption Share of Real GDP per capita. Both from PWT.
Aged dependency ratio	AGE	"SP.POP.DPND.OL" from World Development Indicators (WDI) of World Bank 2/ and the *Statistical Yearbook* for Taipei,China 3/	Ratio of the population aged 65 or older to the population aged 15-64
Youth dependency ratio	DEP	"SP.POP.DPND.YG" from WDI and the *Statistical Yearbook* for Taipei,China	Ratio of the population aged 0-14 to the population aged 15-64
Real per capita GDP	LNGDP	"rgdpch" from Penn World Table version 6.3	Real GDP per capita (2005 Constant Prices: Laspeyres)
Real per capita GDP growth	CHGDP	"grgdpch" from Penn World Table version 6.3	Growth rate of Real GDP Chain per capita (rgdpch)
Private credit by deposit money banks and other financial institutions (% of GDP)	CREDIT	"pcrdbofgdp" from Beck and Demirguc-Kunt (2009) and line 32D from International Financial Statistics (IFS) of the International Monetary Fund for the PRC	Private Credit by Deposit Money Banks and Other Financial Institutions
Public expenditure on social services and pensions (% of GNDI)	SSR	CEIC Data Company Ltd., and Department of Budget and Management for the Philippines. 4/	Government Expenditure on Social services divided by Gross National Disposable Income

Fiscal balance (% of GDP)	FISC	CEIC Data Company Ltd., Asian Development Outlook Database, Key Indicators (various issues) of Asian Development Bank 5/, Bank of Thailand 6/, and Bank Negara Malaysia 7/.	Surpluses are positive and deficits are negative
Interest rate	INT	IFS, and the Central Bank of the Republic of China (Taipei,China's central bank) for Taipei,China. 8/	Used data on the deposit rate (line 60L of IFS) except for India, Pakistan, and Korea, for which we used the discount rate (line 60 of IFS)
Inflation rate	INFL	"NY.GDP.DEFL.KD.ZG" from WDI	
Real interest rate	RITN	IFS, WDI, and the Central Bank of the Republic of China	Computed as $\ln((1+INT/100)/(1+INFL/100))$

Note:

1/ Available at http://pwt.econ.upenn.edu/php_site/pwt_index.php

2/ Available at http://devdata.worldbank.org/dataonline/

3/ Available at http://www.cepd.gov.tw/encontent/m1.aspx?sNo=0000063

4/ Available at http://www.dbm.gov.ph/index.php?id=32&pid=9

5/ Available at http://www.adb.org/Statistics/ki.asp

6/ Available at http://www.bot.or.th

7/ Available at http://www.bnm.gov.my

8/ Available at http://www.cbc.gov.tw/ct.asp?xItem=30010&CtNode=517&mp=2

Appendix Table 2: Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
PWTSR	24.0	14.3	-8.4	61.9
AGE	7.8	2.2	3.8	16.7
DEP	60.5	19.4	17.7	91.3
CHGDP	4.4	4.2	-14.2	20.2
LNGDP	7075.4	8549.6	435.8	44619.0
INFL	7.7	5.0	0.0	39.1
INT	7.8	5.2	0.0	39.1
CREDIT	0.6	0.5	0.1	2.4
FISC	-1.4	4.2	-16.7	16.1
SSR	4.8	3.4	0.7	16.9

Uncertainty of Public Pension and Precautionary Saving in Japan
—Evidence from the Micro Data of Close-to-retirement Households

Wataru Suzuki[*] and Yanfei Zhou[**]

Introduction

The Japanese net household saving rate (national accounting base) slid to a historical low level of 3.2% in 2006, from 11.4% in 1997. However, the savings behavior of each individual household, measured by the gross saving rate (also named "surplus ratio") of worker households, remained around 25–30% in the 2000s (see Table 1). Even retirement-age households, with a head-of-household aged 60 or over, save nearly 10% of their disposable income each year. Meanwhile, Japanese households' wealth accumulation is still the highest among the OECD countries. Elderly households, however, are the major holders of this huge accumulation of wealth: households with heads-of-household aged 60 or over own 78.6% of total net financial wealth, while their share of the population is only 37.4% (see Table 2). A recent simulation study by Uemura (2008) suggests that Japanese elderly households hold a total of 179 trillion yen of excessive savings, compared with the predicted amount based on a typical life-cycle model.

This huge wealth holding of Japanese elderly households, however, is regarded by government and business as a potential source of Japanese economic recovery. If part of the elderly households' wealth and savings could be shifted to consumption, strong domestic demand would be created, and the stagnant Japanese economy may then have a good chance of recovering. The Japanese government has already introduced policies to encourage elderly households to spend some of their financial wealth: (1) a tax cut for inter vivos transfers (e.g., the tax-free cap for housing fund donation to children or grandchildren was raised from 3.3 million yen to 5.5 million yen in 2001, and then to 15 million yen in 2010), and (2) expanding social security expenditure in order to ease the anxieties of elderly nationals. The current Democratic Party regime treats social security expansion not only as an antirecession measure but also as a long-term economic growth strategy (Democratic Party Manifesto 2009). One of their theoretical bases, however, is that social security expansion could alleviate elderly households' insecurity and lead to more active consumption.

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The social security system is undoubtedly a critical source of uncertainty for nationals. Uncertainty significantly affects household saving/consumption, because it is a universal experience (e.g., uncertain longevity, unexpected disaster and sickness, etc.) and because Japanese households are highly risk averse. For instance, a well-run medical care system or long-term nursing care system could ease households' uncertainties about medical-care or nursing-care costs in the future, and hence reduce households' need for excessive savings. On the contrary, the absence of such systems could encourage excessive saving by households.

