

Park, Donghyun

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## Ageing Asia's Looming Pension Crisis

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## ADB Economics Working Paper Series



### Ageing Asia's Looming Pension Crisis

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Donghyun Park

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# **Ageing Asia's Looming Pension Crisis**

**Donghyun Park**

July 2009

Donghyun Park is Senior Economist, Macroeconomics and Finance Research Division, Economics and Research Department, Asian Development Bank. An earlier version of this paper was presented at the OECD-World Bank International Conference on Pension Reform in Asia and the Pacific held 25–26 June 2008 in Seoul. The author wishes to thank the conference participants for many helpful comments, and OECD for sponsoring his participation.

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1550 Metro Manila, Philippines  
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## **Abstract**

Due to population ageing, weakening of family-based support, and other factors, old-age income support is becoming an issue of growing importance throughout Asia. This is especially true in East Asia and Southeast Asia where the demographic transition is already well under way. This paper provides a broad overview of the current state of the pension systems in People's Republic of China, Indonesia, Republic of Korea, Malaysia, Philippines, Singapore, Thailand, and Viet Nam; diagnoses the pension systems; and identifies their major structural weaknesses. Key systemic failures were found to be low coverage, inadequate benefits, lack of financial sustainability, and insufficient support for the elderly poor. The paper concludes with some specific policy directions for pension reform to strengthen the capacity of Asian pension systems in delivering economic security for the looming large and growing army of the elderly in the region.



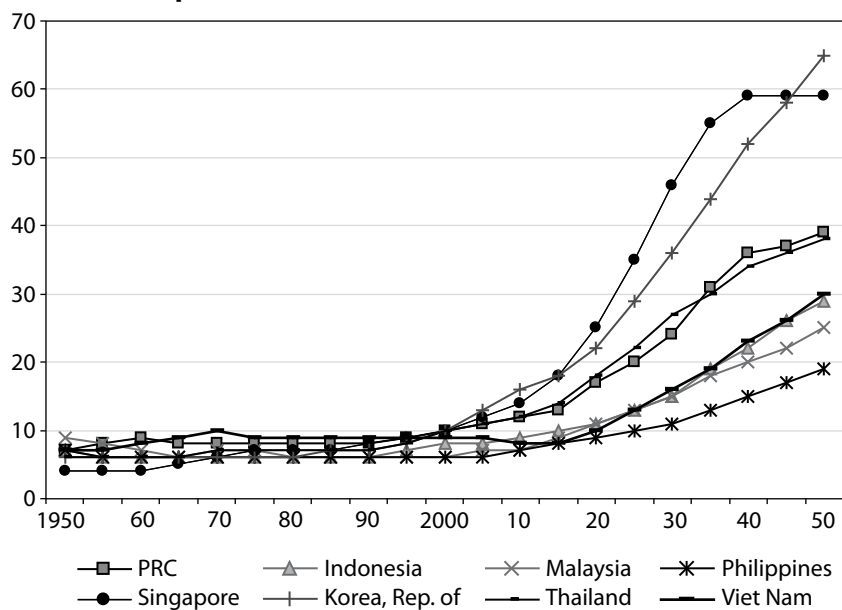


## I. Introduction

Old-age income support will be one of the biggest social and economic challenges facing developing Asia (henceforth Asia) in the 21<sup>st</sup> century. The growing spotlight on old-age income support is largely due to a seismic demographic transition that is fundamentally reshaping Asia's demographic profile. A young continent reaping the demographic dividend of a large youthful workforce is giving way to a graying continent where the ratio of retirees to workers is on the rise. In contrast to industrialized countries, most Asian countries do not yet have mature, well-functioning pension systems. As a result, they are ill prepared to provide economic security for the large number of retirees who loom on the horizon. This paper looks at pension systems in eight countries in East and Southeast Asia, namely, People's Republic of China (PRC), Indonesia, Republic of Korea (henceforth Korea), Malaysia, Philippines, Singapore, Thailand, and Viet Nam, which encompass a wide range of income and development levels. The demographic transition toward older populations is much more advanced in these two subregions than in South Asia.

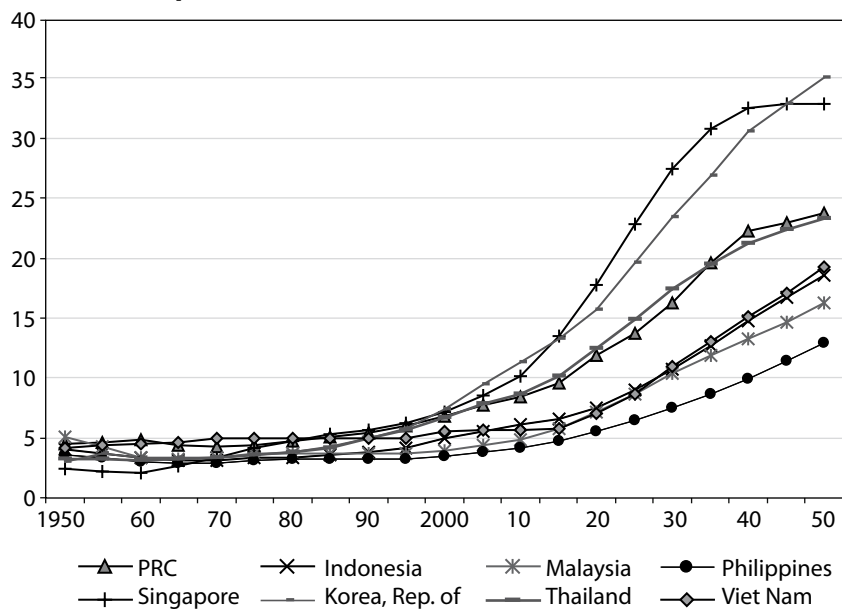
The demographic trends of the eight countries as a whole resoundingly confirm the conventional wisdom of a rapidly ageing Asia. All eight countries are experiencing a secular increase in the proportion of the elderly relative to working-age population (Figure 1) and total population (Figure 2). It is evident that the entire region will have a drastically different, much greyer demographic profile by 2050. As in the industrialized countries, Asia's demographic transition is driven by falling fertility and rising life expectancy. A constellation of economic and social factors such as improved female education and better medical care is inducing Asians to have fewer children and enabling them to live longer. Other demographic indicators also point unequivocally toward a graying continent (Table 1). The median age of all the eight countries except the Philippines will exceed the world average by 2050. Furthermore, life expectancy at 60 is already fairly high, and by 2050, fertility rates will fall below levels required for a stable population.

**Figure 1: Ratio of Population Aged ≥65 to Population Aged 15–64, 1950–2050 (percent)**



Source: *World Population Prospects: The 2006 Revision and World Urbanization Prospects: The 2005 Revision*, available: [esa.un.org/unpp](http://esa.un.org/unpp), downloaded 10 January 2008 (Economic and Social Affairs of the United Nations Secretariat 2005).

