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Social protection for men and women in the Philippines: Some insights for improving program design of social insurance schemes

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Social Protection for Men and Women in the Philippines: Some Insights for Improving Program Design of Social Insurance Schemes

Celia M. Reyes, Aubrey D. Tabuga, and Ronina D. Asis

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CONTACT US:

RESEARCH INFORMATION DEPARTMENT
Philippine Institute for Development Studies

18th Floor, Three Cyberpod Centris - North Tower
EDSA corner Quezon Avenue, Quezon City, Philippines

publications@mail.pids.gov.ph
(+632) 372-1291/(+632) 372-1292

https://www.pids.gov.ph

Social Protection for Men and Women in the Philippines: Some Insights for Improving Program Design of Social Insurance Schemes

Celia M. Reyes
Aubrey D. Tabuga
Ronina D. Asis

PHILIPPINE INSTITUTE FOR DEVELOPMENT STUDIES

December 2018

Abstract

To reduce the risks and vulnerability to sudden income shocks faced by households due to natural calamities, disability, illnesses and other causes, ensuring that social protection programs are designed in a relevant and effective manner is crucial. This study examines the coverage of several social protection programs with focus on social insurance schemes like the SSS/GSIS, PhilHealth and social pension programs. The idea is to profile those with access to these schemes, examine potential exclusion issues and leakages, and provide insights for improving access to insurance schemes. This paper likewise examines access to social insurance with a gender perspective to help determine any need for differentiated intervention or program design for men and women.

Keywords: Social protection, Philippines, social insurance, gender

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Social protection for men and women in the Philippines: Some insights for improving program design of social insurance schemes

Dr. Celia M. Reyes, Dr. Aubrey D. Tabuga, and Ms. Ronina D. Asis[1]

1. Introduction

Despite the robust economic growth in recent years, the number of poor families remains at its level 25 years ago. There has been some progress in terms of poverty incidence, yet number of poor stands at 3.7 million families in 2015, even larger than 1991's 3.6 million. This clearly indicates the need for more concerted efforts amidst rapid growth of population. The number of subsistence poor (i.e. families which do not even have the income necessary to meet basic food needs) has gone down by only 400,000 families during the same period; it is now at 1.3 million. This shows an annual rate of reduction of only 1 percent. At this rate, the Philippines will not be able to eradicate subsistence poverty anytime soon, not in the next century. The rate of progress in reducing inequality is even more dismal – the Gini index has been reduced by only 0.2% annually in the last 24 years. At present the Gini is at 0.453 from 0.48 in 1991.

In terms of non-income dimensions of poverty, there has been improvements in the proportion of families with access to sanitary toilet facilities and electricity but not so for access to potable water where the incidence remains below 80 percent. The weak performance in income poverty reduction is also mirrored in the nutrition dimension of poverty. The prevalence of underweight children 0 to 5 years old has declined very minimally from 2008 to 2013 and even experienced a reversal in 2015. From 2003 to 2013, there has been no movement in the prevalence of underweight at 20 percent, then in 2015, the rate went up to 21.5 percent.

The profile of poor families in the country may lend some insights as to why there has been no significant reduction in the number of poor families through the years. First, a significant proportion (roughly half)[2] of the poor are transient poor, they become poor when calamities strike or when they undergo significant economic shocks like loss of employment or death of the bread winner. The Philippines ranks third in terms of disaster risk (Birkmann et al, 2011).[3] The country is naturally vulnerable, being a typhoon-prone country, and one that experiences massive flooding in many areas. The damages on agriculture and properties are significant. Without the proper intervention given to people affected by these disasters, they can easily fall into poverty, adding to growing number of poor. The largest social assistance program – the 4Ps is meant for helping the chronic poor who are in need of support for curbing intergenerational poverty through human capital investment. But the chronic poor reflects only half of the problem. Addressing the needs of the other half – the transient poor is imperative in the fight against poverty. Second, though the agriculture sector now contributes a dismal 10 percent of the GDP, it remains the sector of employment or livelihood to a significant proportion of the labor force. The latest data shows that 30 percent of all employed workers are engaged in agriculture. The low productivity of the agriculture sector is a daunting issue that has not been addressed for a long time. The abovementioned points warrant the need to examine the different social protection programs of the government with an objective of

[1] President, Research Fellow, and Executive Assistant V, respectively, Philippine Institute for Development Studies
[2] Reyes, et al. 2015 at https://www.unicef.org/philippines/PB3_final.pdf
[3] http://essc.org.ph/content/view/728/1/

examining the characteristics of those who have access to such programs for purposes of providing insights on improving the design particularly targeting mechanisms.

The literature lends some insights about the factors that influence access to social insurance. In a study in Ghana, it is shown that the "elderly, the single, the highly educated, highly depended and higher income workers have a higher probability of contributing to the informal pension scheme" (Adzawla, Baani, and Wontumi, 2015: 37) (Adzawla, Baani, & Wontumi, 2015). In a related study on saving for retirement in Portugal and Spain, it is shown that such is positively correlated with education, area of residence, home ownership status, saving habits, and job situation; and negatively associated with financial risk aversion and right-leaning political orientation (Ares, Lopez, & Bua, 2015) p. 69. Pius (2015) also notes the importance of employment income being an influential factor in membership to voluntary pension programs in Africa.

People's awareness or education of the benefits of pension schemes is also an important factor that influences coverage of such programs (Heenkenda, 2016) (Heenkenda, 2016) (Pius, 2015). Meanwhile, others examined the influence of the political economy of program design and implementation. Kidd (2017: 237) notes that 'Politicians are more likely to allocate funds to schemes incorporating those with greater political influence". Further, 'political economy theory argues that higher coverage schemes, incorporating people across wealth groups, generate greater political support, with cross-class coalitions pushing for higher budgets" (p.237) (Kidd, 2017).
The analytical approach is descriptive and associative. It examines how relevant the program designs are as far as including the target population is concerned. Likewise, it analyzes the correlates of access through an econometric estimation to have a better understanding of who has access to such programs. The research questions this paper aims to answer are – Who has access to social protection programs? Are they reaching the intended beneficiaries? What are the factors that are associated with having access to such programs? The succeeding section examines the coverage and implementation of the selected social protection programs vis-à-vis their designs. This is followed by an econometric analysis of the

2. Coverage of social insurance programs

Social assistance initiatives of the Philippines have led to reduction in poverty and inequality. Data from the World Bank shows that all social assistance programs in the country has led to a reduction of 8.8 percent in poverty headcount ratio, 15.2 percent reduction in poverty gap, and 1.5 percent in Gini inequality index. This is quite low, however, when compared to the performance of social assistance programs in Indonesia, Mongolia, and Thailand. The reduction does not have a bearing on the number of poor families, we are still dealing with the same number of people to support through social protection programs.

The NEDA-SDC Resolution No. 1, Series of 2007 defines social protection as" Policies and programs that seek to reduce poverty and vulnerability to risks and enhance the social status and rights of the marginalized by promoting and protecting livelihood and employment, protecting against hazards and sudden loss of income, and improving people's capacity to manage risks". It identifies the four (4) components of the Philippine Social Protection as follows: a) Labor Market Programs/Interventions: b) Social Insurance; c) Social Welfare; and d) Social Safety Nets.

Labor market programs or interventions are measures to enhance employment opportunities such as trade policies and skills development and training. These also include programs for the protection of the rights and welfare of workers - compliance with labor standards such as minimum wages or health and safety in the workplace. Social insurance programs for mitigating income risks by pooling resources and spreading risks across time and classes. These are designed in such a way that beneficiaries pay a premium over a given period of time to cover or protect them from loss of income and unemployment as a result of illness, injury, disability, retrenchment, harvest failure, maternity, old age, etc.; Includes micro- and area-based schemes to address vulnerability at the community level (such as micro-insurance and social support funds).

Social welfare are preventive and developmental interventions for supporting the minimum basic requirements of the poor, poorest of the poor, and reduce risks associated with unemployment, resettlement, marginalization, illness, disability, old age and loss of family care. Social welfare and assistance programs usually comprise direct assistance in the form of cash or in-kind transfers to the poorest and marginalized groups, as well as social services including family and community support, alternative care and referral services. Lastly, social safety nets are stop-gap mechanisms or urgent responses that address effects of economic shocks, disasters and calamities on specific vulnerable groups. These are measures that specifically target affected groups with specific objective of providing relief and transition. These include emergency assistance, price subsidies, food programs, employment programs, retraining programs and emergency loans.

Based on available nationally-representative data from the Family Income and Expenditure Survey (FIES) and Annual Poverty Indicator Survey (APIS), this study seeks to examine the reach of social protection programs in the country based on these four components. The study aims to provide a better understanding of who are actually able to benefit from the major social protection programs of the government. The study will examine the following questions: Are there inequities in access to social protection programs? Who are able to access these programs? Are there any gaps in the design and implementation? How can these gaps be addressed? The table below shows the different components of social protection based on the abovementioned NEDA resolution with the examples of social assistance programs that can be analyzed based on the APIS. This paper focuses only on a select set of programs.

Table 1. Components of social protection

Component	Programs/Interventions (which can be assessed using APIS/FIES)
Labor market programs or interventions	1. Sustainable Livelihood Program 2. Expanded Students Grant-In Program for Poverty Alleviation (ESGP-PA) 3. Students Financial Assistance Programs (StuFAP: State Scholarship; Study Now Pay Later 4. Community-based employment program 5. Training for Work Scholarship Program (TWSP)
Social insurance	1. SSS, GSIS 2. Private Insurance Companies 3. Agricultural Insurance 4. PhilHealth (paying)

Social welfare	1. *Pantawid Pamilya Pilipino* Program (4Ps) 2. Social Pension 3. PhilHealth (sponsored)
Social safety nets	1. Cash/Food for Work Program 2. Supplemental Feeding Program

2.1. Social Security System/Government Service Insurance System

A social insurance scheme primarily established for the workers in the private sector, the Social Security System (SSS) was created in June 1954 through Republic Act 1161. Some sections of the legislation were amended first by PD 24 in October, 1972 and then by RA 8282 in May 1997. SSS notes that the social insurance program was created to develop and promote a "sound and viable tax-exempt social security system that provides protection of its members and their beneficiaries in times of death, disability, old age, sickness, maternity, and other contingencies resulting in loss of income or financial burden." The Social Security System (SSS) provides for a replacement of income lost on account of the ff. contingencies: sickness, maternity, disability, retirement, death, and funeral. SSS has also an 'Employees Compensation Program' (allowing double compensation for work-related contingencies). It also offers its members salary loan & a calamity relief package for members affected by calamities. For government employees, the GSIS provides life insurance, retirement benefits, separation, unemployment benefits, disability, survivorship, funeral, and employees compensation. Among the loans facilities that GSIS members can avail are the consolidated loan, policy loan, emergency loan, and calamity loan programs.

The coverage of SSS are of two types – compulsory and voluntary. Those under compulsory coverage are employers and private sector employees, and self-employed persons. Voluntary coverage covers OFWs, non-working spouses and even members separated from employment.

