

Design issues of the Philippine agricultural insurance programs

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A number of bills filed in the Philippine Congress within the past year have proposed amendments in the charter of the Philippine Crop Insurance Corporation (PCIC) to improve its products and services. Unfortunately, these current proposals do not cover key design issues of the PCIC programs that also merit the attention of policymakers.

This *Policy Note* summarizes these design issues as identified in Reyes et al. (2015). It also provides key recommendations that policymakers should consider in their bill proposals.

Product objective

Introduced as crop insurance in 1981, the agricultural insurance of the PCIC is originally designed to serve as surrogate collateral for lending institutions (Corpuz 2013) to protect lenders from credit risks and ensure stability in agricultural credit supply. In case of a crop damage, for instance, the indemnity claim that the assured crop farmer receives is used to pay

for his loan. As such, the PCIC insurance appears to be serving more as a credit risk reduction tool by design than a risk mitigation tool.

For one, the maximum amount of insurance cover for borrowing clients is equal to the loan amount. Loan amount is determined based on client's capacity to pay back the loan, which can be less than the amount needed to pay for total cost of production inputs, such as seeds, fertilizer, pesticides, and labor costs, excluding those for harvesting and postharvest activities and adjusted to per-hectare basis. Based on the 2016 impact evaluation survey of the Philippine Institute for Development Studies (PIDS), for example, around 80 percent of the randomly selected rice and corn farmers who availed of crop loan(s) at least once during the period October 2013 to September 2015 had loan amount less than their actual cost of production inputs.

PIDS Policy Notes are observations/analyses written by PIDS researchers on certain policy issues. The treatise is holistic in approach and aims to provide useful inputs for decisionmaking.

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The amount of indemnity claims is also automatically paid to the lending institution. Moreover, the PCIC does not give the assured borrowing clients the option to postpone loan payment until they are fully recovered. As such, roughly two in every three indemnity claims that Davao banana farmers received were used to pay for their crop loans, as reflected in the PIDS survey. These realities suggest the program places more importance on stability of lenders' finances than that of agricultural producers'.

Amount of insurance cover

Reyes et al. (2015) also revealed that the amount of insurance cover is insufficient to cover the total cost of production inputs, at least for rice and corn—the major product lines accounting for more than half of PCIC's total number of insurance policies. Both the PIDS survey and PCIC data corroborate this finding.

For instance, crop farmers, particularly coconut and banana growers who participated in the PIDS survey, gave a low rating on the adequacy of the amount of cover. Moreover, data from PCIC show that at least half of its clients from 2013 to 2015 had an insurance cover less than PHP 23,950.77, the average per-hectare cost of production inputs in 2015.¹ In 2015, this proportion of assured rice farmers with insufficient amount of cover already reached around 84 percent.

¹ minimum cost of per-hectare rice production without harvesting and postharvest expenses, using different assumptions for share of harvesting and postharvest costs to total labor costs (Bordey et al. 2016; phone interview with M.R.C. Salamanca, rice farmer from Ramon, Isabela on May 3, 2017) and share of harvesting and postharvest costs to total production costs (GMA Rice Program 2009; DA-RFO No. 02 2010; PIDS 2016)

The low amount of cover is evident among special programs, specifically the Department of Agriculture (DA) Weather-Adverse Rice Areas (WARA), the DA-National Irrigation Administration (NIA) Third Cropping, and the Registry System for Basic Sectors in Agriculture (RSBSA)-Agricultural Insurance Program (AIP) (Figure 1). At PHP 10,000 per hectare for DA WARA and DA-NIA Third Cropping and PHP 20,000 per hectare for RSBSA, cover ceilings for these programs are below the aforementioned average per-hectare cost of production.