Recently, a surge in anxiety about the sustainability of the public pension system has introduced a major uncertainty for Japanese households. As we will explain in Section 2, public pension uncertainty is very likely to be responsible for the precautionary savings and excessive wealth accumulation by elderly households. The essential question is as follows: how much precautionary saving result from public pension uncertainty? Answers to this puzzle will be critical for the evaluation of the Democratic Party's social security expansion policy and for the development of future growth strategies. Nevertheless, very few empirical studies have been conducted on this topic.

The present paper therefore uses a unique survey conducted by the Japan Institute for Labour Policy and Training (JILPT) in 2009 to tackle this problem. An important contribution of the JILPT survey is the provision of data on public pension uncertainty: the anticipated percentage change (APC) in public pension benefits with respect to the present benefit level, and the ideal amount (IA) of public pension for retirement. These data enable us to construct two indexes of public pension uncertainty: anticipated change rate in public pension benefits, and the expected change in the value of public pension benefits (APC×IA). Additionally, to assess precautionary savings motives more precisely, we limit our samples to people close to retirement for whom the labor income risk should be relatively small, following Lusardi (1997). Our estimates indicate that public pension uncertainty affects household wealth accumulation significantly, and that precautionary savings make up nearly 10% of net and 5% of gross financial wealth accumulation by close-to-retirement households.

1. Research Background and Literature Review

1.1 Background

(i) Households' surplus ratio remains high

The most recent Japanese net household saving rate (national accounting base) has slid to a historical low of 3.2% in 2006, from 11.4% in 1997. Along with population aging and capital depreciation, the net household saving rate may reach as low as zero or even become

negative in the long run (NIRA 2008). Accordingly, perception of Japanese household saving behavior has changed notably. Horioka (2004) compares net household saving rates between Japan and 13 other OECD countries and finds that Japan has not had the highest saving rate since the mid 1980s. He thus concludes that Japan may no longer be regarded as the nation of enthusiastic savers it once was.

Table 1 Household saving rates in Japan (1996–2008) (%)

	96	97	98	99	00	01	02	03	04	05	06	07	08
National Accounting Index (SNA)	10.4	11.4	10.7	10	7.9	5.2	4.6	3.9	3.4	3.5	3.2		
Kakei Survey Index													
Workers' H. : all	28.0	28.0	28.7	28.5	27.9	27.9	27.0	25.9	25.7	25.3	27.5	26.9	26.6
Workers' H. : head aged 60 or over	21.8	22.4	22.5	21.0	18.4	19.6	14.5	12.8	10.5	8.5	9.0	11.1	9.0
Retiree's H.: head aged 65 or over	-6.0	-6.3	-6.1	-7.4	-8.8	-13.3	-17.5	-16.8	-23.2	-20.7	-21.2	-24.9	-25.5

Source: Cabinet Office "Annual Report of National Accounting", MIC "Annual Report of Kakei Survey".
Notes: (1) The Kakei Survey workers' H. data relate to two-or-more person households. (2) There is a huge gap between the SNA index and the Kakei Survey index (also named "surplus ratio"). The SNA index is computed using macro data, and it is much lower than the Kakei Survey index largely because it (a) includes retired and unemployed households, and (b) has taken into account capital depreciation and imputed house rent.

However, in examining the saving behavior of each household, we get a different image. The gross saving rate (also named "surplus ratio") of the workers' households has been as high as 25–30% in the 2000s (see Table 1). Even retirement-age households, with heads-of-household aged 60 or over, save nearly 10% of their disposable income each year. Meanwhile, Japanese households' wealth accumulation remains among the highest of OECD countries. According to OECD statistics for 2006, the ratio of household net financial wealth to disposable income is 403.7% in Japan, which is notably higher than in the US (309.1%), Britain (291.3%), Germany (198.3%), and other OECD countries.

Hence, a simple question arises: do Japanese households save excessively and accumulate too much wealth? Dekle (1990) believes the answer is yes, at least for elderly households. Using a 1983 Japanese household survey, Dekle (1990) finds an obvious absence of dissaving among Japanese elderly households, based on there being no significant differences in total wealth between different age groups for Japanese elderly households. A recent simulation study by Uemura (2008) suggests that Japanese elderly households have around 179 trillion yen of excessive savings, compared with the predicted amount based on a

typical life-cycle model. Japanese households were estimated to hold a total of 456.9 trillion yen in net financial wealth in 2004, which is equal to nearly one year of GDP[1] in Japan (see Table 2). Elderly households, however, are the major holders of this huge stock of financial wealth: households with heads-of-household aged 60 or over own 78.6% of the total net financial wealth, while their population share is only 37.4%.

Table 2 Household wealth accumulation, by age of the household head

(2004, unit: 10,000 yen)

	Number of Households (A)			Net wealth (B)	Net financial wealth (C)	Housing& land assets	Other fixed assets	Annual income	Wealth/ income	share of total net wealth	share of total net financial wealth
0–29	5,271,641	(	10.7%)	817	-8	679	146	469	1.7	2.3%	-0.1%
30–39	7,714,522	(	15.7%)	1,459	-212	1,514	158	597	2.4	6.1%	-3.6%
40–49	7,570,791	(	15.4%)	2,712	148	2,393	171	777	3.5	11.2%	2.5%
50–59	10,161,606	(	20.7%)	4,160	1,020	2,955	186	878	4.7	23.0%	22.7%
60–69	9,034,720	(	18.4%)	5,556	1,884	3,499	173	624	8.9	27.3%	37.3%
70 and over	9,309,250	(	19.0%)	5,961	2,026	3,817	117	542	11.0	30.1%	41.3%
Total	49,062,530	(	100.0%)	3,900	950	2,786	164	696	5.6	100.0%	100.0%

Source: Bureau of Statistics "National Census 2005", "National Survey of Family Income and Expenditure 2004".

