# Reducing Elderly Poverty in Thailand

## The Role of Thailand's Pension and Social Assistance Programs

THE WORLD BANK

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THE WORLD BANK

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## Acknowledgements

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# Foreword

The number of elderly people in Thailand will increase dramatically over the next 30 years, and the poverty rate for the elderly is higher than the poverty rate for the population as a whole. Despite the fact that Thailand has many social assistance and pension programs, government spending that benefits the elderly poor accounts for only a small portion.

This paper combines our past analyses of population aging, elderly poverty and the social pensions in Thailand. It examines Thailand's elderly poverty situation and programs for poverty among the elderly, and suggests options for improving the effectiveness of those programs, and provides policy recommendations to the Thai government aimed at preventing poverty among the elderly, targeting more government social protection spending to benefit the elderly poor and assuring long-term fiscal sustainability of the various social assistance and pension programs. The analyses for this paper were presented to the Thai government, international agencies, civil society and academia in Thailand in October 2012, and received positive responses.

We hope that this report may serve to provide useful insights and suggestions, and contribute to an informed decision that contributes to poverty elevation among the elderly. We look forward to further dialogue with the government of Thailand with regard to reducing elderly poverty and rationalizing pension policy and programs.

Annette Dixon
Country Director, Thailand
World Bank
East Asia and Pacific Region

## Acronyms

| | |
|---|---|
| DB | Defined Benefit |
| DC | Defined Contribution |
| DID | Difference-In-Difference |
| GDP | Gross Domestic Product |
| GPF | Government Pension Fund |
| MOI | Ministry of Interior |
| MOF | Ministry of Finance |
| MPC | Marginal Propensity to Consume |
| MSDHS | Ministry of Social Development and Human Security |
| NPF | National Pension Fund |
| NSF | National Savings Fund |
| NSO | National Statistics Office |
| OAA | Old Age Allowance |
| OAP | Old Age Pension |
| PCE | Per Capita Expenditures |
| PMT | Proxy Means Test |
| PT | Perfect Targeting |
| PTwGP | Perfect Targeting with Graded Pension |
| PVD | Provident Fund |
| RMF | Retirement Mutual Fund |
| SEC | Securities and Exchange Commission |
| SES | Socio-Economic Survey |
| SFI | Specialized Financial Institution |
| SSO | Social Security Office |
| UC | Universal Coverage |
| UCwGP | Universal Coverage with Graded Pension |
| USD | United States Dollar |

# Executive Summary

This Policy Note examines Thailand's programs for preventing poverty among the elderly and suggests options for improving the effectiveness of those programs.

**Population Aging.** The number of Thai elderly will increase dramatically over the next 30 years. Figure ES1 shows that the population of Thailand has peaked and will start to decrease by 2030 and Figure ES2 shows that the portion of the population over age 60 will increase dramatically after 2015 while at the same time, the portion of the population of working age will shrink after 2020.

**Figure ES1: Total Population**

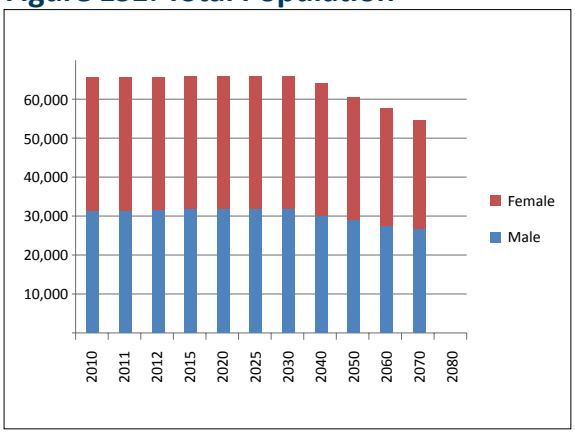
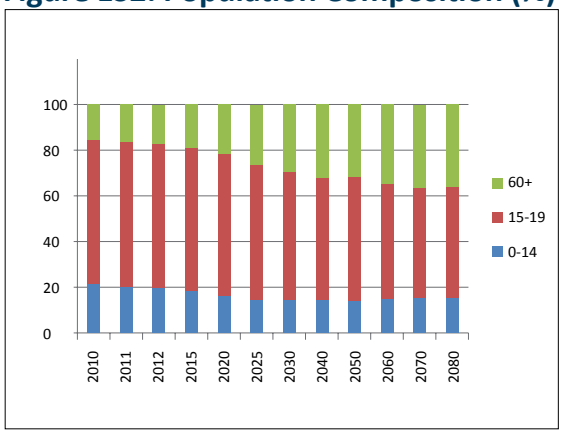
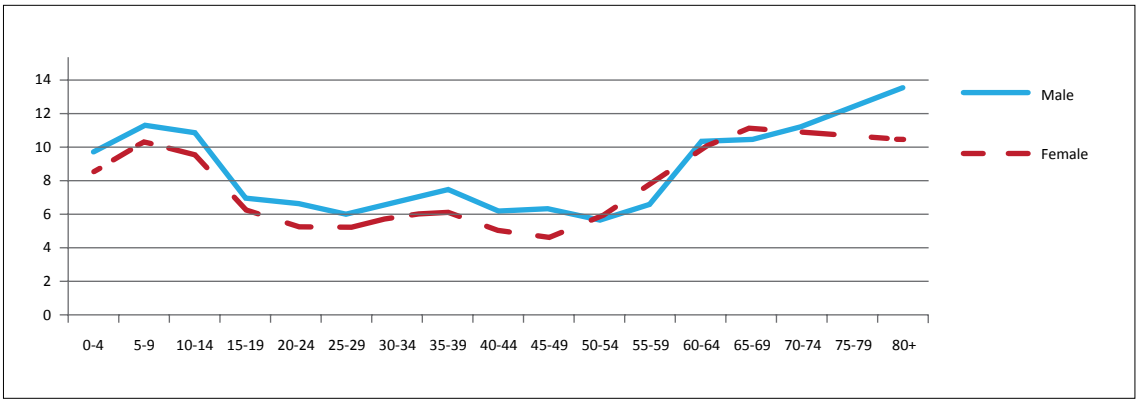



**Figure ES2: Population Composition (%)**




**Poverty Rates.** The Thai elderly also have a higher poverty rate than the population as a whole. Figure ES3 shows that the young and the elderly are the poorest members of Thai society, though the overall poverty rate in the country is quite low. In 2010, the poverty rate for the country as a whole was 7.7% while the poverty rate for the elderly was 10.9%.

**Figure ES3: Poverty Rate by Age and Gender 2010 (%)**



**Number of pension programs.** Thailand appears to have too many pension programs and consideration should be given to consolidating and further rationalizing these programs. Several of the programs also lack an adequate legal framework. Unlike other countries in the region, Thailand lacks a pension and provident fund supervision agency or a consolidated financial institution regulator, and does not appear to have a well-articulated national pension policy. Thailand currently has eight separate pension programs covering different portions of the population as shown in the table below. Many of these programs appear to be duplicative, and of all these programs, only the social pension under Article 11(11) of the Old Age Act appears to have a significant impact on the prevention of old age poverty, particularly in the informal sector.

### Table ES1: Characteristics of Retirement Programs

| *Program* | *Eligibility* | *Sponsor* | *Type* | *DB/DC source* | *Contribution* | *Supervisor* |
|---|---|---|---|---|---|---|
| **OAP, SSO Articles 33 & 39** | Formal sector | Employer | Mandatory | DB | Employers, workers and government | Ministry of Labor |
| **GPF and pension** | Government officials | Employer (Government) | Mandatory | DB/DC | Government and workers | Ministry of Finance |
| **PVD** | Formal sector | Employer (Occupational pension programs) | Mandatory if listed on | DC | Employer and workers | Securities Commission |
| **RMF** | All workers | Individual | Voluntary | DC | Workers Commission | Securities |
| **OAA** | Informal sector | Individual | Universal | DB | Government | Ministry of Interior |
| **NSF** | Informal sector | Individual | Voluntary | DC | government and Workers match | Ministry of Finance |
| **SSO Article 40** | Informal sector | Individual | Voluntary | DC | government and Workers match | Ministry of Labor |

**Note:** GPF and Pension are two separate programs for civil servants. Hence, there are eight programs.

**Social pension for the informal sector.** The primary program benefiting the elderly poor, particularly those who work in the informal sector, is the social pension payable under Article 11(11) of the Old Age Act. This is a universal program paying monthly benefits to citizens age 60 or older who are not covered elsewhere by a formal statutory pension program. Recent changes to the social pension modified the program to increase benefits with age rather than paying a flat monthly benefit to all eligible beneficiaries as shown in the table below.

### Table ES2: Social Pension Age

| *Age range* | *Amount (Baht) per month* |
|---|---|
| **60-69** | 600 |
| **70-79** | 700 |
| **80-89** | 800 |
| **90 and older** | 1,000 |

Because the program is universal, it provides benefits for all who are poor, but the majority of the benefits go to those who are not poor. The current program has an estimated cost of approximately 63.2 billion baht (based on estimates from the 2010 SES). If benefits were payable with the same benefit formula and only to those who are poor, the cost of the program would reduce to 8.4 billion baht. This estimate is low, however, because the administrative costs of the targeting program would need to be taken into account. This would add another 15-20% to the cost, but it would still be significantly below the cost of the current program. Also, if the benefit was changed so that each poor family received the amount necessary to fully eliminate the poverty gap (the difference between the individual poverty line and the estimated income of the household), then the total cost would increase to 16-26 billion baht, depending on the portion of the social pension the elderly household member is assumed to spend on personal consumption (the marginal propensity to consume or MPC).

Given Thailand's aging population, persistent inequality and government fiscal constraints, the government needs to assess whether this program is the most efficient way of assuring adequate income for the elderly. If the program were to be targeted, the money could be channeled to those most in need and the fiscal cost could be significantly reduced. On the other hand, Thailand would need to set up and maintain a more complex administrative structure to manage the targeting of benefits, and since no targeting system is perfect, there would inevitably be poor families that would be excluded and non-poor families that would be included. The current universal program avoids these complexities.

**Voluntary pension programs for the informal sector.** Thailand recently introduced two new voluntary pension programs for the informal sector, the National Savings Fund (NSF), which does not yet have a scheduled start date, and the pension savings program under Article 40, Option 2 of the Social Security Act, which began in May 2011. Both programs include government matching contributions as an incentive to participate. It is too early to assess whether these programs will have a significant impact on elderly poverty. However, early evidence and international experience with similar programs, suggests take-up will be light and those who join may primarily be self-employed professionals and other wealthier members of the informal sector. The poor may not be able to afford to participate on a regular basis and the programs may not meet their savings needs. Consequently, it is likely most of the government match will be paid to those who are not poor.