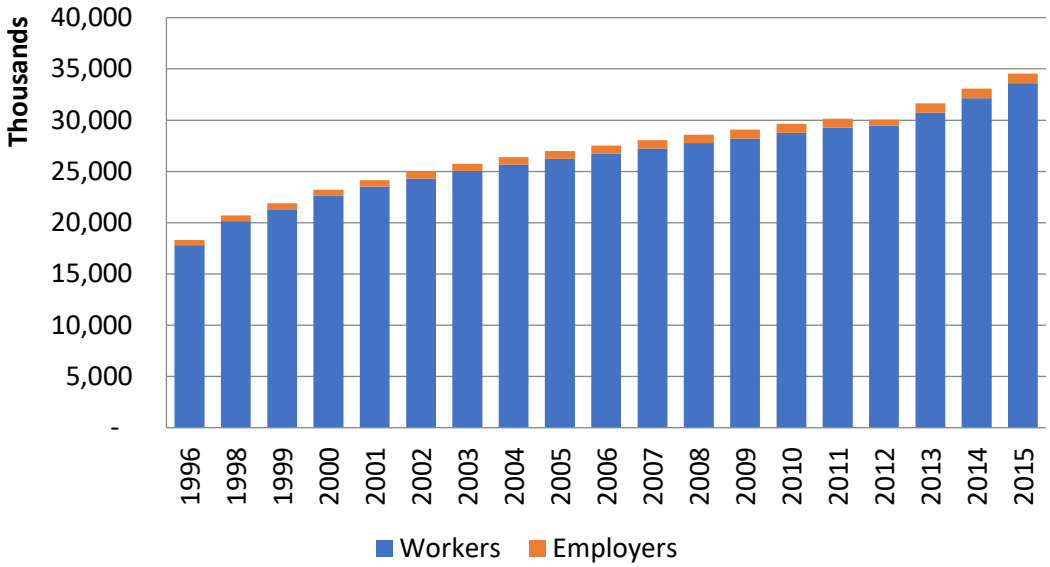
Table 2. Types of coverage of SSS

Compulsory	Voluntary
Employers or any person using the services of another person in business, trade, industry or any undertaking. Also included in this group are social, civic, professional, charitable, and other non-profit organizations that are hiring the services of employees. Foreign governments and institutions, through an administrative agreement with SSS, may elect for coverage of its Filipino employees.	Overseas Filipino Workers (OFWs) or those recruited by foreign-based employers for employment abroad, with a source of income and permanent residence in a foreign country.
Private sector employees, including household helpers (as of September 1, 1993, those earning at least PHP 1,000 monthly salary) and Filipino seafarers, regardless of employment status and is not over 60 years old. Filipino employees of foreign government and organizations, as described above, may also be covered.	Non-working spouses of currently employed and actively paying SSS members who devote their full time in management of household and family affairs. They should have never been an SSS member. Coverage requires approval of the working spouse.
Self-employed persons regardless of trade, business or occupation, with at least PHP 1,000 monthly income and is not over 60 years old. This includes	Members separated from employment or ceased to be self-employed/OFWs/non-working

partners and single proprietors of business, self-employed professionals, professional athletes, contractors/consultants (those without employer-employee relationship), farmers and fisherfolks, and workers in the informal sector[4], among others.	spouse can continue paying for the contributions on their account.

In 2015, the SSS reports that it has 33.6 million members, almost double the coverage in 1996 at 17.8 million (see Figure 1). As of September 2016, there are a total of 34.58 million registered members – 25 million or 72.3 percent of which are employees, around 5 million are voluntary members, while 4.57 million are self-employed. Unfortunately, the percentage of active members (i.e. those with at least one month posted contribution for the year) is only 38 percent (12,193,170).[5]

Figure 1. Actual Membership Coverage at Year's End



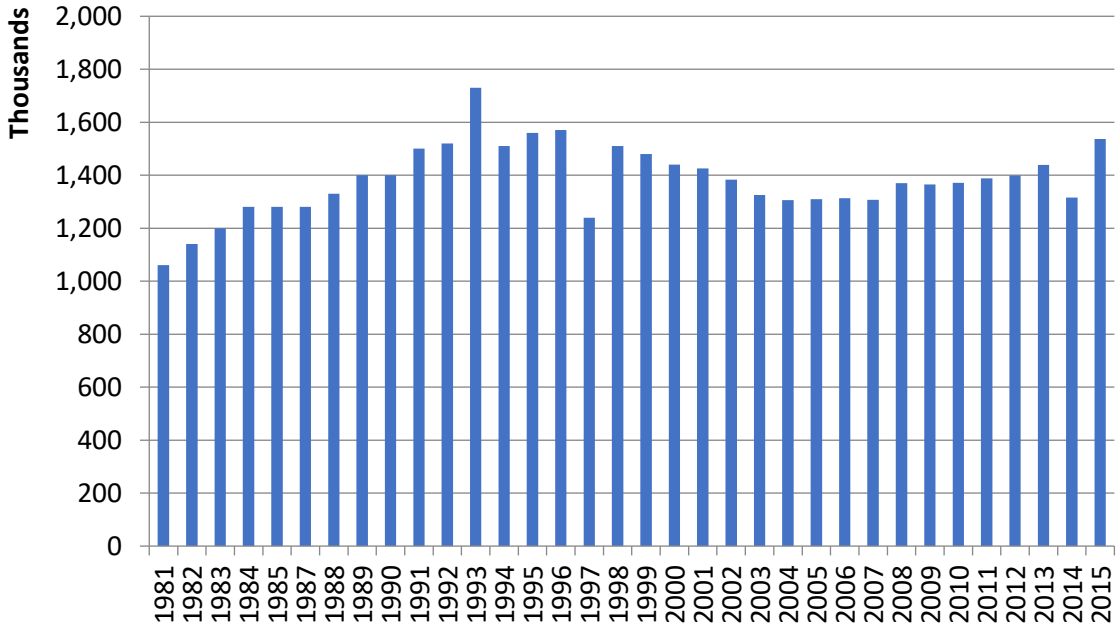
Source: Social Security System/PSY 2016

Meanwhile, the Government Service Insurance System (GSIS) is a social insurance program created by virtue of Commonwealth Act No. 186 of 1936. It was amended and expanded by Presidential Decree No. 1146 signed in July 1985 and was further amended under Republic Act No. 8291 of 1997. It is noted that "GSIS was established to promote the efficiency and welfare of the employees of the Philippine government under a defined benefit scheme. It insures its members against occurrences of certain contingencies in exchange for their monthly premium contributions." GSIS membership is compulsory for all public sector employees, irrespective of employment status, who receives compensation and have not reached the compulsory retirement age, but excludes uniformed members of the Armed Forces of the Philippines and the Philippine National Police, including the Bureau of Jail Management and Penology and the Bureau of Fire Protection, subject to the condition that they must first settle their financial obligations with the GSIS; contractual workers who have no employer-employee relationship with the agencies they serve; and members of the judiciary and constitutional commissions who are covered by separate retirement laws. All GSIS members are entitled for

[4] SSS defined workers in the informal sector as "market and ambulant vendors, public utility transport drivers, tourism industry-related workers, and others similarly situated."
[5] http://news.abs-cbn.com/focus/01/12/17/social-security-system-quick-facts

compulsory and optional life insurance, retirement and other social security protection such as disability, survivorship, separation, and unemployment benefits. Active GSIS members also have access to salary, policy and emergency loan privileges. Members of the judiciary and constitutional commissions, however, are entitled to life insurance only. As of 2015, there are 1.54 million members of the GSIS.

Figure 2. Actual Membership Coverage[1], 1981-2015



Note: [1]/ Refers to social security coverage as of June 30 or December 31. Source: Government Service Insurance System/PSY 2016

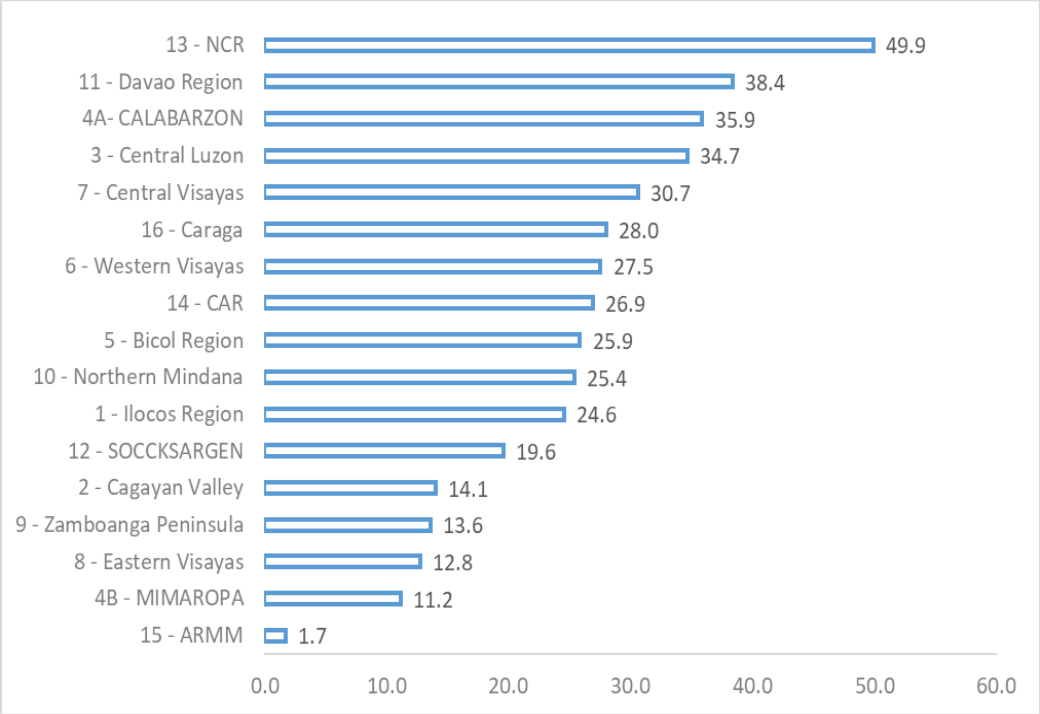
Access to SSS/GSIS (APIS-LFS-based estimates)

To gain some understanding as to who has access to social insurance especially among workers aged 15 to 59, we analyzed survey responses from the 2016 Annual Poverty Indicator Survey (APIS) merged with labor force information from the Labor Force Survey. The cross-tabulations made from APIS-LFS, however, may not be representative of workers in the different specified categories. Readers must be cautious in drawing conclusions from this limited sample analysis. Notwithstanding this limitation, this analysis can provide some useful insights for improving access to social protection.

The total estimated number of workers aged 15 to 59 is 40.5 million where 24.76 million are men and 15.76 million are women. Of the 40.5 million workers, three out of 10 (or around 12 million individuals) are members of either SSS or GSIS. Admittedly, this estimate grossly underestimates the official figures of total workers with social insurance coverage from SSS and GSIS. Such figure is nearer the estimate of "active" SSS members plus the total GSIS members.[6] There is wide variation of social insurance access by region. Roughly half of the workers of interest in NCR are members of SSS/GSIS while ARMM has only around 2 percent. Other regions that have very low proportions are MIMAROPA (11%), Eastern Visayas (13%), Zamboanga Peninsula (14%), Cagayan Valley (14%), and SOCCKSARGEN (20%).

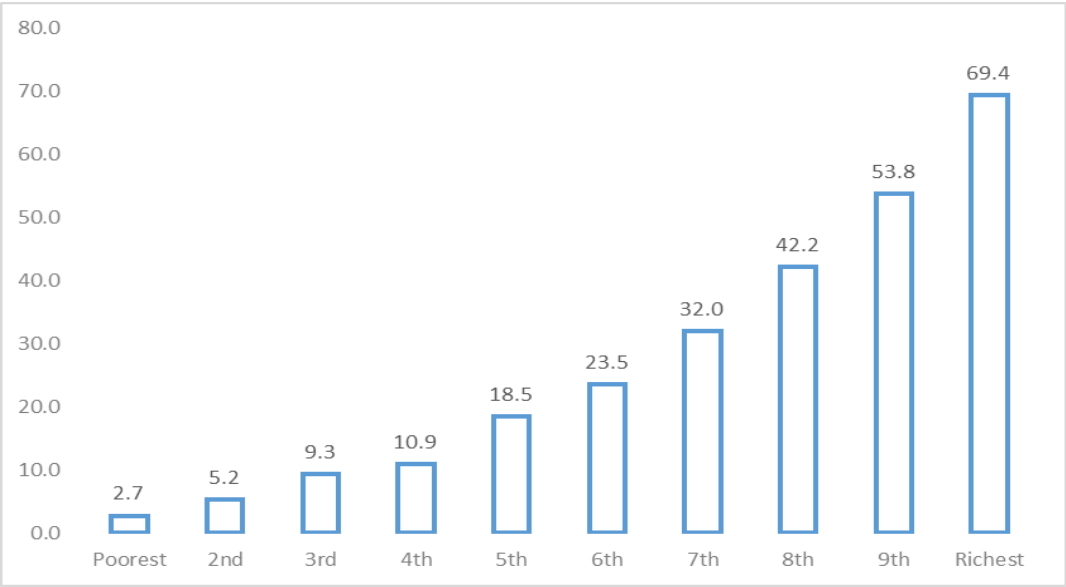
Figure 3. Percentage of workers with (SSS/GSIS) by region

[6] Assuming that the percentage of active members in 2014 which was at 38% remained the same through the years.



Access to social insurance appears to be correlated with income. Of the workers from the poorest families (i.e. bottom 10 percent), only 3 percent of them have social insurance. The proportion is slightly higher among those in the second income decile at 5.2 percent. The richest decile has the highest percentage of workers who can benefit from social insurance at around 69 percent.

Figure 4. Percentage of workers with (SSS/GSIS) by income decile



Source of basic data: 2016 Annual Poverty Indicators Survey (APIS), PSA; Caution: Sample may not be representative of sectors/groups

Interestingly, the proportion of those with access is higher for women (31.6%) than men (28.2%). When the proportions of the two samples (i.e. men and women) are tested where the null hypothesis states that there is no difference between the two proportions, the outcome of the Stata routine test (*prtest*) shows a highly significant difference – women have statistically

significantly higher proportion of workers with SSS/GSIS membership than men. In terms of nature of employment, workers with permanent job have relatively higher proportion of those with SSS/GSIS which is 33.5 percent; those in short-term job arrangements have 23 percent while those who have different employers have a low 4 percent.