Notes: (1) The shares are computed by the authors. Share of total net wealth = $(B_i \times A_i)/\Sigma_j(B_j \times A_j)$; share of total net financial wealth = $(C_i \times A_i)/\Sigma_j(C_j \times A_j)$. (2) The total household net financial wealth (456.9 trillion yen) = $\Sigma_j(C_j \times A_j)$.

(ii) Public pension uncertainty surges

Recently, increasing concern about the sustainability of the public pension system has made this a more important uncertainty factor for Japanese households. According to the Social Security Survey conducted by the Japan Institute of Life Insurance (Seimei Hoken Bunka Center) in 2007, 69.2% of respondents feel somewhat anxious about life in retirement because they believe that the public pension cannot provide a reliable retirement income, which is 10.2 percentage points higher than the 1998 survey. Accordingly, the saving motive for living expenses during old age (namely "retirement saving") seems to be stronger.

A long-lasting annual survey by the Central Council for Financial Services Information shows that the saving motive for living expenses during old age has been sharply gaining weight since 1985, the year that Japan enacted significant reforms of its public pension system. Figure 1 shows the proportion of respondents that admitted having a saving motive for living expenses during old age. The retirement saving motive fluctuated around 30–40% before 1985; it then rose steadily thereafter, with an accelerated speed after the crash of the bubble economy in 1992 and after the scandal of the missing pension records in 2007. In 2009, 61.6%

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[1] The total gross financial wealth of Japanese households was estimated to be as much as 1,410.4 trillion yen in 2009 (Source: Bank of Japan "Statistics of Flow-of-Fund Account").

of Japanese reported that they were saving for retirement, almost a 20-percentage-point increase from 42.5% in 1985.

Figure 1 Historical trend of saving motive for living expenses during old age (%)

Source: the Central Council for Financial Services Information (Kinyu Koho Chuo Iinkai) (ed.) "Kakei no Kinyu Kodou ni Kansuru Seron Chosa" (Public Opinion Survey on Household Financial Choices), time series statistics from 1963 to 2009.

(iii) How can public pension uncertainty depress household consumption?

Japan's public pension system is a two-tiered system in which the first tier (namely, the "basic pension") is common for all nationals while the second tier is divided into three parts according to the occupation of the insurees: the Employees' Pension System to which private salaried workers belong, the Mutual Aid Association Pension System to which government workers belong, and the National Pension System[2] to which the self-employed and all others belong. All of these public pension systems are essentially operated on a pay-as-you-go basis. Thus, in a society in which fertility is declining and the population is aging, it becomes necessary to raise the contribution rate or cut the benefits of pensioners in order to keep a balanced budget.

Japan's population is known to be aging at its fastest rate in human history (Horioka et al. 2007). In 2008, the ratio of the productive-age (15–64 years) population to the elderly (65 and over) population reached 33.6%, which implies that it takes three productive-age people to support one elderly person. This ratio is projected to reach 50.2% in 2023 and 85.7% at the age peak of 2072. Besides this rapid aging process, the stagnation of economic growth in the past two decades has worsened the fiscal situation of the public pension system.

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[2] The maximum benefit level for the "basic pension" is 66,000 yen per month. Pensioners belonging to the National Pension System are eligible for the "basic pension" only, while pensioners belonging to the other two systems are eligible for a second-tier benefit proportional to his/her total earnings for their working lifetime.

Because of the significant political power of the elderly population, until the 1994 reform, the public pension budget was balanced mainly by increasing the contribution rate. The benefits of pensioners were protected, and few retirees felt any anxiety over their pension benefits. Raising the contribution rate repeatedly as a budget balancing mechanism, of course, imposed heavy burdens on working households and resulted in further distrust of the public pension system among young generations. Accordingly, the number of dropouts and premium defaulters within the National Pension System has increased sharply since the 1990s (Suzuki and Zhou 2010). In 2008, the default rate for the national pension premium reached as high as 37.9%.

In the 1994 pension reform (and reforms thereafter), the Japanese government had no choice but to begin cutting the benefits of pensioners step by step. Firstly, in the 1994 reform, the eligible age for the basic pension benefit was postponed from 60 to 65 years in a phased manner. Then in the 1999 reform, the eligible age for the second-tier benefit was changed from 60 to 65 in a phased manner. The 1999 reform reduced pensioner benefits by 20% in incremental steps. The 2004 reform introduced a new system named "Macro Economic Slide" (MES), whereby the benefit amount of pensioners was lowered automatically along with the declining birth rate and the increasing longevity of the elderly.[3] According to simulations by the Japanese government, no further benefit reductions or eligible age postponing will be necessary until 2023 if the MES functions well. However, because the peak of population aging will occur in 2075, the risk of further cuts in pension benefits will be very high over the longer term.

In summary, for most Japanese households, including the close-to-retirement households, public pension uncertainty arises from not only the existing MES but also the unavoidable future reforms. As Horioka (1990) warned, uncertainty in the future provisions of the Japanese public pension system will cause Japanese households to discount future benefits heavily and to save excessively.

1.2 Literature review

The idea that people engage in saving as protection against income risk represents an important innovation in the life-cycle permanent-income hypothesis in explaining excessive household saving and wealth accumulation. Many empirical studies have been performed to evaluate the importance and magnitude of precautionary saving, but so far the findings are inconclusive. As Lusardi (1997) stresses, one of the major problems of empirical work is how

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[3] The public pension system was regulated by law to be reformed once every five years, based on forecasts of the future financial situation of the system. After the introduction of MES in 2004, however, this "once every five years reform" is regarded as unnecessary, and it was deleted from law.

to construct an exogenous direct index of income risk. Some studies (e.g., Skinner 1998) use occupation as a proxy for income risk, but this is criticized for selectivity bias, because people may choose occupations depending upon their degree of risk aversion. Other studies (e.g., Guiso et al. 1992; Lusardi 1997, 1998) utilize households' expectations about the probability of unemployment or nominal earnings changes as a proxy for income risk. These studies may suffer from measurement error, because the self-reported earnings variance refers to one-period-ahead forecasts of income and cannot be interpreted as a measure of lifetime earnings variance. Other studies using income variance within homogeneous groups (e.g., Dardanoni 1991; Carroll and Samwick 1998) as a proxy for income risk. However, this measure of income risk is not appropriate unless the income variability of households within each group is homogenous enough and the income variance varies significantly across different groups.