**Figure 2: Ratio of Population Aged ≥65 to Total Population, 1950–2050 (percent)**



Source: *World Population Prospects: The 2006 Revision and World Urbanization Prospects: The 2005 Revision*, available: [esa.un.org/unpp](http://esa.un.org/unpp), downloaded 10 January 2008 (Economic and Social Affairs of the United Nations Secretariat 2005).

**Table 1: Demographic Indicators of Selected Asian Countries**

Country	Total Population (millions)		Average Annual Rate of Change of Population		Total Fertility Rate		Median Age	
	2007	2050	2005–2010	2045–2050	2005–2010	2045–2050	2005	2050
World	6671.2	9191.3	1.17	0.36	2.6	2.0	28.0	38.1
PRC	1328.6	1408.8	0.58	(0.32)	1.7	1.8	32.5	45.0
Indonesia	231.6	296.9	1.16	0.10	2.2	1.8	26.5	41.1
Korea, Rep. of	48.2	42.3	0.33	(0.89)	1.2	1.5	35.0	54.9
Malaysia	26.6	39.6	1.69	0.41	2.6	1.8	24.7	39.3
Philippines	87.9	140.5	1.90	0.50	3.2	1.8	21.8	36.3
Singapore	4.4	5.0	1.19	(0.38)	1.2	1.6	37.5	53.7
Thailand	63.9	67.4	0.66	(0.27)	1.8	1.8	32.6	44.3
Viet Nam	87.4	120.0	1.32	0.21	2.1	1.8	24.9	41.6

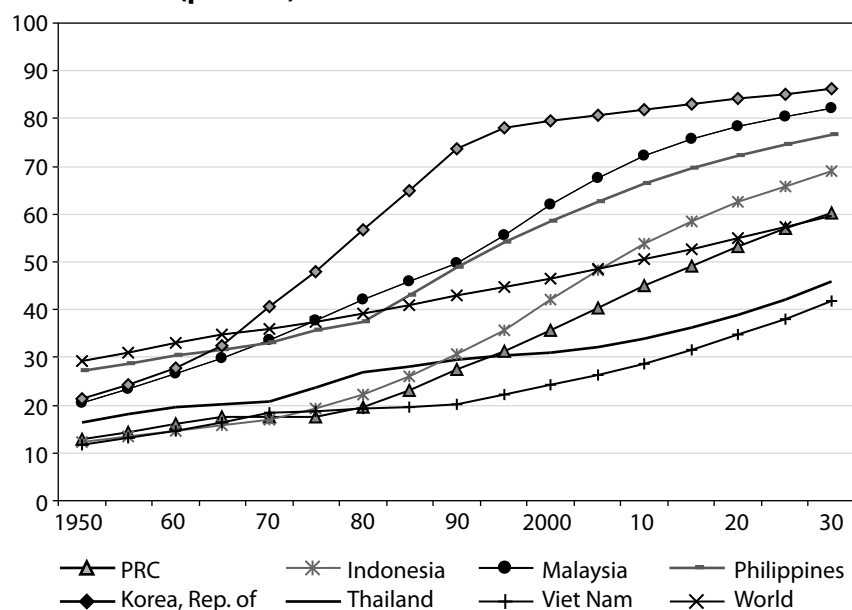
  

Country	Life Expectancy at Birth		Life Expectancy at 60, 2000–2005		Percentage of Population Aged 60 and Above		Population Aged 60 and Above (millions)	
	2005–2010	2045–2050	Men	Women	2005	2050	2005	2050
World	67.2	75.4	N.A.	N.A.	10.3	21.8	672.8	2005.7
PRC	73.0	79.3	20	17	11.0	31.1	144.0	437.9
Indonesia	70.7	78.6	18	16	8.3	24.8	18.9	73.6
Korea, Rep. of	78.6	83.5	23	18	13.7	42.2	6.6	17.8
Malaysia	74.2	80.1	19	17	6.7	22.2	1.7	8.8
Philippines	71.7	78.7	19	17	6.0	18.2	5.1	25.5
Singapore	80.0	84.6	23	20	12.3	39.8	0.5	2.0
Thailand	70.6	78.1	20	17	11.3	29.8	7.1	20.1
Viet Nam	74.2	80.3	20	18	7.6	26.1	6.5	31.3

Source: *World Population Prospects: The 2006 Revision and World Urbanization Prospects: The 2005 Revision*, available: [esa.un.org/unpp](http://esa.un.org/unpp), downloaded 10 January 2008 (Economic and Social Affairs of the United Nations Secretariat 2005).

In addition to population ageing, a number of other factors also point to an urgent need to strengthen old-age support in Asia. In particular, the weakening of informal family-based old age support mechanisms suggests a greater role for formal pension systems throughout the region. Asians have traditionally relied upon their children to take care of their material needs in their old age. The family network was in effect Asia's pension system, especially in rural environments where extended families of three generations often lived together under one roof and younger family members supported older family members. However, the far-reaching social changes accompanying the region's economic progress have given rise to smaller nuclear families that are less conducive to intrafamily support. Such changes include rapid urbanization (Figure 3) and declining relative importance of agriculture in the economy. In short, urbanization, industrialization, and sociocultural changes are creating a vacuum in Asia's old age support, a vacuum that must be filled by formal pension systems.

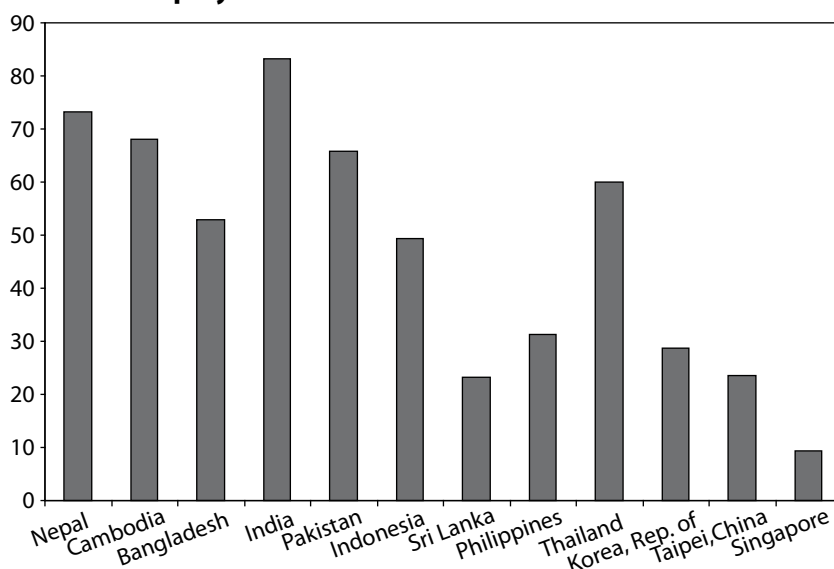
**Figure 3: Urban Population as Share of Total Population, 1950–2030 (percent)**



Source: *World Population Prospects: The 2006 Revision and World Urbanization Prospects: The 2005 Revision*, available: [esa.un.org/unpp](http://esa.un.org/unpp), downloaded 10 January 2008 (Economic and Social Affairs of the United Nations Secretariat 2005).