**Pension program for the formal sector.** The Old Age Pension (OAP) system under Articles 33 and 39 of the Social Security Act provides pension benefits to formal sector workers following retirement and would appear to prevent poverty among formal sector workers following their exit from the workforce. Benefits begin at age 55 and are based on salary history and years of contribution to the system. However, the system requires 15 years of contributions in order to receive a pension, and the system began in 1999. Consequently, the first pension benefits will be paid in 2014. Several researchers have also concluded that the system is not fiscally sustainable as designed and will experience severe financial difficulties beginning in the late 2020's. The fiscal sustainability is impacted by a combination of several factors including the low retirement age, rich benefit formula, use of final pay for calculating benefits, and rapid population aging.

**Conclusion.** The government of Thailand should consider revising the structure of its myriad programs to improve the legal basis for several of the programs, target more of the benefits to the poorest Thai citizens, improve the fiscal sustainability of the programs, and simplify and rationalize the structure and regulation of its pension programs.

## I. INTRODUCTION

This Policy Note examines Thailand's programs for preventing poverty among the elderly, and suggests options for improving the effectiveness of these programs. The number of elderly people in Thailand will increase dramatically over the next 30 years, and the elderly already have a higher poverty rate than the population as a whole.

Although Thailand currently has a total of eight pension programs, the majority of the benefits go to those who are not poor. In addition, unlike most countries, Thailand lacks a pension and provident fund supervision agency or a consolidated financial institution regulator, and does not appear to have a well-articulated national pension policy.

This has led to the development of two major sets of pension programs, with one group sponsored by the Ministry of Labor and the Social Security Office, and the other by the Ministry of Finance and the Securities Commission. These are also supplemented by an assortment of social assistance and community programs sponsored by the Ministry of Social Development and Human Security and the Ministry of Interior.

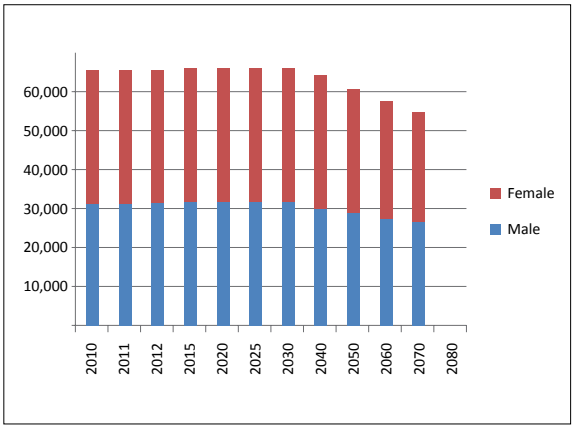
This Policy Note will examine the above issues in more detail and recommend policy options to simplify and coordinate the various pension and social assistance programs aimed at preventing poverty among the elderly, target more spending at the elderly poor, and assure long-term fiscal sustainability.

## II. POPULATION AGING

Any analysis of elderly poverty should begin by examining predicted changes in Thailand's demographics. These will substantially increase the number of elderly

people and the fiscal cost of caring for them. To cope with this, the Thai government will have to further rationalize its total spending on the elderly, as well as spending efficiency. While Thailand is not yet 'old', the population has already begun to age, and this will accelerate rapidly over the next 20-30 years. Figures 1 and 2 show projections for Thailand's population, based on census data derived from the 2010 Socio-Economic Survey (SES), and fertility and mortality data supplied by the United Nations.

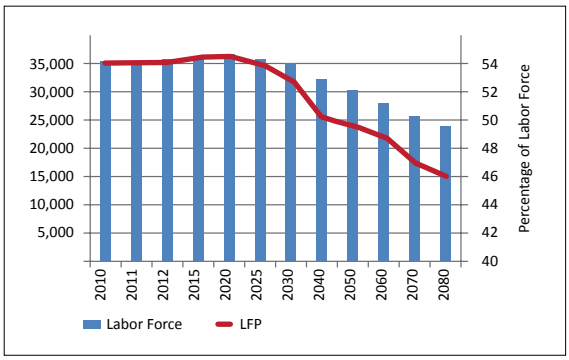
### Figure 1: Total Population




### Figure 2: Population Composition (%)


Figure 1 shows that Thailand's population will peak in about 2023, and then decline sharply. Figure 2 shows that the portion of the population that is elderly (above age 60) will grow from about 15% in 2010 to 35% by 2060. At the same time, the absolute and relative size of the working age population (ages 15 to 59) will decline.

### Figure 3: Labor Force and LFP Rate




### Figure 4: Dependency Ratios (%)

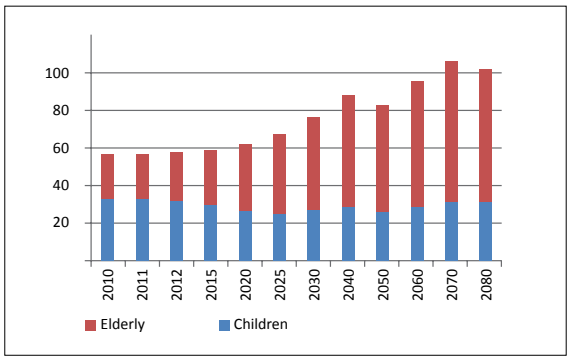



Figure 3 shows that Thailand's labor force will continue to increase in size until about 2020, and the **labor force participation rate** (the % of the total population that is employed) will also rise very slightly during that time. However, after 2025, both the absolute size of the labor force, and the percentage of the population that is working will drop sharply.

Figure 4 shows the **dependency ratio** (the number of children and the number of elderly people, compared with the number of citizens of working age). The current dependency ratio is about 56%, with the number of children exceeding the number

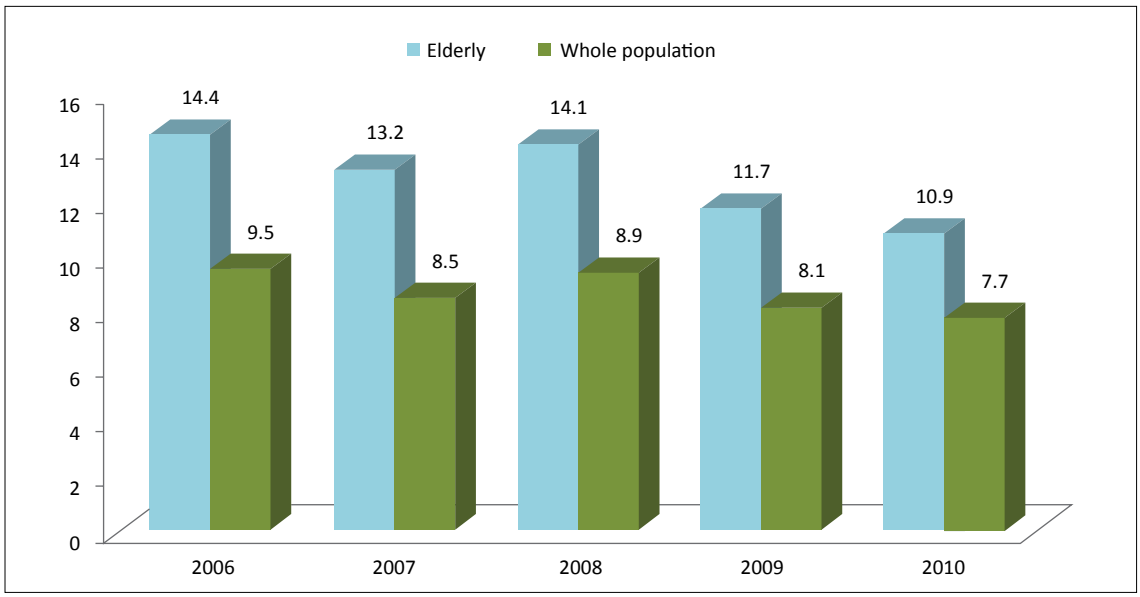
of elderly. This means there are now almost two Thai citizens of working age for every child or elderly person who is not working. However, by 2070, this dependency ratio will exceed 100%, which means there will be **more people not working than working,** and most of these dependents will be elderly.

Given this environment, it is important for Thailand to put efficient and sustainable systems in place today that can provide social protection in the future for the growing number of elderly people. The fiscal costs associated with an aging population will grow over time, and will be exacerbated by a declining population and workforce. Thailand should consider what combination of economic and social programs are needed to deal efficiently and cost-effectively with these emerging demographics.

## III. CURRENT SITUATION OF THE ELDERLY POOR

The socio-economic surveys conducted by the National Statistics Office of Thailand provide insight into the characteristics and welfare of the elderly. Figure 5 shows that poverty for the whole population, and for the elderly, has been declining since 2006, with the exception of some regression during the 2008 global financial crisis.

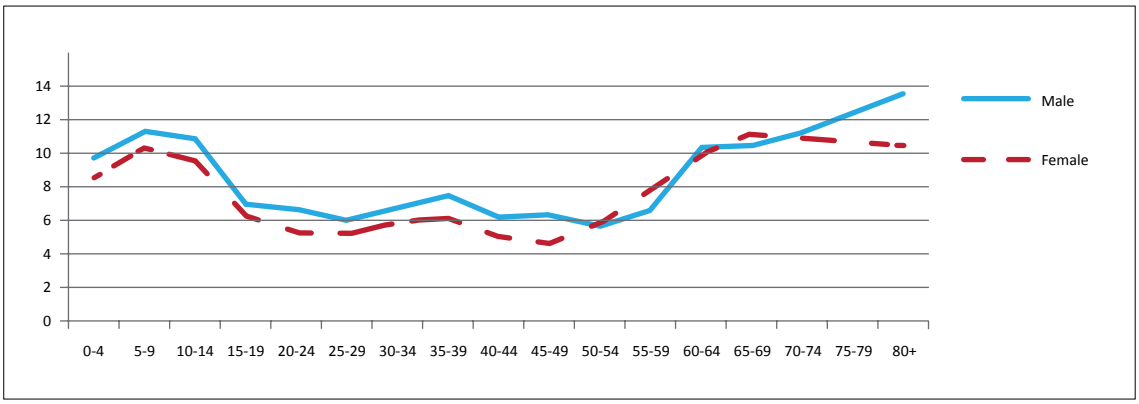
### Figure 5: Poverty Headcount Ratio (%)




**Source:** Calculated from Socio-Economic Surveys, National Statistical Offices, Thailand

However, Figure 6 shows that poverty rates vary significantly by age and sex. Male poverty rates are higher than female poverty rates at most ages, and particularly among those ages 70 and above. Poverty rates are highest for both sexes below age 15 and above age 60.