2.2. Social Pension

Republic Act 9994 or the Expanded Senior Citizens Act of 2010 stipulates for the implementation of a social pension program for the 'frail, sickly or with disability; with no regular income or support from family and relatives, and without pension from private or government institutions'[7] The DSWD implements the program in partnership with the local government units and the Office of the Senior Citizens Affairs (OSCA). DSWD, notes that the program seeks to 1) enhance the living condition of eligible indigent senior citizens, 2) improve indigent senior citizens' capacity to meet their daily subsistence and medical requirements, 3) to bring down incidence of hunger among the target population; and 4) to protect them from neglect, abuse, or deprivation.

In 2011 until 2014, the program targeted individuals aged 77 years and above. In 2015, this coverage was revised to include 65 years and older, and in 2016, the program was further expanded to include all persons 60 years old and above. The list of qualified indigent senior citizens is put together by the Office of Senior Citizens Affairs (OSCA). The ones that conduct validation or assessment of the list are social workers of the local government units. DSWD then conducts final assessment of the validated list. For senior citizens who are not yet beneficiaries and wish to apply, they are required to apply at the Social Welfare and Development Office at the cities and municipalities, the Office of the Senior Citizens Affairs (OSCA), or DSWD field office. The documentary requirements are OSCA ID and birth certificate. All applications are subjected to assessment based on the abovementioned criteria. Moreover, the design of the program is that there is a review of the program every two years to be done by Congress in consultation with the implementing agency.

Under the program, a beneficiary is entitled to a monthly stipend amounting to five hundred pesos (PhP 500.00) to augment daily sustenance and medical needs. Starting March 2018, the pensioners are also entitled to additional monthly stipend of P200 provided for by the TRAIN law under the Unconditional Cash Transfer Grant (UCT). This monthly cash grant will be increased to P300 in 2019 and 2020. In 2017, the DSWD targeted some 2.8 million indigent elderly persons for a budget of P17 billion. In 2018, the number of beneficiaries increased to three million with an allotment of around P19.3 billion.[8]

The APIS 2017 shows that among the 8.4 million senior citizens in the country, 1.8 million or 21.5 percent are beneficiaries of the social pension program. Thirty-seven percent of the total beneficiaries come from the bottom 30 percent of the population based on income. There seems to be no large variation in the percentage of beneficiaries by sex (see Table _). The proportion of those with access is similar for men and women (at 21 percent). At the sub-national level, the regions with the highest proportion of social pension beneficiaries are C. Mindanao (52.4%), CAR (51.2%), and C. Visayas (41.1%). The ones with the lowest percentage are NCR (7%), ARMM (7.3%), and CALABARZON (9.7%).

[7] DSWD

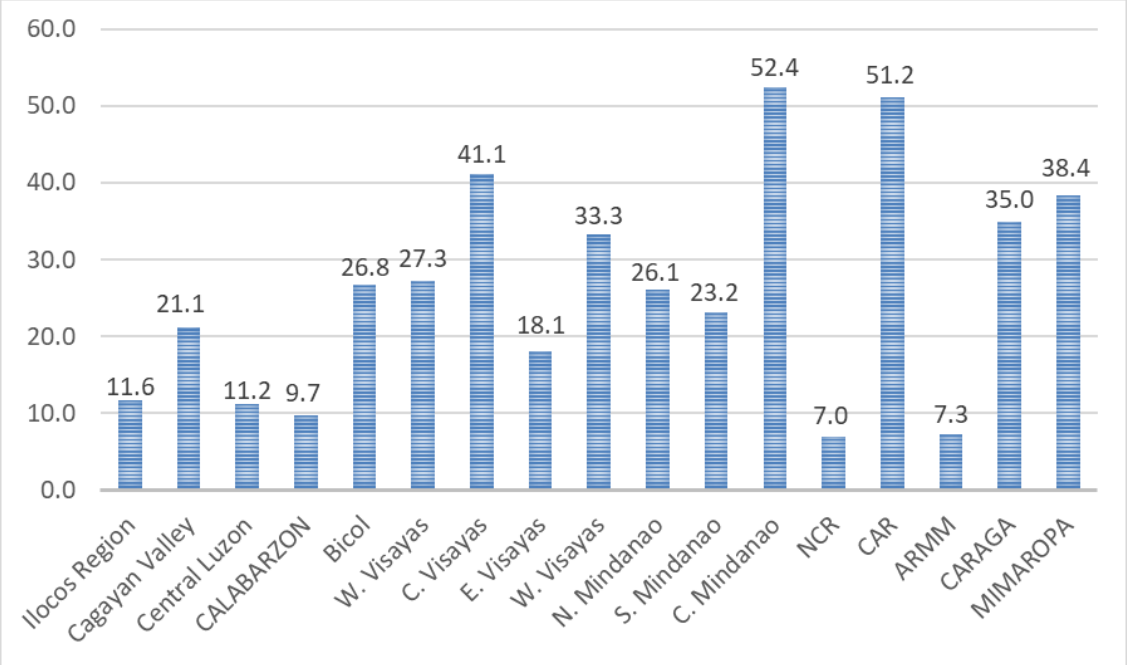
[8] https://www.dswd.gov.ph/only-indigent-older-persons-are-qualified-to-receive-social-pension-dswd/

Table 3. Proportion of elderly population with social pension by income decile and by sex

Income Decile	Male	Female
Poorest	29.4	36.8
2nd	34.0	29.3
3rd	28.5	28.3
4th	26.9	28.2
5th	25.2	32.7
6th	28.0	20.4
7th	18.0	15.3
8th	11.0	14.9
9th	12.4	16.3
Richest	7.0	7.6
Total	21.1	21.9

*Caution: Crude estimates; sample is not representative of target population; tabulation was conducted only to examine trends and patterns in the data

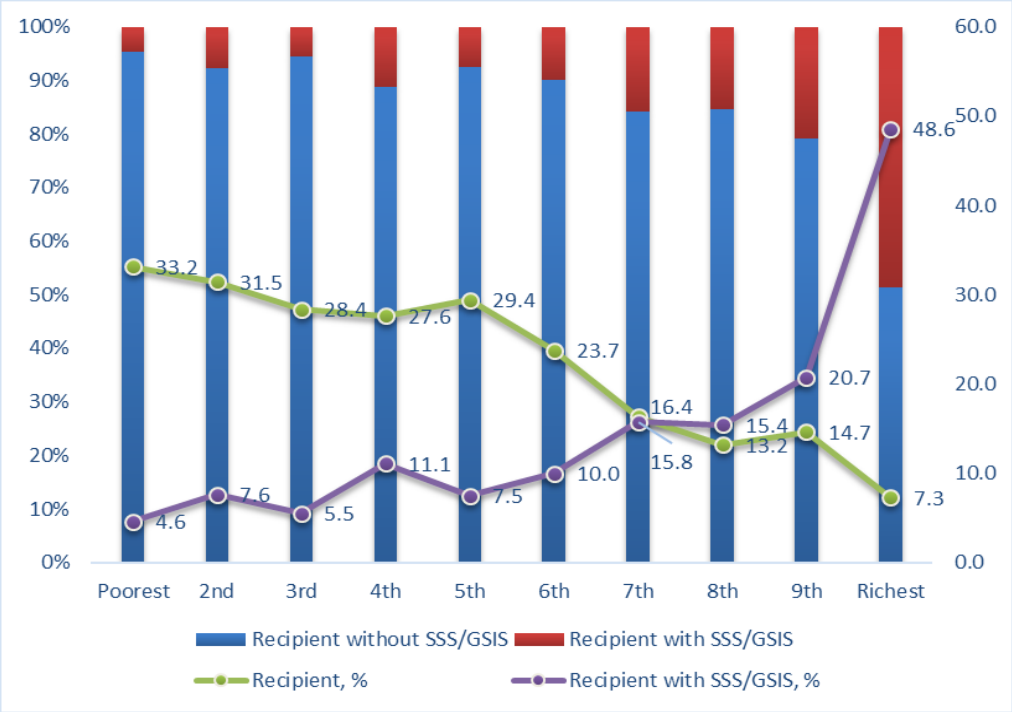
Figure 5. Proportion of elderly population with social pension by region



*Caution: Crude estimates; sample is not representative of target population; tabulation was conducted only to examine trends and patterns in the data

Further analysis of the program beneficiaries shows that one-third of all senior citizens from the bottom income decile, 32 percent of those in 2nd decile while 28 percent of those in 3rd income decile are recipients of the grant. Notice that although the DSWD notes that only indigent elderly persons are covered, some 320,000 beneficiaries (or 18% of the total beneficiaries) come from the 30 richest deciles of the population.

Figure 6. Proportion of beneficiaries of social pension by SSS/GSIS membership status and by income decile



Source of basic data: 2017 Annual Poverty Indicators Survey (APIS), PSA

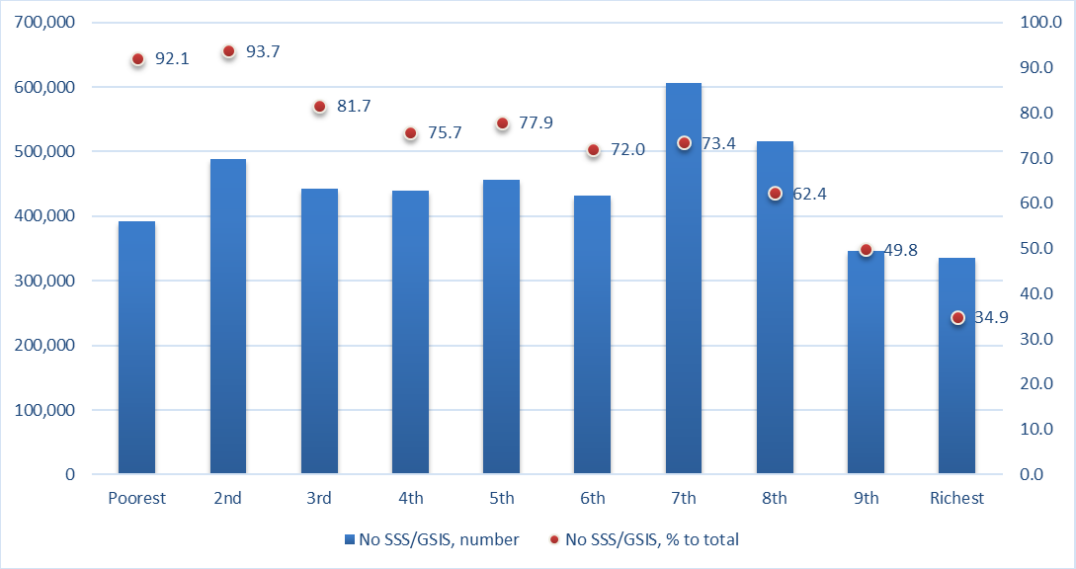
*Caution: Crude estimates; sample is not representative of target population; tabulation was conducted only to examine trends and patterns in the data

Among the 1.8 million elderly persons with social pension, an estimated 11.5 percent (or 207,000) are also members of either SSS or GSIS. The highest proportions of such come from the ninth (21%) and tenth income decile (49%). In contrast, the proportions of social pension beneficiaries from the 3 poorest income deciles who are also covered by SSS/GSIS are minimal (ranging from 5 to 8%). Recall that the program targets elderly who are frail and sickly, no regular source of income or support from family members, and are without pension from private and government programs. Retirees who are members of SSS/GSIS are supposed to be receiving pensions. DSWD Administrative Order 2010-15 stipulates that social pension beneficiaries 'should not be receiving any pension from the GSIS, SSS, or AFPMBAI and other insurance company.'

The above-mentioned are indicative of a flaw in the listing of eligible beneficiaries because there are grantees belonging to the top 3 richest deciles and there are those who are already covered by social insurance programs such as the SSS/GSIS. The program is supposed to target only indigent and those without access to other social insurance programs.

Meanwhile, of the 6.5 million elderly who are not beneficiaries of social pension, only 32 percent are members of either SSS or GSIS. The remaining 68 percent, roughly 4.4 million are without both social pension and SSS/GSIS coverage, of which 1.3 million come from the poorest 30 percent of the households and should be prioritized in the provision of social pension. Figure 7 shows that 92 to 94 percent of the poorest and second poorest deciles, respectively, are not beneficiaries of both social pension and SSS/GSIS programs. Only 50 and 35 percent of the ninth and richest deciles, respectively, are in a similar situation. A significant proportion of the elderly that constitute this group (i.e. non-members of both social insurance programs) are in W. Visayas (12%), CALABARZON (12%), Bicol (9%), and E. Visayas (8%).