Globalization and globalization-related labor market developments provide a further rationale for strengthening Asia's pension systems. While Asia has reaped enormous benefits from globalization, it is not immune from the structural dislocations it wreaks. Globalization produces both winners and losers, and increases the sense of economic and social insecurity. Well-functioning social protection systems, including pension systems, can ease such insecurity and thereby promote public support for globalization. The competitive pressures unleashed by globalization are forcing firms to reduce labor costs. As a result, workers are more likely to lose their jobs and move from one job to another. In Asia, workers' loss of job security due to globalization is compounded by large numbers of workers in the informal sector (Figure 4). Those workers are usually unprotected by labor regulations and lack access to pensions and other benefits. Asia's growing labor mobility and prevalence of informal employment calls for improving pension coverage and portability in the region.

**Figure 4: Share of Informal Sector Employment in Urban Employment**



Source: *Key Indicators 2005* (ADB 2005).

This paper is organized as follows. Section II reviews the universal core functions and objectives of pension systems. Section III looks at the broad anatomy of the pension systems in the eight countries. Section IV seeks to identify the main shortcomings of Asia's existing pension systems. Section V looks at the main directions for pension reform that emerge from the diagnosis.

## II. ABCs of Pension Systems

A pension refers to an annuity or lump sum of cash received by individuals upon their retirement. In light of population ageing and other trends outlined above, building well-functioning pension systems capable of protecting older Asians from poverty is no longer a luxury but an absolute necessity. Broadly speaking, an optimal pension system is one that covers as much of the society as possible, delivers adequate yet affordable retirement benefits for its members, and does both on a financially sound basis. For individuals, society, and government, the main objectives of any pension system are to: (i) smooth consumption over lifetime; (ii) provide insurance against longevity risk, inflation risk, and other risks; (iii) redistribute income; and (iv) alleviate poverty. However, these have to be traded off against economic growth; labor market efficiency and flexibility; and against other needs like health, education, and infrastructure. Individual, fiscal, and societal affordability should be kept in mind in designing pension systems. Benefits must thus evolve over time as affordability grows.

There are five core functions that any pension system must perform (Ross 2004). These are: (i) reliable collection of contributions, taxes and other receipts, including any loan payments (in many pension schemes, a member is permitted to borrow for housing, education or other purposes but the loan needs to be repaid); (ii) payment of benefits for each of the schemes in a timely and correct way; (iii) securing financial management and productive investment of pension assets; (iv) maintaining an effective communication network, including development of accurate data and record keeping mechanisms to support collection, payment and financial activities; and (v) production of financial statements and reports that promote better governance, fiduciary responsibility, transparency, and accountability. In developing countries, organizational reforms that enable pension systems to perform the five tasks more professionally and effectively is a prerequisite for broader systemic reform.

At the systemic level, a well-designed pension system should have the following properties. Ideally, a pension system should be broad-based, i.e., be **adequate** in terms of both coverage and range of risks covered; **affordable** from individual, business, fiscal, and macroeconomic perspectives; actuarially and hence financially sound and **sustainable** over time; **robust** so as to withstand macroeconomic and other shocks; and provide reasonable levels of postretirement income coupled with a **safety net** for the elderly poor. The above implies a fairly complex objective function for a pension system. The society needs to decide through policy makers on the relative weights given to adequacy, affordability, sustainability, robustness, and the level of safety nets. Different societies will make different tradeoffs according to their circumstances; and the same society may opt for different tradeoffs at different stages of its economic development and demographic transition.

More generally, although all pension systems share universal core functions and objectives, there are different kinds of pension systems. Societies will therefore have to decide which kind of pension system best meets its needs. The big strategic choice confronting Asian countries in the context of pension system design is the choice between individual risk bearing and social risk pooling. A good example of individual risk bearing is defined contribution (DC) pension plans, which make the individual responsible for his own investment and longevity risks. In contrast to individual risk bearing, under social risk pooling, society pools together the risks of all individual members and bears the risks on their behalf. For example, in government-mandated national defined benefit (DB) pension plans, society as a whole shares investment and longevity risks. Related to dichotomy between DB and DC pension schemes is the dichotomy between pay-as-you-go (PAYG) and fully funded pension schemes.

In the real world, pension systems rarely rely exclusively on individual risk bearing or social risk pooling. Instead pension systems typically incorporate elements of both but differ with respect to the relative importance of each. In fact, the World Bank's multi-pillar model (Box 1) recommends combining five different pillars of old-age income support

with varying degrees of social risk pooling. One of the five pillars consists of DB PAYG pension schemes while another pillar consists of mandatory DC pension schemes. The multi-pillar model has greatly influenced current thinking on pension design and reform among policymakers around the world. This has led to a consensus that effective old-age income support requires a healthy mix of individual risk bearing and social risk pooling. The multi-pillar model thus provides a useful conceptual framework for thinking about pension design and reform. However, the real challenge for each Asian country is to develop a multi-pillar system that best suits its own needs, preferences, and capabilities.

**Box 1: The World Bank's Multi-Pillar Model of Old-Age Income Support (1994, 2005)**

Despite considerable debate and experience in the design and reform of pension systems, no single idea, system, or model has emerged among Asian countries. However, from a practical policy point of view, there is a growing recognition in Asia and elsewhere that a multi-pillar system is better able to address the various risks associated with population ageing than reliance on a single-pillar system. The World Bank's seminal report *Averting the Old Age Crisis* (World Bank 1994) laid out a three-pillar model for pension systems. The model has since then become a common point of reference for thinking about pension system design and reform.

The first pillar was pay-as-you-go, defined benefit (DB) pension schemes that were publicly managed and financed by either social security contributions or general taxes. These were the traditional pension schemes based on social insurance principles. The second pillar was mandatory defined contribution (DC) pension schemes that were funded, privately managed, and based on individual accounts. The second pillar was emphasized by the 1994 report, which was pessimistic about the future of the first pillar even in countries of the Organisation for Economic Co-operation and Development. The third pillar of privately managed, voluntary savings was to support and complement the second tier in providing economic security.

In its 2005 report *Old-Age Income Support in the 21<sup>st</sup> Century*, the World Bank has added more nuance to its basic three-pillar model (World Bank 2005). The resulting five-pillar model adds a zero pillar that provides a minimum level of protection, as well as a fourth pillar that includes family support. The fourth pillar is of particular importance in Asia, where parents were traditionally supported by their children in their old age. Zero pillar reflects an emerging consensus that the lifetime poor require basic pension or social assistance financed from general budgetary revenues. The lifetime poor may constitute as high as 30% of the total labor force in some developing Asian countries. The World Bank's multi-pillar model provides the intellectual underpinnings of the now widely accepted notion that a mixture of DB and DC schemes, with varying degrees of social risk pooling, is required for a well-functioning pension system.