As a whole, empirical studies that use occupation or subject earnings variance as a proxy for income risk find little evidence in favor of the precautionary saving model. For example, Skinner (1998) compares the saving rates across different occupations and finds that people in riskier occupations, such as farmers or the self-employed, are in fact saving less than are people in professions with less income variability. Guiso et al. (1992) and Lusardi (1997) both employ households' expected nominal earnings changes as a measure of income risk from the 1989 Italian SHIW. They find that precautionary savings explain only 2–2.8% of total wealth accumulation. Additionally, Lusardi (1998) constructs an income risk index by using information about the subjective probability of job loss from the Health and Retirement Survey. He then finds that although precautionary saving has a role in explaining excessive saving and wealth accumulation by people close to retirement, it explains only a small part (2–4.5% of net financial wealth) of total wealth accumulation.

On the other hand, empirical studies using the variance of the income of homogeneous groups as a measure of income risk have in general obtained results supportive of the precautionary saving model. For instance, Carroll and Samwick (1998) divide the Panel

Study of Income Dynamics sample into 26 groups according to the occupation, industry, and education of the head-of-household, with the variance and log of the income within each group employed as proxies for income uncertainty. As a result, they find that wealth and uncertainty are positively related, and that precautionary savings account for 45% of total net worth and 32% of very-liquid assets for households with heads-of-household aged younger than 50 years. Using cross-section data for Britain, Dardanoni (1991) estimates income variances by grouping the sample into dozens of groups with respect to the industry, economic position, and skill level of the head-of-household. His estimates indicate that more than 60% of savings arise as a precaution against future risk. Furthermore, Kazarosian (1997) decomposes

individual-specific income uncertainty into permanent and transitory components using National Longitudinal Survey. He finds that the impact of uncertainty on the ratio of wealth to permanent income is highly significant, and that a doubling of uncertainty increases the ratio of wealth to permanent income by 29%.

Empirical studies of Japanese precautionary saving, although still limited, have become more common since the 2000s. Zhou (2003) improves upon the methodology of Dardanoni (1991) and applies it to Japanese household-level data. Specifically, she divides a representative Japanese sample into 56 homogeneous groups with respect to the education, age, and occupation of the head-of-household, and regards the income variances within each group as proxies for income risk for each household in that group. Zhou (2003) finds that precautionary saving represents 5.6% of the total savings of salaried-worker households and 64.3% of the total savings of farmers and self-employed households. Bessho and Tobita (2008) quote job loss rates and standard deviations of income by gender, age, education, and marital status from macro statistics, and then match this information with Japanese household-level data to obtain proxies for income uncertainty. They find that uncertainty is positively related to the wealth-to-income ratio, and that precautionary savings account for 6–15% of household net financial assets.

Many recent empirical studies shed light upon the effect of uncertainties in the social security system on household saving. The uncertainty of medical expenses, however, is one of the hottest topics. Using data from the 1989 Survey of Consumer Finances, Starr-McCluer (1996) finds that, contrary to expectations, insured households maintain a much higher level of wealth than comparable households without insurance do. She concludes that savings and health insurance are related for reasons that have little to do with certainty and precautionary motives. In contrast, Chou et al. (2003) find supportive evidence for the hypothesis of precautionary saving for medical expenses uncertainty. Using a natural experiment associated with the 1995 introduction of the National Health Insurance program in Chinese Taipei, they find that the program reduced households' savings by an average of 8.6–13.7%, with the largest effects for households with the least savings. Additionally, Palumbo (1999) uses a health-uncertainty model to predict household consumption expenditures, and his simulations imply that uncertain future out-of-pocket medical expenses reduce household annual consumption among elderly American couples by 7%.

There have been very few empirical studies of precautionary saving with respect to social security uncertainty in Japan, with the exception of Suzuki et al. (2008) and Murata (2003). Using Japanese micro data, Suzuki et al. (2008) examine whether the introduction of the Japanese Long-term Care Insurance System in 2000 has reduced households' precautionary saving or not. Contrary to their expectations, they find that households' gross

financial assets remain constant or even slightly higher among elderly households. As Suzuki et al. (2008) admit in their paper, the uncertainty reduction effect of the Long-term care Insurance System might be cancelled out by other social changes (e.g., a sharp increase in public pension uncertainty, a rise in the unemployment rate, etc.).

On the other hand, Murata (2003) uses information about households' attitudes toward the public pension system[4] from a Japanese household survey to proxy public pension uncertainty. Although the final result is inconclusive, she finds supportive evidence for the precautionary saving model when limiting the sample to households where grown-up children do not coreside with their parents. That is, households besides coresidences with higher levels of anxiety toward the public pension system have a higher wealth-to-income ratio than comparable households that feel comfortable with the present pension system. Given that the average financial assets holdings of households with some anxiety about the pension system are 2.1 million yen higher than their counterparts', Murata (2003) suggests that precautionary saving because of public pension uncertainty could account for 1/4 to 1/3 of household financial wealth.

The present paper focuses on the impact of public pension uncertainty on household wealth accumulation, but it improves upon Murata's (2003) approach in the following ways. First, we use more specific and quantitative measures for public pension uncertainty instead of the abstract, four-choice dummy variable used in Murata (2003). Second, we limit our sample to people close to retirement, for whom labor income risk should be relatively small and public pension uncertainty should be relatively dominant, while Murata's sample is young households with members aged 27–37 years, for whom saving for child-rearing and housing are so prominent that it is difficult to save for public pension uncertainty. Third, we use econometric simulation techniques to estimate the precise magnitude of precautionary saving because of pension uncertainty instead of depending on descriptive statistics for approximate estimates.