Figure 7. Number and proportion of elderly who are non-beneficiaries of social pension and SSS/GSIS by income decile



*Caution: Crude estimates; sample is not representative of target population; tabulation was conducted only to examine trends and patterns in the data

To summarize, there is a need for closer monitoring and validation of the list of beneficiaries to include only those who are genuinely indigent and are truly helpless (i.e. they are not receiving pensions from private, government and other sources). The APIS 2017 shows that there are 3.2 million elderly persons who are non-members of SSS/GSIS belonging to the poorer half of all families.

2.3. PhilHealth

The Philippine Health Insurance Corporation (PhilHealth) is a government corporation attached to the Department of Health (DOH) that was created in 1995. Its mandate is to administer the National Health Insurance Program which ensures affordable, acceptable, available and accessible health care services, and provides health insurance coverage for all Filipino citizens. The PhilHealth initially consisted of Programs I and II (or Medicare)[9] and was expanded to constitute a universal health insurance program. However, it is limited to paying only for the utilization of health services by covered beneficiaries. Thus, the program is not allowed from directly providing or employing professionals to render health care, dispensing drugs to pharmaceuticals, and owning or investing in health care facilities.

PhilHealth defines six member categories:

1) members from the formal economy are workers in the public and private sectors with formal contracts and fixed terms of employment,
2) Members from the informal economy who are earning individuals outside of an employer-employee relationship or "those who work for him/herself"
3) Indigent members include persons with no visible means of income, or whose income is insufficient for family subsistence as identified by DSWD.

[9] Medicare, as defined in RA 7875, is a health insurance program implemented by the Philippine Medical Care Commission consisting of Program I (covering SSS and GSIS members and their legal dependents) and Program II (covering others not included in Program I).

4) Sponsored members are those whose contributions are being paid for by another individual, government agencies or private entities
5) Lifetime members include those who reached the retirement age and have paid at least 120 monthly contributions with PhilHealth.
6) Senior citizens include individuals at least 60 years old and are not covered by any of the abovementioned membership category.

PhilHealth members and their dependents are entitled to the following benefits: 1) In-patient care, such as room and board, services of health care professionals, diagnostic and other medical examination services, use of surgical or medical equipment and facilities, prescription drugs, and health education;2) Out-patient care, such as services of health care professionals, diagnostic and other medical services, personal preventive services, prescription drugs, and health education; 3) Emergency and transfer services; 4) Health education packages; and 5) Other appropriate and cost-effective health care services determined by PhilHealth and DOH. In 2012, PhilHealth launched the Z Benefits package which aims to provide financial protection for members and their dependents with dreaded illnesses under "case type Z" that requires prolonged hospitalization and very expensive treatments.[10] The package, consisting of payments for room and board fees, laboratory and operating room, and professional fees, is limited only for patients with selected heart conditions – coronary artery bypass graft, tetralogy of fallot, and ventricular septal defect. In 2014, PhilHealth launched an Expanded Z Benefits package to include other serious illnesses, such as kidney disease and various types of cancer. Also, in support of attaining the Millennium Development Goals, PhilHealth introduced the MDG related packages, which includes maternal care, malaria, HIV-AIDS, anti-tuberculosis, and animal bite treatment packages.

The official website of the PhilHealth reports that in 2016, the total number of members is at 41.2 million, with 38 percent consisting of indigents and 34 percent are members from the formal economy. The rest of the members come from the informal economy, sponsored members, senior citizens and lifetime members. PhilHealth likewise claims that 52.2 million dependents are covered by the health insurance program.

Table 4. Actual coverage as of December 31 (in Millions)

Sector	Member			Dependents		
	2014	2015	2016	2014	2015	2016
Formal Economy	13	13.9	14.6	14	14.4	14.7
Informal Economy	3.4	3.4	3.3	4	5	4.9
Indigents	14.7	15.3	14.6	29	30.1	28.8
Sponsored Members	0.8	1	1.2	1.3	1.4	1.6
Senior Citizens	3.5	5.9	6.2	0.8	1.3	1.3
Lifetime Members	0.9	1	1.2	0.7	0.7	0.9
Total	36.4	40.5	41.2	49.8	52.9	52.2
Formal Economy	35.7	34.3	35.4	28.1	27.2	28.2
Informal Economy	9.3	8.4	8.0	8.0	9.5	9.4

[10] PhilHealth classifies disease conditions from type A (simplest and cheapest) to D (more severe and costly). Illnesses under type Z, which at the farthest end of the classification, are cases which are both financially and medically catastrophic.

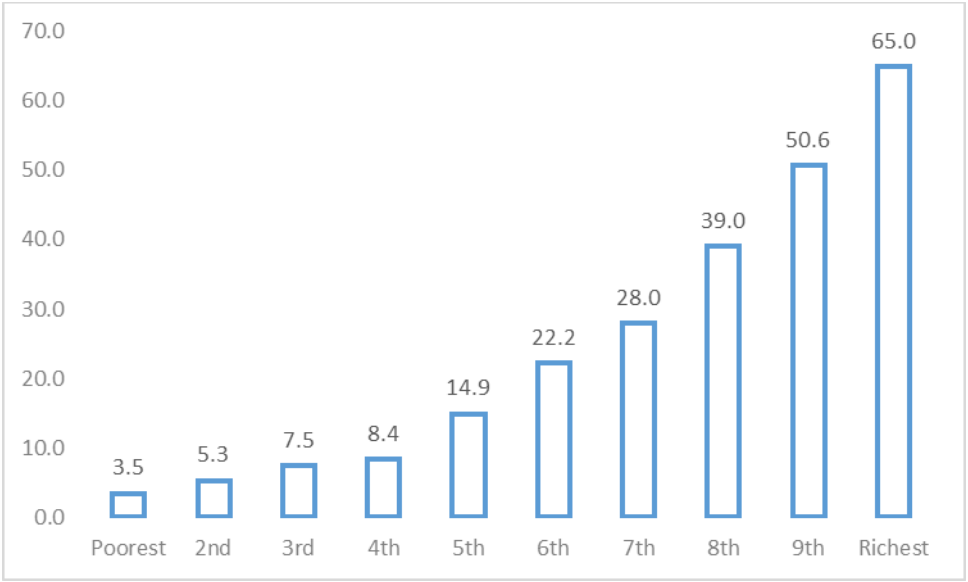
Indigents	40.4	37.8	35.4	58.2	56.9	55.2
Sponsored Members	2.2	2.5	2.9	2.6	2.6	3.1
Senior Citizens	9.6	14.6	15.0	1.6	2.5	2.5
Lifetime Members	2.5	2.5	2.9	1.4	1.3	1.7
Total	100.0	100.0	100.0	100.0	100.0	100.0

Note: Indigent count of members and dependents was based on DSWD *Listahanan* database and are subject for further validation. 2016 Projected Population is 102,715,749 estimated from the August 2015 PopCen by PSA.
Source: Philhealth website, https://www.philhealth.gov.ph/about_us/statsncharts, accessed on 02March2018

Access to PhilHealth, paying scheme

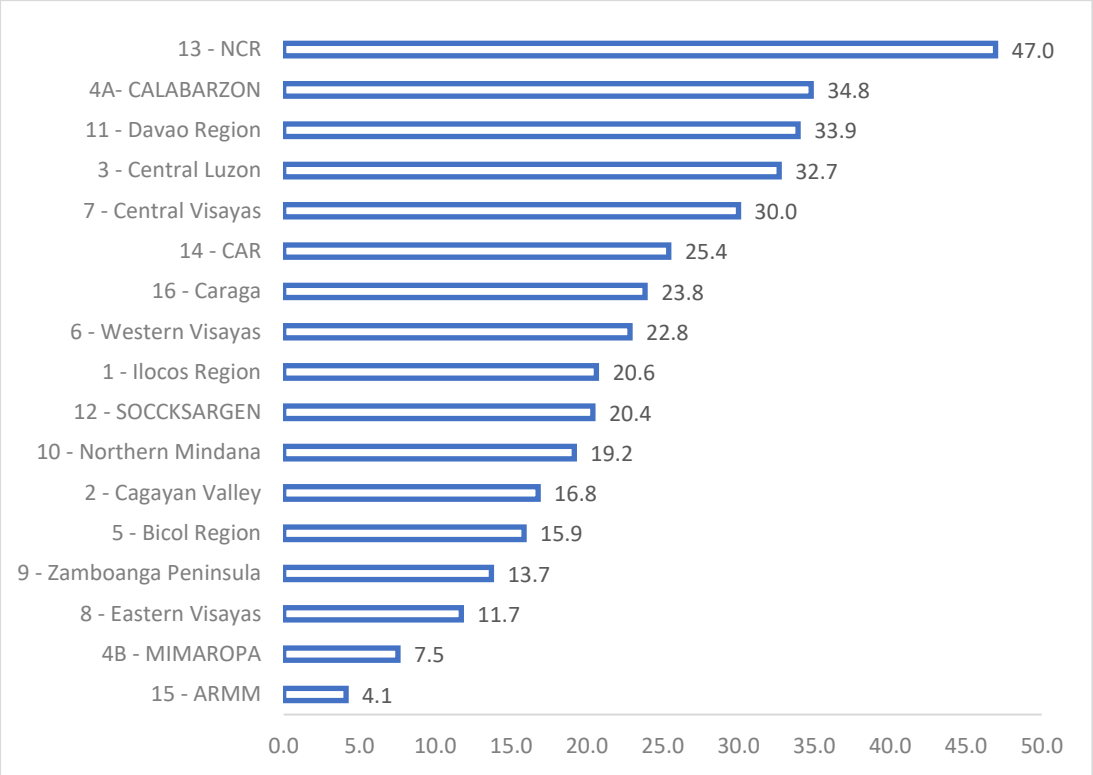
A little over a quarter (27 percent of 10.4 million) of the workers of interest are members of the paying scheme of PhilHealth, where female have slightly higher proportion of those with membership at 29.6 percent compared to men's 26.1 percent. The difference between these two proportions was tested via Stata Prtest routine and the result shows that indeed there is a difference between the two where women's access is statistically significantly higher than men's access to Philhealth. Meanwhile, membership appears to improve with income because the proportion of those with PhilHealth access is lowest for the poorest segment (3.5 percent) and highest for the richest segment (65 percent).

Figure 8. Percentage of workers with PhilHealth (paying scheme) by income decile, Philippines



Source of basic data: APIS 2016

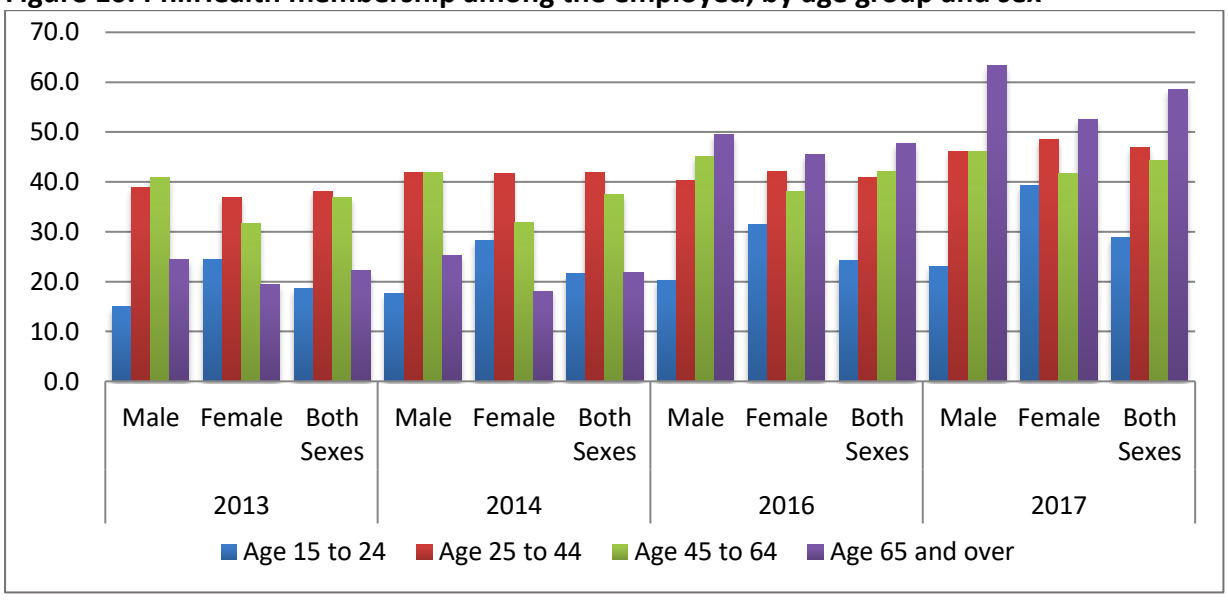
Figure 9. Percentage of workers with PhilHealth (paying scheme) by region, Philippines