### III. Overview of Asian Pension Systems

Identifying the directions for pension reform in Asia requires an understanding of the current shortcomings of Asian pension systems. Understanding the shortcomings of Asian pension systems, in turn, requires a basic understanding of Asian pension systems themselves. One key characteristic of a pension system is the pension age, or the age at which retirees begin to receive their benefits. This ranges from 55 in Indonesia, Malaysia, and Thailand; to 65 in Korea and Philippines (Table 1). Pension age is lower for women than men in the PRC and Viet Nam. The difference between life expectancy and pension age is the number of years that a retiree has to depend on pension benefit for old-age support. Other things equal, the larger this difference, the larger the liabilities of the pension system. The life expectancy-pension age gap ranges from 6.7 years in Philippines to 19.2 years in Malaysia and for women in Viet Nam. The pension age is expected to rise throughout Asia in response to rising life expectancy.

**Table 2: Pension Age and Basic Structure of Pension Systems, 2007**

Country	Pension Age (Years)	Difference Between Life Expectancy and Pension Age (Years)	Defined Benefit or Defined Contribution	Element of Income Redistribution
PRC	60 (55)	13 (18)	Defined Benefit, Defined Contribution, and Notional Defined Contribution	Yes
Indonesia	55	15.7	Defined Contribution	No
Korea	65	13.6	Defined Benefit	Yes
Malaysia	55	19.2	Defined Contribution	No
Philippines	65	6.7	Defined Benefit	Yes
Singapore	62	18	Defined Contribution	No
Thailand	55	15.6	Defined Benefit	No
Viet Nam	60 (55)	14.2 (19.2)	Defined Benefit	No

Note: The pension age in parentheses refers to the pension age for women, where different from men. Life expectancy refers to life expectancy at birth.

In some countries, including Australia; Chile; and Hong Kong, China; the pension systems have been set up by the government but they are run by the private sector. Individual pension members can choose from among different private sector pension fund managers. In contrast to such countries, the pension systems of all the eight countries are managed by the government. However, the basic structure of the pension systems for formal sector workers is far from uniform in the eight countries. The pension systems of PRC, Indonesia, Malaysia, and Singapore are DC or notional DC while those of Korea, Philippines, Thailand, and Viet Nam are defined benefit. Defined contribution systems are generally *prefunded* while DB systems are not. The structure of the PRC's pension system combines a DB pillar with another pillar consisting of DC and notional DC schemes. Among the eight countries, ignoring the broader social safety nets, only the pension systems of three countries explicitly redistribute income. Philippines has a

minimum pension that pays higher benefits to poor retirees. In the PRC, the redistributive element takes the form of a DB basic pension. In both the PRC and Korea, pension benefits depend partly on average earnings.

The formula for computing pension benefits varies widely across the five countries with DB pension systems, namely PRC, Korea, Philippines, Thailand, and Viet Nam (see Box 2). Areas of differences include earnings measure used to compute benefits, indexation of benefits to wages and prices, and qualifying conditions for pension eligibility. For an individual who enters the labor market at 20, the DB replaces 85% of income in Vietnam, 80% in Philippines, 50% in Korea, 35% in Thailand, and 40% for the PRC's redistributive basic pension. Under the DC and notional DC pension systems of PRC, Indonesia, Malaysia, and Singapore, the worker receives a lump sum consisting of accumulated contributions and interest income upon retirement. The contribution rate for employees and employers differs substantially across countries (see Figure 5). Employee contribution rate ranges from 2% of wages in Indonesia to 20% in Singapore. It should be pointed out that workers also make contributions under DB systems. Total contribution rates are highest in Singapore and Malaysia and lowest in Indonesia and Thailand.

### **Box 2: Benefit Rules of Asian Pension Systems**

**People's Republic of China:** Both the defined contribution (DC) and notional DC pension pay a lump sum consisting of accumulated contributions and interest income upon retirement. The redistributive basic pension is a defined benefit (DB) pension, and pays 1% of the average of citywide average earnings and individual earnings for each year of coverage, subject to a minimum of 15 years of service. The earnings basis for benefits is citywide because pension systems are organized on a municipal basis. The basic pension is indexed to a mix of wages and prices.

**Indonesia:** The DC pension pays a lump sum consisting of accumulated contributions and interest income upon retirement.

**Republic of Korea:** For an individual with 40 years of contributions, pension benefits were designed to replace 60% of earnings until 2007. Due to pension reform, the replacement has been reduced to 50% in 2008 and then will be reduced 0.5% every year to 40% from 2009 to 2028. The earnings measure used for computing benefits is a weighted average of individual lifetime earnings, adjusted for wage growth, and economywide earnings over the previous 3 years, adjusted for price inflation. Pension benefits are indexed to price inflation.

**Malaysia:** The DC pension pays a lump sum consisting of accumulated contributions and interest income upon retirement.

**Philippines:** The monthly basic pension is independent of earnings and is Pesos 300. Earnings-related monthly pension is the greater of: (i) 20% of workers' average monthly earnings plus 2% of average monthly earnings for each year of service exceeding 10 years, or (ii) 40% of the workers' average monthly earnings. The earnings basis is the greater of: (i) average earnings over 5 years prior to pension claim, or (ii) average earnings for the period in which contributions were made. Benefits are periodically adjusted for price inflation and wage growth on an ad hoc basis.

*continued.*

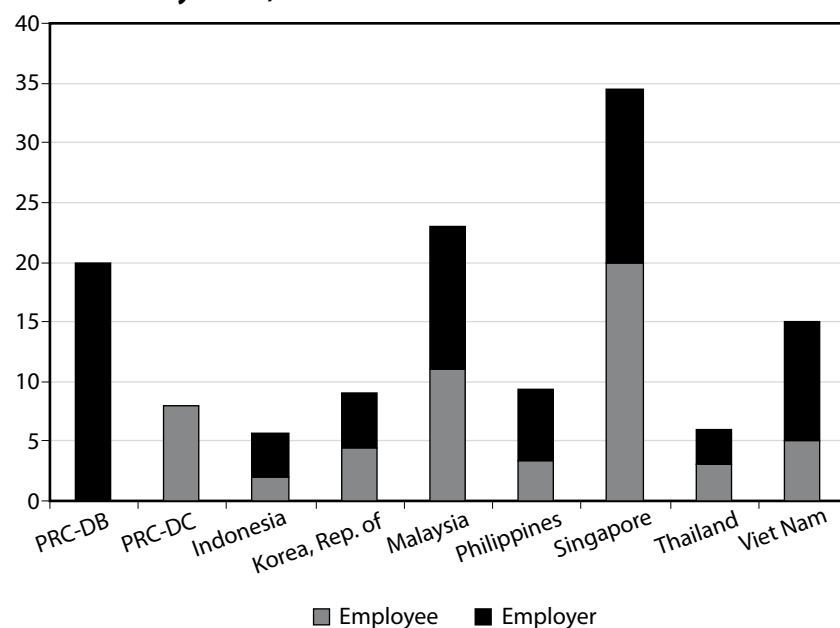
**Box 2: continued.**

**Singapore:** The DC pension pays a lump sum consisting of accumulated contributions and interest income upon retirement.