2. Data and Empirical Model

2.1 Data

This study uses household data from the Survey on the Employment and Work Conditions of Elderly People (SEWCEP), a survey that was conducted by the Japan Institute for Labour Policy and Training in 2008. To ensure that the sample was representative of the Japanese population, the sample was selected from the Basic Residential Registers ("Jyumin

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[4] The variable is discontinuous and includes four choices: very comfortable, anxious about benefit cuts, anxious about the sustainability of the system, and no plan to rely on the system.

Kihon Daicho"), based on a two-stage stratified sampling procedure. To improve the response rate, the questionnaires were distributed by surveyors instead of mailing. Surveyors distributed and explained the questionnaire to subjects in person, and several days later, the surveyors visited the subjects again to collect the questionnaires. Five thousand individuals aged between 55 and 69 years received the questionnaire throughout Japan, of whom 3,602 responded. The response rate was 72.0%.

Because of the necessity of estimating permanent income and the need to limit our sample to the close-to-retirement households, we used subjects (N=1,012) that met the following three conditions: (1) presently working and earning some labor income, (2) not yet receiving any public pension benefit, and (3) head of the household.[5] We took the predicted labor income of the head-of-household from his/her income function as a proxy for his/her permanent income. (See Appendix I for details.)

The SEWCEP collected very detailed data on retirement plans, pension participation, household holdings of financial assets and debts, and consumption. Most interestingly, the SEWCEP provides unique information that can be used to construct proxies for public pension uncertainty.

(i) Measuring public pension uncertainty

SEWCEP includes data on the anticipated percentage change (APC) in public pension benefits with respect to the present benefit level. The anticipated percentage change is determined in two steps: first, the respondents are asked to predict whether they think that their own public pension benefit will (a) rise, (b) drop, or (c) remain unchanged/unknown compared with the present benefit level.[6] Then, those who responded (a) or (b) are requested to provide the specific percentage (m%) change that they expect. We take the APC as 0% for "(c) remain unchanged/unknown" cases, –m% for "(b) drop" cases, and +m% for "(a) rise" cases.

Our second candidate measure of public pension uncertainty is the anticipated value change (AVC) of the public pension, which equals APC multiplied by the IA of the public pension for retirement. IA, however, is constructed by multiplying the ideal amount of living expenses in retirement by the ideal financing rate of the public pension benefit.[7]

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[5] Because there is no direct information in the survey to determine whether a respondent is a head-of-household, we treat subjects that meet any of the following two conditions as a household head: (1) total income (including unearned income) of the respondent accounts for 50% or more of household income; (2) the biggest component of total income for the household is the respondent's labor income.

[6] Reflecting the recent trend of pension reforms, only 1.4% of respondents expected a rise in pension benefits, and 43.8% of respondents expected a drop.

[7] The ideal living expenses cover both the respondent and his/her spouse (if they have one).

Figure 2 Distribution of anticipated pension change

(APC)   (AVC)

The distribution of the anticipated change in the public pension in terms of both percentage change and value change is shown in Figure 2. Although nearly half of the respondents expect "remain unchanged/unknown", the percentage of respondents (43.8%) expecting a drop is much larger than those expecting a rise (1.4%). The average anticipated percentage change is –9.3%, and the average anticipated value change is –21.9 thousand yen (see Table 3). In comparison with the government's presently planned pension percentage change (–4.8%) and value change (–11.7 thousand yen)[8], households' anticipated decline in pension benefits is much larger. This huge gap between households' anticipation and the government's planning reflects the fact that households are discounting future pension benefits much more heavily than the government's planned level. This household pessimism toward public pensions is very likely to induce households to practice excessive saving and wealth accumulation.

(ii) Measuring wealth

Three measures of wealth are used in our empirical analysis. The first measure (gross financial assets) is defined as the sum of all savings account balances.[9] The second measure (net financial assets 1) is calculated by deducting all debts from gross financial assets. The third measure (net financial assets 2) is computed by deducting all debts, except housing mortgages, from gross financial assets. Because most households with a mortgage should possess a comparable or higher value of housing assets than average, the third measure sounds more reasonable as an index of households' net financial assets.

Because the wealth-to-income ratio has such a wide distribution, and outliers can

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[8] Both are simulation values computed by the authors. See Appendix II for details of the simulation.
[9] Because it is rare for Japanese household to hold bonds, stocks, and individual retirement annuities, saving accounts represent a major type of household financial assets.

significantly affect the estimates, we trimmed the distribution and excluded the top and bottom 2.5%. For the close-to-retirement households, the average wealth-to-income ratio is 163% according to the first measure, 50% according to the second measure, and 124% according to the third measure (see Table 3).

Because the SEWCEP contains no data on the specific values of housing assets or other real assets, we could not compute total household worth or net worth. As an alternative, we included an own-house dummy as an explanatory variable in our estimations, to control for the effect of real assets.

2.2 Empirical model

The theoretical predictions of the precautionary saving model can be summarized with reference to the following reduced-form equation, which has been employed by many empirical studies (e.g., Kazarosian 1997; Lusardi 1998; Murata 2003).

$$\frac{W_h}{Y_h^P} = a_0 AGE + a_1 \sigma_h + X_h{}'\beta + \varepsilon_h \tag{1}$$

In the above model, a_0, a_1, β are coefficients, and ε is a normally distributed disturbance term. Wealth divided by the permanent income (W/Y^P) of household h is a function of AGE, household characteristics (X) that reflect the preferences parameters, and uncertainty about future income, as measured by the variance of σ. Uncertainty about future income, in this paper's context, is uncertainty about public pension benefits, because our sample is limited to close-to-retirement households. A supportive condition of the precautionary saving model is that uncertainty σ is positively related to the wealth-to-income ratio. In our context, because the values of our uncertainty proxies are inversely proportional to the degree of uncertainty, the estimated coefficient should be negative ($\hat{a}_1 < 0$) if the precautionary saving model is true.