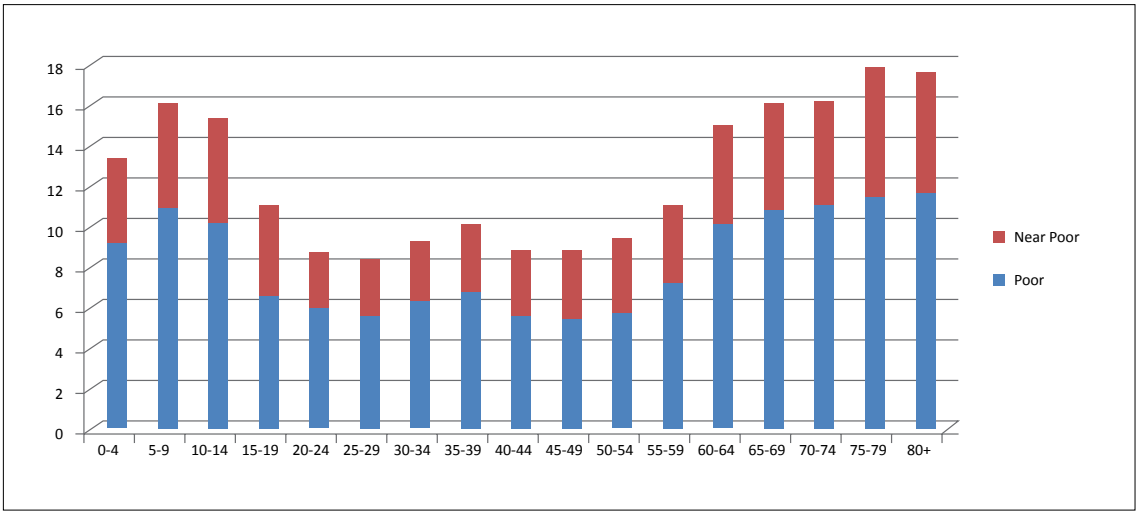
## Figure 6: Poverty Rate by Age and Gender 2010 (%)




**Source:** Socio-Economic Surveys, National Statistical Office, Thailand

While the absolute poverty rates in Thailand may appear quite low, a different picture emerges when the near poor are included in the analysis. The near poor are defined as those with consumption spending between 100% and 120% of the national poverty line. If the poor and near poor are summed, then nearly 18% of the elderly are vulnerable, as shown in Figure 7. Small economic shocks, like unexpected medical expenses, can easily send the near poor into poverty. In fact, research in Indonesia showed that the composition of the poor changes substantially from one year to the next. Almost 40% of those who were poor in the current year were not poor in the prior year and vice versa. It is likely the same is true in Thailand as well.

## Figure 7: Poverty and Vulnerability Rates by Age Group 2010 (%)




**Source:** Socio-Economic Surveys, National Statistical Office, Thailand

The elderly who are living in one-generation families are likely to be poor. These are households composed only of elderly people, with no younger family members working and helping to support them. The elderly living in three-generation families were less likely to be poor. These families likely have grown children and grandchildren, many of whom are probably working. Finally, two-generation households consisting of elderly caring for grandchildren were also likely to be poor.

As shown in Table 1, elderly poverty today is mostly an informal sector issue. More than 80% of the elderly worked in the informal sector. Consequently, the social assistance and pension programs for the informal sector are of the greatest importance in preventing or reducing elderly poverty.

### Table 1: Elderly Population (60+) Classified by Formal and Informal Sector (persons)

| | *2007* | *2008* | *2009* | *2010* |
|---|---|---|---|---|
| **Formal Sector** | 1,729,098 | 1,813,541 | 1,814,766 | 1,907,578 |
| Ex-Government Officials | 1,664,013 | 1,727,858 | 1,726,444 | 1,819,863 |
| Ex-SSO Members | 65,085 | 85,683 | 88,322 | 87,715 |
| **Informal Sector** | 7,337,785 | 7,511,574 | 7,874,246 | 8,158,967 |
| **Total** | 9,066,883 | 9,325,115 | 9,689,012 | 10,066,545 |
| **Share (%)** | | | | |
| **Formal** | 19.1 | 19.4 | 18.7 | 18.9 |
| Ex-Government Officials | 18.4 | 18.5 | 17.8 | 18.1 |
| Ex-SSO Members | 0.7 | 0.9 | 0.9 | 0.9 |
| **Informal** | 80.9 | 80.6 | 81.3 | 81.1 |
| **Total** | 100.0 | 100.0 | 100.0 | 100.0 |

**Source:** Socio-Economic Surveys, National Statistical Office, Thailand

## IV. CURRENT PENSION PROGRAMS

Thailand's pension programs will likely be the primary source of retirement income for its elderly. Consequently, any analysis of the poverty of elderly people begins with an examination of the coverage and benefits provided by these programs. Thailand has eight different pension programs covering different groups of workers. For the most part, formal sector workers, civil servants and informal sector workers participate in programs that are different from each other. Civil servants receive both a defined pension benefit from the state budget and a defined payout from the Government Pension Fund (GPF), and most civil servants work for the government for their entire career. Consequently, former civil servants are the least likely group to live in poverty following retirement and are the only group that currently receives an adequate pension.

Existing old-age, income-support schemes in Thailand are presented in Table 2. This Table shows the pension programs that cover the different labor market segments.

### Table 2: Existing Old Age Income Support Schemes in Thailand

| Government & State Enterprise Employees | Formal Sector Workers | Informal Sector |
|---|---|---|
| Government Pension Fund | Voluntary Provident Funds | National Savings Fund (start date unknown) |
| Retirement Pension (tax financed) | SSO, Articles 33 and 39 (Old Age Pension) | SSO, Article 40, option 2 Social Pension |
| | Social Pension (until 2014 when Old Age Pension Payouts Begin) | |
| | Private Plans<br>Retirement Mutual Funds<br>Community Welfare Funds | |

Table 3 gives a rough picture of the coverage today under various pension schemes. The social pension covered 5.5 million out of 10 million elderly in 2010, or almost 70%. The coverage should be significantly higher after 2010, as administrative problems have been resolved. Other schemes do much worse in terms of coverage. Out of 38 million workers in the labor force, only about 12 million are covered by the civil service pension schemes or the program for formal sector workers under Articles 33 and 39 of the Social Security Act. Those participating in voluntary provident funds and private pension plans are primarily the same workers who are already covered by the government and old age pension plans. The only other large-scale pension program for informal workers other than the social pension is the benefit provided by some community welfare funds, whose members are estimated at around one million.

### Table 3: Coverage Under Various Pension Schemes

| | *Persons* | *Note/Source* |
|---|---|---|
| **Total Population 60 years old and older** | 10,066,545 | 2010, SES (NSO) |
| Social Pension Recipients (60+ years old) | 5,559,374 | 2010, estimated/ MOI |
| **Labor Force** | 38,122,242 | 2010/LFS (NSO) |
| Government Employees (in service) | 1,790,000 | 2010, estimated/ MOF |
| State Enterprise Employees (in service) | 210,000 | 2010, estimated/ MOF |
| Social Security Pension A. 33 (existing members) | 9,019,343 | 2011 (March)/ SSO |
| Social Security Pension A. 39 (existing members) | 770,823 | 2011 (March)/ SSO |
| Social Security Pension A. 40 (existing members) | 40 | 2011 (March)/ SOO |
| Provident Fund (account holders) | 1,896,714 | 2010/ SEC |
| National Saving Fund (not in effect yet) | 0 | Registering 2012/ MOF |
| Private Pension Plans | N.A. | |
| Community Funds (existing members, estimated) | 1,000,000 | 2010, estimated/ MSDHS |

**Source:** Ministry of Interior, Ministry of Finance, Social Security Office, Securities and Exchange Commission, Ministry of Social Development and Human Security

The balance of this section examines each of Thailand's pension programs in more detail, with the exception of the two programs for civil servants. The civil servant pension programs cover a relatively small group with rich benefits and this group is not in danger of living in poverty following retirement.

## A. THE OLD AGE PENSION (OAP) PROGRAM

The Old Age Pension (OAP) program is sponsored by the Social Security Office (SSO) and provides pension benefits to formal sector workers following retirement. In 1999, the OAP program was added to the package of insurance benefits already provided by the SSO.

### Table 4: Summary of the Old Age Pension Program

| *Provision* | *Description* |
|---|---|
| **System effective date** | January 1, 1999 |
| **Coverage** | Employers with one or more employees are required to participate in the system and make contributions on behalf of their workers |
| **Contribution rate** | 3% each, from employers and workers |
| **Old-age pension eligibility** | Age 55 and a minimum of 180 months (15 years) of contributions at termination of employment. Those with less than 180 months receive a refund of contributions with interest only |
| **Old-Age pension benefit** | 20% of 5-year final average pay after 15 years of contributions and 1.5% for each additional year of contributions |
| **Disability benefits** | None |
| **Survivor benefits** | None |
| **Minimum pension** | None |
| **Pension indexing** | There is no automatic adjustment of pensions following retirement |
| **Wage cap** | 15,000 baht. Contributions and benefits are based on pay up to the wage cap. This limit has been in place without change since the system began in 1999. |

Only formal sector workers participate in the OAP program. Benefits are based on salary history and years of contributions to the system. None of the elderly receive a pension from this program today. The OAP began in 1999 and requires 15 years of contributions for pension eligibility. Consequently, the first participants who may be eligible to receive a pension would be those retiring in 2014. Formal sector workers also have several voluntary pension programs available for their retirement, and some may be fortunate enough to participate in employer-sponsored pension programs.

The system has a very low retirement age by international standards (55 years). The pension benefit formula was improved to its current level in 2006 even though the system has not begun to pay pensions. The wage-cap is reasonable today, but it will need to be indexed in the future if benefits are to remain adequate.