**Thailand:** Workers accrue 1% of their earnings each year up to a maximum of 35 years. The base wage used to compute benefits is the average wage over the last 5 years prior to retirement. For example, an individual who worked for 20 years would be entitled to 20% of the base wage. Rules for indexing benefits to wage growth and price inflation are discretionary.

**Viet Nam:** The monthly pension is the sum of three components: (i) 45% of career average earnings for employees with at least 15 years of service; (ii) 2% of the average of earnings in the last 5 years prior to retirement for each year of credited service beyond 15 years; and (iii) a lump sum equal to 50% of the 5-year average monthly earnings prior to retirement for those with more than 30 years of contribution. Pension benefits are indexed to changes in the minimum wage.

**Figure 5: Employee, Employer, and Total Contribution Rates of Pension Systems, 2007**



DB = defined benefit, DC = defined contribution.  
Source: Pension Modeling Study (ADB 2008a).

It was noted earlier that Asian countries face a strategic choice between social risk pooling and individual risk taking in pension system design. The pension systems of Singapore and Malaysia are unique in the region for their heavy tilt toward individual risk taking and relative absence of social risk pooling. Unlike the other countries of the region,

the two countries explicitly reject the social insurance principle in old-age income support. Both countries have national provident funds, which are essentially mandatory savings schemes. Singapore set up its Central Provident Fund in 1955 and Malaysia established its Employees Provident Fund in 1951. Employers and employees are required to make contributions to the funds, which are managed by government organizations on behalf of employees, each of whom has an individual account. Although the primary purpose of the two funds is to encourage saving for retirement, both the Central Provident Fund and Employees Provident Fund allow their members to use their balances for a variety of purposes. These include housing, preretirement investments, and tertiary education. Furthermore, members can use part of the balances only for health expenditures. The mandatory savings nature of the funds has contributed to high national savings rates.

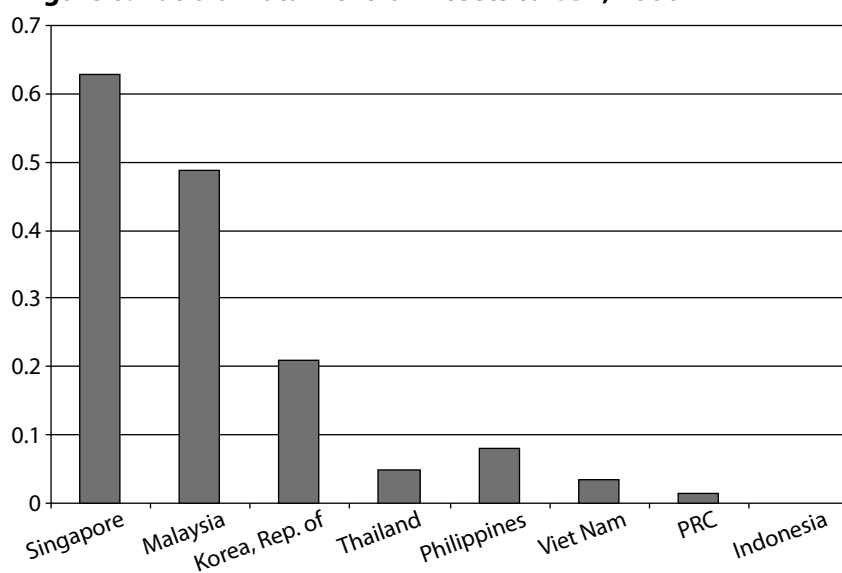
Relative to Singapore and Malaysia, social risk pooling plays a greater role in the pension systems of the other countries. However, the six countries diverge widely in terms of the economic, institutional, and technological capacity needed to apply the social insurance principle on the ground. For example, the Korean pension system is a comprehensive social security system comparable to those found in welfare states. At the other end, Indonesia is just beginning to lay the foundations of a new social insurance-based social security system. The main pension systems of Korea, Philippines, Thailand, and Viet Nam are all DB systems that protect individual members from investment and longevity risks. In the PRC, the redistributive basic pension is a DB scheme. The only country with a DC system (Indonesia) is moving toward a more mixed system with greater social assistance. In addition to the predominance of DB plans, the pension systems of the six countries are largely PAYG. Only Korea's DB system involves significant amount of prefunding. The benefit payments of the other DB systems depend almost exclusively on the contributions of current workers.

Another noteworthy characteristic of many Asian pension systems is that they are relatively new and very much in a state of flux. The oldest systems are those of Malaysia, Philippines, and Singapore but even those are constantly evolving. The relatively advanced Korean system was created only in 1988 and is still undergoing reforms. Indonesia enacted a law designed to establish a comprehensive social security system in 2004 although it has yet to be fully implemented. Likewise, Thailand and Viet Nam are also in the process of revamping their pension systems to extend coverage and improve benefits. The ongoing evolution of the PRC's pension system reflects the extensive structural transformation of its economy and society. A milestone 1997 decree provides the basic structure of the new two-pillar pension system, namely, PAYG DB basic pension, and funded DC and notional DC pensions. The PRC is in the middle of a systemic consolidation from a highly fragmented system to the two-pillar system.

The total size of pension assets in a country is relevant from a macroeconomic viewpoint. For example, the assets of the provident funds of Singapore and Malaysia represent a large part of national savings. Total pension assets also influence the impact that

liberalizing pension asset investment has on financial markets. Countries such as Korea, Malaysia, and Singapore have set up public funds to manage the contributions of funded or partially funded pension systems. The public funds the Philippines and Thailand manage the contributions of pension schemes for civil servants. The PRC established a dedicated reserve fund, the National Social Security Fund, in 2000 to help cover future pension liabilities arising from demographic trends. The assets controlled by Asia's public pension and reserve funds are quite sizable but vary widely across countries. Total pension assets in 2006 ranged from less than US\$1 billion in Indonesia to more than US\$180 billion in Korea. The ratio of pension assets to gross domestic product is highest in Singapore, Malaysia, and Korea (Figure 6). The overall trend in the investment portfolios of Asia's pension funds is toward greater diversification in terms of both asset classes and rising share of overseas investments.

**Figure 6: Ratio of Total Pension Assets to GDP, 2006**



Note: The PRC's assets refer to those of the National Social Security Fund. The assets of Philippines and Thailand refer to those of the pension systems for government workers.