Source of basic data: APIS 2016

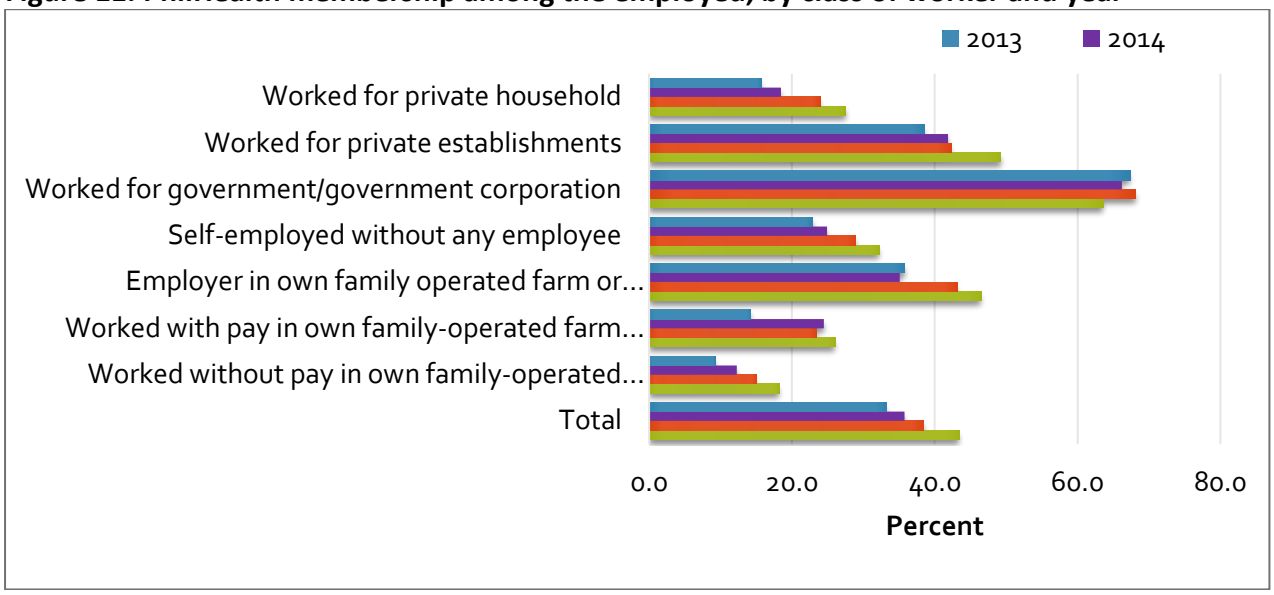
Using the full sample of workers regardless of age, PhilHealth membership data by sex show that female workers have higher coverage rates for younger persons but lower for older persons. In terms of the class of workers, government workers have the highest coverage in PhilHealth, followed by workers in private establishments. Those with lowest coverage rates are the unpaid workers of own family-operated enterprises and those who are in private households. It is noteworthy that coverage rates in the government sector, though highest among classes, has recently declined while those for other groups have recently increased.

Figure 10. PhilHealth membership among the employed, by age group and sex



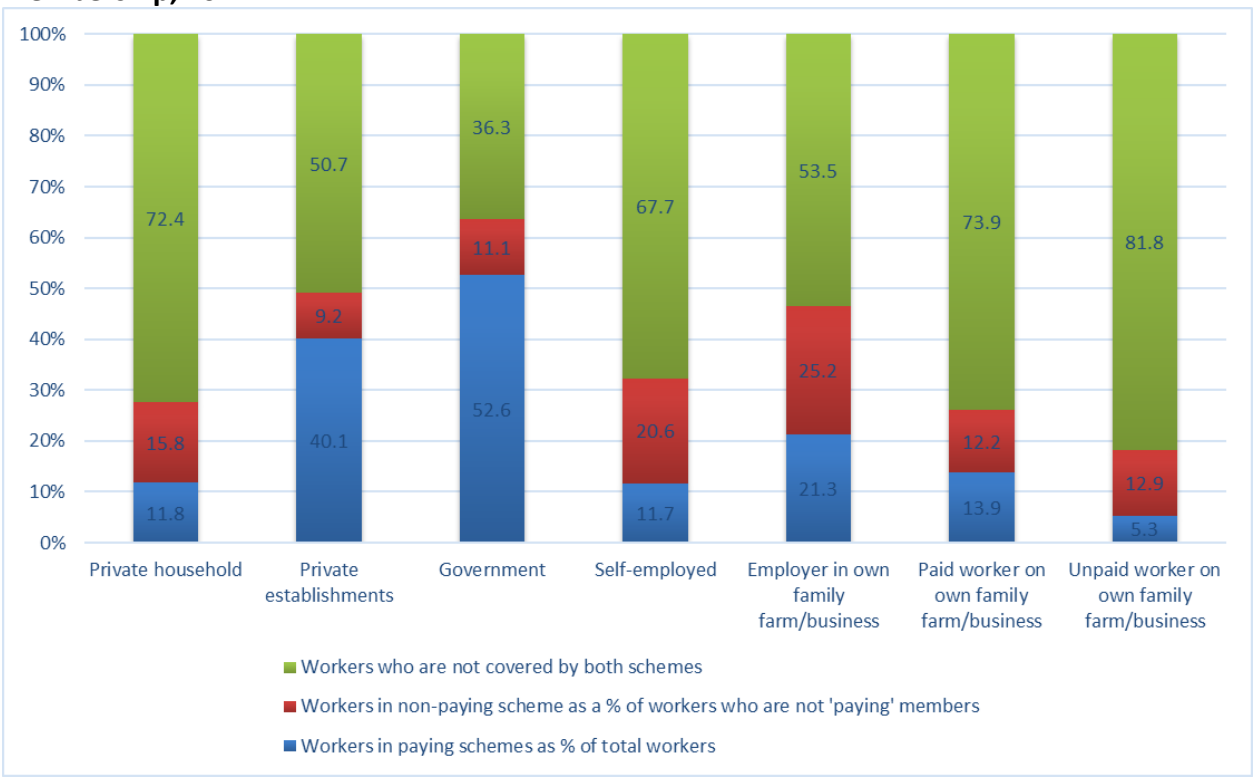
Source of basic data: Annual Poverty Indicators Survey (APIS), PSA
*Caution: Crude estimates; sample is not representative of target population; tabulation was conducted only to examine trends and patterns in the data

Figure 11. PhilHealth membership among the employed, by class of worker and year



Source of basic data: Annual Poverty Indicators Survey (APIS), PSA
*Caution: Crude estimates; sample is not representative of target population; tabulation was conducted only to examine trends and patterns in the data

Figure 12. PhilHealth membership among the employed, by class of worker and type of membership, 2017



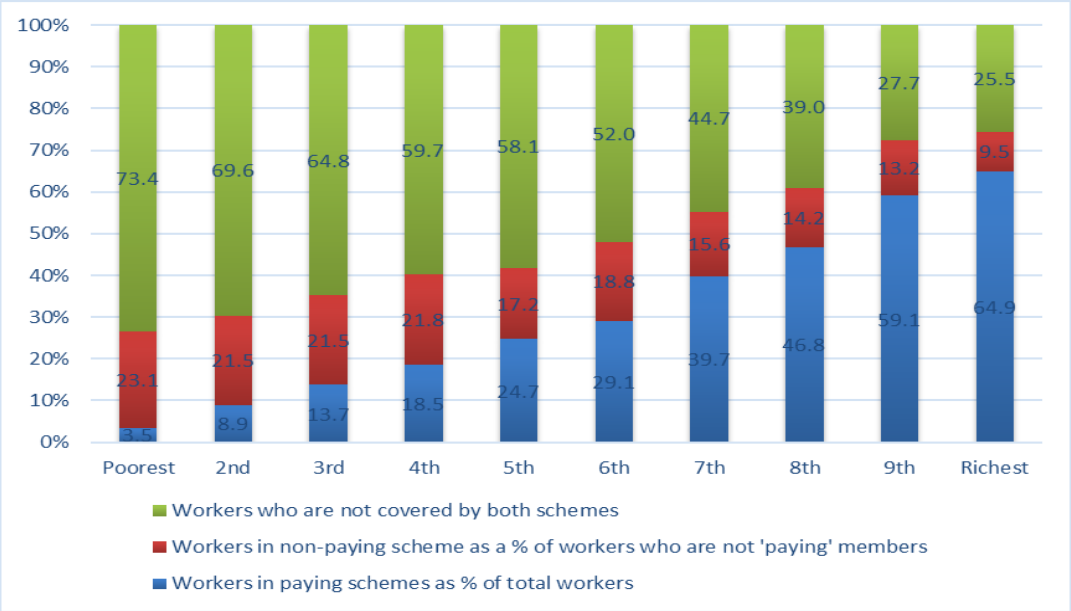
*Caution: Crude estimates; sample is not representative of target population; tabulation was conducted only to examine trends and patterns in the data

Non-paying Scheme, PhilHealth

Using the more updated APIS 2017 data, this section examines the extent of implementation and relevance of the sponsored program – it wants to ask "To what extent is the non-paying scheme able to complement the paying scheme?" In 2017, an estimated 13.5 million (30 percent of the total) workers are 'paying' members of the PhilHealth; some 5.9 million are 'non-paying' or sponsored members. The data shows that 'sponsored' PhilHealth program appears to be complementing the coverage of workers who are 'paying members'. Figure 13 shows the proportion of those with PhilHealth memberships by income class. While the paying membership is positively correlated with income, the non-paying coverage is negatively correlated with income. For example, 22 to 23 percent of those in the 3 poorest deciles (not among the paying members) are covered under the 'non-paying' schemes; the richer the individuals, the less likely that they are included in such schemes as shown by the lower proportions at the richer deciles.

Ideally, the sponsored program should cover those who cannot afford to pay for their insurance premium. However, the data shows that there is some scope for improvement since people from the richer groups (who are not supposed to be covered) are still included in the program (i.e. 10% of the richest; 14% and 13% of the ninth and eighth deciles, respectively) while a significant portion of the poorest are not. Majority of those in the poorest deciles who are not covered by the PhilHealth either through their employment or through voluntary membership are not included in the sponsored program (e.g. 73, 70, and 65% for the poorest, 2nd, and 3rd income deciles, respectively).

Figure 13. Percentage of workers who are PhilHealth members by membership type and by income decile, 2017



Source of basic data: 2017 Annual Poverty Indicators Survey (APIS), PSA

*Caution: Crude estimates; sample is not representative of target population; tabulation was conducted only to examine trends and patterns in the data

3. Correlates of access to social protection

While the above analysis provides intuitive ideas about the access of men and women to social insurance, there is a need to establish the associations between the outcome of interest and the different factors being examined. A regression analysis is therefore necessary so that the relationship between the dependent and explanatory variables are examined while holding the other factors constant. To empirically examine the correlates of social protection access among workers of economically active ages (i.e. aged 15 to 59 years), we use data from the Annual Poverty Indicator Survey and Labor Force Survey. The estimation is not meant to prove causal relationships between access to social protection and the selected explanatory variables but only to gain insights about the factors that make one more likely to access social insurance for purposes of improving the targeting design of programs in the future. Knowing who are more likely to have access gives an idea as to who are the ones less likely to have access and may be prioritized in the design of social protection programs. For this empirical analysis, the dependent variable is a dummy variable with a value of 1 for a member of SSS/GSIS and a paying member of PhilHealth, and 0, otherwise. The likelihood of having access to these basic social insurance schemes is estimated via logistic regression.

3.1. Variables

The explanatory variables include individual-level demographics and human capital variables such as age, marital status, sex, and formal employment status. To control for possible non-linear influence of age on access, the square of age is also included. It is expected that being married is positively correlated with having access to the social insurance schemes. Another important explanatory variable is having formal employment which is operationalized as being employed in either private or government establishment. The expected sign is also positive – being formally employed increases the odds of being covered by social insurance. Also, the more educated the person, the greater the understanding of the benefits of social insurance, and the higher the capacity to pay for the insurance premiums. We have roughly estimated the years of schooling from the categorical variables of educational attainment from the Annual Poverty Indicator Survey (APIS).