Despite the rich benefit formula, there are benefit adequacy issues with this program, particularly in the next 10-15 years. Workers retiring prior to 2014 will not receive a pension benefit, and those retiring shortly thereafter may receive inadequate pensions, since benefits are based only on service starting from 1999. The government will need to examine potential changes in the eligibility conditions and benefits to assure the program meets its goal of preventing poverty among formal sector workers following retirement.[1]

## B. THE SOCIAL PENSION UNDER ARTICLE 11(11) OF THE OLD AGE ACT

The primary program benefiting the elderly today, other than retired civil servants, is the social pension payable under Article 11(11) of the Old Age Act. This is a universal program paying monthly benefits to citizens age 60 or older who are not covered elsewhere by a formal statutory pension program. Recent changes to the social pension modified the program to increase benefits with age rather than paying a flat monthly benefit to all eligible beneficiaries. Because the program is universal, it provides benefits for all who are poor, but the majority of the benefits go to those who are not poor.

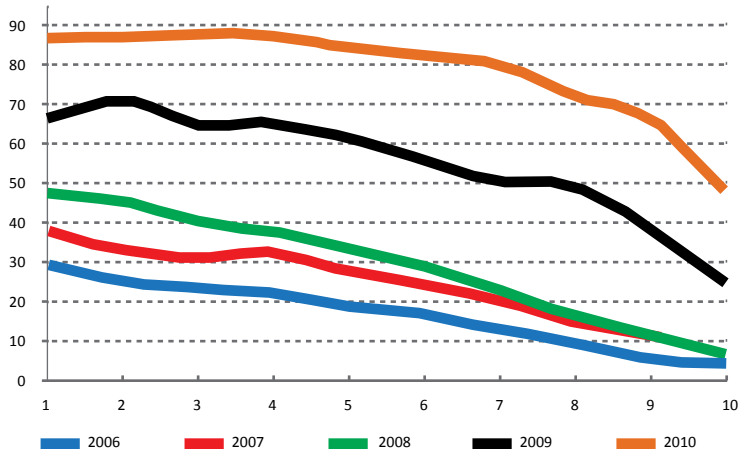
The Act does not specify the amount or form of the pension. It simply entitles older people to "extensive and fair relief in the form of a maintenance allowance where necessary." Consequently, the amount and form of the social pension is not guaranteed. It can be switched from universal to targeted, and the pension amount can be changed at the will of the government.

Before 2009, the Thai government made transfers to selected groups of elderly people who were 60 or older. The key criteria were that recipients were poor and had no support from family members. Although the selection criteria were clear, the implementation was poor. Many recipients were not poor, but rather were related to selection committee members in the villages (this is often referred to as "elite capture"). A fixed quota of five recipients for each village, regardless of its size, made matters even worse. As a result, the scheme had severe targeting problems and the concept of targeting was discredited.

Partly because of the global economic crisis, and partly due to the poor experience with targeting, the government made the elderly income transfer universal in 2009, granting a monthly benefit of 500 baht per month to all Thai aged 60 or older who did not get other 'formal' pensions from the government. As a result, coverage increased significantly, as shown in Figure 8.

[1]Pootrakool and Sirichetpong (2007) have also noted that this system is not fiscally sustainable in the long term. A 2007 study by Mitchell Wiener, one of the authors of this Policy Note, also reached the same conclusion. Fiscal sustainability is impacted by a combination of several factors, including the low retirement age, rich benefit formula, use of final pay for calculating benefits, and rapid population aging. This is not readily apparent today, since the system has not yet started paying pension benefits.

## Figure 8: Proportion of Elderly, Age 60 and Older Receiving a Social Pension Transfer in 2006-2010 by Consumption Deciles




<----- Poorest part of Population  Richest part of population ----->

**Source:** Socio-Economic Surveys, National Statistical Office, Thailand

Almost 90% of elderly people living with families in the poorest 10% of the population received the transfer in 2010, up from less than 50% in 2008, and 30% in 2006. Those who have not received the transfer were either not eligible, such as the retirees from the civil service, or they did not register.

Beginning in October 2011, benefits were further increased and vary by age as shown in Table 4. All eligible citizens now receive at least 600 baht per month and many will receive much more.

## Table 5: Social Pension by Age

| *Age range* | *Amount (Baht) per month* |
|---|---|
| ***60-69*** | 600 |
| ***70-79*** | 700 |
| ***80-89*** | 800 |
| ***90 and older*** | 1,000 |

Assuming the old-age pension covers 80% of all Thai citizens age 60 or older, the total number eligible for benefits in 2012 would be 8,861,000. If each received 500 baht per month, then the total cost of the social pension in 2012 would be 53.2 billion baht (1.5 billion USD at 30.85 baht per USD) or 0.44% of GDP. Introducing the graded scheme in

Table 4 increased the estimated 2012 cost by 32% to 70.2 billion baht (2.0 billion USD) or 0.59% of GDP.

Table 6 shows the estimated cost of the current scheme over time. Costs increase because the number of elderly will increase – both the total numbers over age 60 and the number living to very old ages.

### Table 6: Estimated Social Pension Cost

| *Year (Billion Bt)* | *Amount* | *% of GDP* |
|---|---|---|
| ***2012*** | 70.2 | 0.59 |
| ***2020*** | 190.5 | 0.83 |
| ***2030*** | 438.9 | 0.95 |
| ***2040*** | 871.5 | 0.98 |
| ***2050*** | 1,461.4 | 0.89 |
| ***2060*** | 2,606.1 | 0.88 |

**Source:** World Bank estimates

For the purposes of these estimates, the eligibility age was assumed to remain at 60. However this may not be a reasonable assumption, since population projections assume increasing life expectancy, and the eligibility age could rise as life expectancy rises. Beginning in 2014, the percentage of people eligible for the social pension will begin to decline due to the start of OAP program pension payments. The percentage of the population over age 60, and eligible for benefits, is assumed to decline from 80% in 2013 to 65% by 2033. In order to maintain the value of the social pension relative to average wages, monthly benefits are assumed to increase each year in proportion to the increase in the national average wage. This analysis shows that costs under the current scenario peak in 2040, at 0.98% of GDP, and decline thereafter. These costs can be mitigated further by changing the eligibility age over time or by increasing benefits more slowly. For example, benefits could be increased in proportion to inflation rather than in proportion to average wages.

## C. INFORMAL SECTOR PENSION PROGRAMS

Thailand recently introduced two new voluntary defined contribution pension programs for the informal sector, **1) the National Savings Fund (NSF) which has not yet begun, and 2) the pension savings program under Article 40, Option 2 of the Social Security Act,** which began in May 2011. It should be noted that there are two options under the Article 40 program. Option 1 provides insurance benefits only. Option 2 provides the same insurance benefits as Option 1, plus a pension savings program. Only workers who are not covered by another statutory pension plan (primarily informal sector workers) are eligible for these programs. Workers cannot participate in both NSF and Article 40, Option 2, through switching between programs is permitted

during periodic open enrollment periods. Both are Matching Defined Contribution programs, meaning the government matches the worker's voluntary contributions.

It is too early to assess whether these programs will have a significant impact on elderly poverty. However, early evidence suggests that take-up is light and those who join are primarily self-employed professionals and other wealthier members of the informal sector. The poor may not be able to afford to participate on a regular basis, and the programs may not meet their savings needs. Consequently, it is not clear how much of the government matching will benefit the elderly poor.

In addition, Thai workers may be confused about the two new informal sector pension programs, their terms and conditions, and how to choose between them. Based on discussions with the Ministry of Finance and the Social Security Office, it appears each each institution is separately marketing its own program, though an effort is being made to advise potential members on the relative benefits of the two programs.

## The National Savings Fund Program

The purpose of the National Savings Fund Program (NSF) is to provide a voluntary pension savings program for the informal sector. The NSF Law was enacted in May 2011 and was scheduled to begin operations on May 8, 2012. However, the government has not yet issued several required regulations, changes to the law are being considered and the program start date is unknown.

**Types of accounts:** The NSF will maintain three types of accounts: 1) Individual Accounts, 2) Pension Accounts, and 3) a Central Account. The Individual Account is used to track individual account balances during the participant's working career. At retirement age (60 years old), the balance in the Individual Account is transferred to a Pension Account. The Pension Account is used to make pension payments to participants until age 80, and a portion of the investment earnings on the Pension Account are transferred to the Central Account to help finance annuities after age 80. The Central Account belongs to NSF and not to individual participants. It is used to make pension payments after age 80 to qualifying individuals who exhaust their Pension Account, and is also used to make additional contributions to individual accounts if the investment rate of return guarantee applies.

**Governance structure.** NSF will be responsible for investment management and all administrative functions for the new pension system. The governing body of NSF is the National Savings Fund Committee (NSF Committee). The NSF Committee and its Investment Sub-Committee are responsible for setting the investment policy, determining the methods for making contributions and withdrawals, and hiring fund managers.

**Eligibility.** Eligibility for the new program is limited to those between the ages of 15 and 60, who are not members of any other statutory pension fund (primarily OAP and GPF), that receives mandatory contributions from the State or employers. Essentially, the eligible group comprises the informal sector regardless of their income level. This program is in addition to the universal social pension under the Old Age Act.

**Contributions.** Workers may make contributions whenever they wish. There is no requirement for regular monthly contributions. The minimum contribution is 50 baht (6.67 USD), and no more than 13,200 baht (440 USD) may be contributed in any one calendar year. The government matches the first 1,200 baht of annual worker contributions and the match percentage varies with the age of the contributor. For those ages 15-30, the match will be 50% (a maximum 600 baht, equivalent to 20 USD), for those 30-50, the match is 80% (maximum 960 baht, equivalent to 32 USD) and for those 50-60 it is 100% (maximum 1,200 baht, equivalent to 40 USD).

**Investments.** The law states that at least 60% of the assets must be invested in low-risk securities that include cash, bank deposits and bank certificates of deposit, government bonds, treasury bills, Bank of Thailand bonds, debt instruments guaranteed by the Ministry of Finance, bank debt instruments, and highly-rated corporate debt. The other 40% can be invested in other permitted instruments such as equities (maximum 10% in any one company and 20% of assets in total), overseas investments (maximum 10% of assets), real estate, and lower-rated bonds. Although these will be the legal limits, the government plans initially to use an investment mix of 80% and 20% for NSF in order to reduce volatility in rates of return. There is also an investment rate of return guarantee in the NSF Law. If the account balance at retirement is less than it would have been if the rate of return were equal to the return on 12-month deposits at the Government Savings Bank, the Bank for Agriculture and Agricultural Cooperatives, and the five largest commercial banks, then the account balance will be topped-up using funds from NSF's Central Account.