## IV. Diagnosis of Asian Pension Systems

The brief survey of Asian pension systems indicates a great deal of heterogeneity in design and structure. Pension reform requires a diagnosis of the main weaknesses of the pension systems. Those weaknesses impede the ability of pension systems to fulfill their basic objectives such as enabling consumption smoothing and relieving poverty. A diagnosis is essential for identifying the main areas of pension systems that need to be improved and strengthened, and hence for mapping out the strategic directions of reform. Broadly speaking, Asian pension systems suffer from failures in (i) performing the five

core functions of pension systems as well as (ii) fulfilling the ideal properties of pension systems such as adequate coverage. Those failures suggest that Asian pension systems still have quite a way to go if they are to achieve their main objectives.

## **A. Performance of Five Core Functions**

There is a fundamental difference between developing and developed countries in the context of pension reform. The institutional capacity of developing countries lags considerably behind that of developed countries. It is thus unproductive to frame pension design and reform issues in Asia in the same terms as in developed countries with more well-established pension systems. With the exception of Korea and Singapore, there is significant scope for reducing administrative and other transactions costs. The prevalence of such costs constrains the amount of resources that can be made available to pensioners. More importantly, high administrative and transactions costs impede the ability of pension systems to perform the five core functions to varying degrees in PRC, Indonesia, Malaysia, Philippines, Thailand, and Viet Nam. For example, administrative inefficiency interferes with the collection of contributions from and payment of benefits to hard-to-reach groups such as rural and informal sector workers. The fact that many Asian pension systems are in a state of flux further add to their high administrative and transaction costs.

Compliance cost is a specific transaction cost adversely affecting the pension systems of many Asian countries. Compliance cost refers to the cost to the employers and the employees of complying with the provisions of pension systems. For example, employers have to collect contributions from employees and remit them to relevant authorities, in addition to contributing their share. Compliance costs are high when the pensioner does not get benefits on time, and has to make several trips to ensure that benefits are paid. Furthermore, in some countries, the employees have to pay bribes to receive statutory benefits that are their right. If compliance costs are too high, employers and employees may choose not to participate in the pension system. Furthermore, if the government has only limited capacity to enforce compliance, employers may evade rather than contribute. Even in countries with superficially comprehensive pension systems, such as Philippines, widespread noncompliance means a wide gulf between nominal and effective old-age income support.

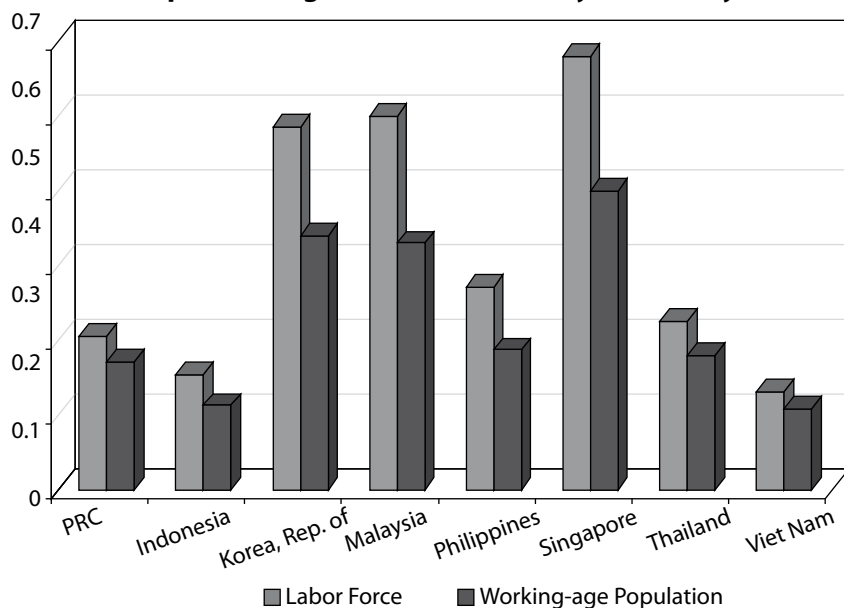
The lack of institutional capacity can be attributed in large part to the generally weak governance and regulation of Asian pension systems. Effective performance of the five core functions of pension systems requires efficient governance, management, and regulation. In pre-funded pension systems, governance, and regulation are especially important for the sound financial management and productive investment of pension assets. In well-developed financial markets such as the United States (US) and United Kingdom, pension funds are subject to explicit regulatory structures and laws governing pension funds. In contrast, in Asia, banks and insurance companies are regulated but

there has been a glaring absence of regulatory bodies for pension funds. Lack of strong governance and regulation also breeds lack of public confidence in pension systems, which, in turn, discourages compliance and participation. Political support for pension systems will remain fragile unless the general public is confident that they will honor their future promises.

## B. Issues in Pension System Design

At one level, Asian pension systems are failing because they fail to effectively perform the five core functions of pension systems due to high transactions costs and lack of strong governance. At another level, they are failing because to varying degrees they are not well-designed—i.e., adequate, affordable, robust, sustainable, and equitable—pension systems. At this level, the biggest failure of Asian pension systems is that they cover only a limited part of the total population. The percentage of the population covered by pension system differs from country to country, but no country has managed to achieve anywhere near universal coverage. The share of the labor force covered by pension systems ranges from 13.2% to 58% (Figure 7). The coverage rate for working-age population ranges from 10.8% to 40%. By way of comparison, in developed countries such as Germany, Japan, and US, pension systems typically cover around 90% of the labor force and between 60% and 75% of the working-age population. Therefore, even in high-income Asian countries such as Korea, coverage falls well short of developed-country levels.

**Figure 7: Share of Labor Force Covered by Pension Systems and Share of Population Aged 15–64 Covered by Pension Systems, 2007**



Sources: OECD-World Bank (2008), ADB staff estimates for Malaysia and Singapore.