As King and Dicks-Mireaux (1982) note, when preferences are nonhomothetic, X may include permanent income.[10] Specifically, X is a vector of the following variables: gender, four-scaled educational attainment, four-scaled health condition, marital status, having a family member in need of nursing care or not, having double income or not, coresiding with

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[10] Some studies (e.g., Lusardi 1997; Bessho and Tobita 2008) assume homothetic preferences and use the log of W/Y^P as the dependent variable. In that case, all the observations with negative net wealth will be automatically excluded from the sample. Because negative net financial assets are quite common in real life, we use absolute value instead of the log value of W/Y^P as the dependent variable.

parents or not, number of family members, children's status[11] and residence (five-scaled city size and 11 districts). Including children's status in the estimations enables us to test the hypothesis of a bequest motive. The descriptive statistics of the major variables are presented in Table 3.

Table 3 Descriptive statistics of major variables

Variables	Mean	Std. Dev.	Min	Max
Gross financial assets (10,000 yen)	583.64	1219.76	0	10000
Net financial assets 1 (10,000 yen)	218.83	1527.42	-10000	10000
Net financial assets 2 (10,000 yen)	494.84	1333.67	-4000	10000
Permanent income (10,000 yen)	402.47	234.88	55.4	1322.0
Annual total income (10,000 yen)	482.91	438.38	10.8	7300.0
Annual labor income (10,000 yen)	445.45	409.21	10.8	7300.0
Permanent income (10,000 yen)	402.47	234.88	55.4	1322.0
Gross financial assets / Permanent income	1.63	3.80	0.0	47.7
Net financial assets 1 / Permanent income	0.52	5.03	-34.0	47.7
Net financial assets 2 / Permanent income	1.24	3.93	-22.7	29.6
Anticipated percentage change in pension (%)	-9.30	14.70	-80.00	50.00
Anticipated value change in pension (10,000 yen)	-2.19	3.81	-25.63	10.00
Planned percentage change in pension by the government (%)	-4.83	1.17	-7.65	-3.04
Planned value change in pension by the government (10,000 y	-1.17	2.21	-25.32	0.00
Age	58.53	2.66	55	69
$Age^2/100$	34.33	3.17	30.25	47.61
Male	0.691	0.462	0	1
Junior high school	0.164	0.370	0	1
High school	0.471	0.499	0	1
Junior college	0.124	0.329	0	1
College or graduate school	0.238	0.426	0	1
Excellent health	0.081	0.273	0	1
Good health	0.688	0.464	0	1
Poor health	0.209	0.407	0	1
Very poor health	0.019	0.136	0	1
Family member in need of nursing care	0.178	0.383	0	1
Double income	0.424	0.494	0	1
Extended family	0.655	0.476	0	1
No children	0.097	0.296	0	1
All children independent	0.519	0.500	0	1
Not all children independent	0.384	0.487	0	1
Married	0.839	0.368	0	1
Number of family members	3.252	1.554	1	11
Own house	0.854	0.353	0	1

Notes: (1) The maximum number of observations is 1,012. (2) Outliers of the distribution of the wealth-to-income ratio (the highest and lowest 2.5%) are excluded from the statistics.

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[11] Children's status is defined as either one of the following three conditions: a) no child, b) all children independent, and c) not all children independent.

3. Empirical Results

Table 4 presents the correlation coefficients between the wealth-to-income ratio and public pension uncertainty. No matter what measures are used, the correlation coefficients are all negative, just as the precautionary saving model predicts. However, the relationship between the wealth-to-income ratio and pension uncertainty seems to be quite weak with respect to the magnitude of the coefficients (less than –0.2).

Table 4 Correlations between wealth-to-income ratio and public pension uncertainty

	Anticipated pension change (percentage)	Anticipated pension change (value)
Gross financial assets / Permanent income	-0.079	-0.104
Net financial assets 1 / Permanent income	-0.079	-0.139
Net financial assets 2 / Permanent income	-0.104	-0.123

When controlling for the other covariates, however, the estimation results show more supportive evidence for the precautionary saving model. Table 5 presents estimates of the wealth-to-income equation by using the APC as a proxy for uncertainty. Table 6, however, uses the alternative proxy, AVC. Both tables present estimation results when either gross financial assets, net financial assets 1, or net financial assets 2 are used as the measure of wealth.

In accordance with the precautionary saving model, the sign of pension uncertainty is negative and statistically significant in five of the six cases, indicating that when people feel greater uncertainty about the public pension, they will save more and accumulate more wealth.

Table 7 presents our estimate of the magnitude of precautionary saving for public pension uncertainty by calculating what our results imply about the share of precautionary wealth in total wealth accumulation. We can calculate the share of precautionary saving (λ) in total wealth (W) from a_1, the estimated coefficient of σ, as follows:

$$\lambda = \frac{\overline{W}^P}{\overline{W}} = \frac{\overline{W}^P / \overline{Y}^P}{\overline{W} / \overline{Y}^P} = \frac{OD \times a_1}{\overline{W} / \overline{Y}^P} . \tag{2}$$

Here, $\overline{W}^P$ is the average precautionary wealth accumulation against public pension uncertainty. OD is the over-discounting of future pension benefits, defined as the difference between households' anticipated percentage change (or value change) of the pension benefit and the government's planned percentage change (or value change). λ is predicted to be 9.87–9.91% when net financial assets 2 are employed as the wealth index, which means that precautionary saving accounts for about 10% of the net financial assets of close-to-retirement

households (see Table 7). λ is predicted to be 5.46–5.78% or 20.32–28.07% when either gross financial assets or net financial assets 1, respectively, are used as the index of wealth.