The law states that at least two domestic institutions or individuals must be hired for domestic investments. There is no specific limit in the law for the number of overseas investment managers. Although not directly stated, the law implies that NSF is not permitted to directly manage Individual and Pension Account assets.

**Payouts.** Those who retire at age 60 will either receive a monthly pension for life or a living allowance. At age 60, a participant's assets are moved from his/her Individual Account to a Pension Account. Assets in the Pension Account are then converted into a monthly pension amount. If the calculated pension is greater than the minimum pension specified in Ministry regulations, the member is eligible for a lifetime annuity. Payments are made from the Pension Account until age 80. If the participant dies before age 80, the balance in the account is paid to the participant's designated beneficiary. If the participant lives beyond age 80, then the remaining payments until death are paid from the Central Account maintained by the NSF Office.

The number of participants who are eligible for a lifetime annuity, therefore, will depend on the procedures adopted by the government for converting the balance in the Individual Account at retirement into a pension and the level at which the Ministry of Finance sets the minimum pension. These two decisions will have a significant impact on the number of participants who will receive a lifetime annuity, the needed size of the Central Account, and the financial solvency of NSF.

There are two situations in which payments can be made prior to age 60. If a participant dies prior to age 60, the balance in the Individual Account is paid out in a lump sum to the designated beneficiaries. If an individual becomes disabled prior to age 60, the individual can choose to receive all or part of the balance in the Individual Account as a lump sum.

**In-service withdrawals.** Members can only receive a payout prior to age 60 if they resign from the Fund. In this case, they receive a lump sum equal to their own contributions, but the portion of the Individual Account due to government contributions and its investment income is forfeited.

**Taxation.** NSF is a fully tax-exempt system. Participant contributions are tax-deductible, the government's contributions are not taxable income, investment earnings are not taxed when earned, and benefit payouts are also not taxed. However, in Thailand, few workers are required to pay personal income tax, so the government is not losing significant revenue with this provision.

**Fees.** The law indicates that fees for outside investment managers will be limited to a maximum of 2.5% of assets. All of the costs of NSF operations and the costs of marketing, enrollment and collection of contributions will be paid from the state budget.

**Contribution Collection.** The Fund is permitted to perform these functions directly, or to outsource them. Community Development Offices of the Ministry of Interior will be responsible for enrolling members in the NSF system and collecting the first contribution at the time of initial enrollment. Afterward, contributions can be made through SFI (the state bank), Community Development Offices or the post office.

Members are responsible for visiting these locations in order to enroll and make contributions. Active marketing by agents is not planned. However, the government will make trips to each region and use community organizations to promote and educate people about the new program.

## Modified SSO Program for Informal Sector Workers

In addition to creating the NSF, Thailand modified and added another option to an existing, but little used, program for informal sector workers under Article 40 of the Social Security Act. These changes modified the insurance benefits available, introduced an option for an old-age savings program, reduced the price, and introduced government cost sharing.

Under the provisions in effect prior to May 1, 2011, workers who were not eligible for OAP or GPF could voluntarily participate in SSO programs that provided death, maternity and invalidity benefits at a cost of 280 baht per month. Members paid the entire premium. Participation in this program has always been minimal. As of March 2011, there were only 40 participants out of 9 million SSO members.

Under the modified program, effective May 1, 2011, **two benefit packages are offered under Article 40,** one includes a pension savings benefit, and the government now helps finance the cost of the benefits.

**Option 1:** includes insurance benefits, but not pension benefits. Workers receive disability, sickness, and death benefits. Workers electing this option contribute 70 baht (2.33 USD) per month and the government contributes 30 baht (1.00 USD) per month.

**Option 2:** includes the same insurance benefits as Option 1, plus an old-age savings benefit. For this option, the worker contributes 100 baht (3.33 USD) per month and the government contributes 50 baht (1.67 USD) per month. The additional 50 baht per month goes into the old-age savings program, which pays a lump-sum benefit at age 60.

Only limited information about this program can be provided because the details of the program are not described in the SSO law. Instead, they are contained in a Royal Decree. But even the Royal Decree gives limited information about the program, and the benefits, cost, and government matching funds are subject to change at any time, as they are not covered by law. Consequently, the legal basis and program certainty are higher under NSF than under the Article 40 programs. As of August 2012, this program had just over one million participants. However, it is not clear how many of those participants are making regular monthly contributions to the programs, and how many might choose to transfer to the NSF once this program begins.

## Fiscal Cost of the New Voluntary Pension Program

It is difficult to estimate the fiscal impact of the two new voluntary programs. The cost to the government will depend on the number of participants who join the two programs, the age of the participants who join, the amount that they choose to contribute, and the frequency of contributions.

The cost to the government for Article 40, Option 2 will depend on the number of participants who choose to join. The government cost for pensions for each participant

will be 240 baht (8 USD) per year (20 baht per month for 12 months), assuming participants contribute every month. As of August 2012, about one million had joined this program. If all remain in the program, the cost to the government would be 240 million baht (8 million USD) per year. If 10% of eligible participants join (this is SSO's estimate of likely membership), there would be about 2.4 million members, and the cost to the government would be 576 million baht (19.2 million USD).

Estimates for NSF are more difficult to estimate, since the government match varies by age and by the amount the participant chooses to contribute. Under the NSF program, the government match can be 50%, 80% or 100% of worker contributions, depending on age, and the match applies to the first 1,200 baht of annual contributions only (40 USD per year). Consequently, the maximum match varies from 600 baht (20 USD) to 1,200 baht (40 USD) per year, depending on age.

Assuming 10% of eligible participants join, there would be 2.4 million members, and the maximum cost to the government would be 2.9 billion baht (96 million USD). This assumes all 2.4 million members receive the maximum government match of 1,200 baht per year. In reality, the actual cost to the government will be less because not everyone will be eligible for a 100% match. For example, if the average match were 800 baht per month (which might be expected given the age distribution of current informal sector workers), the cost to the government would be about 1.9 billion baht (64 million USD).

It seems likely that informal sector workers who want to save for retirement will ultimately choose NSF over Article 40, Option 2, as the NSF program provides higher levels of government contributions and has a much stronger legal basis. Those who have already joined Option 2 will be able to voluntarily switch to the NSF program on selected switching dates.

These estimates can be revised once both programs have started and had some time to mature. Then more detailed statistics will be available by age, sex and income for the number of participants, average amount contributed, frequency of contributions and other important variables affecting the cost of the program.

## Analysis

Due to their rich pension benefits,Thailand's civil servants are unlikely to live in poverty following retirement. However, formal sector workers might not have sufficient retirement income from OAP, particularly during the next 10-15 years. Workers who are currently close to retirement only receive credit for service from 1999 when calculating benefits. There is no credit for years worked prior to the start of the OAP system. There is also no minimum pension under the program. Consequently, those with low pay could receive pensions that are inadequate to prevent poverty following retirement. Finally, the program's contribution rate is too low to fully finance promised benefits beyond the mid-2020's. Analysis in 2007 by Mitchell Wiener, one of the authors of this Policy Note, indicated the plan would begin showing operational losses in 2026

and would exhaust all its reserves by 2039. The contribution level rate required to properly fund the system is 16.3% rather than the 6% rate currently being collected. Without significant reform, the system will be forced to change eligibility conditions, reduce benefit levels, and increase required contribution rates in order to restore fiscal solvency.

At this time, it is too early too early to definitively analyze the impact of the NSF and the Article 40, Option 2 programs on elderly poverty. However, anecdotal evidence suggests that the take-up under the Article 40 program has been light and that the greatest interest is from the self-employed and other wealthier members of the informal sector. The design features of these two programs seem to be best suited to meeting the needs of the wealthier segments of the informal sector. It is likely that the poorer members of the informal sector – those most likely to live in poverty – will be the least able to afford to contribute to the programs.

## V. SOCIAL PENSION DESIGN AND POVERTY IMPACT

One major unanswered question regarding the Thai social pension under the Old Age Act is the extent to which is has contributed to the reduction in elderly poverty. Figure 8 shows that elderly poverty has declined from 14.1% to 10.9% from 2008 through 2010, implying a decline of 3.2% in the poverty rate for the elderly. Is that decline exclusively because of the increased coverage of the social pension system in 2009 or is it primarily due to economic growth?

To address this question, the difference-in-difference (DID) or the double difference estimator was employed. In simple terms, the DID method is based on the presumption that some decline in the poverty rate among the elderly population would have occurred anyway as a consequence of aggregate economic growth even if there were no expansion in the coverage of the social pension system. By estimating the decline in the poverty rate that would have occurred in the "counterfactual" situation of no expansion in the coverage of social pensions, and removing this "trend effect" from the observed decline in the poverty rate, one can get a more reliable picture of the contribution that the increased coverage of social pensions has had in the decline in poverty among the elderly.

Two estimates are derived regarding the impact of social pensions on poverty. The first estimate concerns the change in the poverty rate among elderly individuals eligible for social pensions in the years 2006 to 2009 (the years prior to the expansion of social pensions) and 2009 to 2010 (the years after the expansion of social pensions).

Table 7 presents the evolution of the headcount poverty measure for eligible elderly (60+ years of age) and younger /non-elderly individuals. An elderly person is identified as "eligible" for the social pension if he/she is between 60 and 99 years of age and has a universal health card.

### Table 7: Evolution of Poverty : Eligible Elderly vs. Younger /Non-elderly Individuals

| *Year* | *Non-elderly* | *Eligible elderly* |
|---|---|---|
| *2006* | 8.79 | 17.30 |
| *2007* | 7.71 | 15.83 |
| *2008* | 8.08 | 16.98 |
| *Avg. 2006-8* | 8.19 | 16.71 |
| *2009* | 7.48 | 14.16 |
| *2010* | 7.18 | 13.16 |
| *Avg. 2009-10* | 7.33 | 13.66 |

**Source:** World Bank estimates based on the Socio-Economic Surveys, National Statistical Office, Thailand

The headcount poverty rate among the eligible elderly was, on average 16.71% between 2006 and 2008, and 13.66% between 2009 and 2010, implying a decline by 3.05% (13.66 - 16.71= -3.05) in the poverty rate for the elderly receiving pensions. However, the middle column in Table 7 shows that the poverty rate among non-elderly people also declined by 0.86 percentage points (7.33 - 8.19= -0.86). Thus, the DID suggests that in the years prior to the expansion of social pensions and in the years after the expansion, the decline in the poverty rate among elderly people can be attributed to the expansion of social pensions, which was 2.19% (-3.05-(-0.86) = -2.19), or 72% (2.19/3.05=S0.7176).