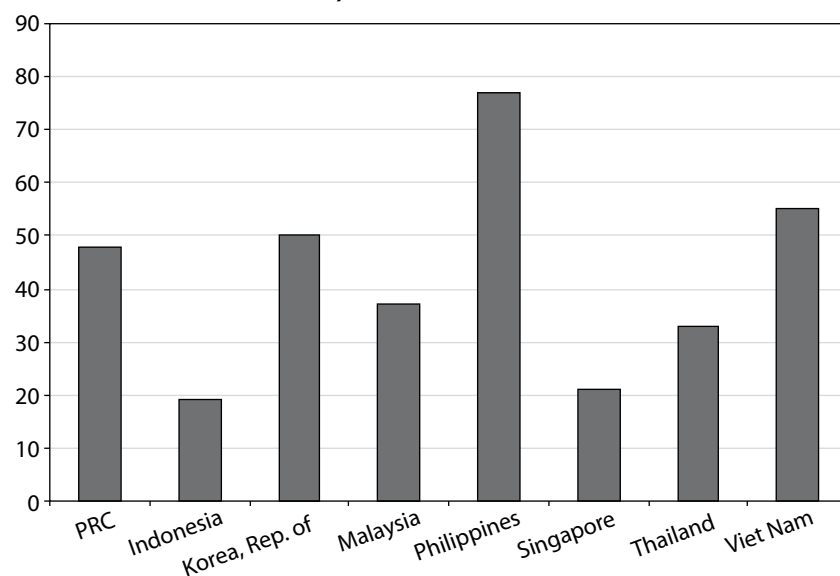
The coverage of Asian pension systems tends to be skewed toward urban areas and the formal sector. For example, in the PRC it is estimated that less than 10% of rural workers have pension coverage. Low rural coverage, in combination with the large numbers of rural workers, helps to account for the PRC's low overall coverage rate of 20.5% of labor force and 17.2% of working-age population. Massive rural-to-urban migration is adding to the pool of informal-sector workers in PRC, Viet Nam, and other countries. The limited coverage of rural and informal sector workers reflects the high administrative costs of reaching them and the limited institutional capacity of Asian pension systems. Pension coverage is also higher for government workers than private sector workers throughout the region. In fact, in many Asian countries, including Korea and Viet Nam, pension systems initially covered only government workers. Government workers' better access to pension systems is part and parcel of the privileged position and stronger rights they enjoy relative to private sector workers. A general lack of portability in Asian pension systems also contributes to the low coverage. For example, migrating workers in the PRC cannot take their rural pension rights to urban areas.

Another key performance indicator where Asian countries perform poorly is the replacement rate, or the ratio of retirement income to preretirement income. The replacement rate is a widely used measure of the adequacy of pension benefit as a source of postretirement income. A higher replacement rate enables the pensioner to achieve a higher standard of living. Pension experts generally recommend a replacement rate of between 66% to 75%, adjusted for both longevity and inflation risks. A pension modeling study completed in 2008 by the Asian Development Bank (ADB) computes the replacement rate for Asian pension systems. According to the ADB study, the replacement rate ranges from 19% in Indonesia to 79% in Philippines (Figure 8). The computed replacement rates are higher in PRC, Korea, Philippines, and Viet Nam than in Indonesia, Malaysia, Singapore, and Thailand. Among the eight countries, only Philippines has replacement rates within the recommended range. This implies that by and large Asian pension systems are not providing an adequate retirement income for retirees.

The PRC's relatively high replacement rate is deceptive in light of its low coverage. If pension benefits are high but only a small share of the population receives those benefits, it is unclear whether the pension system is adequate. A useful index that gives a more accurate picture of the adequacy of a country's pension system is the product of multiplying the coverage rate and replacement rate. The proposed index thus incorporates both replacement rate and coverage. In the case of the PRC, the proposed adequacy index adjusts the high replacement rate for the low coverage. Conversely, for countries with high coverage but low replacement rate, the index adjusts the high coverage for the low replacement rate. The adequacy index is computed on the basis of coverage of labor force. For the ADB study's replacement rates, the index ranges from 3% in Indonesia to 24% in Korea (Figure 9). For both sets of replacement rates, the most adequate pension systems seems to be those of Korea, Malaysia, and Philippines while the least adequate pension systems seem to be those of Indonesia, Thailand, and Viet Nam.

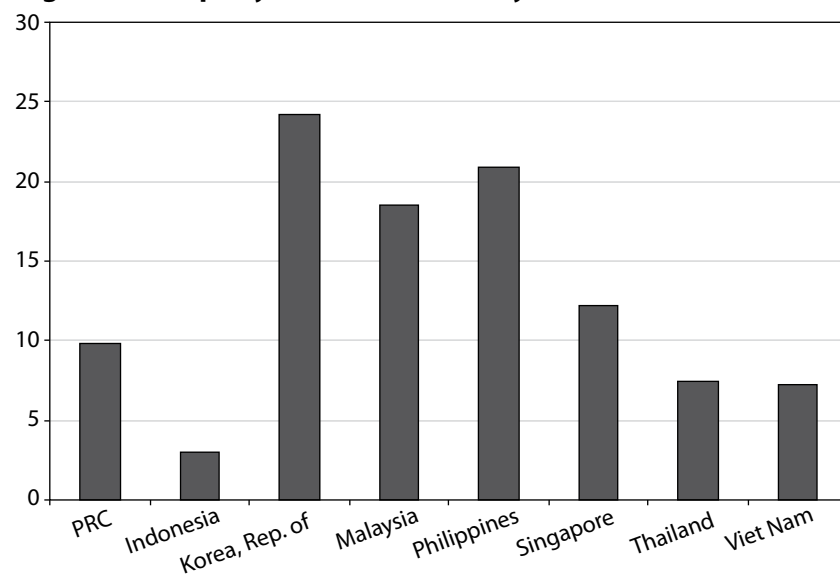


**Figure 8: Replacement Rate—Ratio of Retirement Income to Preretirement Income, 2007**



Source: ADB (2008a).

**Figure 9: Adequacy Index of Pension Systems, 2007**



Note: The coverage rate used in the calculation is the coverage rate of the labor force.  
 Sources: ADB (2008a), OECD-World Bank (2008), ADB staff estimates for the coverage rates of Malaysia and Singapore.

The apparent adequacy of the Philippine pension system brings the issues of sustainability and affordability to the fore. Sizable benefits for a high share of the population are not sustainable in the long run if the country cannot afford such a generous pension system. In this case, the adequacy of the pension system is more apparent than real. A widely used index of sustainability is implicit pension debt, which can be broadly defined as the present value of future pension promises. As noted earlier, in Asian countries with DB pension systems, pension promises are unfunded or only partly funded. Studies by the World Bank found the implicit pension debt of PRC, Korea, and Philippines to be substantially larger than the public debt of those countries. Therefore, relatively healthy fiscal positions should not be allowed to obscure the fiscal risks due to large future pension liabilities. Furthermore, in all three countries the relative size of the implicit pension debt is large enough to raise concerns about the pension system's ability to honor its future promises. In Korea, such concerns have spurred a reduction of benefits beginning in 2008. The implicit pension debt is much higher in the PRC and Philippines than in Korea, which suggests that the need for sustainability-enhancing reform is even stronger in those countries.

Asian pension contribution rates are generally quite low and hence seemingly affordable for both employers and employees. However, widespread noncompliance in many lower-income Asian countries suggests that the true pension costs are higher and hence less affordable for individuals. On the other hand, pension costs do not seem to significantly distort the incentives of employees to work and employers to hire, even in countries with the highest contribution rates. Given that many Asian pension systems are still evolving and consolidating, it is too early to tell whether they are robust to macroeconomic and other shocks. However, the more established pension systems of the region have come through the Asian financial crisis unscathed. Finally, it was earlier seen that only the pension systems of PRC, Korea, and Philippines have safety nets designed to protect the elderly poor. However, those safety nets fail to provide enough income for even a minimum standard of living. For example, the basic monthly pension in the Philippines is only Pesos 300 or about US\$7, and a recently introduced means-tested benefit for the Korean elderly is only about 5% of the average wage. The replacement rate for low-income workers substantially exceeds that of average-income workers in PRC, Korea, and Philippines but not in the other countries.