As for household-level attributes, the log of per capita income is controlled. Again, the richer the household the greater the ability to pay for the premiums, holding other factors constant. Likewise, the reliance on agriculture-based livelihood is an important explanatory factor because these households are more prone to income shocks owing to the susceptibility of agricultural crops and other products to natural calamities like typhoon and flooding. Given such, these households may have greater motive to seek insurance coverage. On the other hand, agricultural households are known to have higher poverty incidence compared to other groups – therefore, they may not afford insurance premiums. This analysis seeks to examine which effect is larger. Moreover, international labor migration is a means of livelihood of many Filipino families and so the proportion of income from overseas workers' remittances is also examined. The literature notes that remittances serve as insurance and therefore, we expect a negative relation between access to social insurance and reliance on remittances. In addition to the abovementioned factors, the conditions in the capital which are different from the rest of the country may also have an influence on people ability to gain access to social insurance. Being in the National Capital region is therefore included as a dummy variable. To further control for location, the model also includes a rural dummy.

The summary statistics of the variables used in the regression are shown in Table 5. Roughly 22 percent of the working persons aged 15-59 included in the sample of 16,688 have access to either SSS or GSIS *and* PhilHealth (paying member). The average age of the sample is 36 years. Around 61 percent of the sample are male, and 68 percent are married. The average respondent has 9 years of education. Majority (60%) are formally employed. The mean family size is 5. On the average, a family receives 4 percent of its total income from remittances, though there are some which obtain close to 100 percent of their income from such source. Lastly, the average proportion of income from agricultural sources is about 11 percent. In terms of sector of employment, majority are in the services sector, 26 percent are in the agricultural sector, and 17 percent are in the industry sector.

Table 5. Summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Individual characteristics					
With social insurance	16,688	0.2176	0.4126	0	1
Age, years	16,688	36.4390	11.7917	15	59
Age, years, squared	16,688	1466.8360	886.2294	225	3481
Male	16,688	0.6109	0.4876	0	1
Married	16,688	0.6751	0.4684	0	1
Years of education	16,688	9.1086	3.4649	0	20
Years of education, squared	16,688	94.9720	58.6162	0	400
Formally employed	16,688	0.5980	0.4903	0	1
Employed in Service sector	16,688	0.5117	0.4999	0	1
Employed in Industry sector	16,688	0.1674	0.3733	0	1
Employed in Agricultural sector	16,688	0.2652	0.4414	0	1
Daily/hourly wage earner	16688	0.7671	0.4227	0	1
Household characteristics					
Log of per capita income	16,688	9.9885	0.7953	8	14
Family size	16,688	5.1233	2.3161	1	21
Overseas remittances as proportion of total household income	16,688	0.0379	0.1223	0	1
Income from agricultural sources, as proportion of total income	16,688	0.1069	0.2190	0	1
Location					
Rural	16,688	0.5715	0.4949	0	1
NCR	16,688	0.1449	0.3520	0	1

3.2. Regression Results

The regression results are shown in Tables 6, 7 and in the Appendices. The estimation was conducted using first the full sample and then by sex, just to illustrate any disparity in the influence of the variables to access to social insurance by men and women. There were also estimations based on location, that is rural versus urban, sector of industry, and type of worker (i.e. permanent, self-employed, hourly/daily wage earners).

Individual and household characteristics

The results show that age has a non-linear relation with having access to social insurance. Among younger people, the relatively older ones have higher likelihood of being covered but among the older ones, those oldest are less likely to have insurance coverage, ceteris paribus. This is true for both sub-sample estimations for rural and urban areas. In terms of marital status, being married is positively associated with the dependent variable particularly among urban workers. The outcome however is different among rural workers wherein being married does not significantly correlate with social insurance. Meanwhile, education seems to matter more significantly among workers in the urban areas than in the rural areas. As expected, having formal employment is positively associated with greater likelihood of getting access to social insurance and this seems to be more so for workers in the urban areas. In terms of sector of primary employment, it is found that those in services and industry sectors have greater probability of accessing social insurance, holding other things equal.

The results likewise show that income also enhances one's likelihood of being insured. Those in larger families also have higher likelihood of having access. Reliance on remittances is negatively correlated with insurance coverage which is consistent with the findings of studies showing remittances act as insurance. Interestingly, increased reliance on agricultural-based livelihood among rural-based workers is associated with lower access to social insurance schemes which shows that those which needed insurance coverage the most (as they are highly vulnerable to income fluctuations due to calamities) are less likely to have social insurance coverage. This also reflects that indeed agricultural workers must be targeted in the provision of government sponsored social insurance schemes.

Table 6. Logit regression results, all areas

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Age, years	.08464706***	.08239554***	.08860667***	.08953001***	.08731507***	.08477272***
Age, years, squared	-.00096946***	-.0010855***	-.00115771***	-.00116893***	-.00113936***	-.00109353***
Male	.13484662**	.15724154**	.15968248**	.15763288**	.13992325**	.14185725**
Married	-0.0233862	.2117596***	.20829555***	.21143159***	.20372428***	.20251577***
Years of education	.29822979***	.34104627***	.34531075***	.3491096***	.33692449***	.31116327***
Years of education, squared	0.00403238	-0.00490589	-0.00541992	-0.00553851	-0.00491318	-0.00322005
Formally employed	1.9184624***	2.0365937***	2.0404895***	2.0276216***	1.9480099***	1.9384823***
Service sector	1.2998983***	.88667349***	.85841997***	.83436264***	.67793645***	.60589232***
Industry sector	1.2247809***	.89685464***	.87640424***	.85337877***	.69197935***	.60276389***
Log of per capita income		1.189425***	1.2635955***	1.282985***	1.2502***	1.1510322***
Family size			.05924234***	.06043896***	.05959076***	.05083572***
Overseas remittances as proportion of total household income				-.69153738**	-.75214769***	-.67147087**
Income from agricultural sources, as proportion of total income					-2.6924801***	-1.9579226***
NCR						-0.05884414
Rural						-.60800252***
_cons	-9.0137847***	-20.32208***	-21.463366***	-21.652483***	-20.923941***	-19.442873***
Number of observation	16,688	16,688	16,688	16,688	16,688	16,688
Pseudo R2	0.308	0.3659	0.3675	0.3683	0.3732	0.3805
Legend: * p<.05; ** p<.01; *** p<.001						

Table 7. Logit regression results, rural and urban areas

Variable	Rural					Urban				
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 1	Model 2	Model 3	Model 4	Model 5
Age, years	.09909157***	.10259921***	.10915067***	.10990571***	.10881844***	.06995473***	.06755704***	.07174836***	.07288607***	.07247663***
Age, years, squared	-.00103062**	-.00123773***	-.00131175***	-.00132306***	-.00131155***	-.0008451***	-.00092581***	-.00097526***	-.00098809***	-.00098386***
Male	.23835175**	.23358532**	.23654985**	.24124318**	.2055673*	0.09326943	.12834416*	.13062138*	0.12428439	0.12429701
Married	-0.06692019	0.09490113	0.08173144	0.08231496	0.0683705	0.04670698	.26577255***	.26792124***	.2714985***	.27089209***
Years of education	0.20150599	.24356312*	.24702414*	.25244932*	.24858777*	.29745148***	.34226864***	.34759839***	.34949179***	.34507982***
Years of education, squared	0.00818401	-0.00013122	-0.00065143	-0.00086211	-0.00076511	0.00390809	-0.00425912	-0.00472262	-0.00476815	-0.0045463
Formally employed	1.6510745***	1.7675857***	1.7732116***	1.7570778***	1.6827686***	2.0104061***	2.105634***	2.1078255***	2.0999201***	2.0734841***
Service sector	1.7019066***	1.3589293***	1.3330343***	1.3134703***	1.1441564***	.49146399***	0.21627125	0.19783393	0.1797503	0.1394378
Industry sector	1.3672878***	1.1334529***	1.1117843***	1.092587***	.91505657***	.51684695***	.30785484*	.29643378*	.27864087*	0.23942966
Log of per capita income		1.109459***	1.1899881***	1.2118725***	1.2063638***		1.0347361***	1.0885884***	1.1037141***	1.0956837***
Family size			.06601556***	.06765683***	.07130992***			.04004171**	.0408212**	.03990488**
Overseas remittances as proportion of total household income				-0.65368457	-.77237777*				-.59484164*	-.60784216*
Income from agricultural sources, as proportion of total income					-2.2398602***					-0.97429539
_cons	-9.5869939***	-20.042471***	-21.269313***	-21.487504***	-21.040491***	-7.6207819***	-17.710418***	-18.540448***	-18.690673***	-18.504739***
Number of observation	9,538	9,538	9,538	9,538	9,538	7,150	7,150	7,150	7,150	7,150
Pseudo R2	0.3182	0.3667	0.3683	0.369	0.3751	0.247	0.2933	0.2942	0.2948	0.2951

Legend: * p<.05; ** p<.01; *** p<.001

Summary of gender differences

Men are more likely to have SSS/GSIS and PhilHealth especially among workers in the rural areas. The regression results for urban areas show that male workers do not have significantly higher likelihood of access than female workers. Within services sector, the male dummy in the model has a highly significant positive coefficient which suggests that among the workers in the services sector, men have a higher likelihood for gaining social insurance than women. But in the industry sector, men have relatively lower access to social insurance than women. The result is highly significant in all the iterations of the estimation. The agricultural sector is quite similar with the services sector results wherein men have higher likelihood than women in having social insurance.

To gain an understanding of possible gender differences, the full sample of workers of economically active ages (that is 15 to 59 years old) was divided to create sub-samples for men and women. The idea is to examine any variation in how the variables influence access to social insurance of men versus women. The findings show that having formal employment appears to be a more important correlate of access to social insurance for women than for men. The coefficient of this variable is larger in the female estimation results than the male sample results. While being married is associated with higher access for men, the opposite is true for women, that is - being married is associated with lower likelihood of having access to social insurance.

Compared to those working in the agriculture sector, women in industry has the highest likelihood of access, followed by those in the services sector. For men, those in the services are more likely to have social insurance, followed by those in the industry sector. It is also interesting to note that men in households that greatly rely on overseas remittances have significantly lower likelihood to have social insurance. This variable is not significant in explaining women's access. Among permanent employees, women have lower likelihood than men in accessing social insurance, but there is no significant difference with respect to non-permanent employees. Women are similarly disadvantaged when the estimation is done among self-employed workers only (see Table A.8 in the Appendices). Women workers paid on a daily or hourly (and others such as commission-based, per piece, etc. but not on a monthly basis) also have relatively lower probability of getting the full range of social insurance compared to men of similar job situation (see Table A.9).

Factors affecting women's access

What are the factors that correlate with women's access to social protection? To answer this, several models have been estimated via logit regression where the dependent variable is having both SSS/GSIS and paying membership in PhilHealth and the explanatory variables are individual, household, and some location characteristics. As in the results for the full sample, age is non-linearly correlated with social insurance such as among relatively younger women, age is positively correlated with access but among the relatively older ones, access becomes lower as women age. Married women are also less likely to have access compared to unmarried ones as shown by the negative and significant coefficient of the married dummy. Years of education is also positively associated with access to social insurance although the square of years of education does not significantly correlate with access. With regards to employment factors, women with formal employment (herein defined as those workers in private and public establishments) are more likely to enjoy the benefits of SSS/GSIS and PhilHealth compared to those in informal jobs.

Those receiving wages in an hourly/daily or by piece bases have lower probability of having social insurance. In terms of sector, women workers in the industry have higher likelihood for social insurance access than those in the agriculture sector even after holding income from agricultural sources constant. Women in households that heavily rely on agricultural sources of income are less likely to have insurance access than those who do not depend much on agriculture for their livelihood.

As for household characteristics, women in more affluent households are more likely to benefit from social insurance than those in more economically disadvantaged households. Household size is also correlated with higher probability of access, holding income and other individual variables constant. Reliance on overseas remittance income does not correlate with women's access which suggests that at least for women, social insurance is not influenced by whether a household relies on remittances or not. As for the location, women in rural areas have significantly lower likelihood of access compared to those in the urban areas, *ceteris paribus.*

4. Some policy insights

Given this paper's findings, we recommend that subsidized social insurance programs must be directed towards improving the access of those who currently have lower access but are in a more disadvantaged position – these are the less educated, the poor, those who rely most on the vulnerable agricultural sector, and the informally employed. Focusing on women, programs that seek to improve their access to social insurance may prioritize poor women in the informal sector or in the agricultural sector, and the hourly/daily wage earners as these are less likely to gain access to social insurance. Promoting women employment in the industry can also improve the chances of women accessing social insurance. In terms of location, those in the rural areas may be targeted.