The second estimate concerns the change in the poverty rate among eligible elderly in the years prior to the pension expansion (2006 to 2008), and the years after the expansion of social pensions (2009 to 2010). Table 8, presents the evolution of the headcount poverty measure for eligible elderly (60+ years of age) individuals receiving pensions and elderly individuals eligible for social pensions but not receiving pensions.

### Table 8: Evolution of Poverty : Eligible Elderly Individuals Receiving Social Pensions vs. Eligible Elderly Individuals not Receiving Pensions

| *Year* | *Eligible Elderly Non-receivers* | *Eligible Elderly Recipients* |
|---|---|---|
| 2006 | 15.09 | 25.83 |
| 2007 | 13.96 | 20.27 |
| 2008 | 13.16 | 23.67 |
| Avg. 2006-8 | 14.07 | 23.25 |
| 2009 | 11.23 | 15.92 |
| 2010 | 10.96 | 13.51 |
| Avg. 2009-10 | 11.09 | 14.72 |

**Source:** World Bank estimates based on the Socio-Economic Surveys, National Statistical Office, Thailand

In Table 8, the headcount poverty rate among the eligible elderly persons receiving pensions was, on average, 23.25% between 2006 and 2008, decreasing to 14.72% in the years after the expansion of social pensions (2009 and 2010). This implies a decline in the poverty rate among the elderly receiving pensions of 8.54% (14.72 - 23.25 = -8.54). The middle column in Table 8 shows that the poverty rate among elderly people eligible to receive, but not receiving, social pensions declined by 2.97% (11.09 - 14.07 = -2.97). Thus, the DID estimate of the change in the poverty rate among elderly persons receiving social pensions suggests that the decline in the poverty rate that can be attributed to the expansion of the social pensions was 5.56 %, or 65% (5.56/8.54 = 0.6518) of the reduction in the average poverty rate. To summarize, social pensions appear to be a very effective tool for reducing poverty among the elderly in Thailand.

Another issue in need of further analysis is the cost/benefit tradeoff associated with alternative designs. What additional degree of poverty reduction can be achieved and at what cost? To address this question, the poverty impacts and budgetary costs were simulated for the following pension schemes:

- **Current (2010)** social pension beneficiaries get an additional transfer of 500 baht monthly. The yearly budget in this scenario is simply the number of elderly individuals (60 years and older) in the 2010 SES reported to be receiving a social pension (or 8,081,295 individuals) multiplied (500 x 12).

- **Universal Coverage (UC) assuming a variety of transfer amounts:** Every eligible elderly person receives either a transfer of 500, 600, or 700 baht monthly. The yearly budget in this scenario is simply the number of eligible elderly individuals in the SES (an estimated 7,991,311 individuals or roughly 80% of the total elderly population) multiplied by the monthly transfer, times 12.

- **Universal Coverage with Graded Pension (UCwGP):** Every eligible elderly person receives a transfer. The amount of the monthly transfer depends on the age of the receiver: 600 baht for people 60-69, 700 baht for people 70-79, 800 baht for people 80-89, and 1,000 baht for people aged 90 or more. The yearly budget is constructed by summing the amounts received across all elderly poor individuals per month, multiplied by 12.

- **Perfect Targeting (PT):** Every poor eligible elderly individual receives a transfer of 500, 600 or 700 baht, monthly. The yearly budget in this scenario is simply the number of eligible elderly individuals in the SES, multiplied by the monthly transfer, times 12.

- **Perfect Targeting with Graded Pension (PTwGP):** Every poor eligible elderly person receives a transfer. The amount of the monthly transfer depends on the age of the receiver: 600 baht for people 60-69, 700 baht for people 70-79, 800 baht for people 80-89, and 1,000 baht for people aged 90 or more. The yearly budget is constructed by summing the amounts received monthly across all poor eligible elderly individuals, times 12.

In the last two scenarios of perfect targeting, it was assumed that there are no administrative costs associated with targeting, and that the administrators of the social pension program have full knowledge of the poverty status of an individual based on the actual per capita expenditure (PCE) of the household where the individual resides. In reality, since data on the expenditure of all the households in the country may be too costly to collect (using a questionnaire like the SES), social pension program administrators may determine the poverty status of a household using a Proxy Means Test (PMT) that aims to approximate the true consumption of the household. The survey required for the construction of the PMT involves some costs though these are likely to be lower than the implementation of the full SES survey, but it is likely to introduce imperfections in targeting the poor due to misclassifications of the poverty status of households.

## Table 9: The Poverty Impacts and Budget Costs of Different Pension Schemes

| | Total Population | | | Elderly Population | | | | |
|---|---|---|---|---|---|---|---|---|
| | P0 | P1 | P2 | P0 | P1 | P2 | Yearly Budgetary Cost | As % of Budget Needed to Eliminate Poverty Gap |
| **Current Situation** | **7.75** | **1.33** | **0.37** | **10.92** | **1.95** | **0.55** | | |
| | | | | | | | | |
| **Current Pension Recipients** | | | | | | | | |
| **500 Baht Monthly** | | | | | | | 48,487,772,100 | |
| MPC = 0.60 | 6.63 | 1.11 | 0.30 | 7.35 | 1.17 | 0.30 | | 181.5 |
| MPC = 1.00 | 6.13 | 1.01 | 0.27 | 5.59 | 0.85 | 0.21 | | 302.5 |
| **600 Baht Monthly** | | | | | | | 58,185,326,520 | |
| MPC = 0.60 | 6.49 | 1.08 | 0.29 | 6.85 | 1.06 | 0.27 | | 217.8 |
| MPC = 1.00 | 5.92 | 0.97 | 0.26 | 4.96 | 0.73 | 0.18 | | 363.0 |
| **700 Baht Monthly** | | | | | | | 67,882,880,940 | |
| MPC = 0.60 | 6.37 | 1.05 | 0.28 | 6.36 | 0.96 | 0.24 | | 254.1 |
| MPC = 1.00 | 5.74 | 0.93 | 0.25 | 4.40 | 0.64 | 0.16 | | 423.5 |
| | | | | | | | | |
| **Universal Coverage (UC)** | | | | | | | | |
| **500 Baht Monthly** | | | | | | | 47,947,867,882 | |
| MPC = 0.60 | 6.57 | 1.09 | 0.29 | 7.19 | 1.11 | 0.27 | | 179.5 |
| MPC = 1.00 | 6.02 | 0.98 | 0.26 | 5.37 | 0.77 | 0.18 | | 299.1 |
| **600 Baht Monthly** | | | | | | | 57,537,441,459 | |
| MPC = 0.60 | 6.41 | 1.05 | 0.28 | 6.66 | 0.99 | 0.24 | | 215.4 |
| MPC = 1.00 | 5.80 | 0.93 | 0.24 | 4.71 | 0.64 | 0.14 | | 359.0 |
| **700 Baht Monthly** | | | | | | | 67,127,015,035 | |
| MPC = 0.60 | 6.26 | 1.02 | 0.27 | 6.11 | 0.89 | 0.21 | | 251.3 |
| MPC = 1.00 | 5.58 | 0.89 | 0.23 | 4.06 | 0.53 | 0.12 | | 418.8 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Universal Coverage with Graded Pension (UCwGP)** | | | | | | | 63,250,799,507 | |
| MPC = 0.60 | 6.31 | 1.03 | 0.27 | 6.32 | 0.93 | 0.22 | | 236.8 |
| MPC = 1.00 | 5.71 | 0.91 | 0.24 | 4.42 | 0.57 | 0.12 | | 394.6 |
| | | | | | | | | |
| **Perfect Targeting (PT)** | | | | | | | | |
| **500 Baht Monthly** | | | | | | | 6,299,150,739 | |
| MPC = 0.60 | 6.57 | 1.09 | 0.29 | 7.19 | 1.11 | 0.27 | | 23.6 |
| MPC = 1.00 | 6.02 | 0.98 | 0.26 | 5.37 | 0.77 | 0.18 | | 39.3 |
| **600 Baht Monthly** | | | | | | | 7,558,980,886 | |
| MPC = 0.60 | 6.41 | 1.05 | 0.28 | 6.66 | 0.99 | 0.24 | | 28.3 |
| MPC = 1.00 | 5.80 | 0.93 | 0.24 | 4.71 | 0.64 | 0.14 | | 47.2 |
| **700 Baht Monthly** | | | | | | | 8,818,811,034 | |
| MPC = 0.60 | 6.26 | 1.02 | 0.27 | 6.11 | 0.89 | 0.21 | | 33.0 |
| MPC = 1.00 | 5.58 | 0.89 | 0.23 | 4.06 | 0.53 | 0.12 | | 55.0 |
| | | | | | | | | |
| **Perfect Targeting with Graded Pension (PTwGP)** | | | | | | | 8,378,725,367 | |
| MPC = 0.60 | 6.31 | 1.03 | 0.27 | 6.32 | 0.93 | 0.22 | | 31.4 |
| MPC = 1.00 | 5.71 | 0.91 | 0.24 | 4.42 | 0.57 | 0.12 | | 52.3 |
| **Budget A: Budget required to Eliminate the Poverty Gap w/ MPC=1:** | | | | | | | 16,028,869,754 | |
| **Budget B: Budget required to Eliminate the Poverty Gap w/ MPC=0.60:** | | | | | | | 26,714,782,924 | |

Notes:
1. Only elderly persons (60 years of age or more) with a universal health coverage card are assumed to be eligible to receive a social pension. Thus, the simulations above take into account the fact that elderly persons receiving formal pensions from the government are, in principle, not eligible for social pensions.
2. The poverty impact of the Universal Coverage Scheme with Graded Pensions (UCwGP) is identical to that of Perfect Targeting with Graded Pensions (PTwGP) except that the budget is much higher.
3. All the poverty impacts simulated above are obtained by adding the amount of the social pension transfer (multiplied by the MPC) to the current level of household consumption expenditure per capita.
Source: World Bank (author's) estimates based on the Socio-Economic Surveys, National Statistical Office, Thailand.

Table 9 presents the budgetary costs and the poverty impacts of the different pension schemes. It reveals that the poverty impacts of the universal pension scheme adopted since 2009 come at a substantial financial cost. The Universal Coverage (UC) schemes cost much more than the Perfect Targeting (PT) schemes. For example, the cost of the universal schemes ranges between 2.99 and 4.19 times the budget required to eliminate the poverty gap assuming a marginal propensity to consume (MPC) of 1.00 (or Budget A). The cost of the universal schemes ranges between 1.79 and 2.51 times the budget required to eliminate the poverty gap assuming a marginal propensity to consume of 0.60 (or Budget B). Also, the Universal Coverage Pension Scheme with a Graded Pension (UCwGP) coming into effect in January 2012 requires a budget that is almost four times the budget required to eliminate the poverty gap (assuming a marginal propensity to consume of 1).