Table 5 Estimation results of wealth-to-income ratio (pension uncertainty=APC)

	Gross FA/Yp			Net FA1/Yp			Net FA 2/Yp		
	Coef.	Std. Err.		Coef.	Std. Err.		Coef.	Std. Err.	
Permanent income (Yp)	-0.002	0.001	**	0.001	0.001		-0.001	0.001	
Anticipated percentage change of pension	-0.020	0.012	*	-0.024	0.015		-0.028	0.013	**
Age	1.668	1.676		0.932	1.995		0.211	1.685	
Age^2/100	-1.321	1.370		-0.701	1.633		-0.114	1.382	
Male	-1.278	0.495	***	-1.228	0.684	*	-1.172	0.547	**
High school	1.019	0.270	***	0.970	0.573	*	0.883	0.334	***
Junior college	1.935	0.825	**	2.065	1.177	*	0.979	0.737	
College or graduate school	2.518	0.520	***	2.249	0.709	***	2.105	0.602	***
Excellent health	1.622	0.909	*	0.788	0.986		1.289	0.953	
Good health	1.155	0.588	**	0.303	0.752		0.713	0.617	
Poor health	0.971	0.652		-0.068	0.868		0.441	0.705	
Family member in need of nursing care	0.791	0.567		1.140	0.690	*	0.386	0.461	
Double income	0.476	0.345		0.527	0.473		0.369	0.387	
Extended family	-0.182	0.435		0.247	0.660		0.026	0.526	
All children independent	-0.430	0.682		-0.998	0.846		-0.780	0.752	
Not all children independent	-1.031	0.679		-2.031	0.880	**	-1.257	0.732	*
Married	0.349	0.462		1.324	0.780	*	0.530	0.536	
Number of family members	-0.144	0.108		-0.666	0.262	**	-0.449	0.209	**
Own house	1.397	0.328	***	0.397	0.417		1.471	0.370	***
Constant	-51.2	51.1		-28.9	60.6		-6.1	51.0	
Number of observations	619			586			576		
Adjusted R^2	0.1391			0.1187			0.1285		

Notes: (1) The estimation method is OLS with robust standard errors. (2) City size dummies and district dummies are included in the covariates, but their coefficients are abbreviated to save space. (3) "***", "**", and "*" indicate that the coefficient is statistically significant at the 1, 5, and 10% level, respectively.

Table 6 Estimation results of wealth-to-income ratio (pension uncertainty=AVC)

	Gross FA/Yp			Net FA1/Yp			Net FA 2/Yp		
	Coef.	Std. Err.		Coef.	Std. Err.		Coef.	Std. Err.	
Permanent income (Yp)	-0.001	0.001	*	0.001	0.001		0.000	0.001	
Anticipated value change of pension	-0.092	0.049	*	-0.142	0.062	**	-0.119	0.055	**
Age	1.540	1.841		1.498	2.287		0.366	2.187	
Age^2/100	-1.145	1.529		-1.158	1.895		-0.154	1.822	
Male	-1.668	0.554	***	-1.410	0.789	*	-1.676	0.659	**
High school	1.083	0.341	***	0.784	0.700		0.871	0.438	**
Junior college	1.392	0.700	**	0.953	1.229		0.941	0.929	
College or graduate school	2.256	0.550	***	1.754	0.791	**	1.814	0.661	***
Excellent health	1.038	0.807		0.649	1.050		0.665	0.896	
Good health	0.801	0.745		0.142	0.990		0.415	0.809	
Poor health	0.516	0.769		-0.187	1.002		-0.151	0.856	
Family member in need of nursing care	0.308	0.466		0.635	0.637		0.296	0.553	
Double income	0.236	0.380		0.485	0.556		0.458	0.487	
Extended family	-0.638	0.527		-0.352	0.809		-0.294	0.665	
All children independent	-0.569	0.856		-1.045	1.063		-0.970	0.955	
Not all children independent	-0.928	0.818		-1.596	1.061		-1.323	0.939	
Married	0.452	0.586		1.544	0.983		0.750	0.676	
Number of family members	-0.102	0.149		-0.735	0.332	**	-0.480	0.273	*
Own house	1.480	0.395	***	0.388	0.525		1.468	0.441	***
Constant	-47.7	55.0		-44.3	68.4		-11.7	65.3	
Number of observations	458			444			437		
Adjusted R^2	0.1891			0.1591			0.1729		

Note: The notes of Table 5 apply.

Table 7 Ratio of precautionary saving to close-to-retirement households' wealth

	Over-discounting of future pension benefit (OD)	Estimate of uncertainty (a1)	Precautionary component of W/YP	Average W/YP	Share of precautionary saving to W (Lambda)
W/Yp=Gross financial assets / Yp					
Pension uncertainty=APC	-4.465	-0.020	0.089	1.634	5.46%
Pension uncertainty=AVC	-1.027	-0.092	0.094	1.634	5.78%
W/Yp=Net financial assets 1 / Yp					
Pension uncertainty=APC	-4.465	-0.024	0.106	0.520	20.32% #
Pension uncertainty=AVC	-1.027	-0.142	0.146	0.520	28.07%
W/Yp=Net financial assets 2 /Yp					
Pension uncertainty=APC	-4.465	-0.028	0.123	1.240	9.91%
Pension uncertainty=AVC	-1.027	-0.119	0.122	1.240	9.87%

Note: "#" indicates that the estimate utilized is not statistically significant.

Precaution against future public pension uncertainty may not be the sole incentive for

excessive wealth accumulation. The elderly may also be holding excessive wealth for the bequest motive (Dekle 1990). The estimation results in Tables 5 and 6, however, provide little supportive evidence for the bequest motive hypothesis. Wealth holding by households is not changed significantly by the existence of children. Rather, households with economically independent children have a significantly lower wealth-to-income ratio in comparison with the households without children.