This study concludes that there is still some room for improving the efficiency of government's social pension programs in that it should cater mostly to the elderly who do not have access to social insurance and have no other means of providing for their needs. Interestingly, we found that remittances from migrant workers act like insurance because receiving remittances is negatively correlated with social insurance access. It is therefore essential that while households reap the rewards for international migration, which is unlikely to be sustainable in the long run, remittances must be harnessed for creating productive investments at home. The above analysis also points to the need for protection among workers in the agricultural sector against risks of sickness and adverse economic fluctuations. Since this segment is relatively less served than other workforce segments, programs like crop insurance are also vital in smoothing household income in times of natural calamities and other events such as typhoons, flooding, drought, fire, and pest infestations.

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Appendices

Table A.1. Test of sample proportions by sex (with SSS/GSIS)

```
. prtest withsssgsis if c05_age>=15 & c05_age<60 & c13_did_work_apis16 ==1, by(male)

Two-sample test of proportions                    0: Number of obs =     6493
                                                  1: Number of obs =    10195
------------------------------------------------------------------------------
    Variable |       Mean   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
           0 |    .3023256   .0056996                      .2911547    .3134965
           1 |    .2715056   .0044046                      .2628727    .2801385
-------------+----------------------------------------------------------------
        diff |    .0308199   .0072032                       .016702    .0449379
             |  under Ho:     .007156     4.31   0.000
------------------------------------------------------------------------------
       diff = prop(0) - prop(1)                                      z =  4.3069
   Ho: diff = 0

    Ha: diff < 0                 Ha: diff != 0                 Ha: diff > 0
 Pr(Z < z) = 1.0000         Pr(|Z| < |z|) = 0.0000          Pr(Z > z) = 0.0000
```

Table A.2. Test of sample proportions by sex (with PhilHealth membership, paying scheme)

```
. prtest with_phealthpaying if c05_age>=15 & c05_age<60 & c13_did_work_apis16 ==1, by(male)

Two-sample test of proportions                    0: Number of obs =     6493
                                                  1: Number of obs =    10195
------------------------------------------------------------------------------
    Variable |       Mean   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
           0 |     .269367   .0055055                      .2585764    .2801577
           1 |    .2450221   .0042597                      .2366733    .2533709
-------------+----------------------------------------------------------------
        diff |    .0243449    .006961                      .0107016    .0379883
             |  under Ho:    .0069159     3.52   0.000
------------------------------------------------------------------------------
       diff = prop(0) - prop(1)                                      z =  3.5201
   Ho: diff = 0

    Ha: diff < 0                 Ha: diff != 0                 Ha: diff > 0
 Pr(Z < z) = 0.9998         Pr(|Z| < |z|) = 0.0004          Pr(Z > z) = 0.0002
```

Table A.3. Logit regression results, female workers only

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Age, years	.06416527**	.0586987*	.06424567*	.064793*	.05814055*	.05370214*
Age, years, squared	-.0006967*	-.00075138*	-.00080426*	-.0008108*	-.00071715*	-0.00065215
Married	-.30527226***	-.23600039*	-.25002697**	-.24977168**	-.22012981*	-.2151998*
Years of education	.51661278**	.43664649**	.44194597**	.44448641**	.4265401*	.40793881*
Years of education, squared	-0.00616741	-0.0099375	-0.01045145	-0.01052779	-0.00971401	-0.00869292
Formally employed	1.6683952***	1.7831044***	1.7891842***	1.7833627***	1.7343325***	1.7285157***
Service sector	.61502282***	.3445222*	.33960338*	.33197857*	0.19129833	0.1507207
Industry sector	1.5376042***	1.2641005***	1.2707642***	1.2626577***	1.0911045***	.99306967***
Hourly/Daily wage earner	-1.0156653***	-.79753602***	-.77386241***	-.76960132***	-.7958866***	-.82057573***
Log of per capita income		1.2546782***	1.342304***	1.3505102***	1.3020048***	1.2555545***
Family size			.07117452***	.07145736***	.06848746***	.06385281**
Overseas remittances as proportion of total household income				-0.22144865	-0.29751594	-0.31648798
Income from agricultural sources, as proportion of total income					-2.8099908***	-2.2858159***
NCR					0.01635944	-.21955084*
Rural						-.51361114***
_cons	-8.3591947***	-19.752385***	-21.139166***	-21.235263***	-20.266474***	-19.306783***
Number of observations	6,493	6,493	6,493	6,493	6,493	6,493
Pseudo R2	0.3782	0.4367	0.4386	0.4386	0.4443	0.4483

Table A.4. Logit regression results, male workers only

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Age, years	.08291936***	.08441523***	.08908282***	.08986486***	.09029168***	.08963753***
Age, years, squared	-.00094571***	-.00111638***	-.00117501***	-.00118475***	-.00119176***	-.00117572***
Married	.24503402**	.53664347***	.53822765***	.54153585***	.51261731***	.49446926***
Years of education	.29810827***	.33331053***	.33640232***	.34134862***	.3287732***	.31522999***
Years of education, squared	0.00105064	-0.00611135	-0.00646272	-0.00664128	-0.00594368	-0.00505426
Formally employed	1.2780361***	1.4930986***	1.5036224***	1.5025853***	1.359397***	1.3535359***
Service sector	1.0163301***	.6804318***	.66123942***	.64251166***	.43286573***	.36911542***
Industry sector	.88099656***	.60189318***	.58475332***	.56372182***	.36633674***	.29231004**
Hourly/Daily wage earner	-1.2870562***	-1.1003702***	-1.0895817***	-1.0780433***	-1.0818459***	-1.0822719***
Log of per capita income		1.0293163***	1.0771758***	1.0954864***	1.0489366***	.98770531***
Family size			.03701679**	.038757**	.03691689**	.03240388*
Overseas remittances as proportion of total household income				-.76315852*	-.79568001**	-.70875931*
Income from agricultural sources, as proportion of total income					-2.5789596***	-2.0143452***
NCR					0.07085239	-.22493253**
Rural						-.65697046***
_cons	-7.0276779***	-17.152091***	-17.902963***	-18.106669***	-17.201499***	-16.11633***
Number of observations	10,195	10,195	10,195	10,195	10,195	10,195
Pseudo R2	0.319	0.3596	0.3602	0.361	0.3657	0.3733

Table A.5. Logit regression for workers in services sector only

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Age, years	.07840696***	.07522331***	.08073554***	.0814619***	.07796733***	.07770353***
Age, years, squared	-.00086423***	-.00095029***	-.00101108***	-.00101911***	-.00097038***	-.00095946***
Male	.33437318***	.33709529***	.33876969***	.33595769***	.30395***	.29360364***
Married	-0.06212165	0.1212138	0.11095242	0.11357954	0.11359446	0.11890039
Years of education	.30242235**	.31995479***	.32075931***	.3270285***	.31899212***	.30402464**
Years of education, squared	0.00385203	-0.00362586	-0.0039408	-0.00418169	-0.00376007	-0.00272559
Formally employed	1.9474952***	2.0400776***	2.0382781***	2.0228564***	2.0189224***	2.013383***
Log of per capita income		1.098287***	1.1655905***	1.1803114***	1.1547654***	1.0906429***
Family size			.05734534***	.05858481***	.05857559***	.05249977***
Overseas remittances as proportion of total household income				-.64300849*	-.69383433**	-.63902646*
Income from agricultural sources, as proportion of total income					-3.0588928***	-2.4500279***
NCR						-0.0191918
Rural						-.38990752***
_cons	-7.7663041***	-18.387559***	-19.444889***	-19.617696***	-19.180379***	-18.305944***
Number of observation	8,540	8,540	8,540	8,540	8,540	8,540
Pseudo R2	0.2593	0.316	0.3176	0.3183	0.3235	0.3269
Legend: * p<.05; ** p<.01; *** p<.001						

Table A.6. Logit regression for workers in industry sector only

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Age, years	.1052681**	.10393834**	.11418805**	.11771256***	.11242564**	.10464065**
Age, years, squared	-.00138856**	-.00157281***	-.00170931***	-.00176004***	-.00169556***	-.0015847***
Male	-.74431003***	-.6261577***	-.62690399***	-.62769629***	-.62839747***	-.55176385***
Married	0.04334828	.44477149***	.47518795***	.48193008***	.45335382***	.43034069***
Years of education	0.16600479	0.25675551	0.26806096	0.26498216	0.24079408	0.23419687
Years of education, squared	0.01233868	0.00075652	-0.00025663	0.00005693	0.00146109	0.00221611
Formally employed	2.2330064***	2.2502895***	2.2858091***	2.2776985***	2.2220258***	2.0957518***
Log of per capita income		1.3805061***	1.5076209***	1.5488702***	1.4903454***	1.3743571***
Family size			.07688346***	.07942643***	.07773999***	.06842474**
Overseas remittances as proportion of total household income				-1.4616341**	-1.4385303**	-1.3493402*
Income from agricultural sources, as proportion of total income					-4.0667927**	-2.9467276*
NCR						-0.1283541
Rural						-.67440186***
_cons	-7.1369743***	-20.95865***	-22.872044***	-23.312244***	-22.390593***	-20.720215***
Number of observation	2,793	2,793	2,793	2,793	2,793	2,793
Pseudo R2	0.2037	0.2778	0.2811	0.2839	0.2889	0.2984
Legend: * p<.05; ** p<.01; *** p<.001						

Table A.7. Logit regression for workers in agriculture sector only

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Age, years	.21654538***	.21296823***	.21315863***	.21340185***	.22562885***	.22248471**
Age, years, squared	-.00231348**	-.00243306**	-.00243465**	-.00243763**	-.00263571**	-.00256925**
Male	.65275825*	.63356652*	.6356888*	.63166181*	.61645508*	.58217863*
Married	0.38491409	.60578808*	.6030224*	.61132731*	0.55419805	0.4770569
Years of education	0.20847035	0.23117021	0.23230451	0.23266669	0.22673287	0.21727807
Years of education, squared	0.00544287	-0.00078274	-0.00086688	-0.00085633	-0.00064783	-0.0000271
Formally employed	1.3226527***	1.6345781***	1.6368499***	1.6409886***	1.0521111***	.88780225***
Log of per capita income		1.0041448***	1.0109599***	1.0299141***	.94677708***	.72370057***
Family size			0.00664562	0.00701853	-0.00705908	-0.01858557
Overseas remittances as proportion of total household income				-0.33014629	-0.58557505	-0.23585489
Income from agricultural sources, as proportion of total income					-2.0970763***	-1.8318108**
NCR						0.65369812
Rural						-1.5171332***
_cons	-11.846881***	-21.324773***	-21.43166***	-21.618107***	-20.080121***	-16.586889***
Number of observation	4,425	4,425	4,425	4,425	4,425	4,425
Pseudo R2	0.1536	0.1979	0.1979	0.1982	0.2121	0.2592
Legend: * p<.05; ** p<.01; *** p<.001						

Table A.8. Logit regression for self-employed workers only

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Age, years	.27525527***	.27924963***	.28008265***	.26930594***	.26203501***	.25304833***
Age, years, squared	-.00295779***	-.003154***	-.00316066***	-.00302967***	-.00295538***	-.00284022***
Male	.48360535**	.49635256**	.49650073**	.54179898***	.64144816***	.676956***
Married	-.55988583**	-.37515742*	-.40028885*	-.4121043*	-.40722687*	-.4081793*
Years of education	.36776369*	.32004216*	.32292916*	.31902518*	0.24295362	0.25887708
Years of education, squared	-0.00038382	-0.00459976	-0.0048207	-0.00466887	-0.00183891	-0.00274245
Formally employed	0.46477072	.66940747*	.67809569*	.67779311*	0.58211948	.64058139*
Log of per capita income		1.0287919***	1.0546531***	1.021664***	.9096761***	.92414625***
Family size			0.0285857	0.03146705	0.011599	0.01533697
Overseas remittances as proportion of total household income				.94881353*	.8506062*	.83314373*
Income from agricultural sources, as proportion of total income					-2.322819***	-2.0893929***
NCR						-.74585565**
Rural						-.59016097***
_cons	-12.346369***	-21.905636***	-22.309344***	-21.846946***	-19.814115***	-19.51678***
Number of observation	4,199	4,199	4,199	4,199	4,199	4,199
Pseudo R2	0.1454	0.2118	0.2121	0.2159	0.2293	0.2389
Legend: * p<.05; ** p<.01; *** p<.001						

Table A.9. Logit regression for workers paid in an hourly/daily/by piece bases only