In contrast, the two targeted pension schemes (assuming perfect targeting with zero administrative costs) cost between 39% and 55% of the budget required to eliminate the poverty gap (assumingMPC=1).

The poverty gap for any one individual is the difference between the poverty line and the average income in the household where the elderly person resides. If this amount is summed for all elderly in the country, the result is the poverty gap. It is the total amount of money needed to completely eliminate elderly poverty in Thailand. It can also be viewed as the cost of a perfectly targeted social pension program for the elderly with no administrative costs. The actual cost of the program today and any proposed program can be viewed as a multiple of the poverty gap.

The marginal propensity to consume is the portion of any additional income (such as that from the social pension) that is used by the elderly recipient for his or her own consumption. Typically, the recipient does not spend the entire amount received. Some of it may be used for the benefit of other household members and some of it may be saved, even when the average household income is below the poverty line. In order to increase the expenditures of the elderly person by 1,000 baht, for example, it may be necessary to pay a pension greater than 1,000 baht to account for the amount expected to be saved or shared with other household members.

Overall, the simulated poverty impacts in Table 9 reveal that the pension scheme with Perfect Targeting with Graded Pension (PTwGP) is the scheme with the strongest impact on poverty (poverty rate, poverty gap and severity of poverty) and with one of the lowest, though not the lowest, budgetary costs (52% of the poverty gap assuming MPC=1 and 23% of the poverty gap assuming MPC=0.60).

## VI. POLICY OPTIONS

This section will explore possible options for consolidating and rationalizing the wide range of Thai pension systems. It will also examine the range of policy options available to the government to address the vulnerabilities identified in Thailand's existing social protection programs that were designed to prevent poverty among the elderly.

## A. PENSION SYSTEM CONSOLIDATION OPTIONS

Table 10 summarizes the basic characteristics of each of the eight Thai retirement programs. The designs of the various programs differ substantially on a number of key characteristics - the eligible group, the program sponsor, whether the programs are mandatory or voluntary, whether programs are defined benefit (DB) or defined contribution (DC), how the program costs are allocated among workers, employers and the government, and the government institution responsible for supervision and control.

### Table 10: Characteristics of Retirement Programs

| *Program* | *Eligibility* | *Sponsor* | *Type* | *DB/DC source* | *Contribution* | *Supervisor* |
|---|---|---|---|---|---|---|
| **OAP, SSO Articles 33 & 39** | Formal sector | Employer | Mandatory | DB | Employers, workers and government | Ministry of Labor |
| **GPF and pension** | Government officials | Employer (Government) | Mandatory | DB/DC | Government and workers | Ministry of Finance |
| **PVD** | Formal sector | Employer (Occupational pension programs) | Mandatory if listed on | DC | Employer and workers | Securities Commission |
| **RMF** | All workers | Individual | Voluntary | DC | Workers Commission | Securities |
| **OAA** | Informal sector | Individual | Universal | DB | Government | Ministry of Interior |
| **NSF** | Informal sector | Individual | Voluntary | DC | government and Workers match | Ministry of Finance |
| **SSO Article 40** | Informal sector | Individual | Voluntary | DC | government and Workers match | Ministry of Labor |

From this table, a number of observations can be made. Thailand's pension programs are highly fragmented, at least in part because there does not appear to be a national pension policy, and responsibility for oversight of Thai pension programs is spread across multiple ministries and institutions. This structure makes it more complicated to achieve the political compromises necessary to consolidate and rationalize the existing programs and establish a separate pension supervision and control agency.

The design of the voluntary programs for the informal sector should vary depending on whether the social pension for the informal sector will be 1) universal or targeted, 2) permanent or temporary. It would make sense to try to consolidate the number of pension programs. One way to envision how such a restructuring might work is to view the existing programs from the perspective of the World Bank's Five Pillar Paradigm as shown in Table 11 below. Except for the second pillar, it can be seen that there are multiple programs within each pillar that could be viewed as redundant.

### Table 11: Thai Pension Programs Classified by the World Bank Pillar Paradigm

| *Pillar* | *Description* | *Thai Programs* |
|---|---|---|
| **Zero pillar** | Non-contributory, social pension and social assistance | Social pension, OAA<br>Non-cash social assistance |
| **First pillar** | Mandatory, earnings-related contributions, income replacement | OAP: SSO, Articles 33 & 39<br>Civil servant DB plan |
| **Second pillar** | Mandatory, defined contribution | GPF |
| **Third pillar** | Voluntary, occupational or individual savings, DB or DC | Voluntary provident funds<br>Retirement mutual funds<br>NSF<br>SSO, Article 40, Option 2 |
| **Fourth pillar** | Non-financial informal support | Family support<br>Universal health care<br>Community welfare funds<br>Personal assets |

## Program Consolidation Example

One possible consolidation option is shown below. This example was selected solely to illustrate the principles for consolidating and rationalizing the existing programs, and we are aware there would be many technical and political obstacles to such a change. Nevertheless, Thailand should consider beginning a debate on how to simplify and better manage its pension programs.

- Put the formal sector and government officials into the same programs. Both could participate in OAP and GPF. As part of this restructuring, OAP benefits could be reduced back to their initial level since everyone would now be participating in GPF as well. This would use the existing infrastructure to provide basic benefits to everyone in the formal sector, including civil servants. It would also create a multi-pillar pension system for the entire formal sector, help improve the fiscal sustainability of OAP, and avoid creating yet another new pension program like the

National Pension Fund (NPF) that was proposed in 2006-7. Instead, the existing GPF could be extended to the whole formal sector.

- The social pension could be rationalized and remain the basis for pensions for the informal sector. In order to assure that pension benefits are paid to everyone, the social pension could be kept universal. The social pension could also serve as a minimum benefit for the formal sector. If the sum of the benefits payable from OAP and GPF are less than the social pension, benefits could be topped-up to that level. The appropriate benefit level for the social pension would require further study to find the optimal balance between poverty reduction and cost.

- Set up one single voluntary defined contribution program for everyone in the formal and informal sectors. NSF could be the program for this consolidation. Retirement mutual funds, voluntary provident funds, and the Article 40, Option 2 could be phased out. Occupational programs could be implemented by requiring employer contributions to individual accounts under NSF. The voluntary program could be designed for those with average to high earnings who want to save more for their retirement.

- The number of ministries regulating pension programs could be reduced to one or two. If one regulator is desired, a new independent pension fund regulator could be established. Such an authority would likely have a tripartite board and would include representatives from both the Ministry of Labor and Ministry of Finance. Alternatively, the Ministry of Labor could supervise the defined benefit programs (OAP and social pension), while the Ministry of Finance could supervise the defined contribution programs (GPF and NSF). The number of administrators could remain the same (SSO, Ministry of Interior, GPF and NSF) or there could be some consolidation here as well.

This possible option for consolidating and rationalizing the existing programs would leave a pillar zero social safety net program (social pension), a single pillar one program (OAP), a single pillar two program (GPF), and a single pillar three program (NSF). Other social assistance programs, such as community welfare funds and MSDHS non-cash programs, would supplement these. Again, this should not be viewed as a concrete recommendation, but rather as an example to stimulate discussion and seek areas of political compromise.

## B. SOCIAL PENSION DESIGN OPTIONS

Thailand should consider reexamining the design and purpose of the social pension program and how it integrates with the other Thai pension programs, particularly the two new voluntary pension programs for the informal sector. At least three distinctly different views have been expressed by government policy makers and civil society organizations.

- NSF and Article 40, Option 2 will eventually obviate the need for the social pension and allow it to be terminated.

- The social pension should remain universal and consideration should be given to significantly increasing the benefit level to as high as the poverty line to assure that all elderly people have sufficient income to prevent poverty.

- The social pension should be targeted in order to reduce the overall fiscal cost of the program and allow the benefit to be set at an appropriate level for each family that includes the elderly.

The key issues to be examined are whether the program should be universal or targeted, and how to harmonize the voluntary informal sector pension programs with the universal pension. If the social pension will remain universal, what is the appropriate level of benefits to optimize the program's impact on elderly poverty, while at the same time limiting the cost of the program to sustainable levels? If the social pension will be universal, then it might be appropriate to design the voluntary programs primarily to meet the needs of the wealthier segment of the informal sector. They will need the additional savings to maintain their standard of living following retirement while others will likely receive sufficient income from the social pension alone.

If the program will be targeted, how can the program be managed efficiently to minimize exclusion error and program administrative costs while achieving maximum fiscal efficiency?

The primary argument for targeting is the potential to reduce the total cost of the program and improve the poverty reduction impact by focusing limited funds on those most in need. If the social pension will be targeted, then the voluntary programs may need to be adjusted to appeal to a wider range of informal sector workers. All non-poor informal sector workers will have to use the voluntary pension programs to meet all of their retirement needs in this instance.

As a very rough approximation of the potential savings, we assumed the 10.9% of the elderly who are poor would be the eligible group for the targeted social pension program. This means about 1,200,000 Thai elderly people would be eligible. If each of these received a benefit equal to the poverty line (about 1,600 baht per month), then the total cost of the program in 2012 would be 23.0 billion baht, just 33% of the 70.2 billion baht expected to be spent on social pensions under the current scheme in 2012. In reality, the total cost would be even lower because most elderly poor people would receive less than the full poverty line. On the other hand, the administrative costs of managing the targeted system would add to program costs.

Targeting resources to particular groups can achieve the greatest impact for a given budget. However, the identification of the right population and the implementation of targeting have costs and targeting errors because targeting is not a perfect science. The main costs of targeting are:

- **Administrative costs.** Around 10-15% of program costs go to pay salaries and train government staff who carry out targeting and manage programs.

- **Gathering information** for identification of beneficiaries.

- **Beneficiary transaction costs.** This is the cost of application for families/individuals, and for solving access problems for those who are disabled or live in remote areas.

- **Social cost.** Some people do not want to be stigmatized as poor or program beneficiaries and therefore choose not to participate.