## **V. Way Forward for Asian Pension Systems**

The diagnosis of the current state of Asian pension systems should make it abundantly clear that there is an urgent case for pension reform throughout the region. There is substantial scope for improving the effectiveness of the pension system in performing its five core functions in many Asian countries. Asian countries are also still a long way off from having well-designed pension systems that satisfy ideal systemic properties such

as adequacy and sustainability. Since failures in both function performance and system design stand in the way of good performance, addressing both types of failure is essential for pension reform. Asian countries vary greatly in terms of their pension-related needs and capacities. There are thus no one-size-fits-all solutions when it comes to pension reform in Asia. However, a number of common regionwide themes emerge from the diagnosis of Asian pension systems. Those themes will help to set the directions for pension reform throughout the region.

One common area of reform is to strengthen the ***institutional and administrative capacity*** of Asian pension systems to perform the five core functions of a pension system. Strengthening institutional capacity is the point of departure for pension reform in Asia since building a well-functioning pension system is simply not possible without adequate institutional capacity. The lack of capacity is more pronounced in poorer countries such as PRC, Indonesia, and Viet Nam, but affects other countries as well. The mundane nature of core functions such as developing accurate data and record keeping systems should not detract from their significance for Asian pension reform. In the sequencing of pension reform, the nitty-gritty homework of capacity-enhancing organizational reform should be completed before broader systemic reform.

A second common area of reform, related to the first, is the need to improve the ***governance and regulation*** of Asian pension systems. Strong governance and regulation are essential for the operational efficiency and transparency of *any* pension system. They are also essential for building up the institutional capacity to perform the five core functions. Examples of specific measures to promote governance include better accounting, more rigorous financial controls, human resource development, computerization, and greater disclosure to stakeholders. Current regulatory structures for pensions are weak in Asia. There is thus a strong case for a dedicated regulator to ensure professionalism in performing core functions, to develop the pension fund industry, promote financial education, and to help bring about a systematic perspective that integrates the different components of the pension system.

In light of low pension coverage throughout the region, a third area of reform is ***expanding coverage***. Even in richer economies such as Korea and Malaysia, coverage is far from universal and there remains substantial scope for further widening coverage. Administrative inefficiency hampers the ability of Asian pension systems to cover more than a limited segment of the population. Coverage expansion should first target the formal sector and only later extend into the informal sector. Due to the growing mobility of Asian workers, lack of pension portability is becoming a major deterrent to expanding coverage. One solution is to offer fiscal incentives for DC occupation pension plans based on individual accounts. One major benefit of such plans is their portability. In countries with fragmented pension systems, such as that of the PRC, which is organized on the basis of cities, better coordination and possibly consolidation will also enhance portability.

There is a real danger that Asia's pension systems, if left unreformed, will be unable to honor their future pension promises. Therefore, **enhancing financial sustainability** is another area of pension reform, especially in countries with DB pension systems. Painful but necessary reforms that adjust the parameters of the pension system, i.e., retirement age, contribution rate, benefits, are required to promote sustainability. Asia's population ageing favors a larger role for fully funded DC pension systems, which are less vulnerable to demographic pressures. More generally, prefunding, which can also occur under DB systems through accumulation of reserves, renders the payment of benefits less dependent on the willingness and ability of future workers to support the elderly.

At least some prefunding is desirable in light of Asia's rapid population ageing, and Asian countries are already beginning to move in that direction. A prominent example is the PRC's establishment of the National Social Security Fund. With more assets to manage, it is imperative for Asian pension funds to **improve the returns** from the assets they manage. The experiences of the highly regarded Chilean pension system clearly illustrate that this is possible even for developing countries. In the past, government interference has channeled much of the funds into low-return domestic assets, often for policy-based investments. However, Asian governments have now begun to deregulate and liberalize pension fund management. For example, the share of foreign assets is growing in the pension funds of Korea, Malaysia, Philippines, and Thailand. Maximizing the returns from pension funds requires the deepening and broadening of domestic financial and capital markets. In this sense, financial development is as much a precondition as a hoped for byproduct of pension reform. Higher returns from better asset management allow for more adequate benefits and strengthen financial sustainability.

Given their general failure to provide safety nets, Asian pension systems must strive to do a much better job of **protecting the elderly poor**. Old-age poverty is especially relevant for Asia, where large numbers of the lifetime poor will never participate in formal pension systems. Indeed the lifetime poor may constitute as much as 30% of the labor force in some Asian countries. The best way to provide old-age income support for the elderly poor is to establish a universal social pension system that pays a small amount for basic sustenance to the entire population. An alternative to universal coverage is to limit the beneficiaries through means-testing. Either way, the basic social pension will be financed from general budgetary revenues rather than contributions. Setting up a separate social pension system with the explicit objective of poverty relief also helps prevent ad hoc uses of the main pension system's funds.

There is also a case for Asian policymakers to **think outside the box**. There is no reason why the parameters facing the pension system should necessarily be constant. For example, government policies may help reverse or slow down the fall in fertility and encourage longer working lives, which would change the demographic and financial equations facing Asian pension systems. Better health enables people to work longer,

and government policy can encourage firms to hire older workers. Korea, which has tried to limit population growth for decades, has reversed course and is now offering a wide range of fiscal incentives to encourage larger families. Policymakers may also provide tax breaks for children who support their parents. Filial piety cannot be legislated but it could be influenced by financial incentives. Box-changing policies entail fiscal costs of their own so these will have to be weighed against their benefits.

After decades of growth-oriented policies and rapid economic growth, Asia is finally paying more attention to social protection. This shift is not merely due to the fact that Asian countries have become richer and can thus afford to devote more resources to protecting their citizens from various risks. It also reflects a growing recognition that the traditional narrow definition of growth is harmful for inclusive growth. In light of Asia's rapid population ageing, a particularly important component of social protection is to protect the old from not having adequate income to meet their needs. Economic growth in a society where a large and growing segment of the population is poor and marginalized cannot possibly be inclusive. More fundamentally, Asia's demographic trends mean that the social and political constraints to sustaining high growth may eventually become overwhelming in the absence of well-functioning pension systems. Therefore, the case for urgent pension reform in Asia is as much economic as social.

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## **About the Paper**

Due to population ageing, weakening of family-based support, and other factors, old-age income support is becoming an issue of growing importance throughout Asia. Donghyun Park finds the key systemic failures of Asian pension systems to be low coverage, inadequate benefits, lack of financial sustainability, and insufficient support for the elderly poor. The paper concludes with some specific policy directions for pension reform that will strengthen the capacity of Asian pension systems to deliver economic security for the large and growing army of the elderly, which looms on the region's horizon.

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ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries substantially reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to two thirds of the world's poor: 1.8 billion people who live on less than \$2 a day, with 903 million struggling on less than \$1.25 a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

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