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Age, years	.08265574***	.08116074***	.08539027***	.08585704***	.08130507***	.07801148***
Age, years, squared	-.00092588***	-.00106036***	-.00110992***	-.00111627***	-.00106009***	-.00100553***
Male	.13617575*	.15178864*	.15363283*	.15219273*	.16149535*	.17993531*
Married	-0.10344364	0.12986078	0.12511628	0.12701969	0.10627574	0.09728577
Years of education	.43734179***	.4283562***	.42972644***	.42992125***	.40616314***	.39373541***
Years of education, squared	-0.00373579	-.01002603*	-.01027489**	-.01023247**	-.00929052*	-.0085745*
Formally employed	1.4372698***	1.6825308***	1.6901957***	1.6859324***	1.5132864***	1.4940584***
Log of per capita income		1.216168***	1.2628362***	1.274272***	1.2015741***	1.110533***
Family size			.03982417**	.04054263**	.03463876*	0.0257053
Overseas remittances as proportion of total household income				-0.35498493	-0.38068822	-0.29345549
Income from agricultural sources, as proportion of total income					-2.8824738***	-2.1285243***
NCR						-.38263997***
Rural						-.8196611***
_cons	-8.5185359***	-20.178244***	-20.919324***	-21.033561***	-19.794469***	-18.324017***
Number of observation	12,802	12,802	12,802	12,802	12,802	12,802
Pseudo R2	0.1813	0.2544	0.2552	0.2555	0.2649	0.2792
Legend: * p<.05; ** p<.01; *** p<.001						

Table A.10. Logit regression for permanent workers only

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Age, years	.07960399***	.07850695***	.08580235***	.08711466***	.08266282***	.08034797***
Age, years, squared	-.00089218***	-.00101224***	-.00109781***	-.00111318***	-.00105547***	-.00101414***
Male	.14817901**	.20293965***	.20740418***	.20376482***	.19112442**	.19114717**
Married	-0.08036341	.16621602*	.15804485*	.15949163*	.14751571*	.14528391*
Years of education	.39475176***	.40089302***	.40776609***	.41127452***	.38198977***	.3549824***
Years of education, squared	0.00060908	-0.00691086	-.0076204*	-.00776289*	-0.00636844	-0.00462019
Formally employed	2.1843431***	2.2386656***	2.2368626***	2.2252988***	2.0710956***	2.0533099***
Log of per capita income		1.1434326***	1.2198512***	1.2340978***	1.174443***	1.0819098***
Family size			.06437765***	.06546544***	.0602711***	.05189653***
Overseas remittances as proportion of total household				-.61831313*	-.66977542**	-.59818808*
Income from agricultural sources, as proportion of total					-2.9674697***	-2.2823671***
NCR						-0.08253182
Rural						-.58242461***
_cons	-8.4483979***	-19.44851***	-20.679317***	-20.842575***	-19.74354***	-18.388109***
Number of observation	11,749	11,749	11,749	11,749	11,749	11,749
Pseudo R2	0.3171	0.3736	0.3753	0.3759	0.3834	0.39
Legend: * p<.05; ** p<.01; *** p<.001						

Table A.11. Logit regression for non-permanent workers only

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Age, years	.09361289**	.09358932**	.09683358**	.09734567**	.08926286**	.07976668*
Age, years, squared	-.00138254**	-.00153014***	-.00155748***	-.00155699***	-.00145637**	-.0013143**
Male	-0.11010461	-0.07589667	-0.06707892	-0.05615206	-0.07248299	-0.06186598
Married	-0.08398471	0.19269187	0.20731933	0.2232271	0.20849266	0.18582543
Years of education	.43533789**	.41718237**	.40371176**	.3986288**	.37765056**	.32790883*
Years of education, squared	-0.00330442	-0.01101511	-0.01065918	-0.01018339	-0.00936673	-0.00666759
Formally employed	1.7680986***	1.8801307***	1.9041255***	1.8640447***	1.7139714***	1.6917444***
Log of per capita income		1.4869487***	1.5755187***	1.6205783***	1.5242032***	1.3052724***
Family size			.06751517**	.06891212**	.0682488**	.04839622*
Overseas remittances as proportion of total household				-1.0788822**	-1.0397955*	-0.76393091
Income from agricultural sources, as proportion of total					-4.452623***	-2.9730013**
NCR						0.12053257
Rural						-.8230037***
_cons	-8.6191174***	-22.696575***	-23.9456***	-24.354909***	-22.845659***	-19.87129***
Number of observation	4,939	4,939	4,939	4,939	4,939	4,939
Pseudo R2	0.1914	0.2828	0.2852	0.2877	0.298	0.3144
Legend: * p<.05; ** p<.01; *** p<.001						

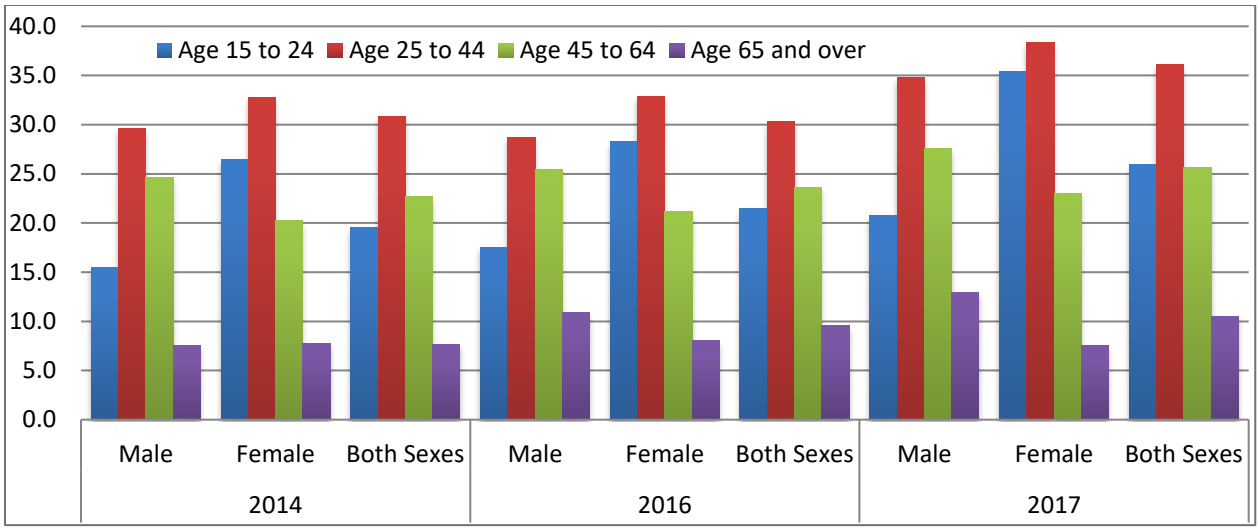
Appendix A. GSIS Benefits

1. Life Insurance
   - *Life Endowment Policy (LEP)* – available to all GSIS members who entered the service prior to August 1, 2003. Insurance plans, which covers/includes maturity, surrender and death benefits, policy loan, and dividends, depends on the age nearest the member's birthday at the time of effectivity.
   - *Enhanced Life Policy (ELP)* – available to GSIS members who entered the service after July 31, 2003 or to existing GSIS members who opt to convert their LEP into ELP. Insurance coverage, independent of age and length of service, is a yearly term renewable life insurance based on fixed monthly compensation
2. Retirement
   - *Retirement under Republic Act No. 8291* – Retirees, with at least 15 years in service and at least 60 years old upon retirement, can choose either a five-year worth of pension in advance or a cash payment payable upon retirement.
   - *Retirement under Republic Act No. 660* – Pensioners under this option should be permanent employees who entered the service on or before May 31, 1977 and the sum of his/her age and years in service should total to at least 87. Benefits, depending on age, can either be an automatic monthly pension for life or a lump sum.
   - *Retirement under Republic Act No. 1616* – Retirees who entered the service on or before May 31, 1977 and rendered at least 20 years of service regardless of age and employment status can avail gratuity payments based on the total creditable service converted into gratuity months multiplied by the highest compensation received.
   - *Retirement under Presidential Decree No. 1146* – Retirees who were in service after May 31, 1977 but prior to June 24, 1997, depending on the years of service, can choose either a basic monthly pension guaranteed for five years or a cash payment for every year of service
   - *Portability Law (Republic Act No. 7699)* – Retirees, formerly working in the private sector, can combine his/her years of service in the private sector (represented by SSS contributions) with that of GSIS to satisfy the required years of service under PD 1146 and RA 8291.

3. Separation – Employees separated from the service but have not reached the retirement age can receive benefits in the form of cash payment, or cash payment and pension depending on the years of service.
4. Unemployment – Permanent government employees with 12 months of integrated contributions and is involuntarily separated from service as a result of abolition of the office or position can receive monthly cash payments for 2 to 6 months, depending on the length of service
5. Disability – Members suffering from a loss or reduction in earning capacity caused by a loss or impairment of the physical and/or mental faculties as a result of an injury or disease can avail a basic monthly pension or cash payments depending on the disability and years of service.
6. Burial – Financial assistance given to the surviving spouse of the deceased member, or any person who shouldered the funeral expenses and can present receipt/s that were acknowledged by the surviving spouse.
7. Survivorship – All primary and secondary beneficiaries of a dead member or pensioner receives a basic survivorship pension of 50% of the basic monthly pension but not exceeding to 50% of the current Step 8 salary of an Undersecretary.
8. Loan Privileges
    - *Consolidated Loan* – available for members with at least 20 months of rendered service. Availment will result in consolidation and wipeout of penalties and surcharges from salary loan, restructured salary loan, enhanced salary loan, emergency loan assistance, and summer one-month salary.
    - *Emergency Loan* – available for member-applicants who is a bona fide resident or employee of a government office in the declared calamity area.
    - *Policy Loan* – available for GSIS members insured for at least one year, with updated premium payments and an active policy.

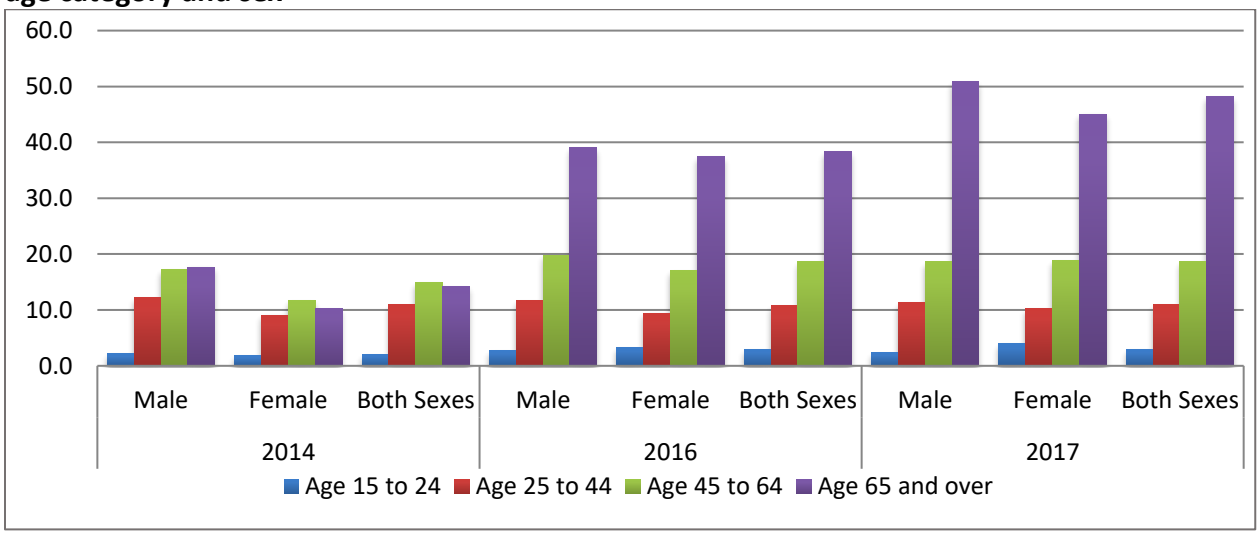
Other programs include the GSIS Scholarship Program (GSP), wherein GSIS provides opportunities for children of low-income members to earn a college degree. Under the GSP, selected scholars will get a maximum of PHP 20,000 per semester for tuition and miscellaneous fees and a monthly stipend of PHP 2,000. GSIS also offers compulsory third party liability insurance (which includes personal, car and house insurances) for individual and institutional clients.

Appendix Table 1. PhilHealth membership (paying) among the employed, by age group and sex



Source of basic data: Annual Poverty Indicators Survey (APIS), PSA

Appendix Table 2. PhilHealth membership (non-paying/sponsored) among the employed, by age category and sex



Source of basic data: Annual Poverty Indicators Survey (APIS), PSA