Errors of targeting result because some of the eligible population are not selected (errors of exclusion), and some ineligible ones are selected for participation (errors of inclusion). Significant research on targeting has been conducted over the past 5-10 years, and better methods have been developed that reduce targeting errors, but targeting errors still remain significant. No matter which methods are chosen for targeting, implementation is key, and coordination across different programs is essential to achieve good coverage of the poor.

A good targeting system should ensure transparency and consistency, where local branches and agents ensure clear and consistent application of common centralized criteria, and where there is low political interference and manipulation by frontline officials and beneficiaries. Good systems also are designed to achieve maximum inclusion of the poor and the near poor. Reducing leakage to the non-poor enhances political sustainability and credibility. It is acceptable and inevitable to have some errors of targeting (technical, administrative), but appeals mechanisms should be available for those who feel they have improperly been excluded and fraud, corruption and manipulation should be combated.

To reduce costs of targeting and achieve economies of scale, countries use the same administrative platforms for multiple programs. The targeting criteria for each program should be applied against a common database of potentially eligible participants. Such common targeting platforms have been, or are, being developed in many countries. The World Bank can share regional and global experiences and lessons learned from countries such as Indonesia, the Philippines, Brazil, Colombia, and Mexico.

## C. VOLUNTARY INFORMAL SECTOR PROGRAM OPTIONS

NSF and Article 40 programs will likely be most attractive to self-employed professionals and other high-paid members of the informal sector. This may be an appropriate strategy if these two programs are intended to supplement, and not replace, the universal social pension. If the social pension remains universal and is sufficient to prevent poverty, then those members of the informal sector who want to save more for retirement can use either of these two voluntary pension programs to accumulate additional retirement savings. On the other hand, if the social pension will be targeted at the poor only, then the remainder of the informal sector would need to use these programs to meet all their

pension savings needs. In this case, the amounts that would need to be accumulated would be much higher.

Several changes should be considered if the goal is to have a broader cross-section of the informal sector participate in the voluntary pension programs. The legal structure of the Article 40 programs should be strengthened and the government match should be codified. The law creates the program but all important details are found in Royal Decrees and there is little comfort that the programs will remain in place in their current form or that the government will continue to contribute.

On the other hand, the NSF law is extensive and carefully outlines the legal structure and benefits of the program. However, there are several provisions that could be re-examined to enhance the attractiveness of the NSF program for a wider group of potential participants. These comments are based on analysis of the spending habits of the poor, as outlined in "*Portfolios of the Poor: How the World's Poor Live on USD2 a Day*" (Collins, Morduch, Rutherford and Ruthven, 2009). This book carefully examines the financial transactions of the poor, and illustrates the methods they use for borrowing and saving to meet their needs, despite minimal and irregular income and limited assets. While the book examines spending habits in India, Bangladesh and South Africa, discussions with microfinance institutions in Indonesia indicate that these same observations are equally applicable in Indonesia and the majority of the findings are likely equally applicable to the poor in Thailand.

The following enhancements should be considered if Thailand wants the voluntary informal sector pension programs to have greater appeal to a wider range of informal sector workers at different income levels.

- **Withdrawal flexibility prior to retirement age.** It would be helpful to have some additional flexibility to withdraw contributions prior to retirement without severe penalty. Most savings in the informal sector are for consumption smoothing and medium-term needs such as weddings, funerals, household purchases, and medical expenses. The preferred form of long-term informal sector retirement savings is hard assets – gold, jewelry, land, livestock, and housing. The NSF program requires members to forfeit all government contributions and the investment income on those contributions if they withdraw money prior to retirement. This severely limits program liquidity and discourages lower-income workers from joining.

- **Points of contact in the community for paying contributions.** Without more proactive collection mechanisms, it is likely that informal sector workers will not contribute regularly and there may be many small, inactive accounts. Long-term saving is likely to have lower priority than other needs, particularly if there is no active encouragement to contribute regularly. For example, microfinance institutions often use weekly community meetings or house-to-house collection of savings to encourage regular participation. Mobile phone banking could also be used to make contributing easier for informal sector workers in remote locations.

- **Lower fees.** The NSF law allows management fees of up to 2.5% of assets. This is high for any type of voluntary defined contribution program. Programs for the informal sector that rely on collecting small amounts of money from a large number of participants must have efficient and centralized administration. Processes should be highly automated to keep expenses low, especially since most contributions will be small, from multiple collection points, and contribution payments will likely be irregular.

- **Government match.** The rationale for the increasing match by age is that those who are older at the time the program begins have less time to save for retirement than those who are younger. While this rationale is persuasive for the existing group of older workers at the time the program begins, it may not be as persuasive for new work force entrants, as they may choose to delay the start of their savings program until later ages when the match is higher. Generally, it is better to encourage workers to start saving as early as possible as contributions made at younger ages will earn interest for a longer period of time and purchase a larger benefit than contributions made at older ages.

- **Effective communication.** Most low-income workers have only a primary education and may know little or nothing about pensions or finance. The benefits of retirement savings must be carefully explained. This requires an initial and strong ongoing public education effort.

Several other issues require careful attention from the government, as they will directly affect the financial solvency of the National Savings Fund as an institution and will have a significant impact on the administrative procedures of the program.

- **Liability for NSF pensions.** NSF may have a substantial liability for payment of lifetime pensions to those who live beyond age 80. The size of the liability will depend on the assumptions and methods used to calculate the initial pension amount, the manner in which pensions are indexed following retirement (if at all), and the manner in which the rate of return on Pension Accounts is allocated between the Central Account and the participant's Pension Account. It will also heavily depend on the size of the minimum pension, which directly determines the number of individuals who qualify for lifetime pensions as opposed to a living allowance. Since a substantial number of future pensioners may live beyond age 80, NSF should hold a Central Account liability to secure these expected future payments. Sophisticated actuarial projections are needed to determine the optimal system design and to calculate the required reserves.

- **Individual account recordkeeping.** More clarity is needed regarding the method for allocating investment income to participants. It is unclear whether account balances will be updated daily, or whether investment income will be declared on a periodic basis. The law requires investment income to be declared at least once per year. International best practice is to allocate investment income daily by marking assets to market, calculating the fund's net asset value, calculating the number of units held by each participant, and updating individual account balances.

- **Fiscal efficiency and political perception.** Both NSF and SSO estimate that only about 10% of eligible workers will join their programs, and they will likely be wealthier members of the informal sector. This means the majority of the government contributions will likely go to those who are not poor, and the programs will likely have limited impact on elderly poverty. This could undermine political support for the programs and endanger their fiscal sustainability.

It is important to note that even a well-designed voluntary savings program for the informal sector may not attract the expected level of contributions for valid reasons. Saving for retirement is usually not the primary concern of informal sector workers. Instead, they tend to value short-term savings, micro-borrowing, health insurance, insurance against catastrophes (earthquakes, typhoons, etc.) and protection against crop failure or livestock loss more than savings for retirement.

For those who are able to save, there may be better investment opportunities than contributing to a voluntary pension program. For example, the purchase of land or livestock or using savings for a child's education may produce higher rates of return than investing in market securities. Consequently, the pension plans should be viewed as one component of an overall program that recognizes the legitimate short- and long-term savings needs of informal sector workers.

## D. OAP PROGRAM OPTIONS

The primary issue with the OAP program under Articles 33 and 39 of the Social Security Act is its long-term fiscal sustainability and its role within the overall pension system for the country. There is also an issue of providing adequate retirement income to OAP participants over the next 10-20 years when benefits payable from OAP will be based on years of service from 1999 only. At the moment, the OAP program continues to run a significant surplus since it is collecting contributions but no one is eligible yet for a pension benefit. However, this situation will reverse rapidly between 2014 and 2040 and the apparent surplus will quickly turn into a deficit. Actuarial analysis is needed to examine design options to assure long-term fiscal sustainability.

The standard contribution rate for the OAP program is 7%. Workers and their employers each contribute 3% while the government contributes 1%. In addition to pension benefits, the OAP program also includes childcare benefit. According to calculations by the author in 2007, the true rate necessary to properly fund the program in the long term is 16.3%.

Many features of the OAP program could be adjusted to bring it back into fiscal balance. The retirement age of 55 is too low, the wage cap of 15,000 baht is reasonable today, but should be automatically indexed as average wages increase. Average pay is calculated over too short a time period, and the benefit level is too high. Some combination of changes in eligibility conditions, benefit provisions, and contribution rates will be needed to restore the long-term fiscal balance of the OAP system.

# VII. CONCLUSION

The government of Thailand has recently introduced two new voluntary pension programs and changed the structure of the universal social pension for informal sector workers. The voluntary pension program under Article 40 of the Social Security Act has been in operation for about 18 months, while the start of the NSF has been delayed. Consequently, there is little empirical data available about participation in these programs and the impact of the start of NSF on the Article 40 programs is unknown. For reasons described in this report, we do not expect either of these programs to have a significant impact on poor elderly people or to ultimately replace the universal social pension for informal sector workers. Rather, we think that wealthier members of the informal sector will likely use these programs to supplement benefits from the social pension. Consequently, the government match under these programs will primarily benefit the non-poor elderly.

The universal informal sector social pension, however, has been in place in its current form since 2009, so there is significant practical experience that can be used to evaluate its impact on elderly poverty. We find that the social pension is responsible for more about 75% of the observed reduction in elderly poverty, the poverty gap, and the severity of poverty from 2006-2008 compared with 2009-2010. While the benefit is not high enough to raise all elderly above the poverty line, it has virtually eliminated extreme poverty among the elderly and significantly reduced the poverty gap. Because it is a universal program covering all informal sector workers, it has avoided the exclusion errors often observed in targeted programs, but at the same time, significant amounts of government benefits are going to those who are not in need.

The government could save significant expenditures by restructuring the program to target only the elderly poor to eliminate poverty completely for this group. Alternatively, increases in the amount of the benefit provided by the social pension system or additional new benefits, could be targeted to ensure that these additional benefits go the pensioners who are poor or need it the most. Either way, the government would have to set up an effective targeting mechanism and would not be assured of covering all of the elderly poor due to inevitable targeting errors. If the additional social pension benefits were targeted, the government would also need to revisit the design of its voluntary pension programs, as they are unlikely to provide sufficient benefits to fully meet the needs of the elderly who are not poor.

Thailand should consider rationalizing and reducing the number of pension programs, establishing a pension regulator, and establishing clear responsibility for overall pension policy. This policy note suggests one possible way to restructure, though there are many other options that could accomplish similar objectives.

We look forward to further dialogue with the government of Thailand with regard to reducing elderly poverty and rationalizing pension policy and programs.

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