Estimates of household characteristics are in general consistent with intuition. For example, households headed by a female or a more highly educated individual, households that own their residences, and households with fewer family members have a relatively higher wealth-to-income ratio than their counterparts.

4. Concluding Remarks

Using a representative and unique Japanese elderly household survey, this paper investigated the impact of public pension uncertainty on wealth accumulation by close-to-retirement Japanese households. Households' anticipated percentage/value changes in pension and future public pension benefits with respect to the present benefit level were used to proxy pension uncertainty. Our principle econometric finding is that households' financial wealth holdings are positively and significantly related to public pension uncertainty for various measures of wealth and both uncertainty proxies.

We also found that households discount future pension benefits much more heavily than the government's planned pension cut. We use this discrepancy as an index of households' over-discounting rate on future pension benefits and combine this information with the estimation result to predict the magnitude of precautionary saving. Our simulations suggest that approximately 10% of net financial assets and 5% of gross financial assets of the close-to-retirement households are held as a precaution against public pension uncertainty. Hence, our findings are in accordance with the precautionary saving model and provide supportive evidence for the hypothesis of excessive saving and wealth accumulation by elderly Japanese households.

How to alleviate the public pension uncertainty of elderly households effectively, however, remains an open question. Major possible reasons for public pension uncertainty include (a) nationals' distrustfulness toward the pension system management (e.g., missing pension records, poor management of the pension fund), (b) anxiety about the sustainability of the public pension system because of population aging, and (c) irrational panic and gossip because of nationals' lack of knowledge concerning the complicated public pension system and pension reforms. Therefore, effective strategies for easing pension uncertainty could be to provide a reliable, easy-to-understand reform plan to nationals and to improve the

transparency and efficiency of the pension management system.

Although encouraging dissaving by elderly households or encouraging inter vivos transfers is a potentially efficient antirecession approach, there are some side-effects that we should consider. A large decline in elderly households' wealth holdings is likely to weaken the domestic affordability of government bonds and then drive up the long-term interest rate. A dramatic rise in the interest rate will not only have a negative impact on the economy by crowding out equipment investment of private companies but also drive up the interest rate burden of government debt. To avoid debt default, the government would have to print more money, which may cause hyperinflation, raise tax rates, which will be harmful to economic growth, or cut public spending, which is extremely painful and politically difficult. In sum, expecting elderly households to spend more to save the Japanese economy has limited effectiveness.

An important limitation of our approach is that the subjective proxies for public pension uncertainty we used may suffer from endogeneity. Because we could not control households' risk aversion and time preference rates because of lack of information, estimates of uncertainty may be upward biased if these two unobservable preference variables affect both households' subjective uncertainty perceptions and wealth accumulation.

Appendix I: Estimation of Permanent Income

We use the predicted labor income of the head-of-household from his/her income function as a proxy for his/her permanent income. This income function uses explanatory variables such as age, tenure, education, health condition, marriage status, occupation, industry, scale of workplace, size of city of residence, and district of residence. We also include the square of the person's age and tenure as explanatory variables to measure age or tenure based upon an inverted-U earning profile. A typical Mincerian wage function is employed, in which the dependent variable is the log of annual labor income. The estimation result is outlined in Table A.1.

Table A.1 Estimation result of Mincerian wage function

	Coef.	Std. Err.	
Age	0.098	0.245	
$Age^2/100$	-0.098	0.205	
Tenure	0.028	0.007	***
$Tenure^2/100$	-0.031	0.015	**
Male	0.527	0.060	***
High school	0.044	0.064	
Junior college	-0.009	0.087	
College or graduate school	0.235	0.079	***
Excellent health	0.025	0.161	
Good health	0.034	0.147	
Poor health	-0.107	0.152	
Married	0.052	0.059	
Constant	2.149	7.314	
Occupation dummies	Yes		
Industry dummies	Yes		
Scale of workplace dummies	Yes		
City size dummies	Yes		
District dummies	Yes		
Number of observations	727		
Adjusted R^2	0.5205		

Note: The estimation method is OLS with robust standard errors. "***", "**", and "*" indicate that the coefficient is statistically significant at the 1, 5, and 10% level, respectively.

Appendix II: Simulation of the Government's Planned Pension Benefit Change

The government's planned pension benefit change is simulated by estimating the extent to which lifetime pension benefits will decline within the system of macroeconomic slide (MES) functions. We use the standard scenario used by the government in 2007, which assumed the following conditions.[12]

Nominal wage increase rate per year (w): 2.1%

Inflation rate per year (π): 1.0%

Nominal interest rate (r): 3.2%

MES rate per year (k): 0.9%

Because it is planned that the MES will be functioning between 2009 and 2023, we assume that pension benefits in other years are unchanged. Then for people aged 55 in the JILPT 2009 survey, for instance, the MES will be applicable after they reach 65 years of age (2019) and end when they reach 69 years of age (2023). For people aged 65, however, the applicable period will be the longest (14 years). The pension benefit for people aged 55, for instance, in 2023 (while MES applies) will be as follows (where the pension benefit of people aged 69 in 2009=100):

$$PB_{MES} = 100 \times \frac{(1+w-\pi-k)^{(69-65)}}{(1+r-\pi)^{(2023-2009)}} . \tag{3}$$

We assume that each person lives until age 85, and we sum up their lifetime public pension benefit and compare it with the level when MES is absent to obtain the percentage change in the government planned public pension. We then multiply this percentage with the ideal retirement pension benefit obtained in the survey to get the value change in the government planned public pension. These two variables are employed to estimate the ratio of precautionary saving to total household wealth.

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[12] Source: MHLW Pension Bureau "A Simulation of Impact on Pension Finance by the 2004 Reform". URL: http://www.mhlw.go.jp/topics/nenkin/zaisei/zaisei/04/index.html

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