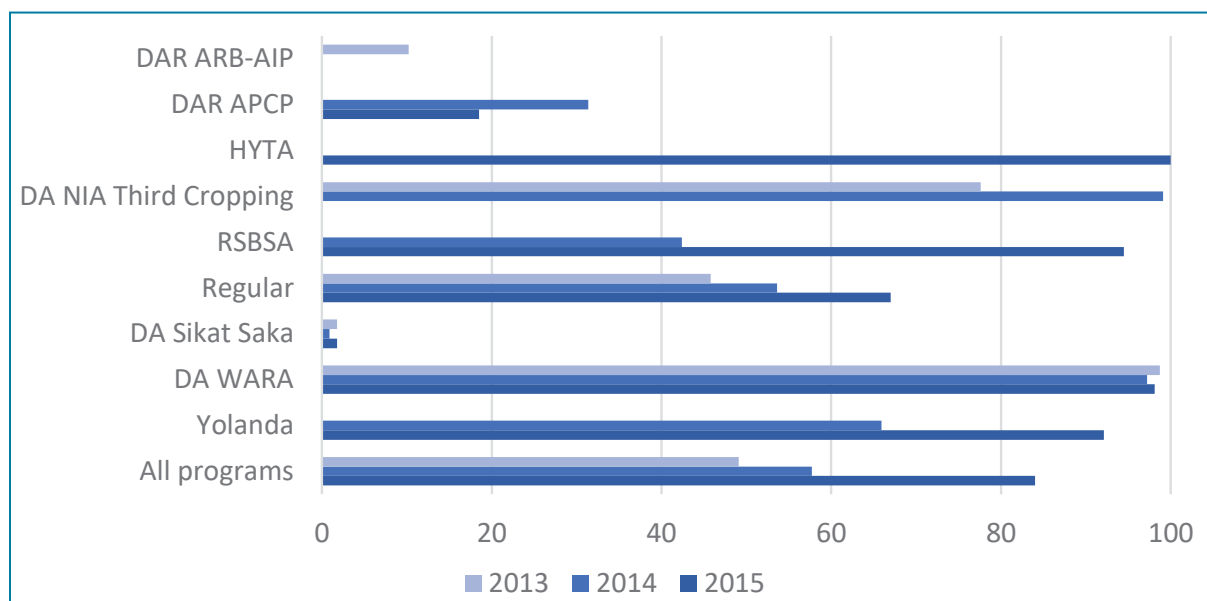
Ceilings were deliberately set at lower amount so that, given the limited budget, the program would be able to cover more beneficiaries. It appears then that the current program prefers coverage expansion, in terms of number of beneficiaries, over provision of sufficient amount of assistance that would ensure protection against potential shocks.

Premium rate

Some PCIC clients who participated in the study's focus group discussions perceived premium rates as high. For instance, premium rate for corn can reach as high as 13 percent of the total cost of production inputs for self-financed corn farmer in high-risk areas in Eastern Visayas during dry season, equivalent to 35.6 percent of the total premium after deducting government's share.

Specifically, the corresponding (unsubsidized) premium amount for an insurance cover of PHP 40,000 per hectare is PHP 5,212, equivalent to roughly 10 percent of the average amount a family of five needs to meet its basic food and nonfood needs for six months. The average

Figure 1. Distribution of rice insurance policies with amount of cover below average per hectare cost of production inputs, Philippines, by program, 2013–2015



DAR = Department of Agrarian Reform; ARB-AIP = Agrarian Reform Beneficiaries-Agricultural Insurance Program; ACP = Agrarian Production Credit Program; HYTA = High Yielding Technology Adaptation; DA = Department of Agriculture; NIA = National Irrigation Administration; RSBSA = Registry System for Basic Sectors in Agriculture; WARA = Weather-Adverse Rice Area
Source of basic data: Philippine Crop Insurance Corporation [PCIC] (various years)

actual premium payment of corn farmers all throughout the country in 2015 was significant as well, as it amounted to PHP 1,545.78 and accounted for 2.8 percent of the poverty threshold. Such percentage value is relatively higher than shares of essential expenditure items like education (2.45%) and health care (1.64%) of Filipino households in bottom 30 percent.²

Premium rates for market-based insurance products of PCIC, particularly for high-value crops (HVCs), are relatively higher than those for rice and corn in general. In 2015, the actual premium payment of HVC farmers was almost twice of that for corn and triple of that for rice. PCIC applies a bonus-malus system on these products such that premium rates change based on damage rates. On top of that, clients

of these products under the regular program do not receive subsidy. These can be serious issues because HVC farmers are not homogenously well-off. In fact, poverty incidence³ is higher among families whose heads are engaged in growing select HVCs, such as cotton/fiber crops (69.7%) and root crops (46.9%), compared to those among other types of agricultural workers.

Another issue with premium rates is whether their variation considers climate variability. For instance, PCIC had modified premium rates of rice and corn insurance four times already since 1981, with latest revision done in 2000. To

² This confirms Virola's (2017) finding, which used the 2012 Family Income and Expenditure Survey (FIES).

³ using merged files of 2015 FIES and January 2016 Labor Force Survey

take into account temporal changes in damage rates,⁴ it updates risk classification of areas (not the rates) every three years. However, regional disparities in premium rates of rice and corn do not seem to correlate well with PCIC's claims data⁵ (2013–2015)⁶ as well as with DA's panel data on damages to agriculture due to various risks such as typhoon, flood, drought, and pest infestation, among others, in terms of total area affected and volume of production losses from 2003 to 2016.

Premium subsidy

The Philippine government has long been giving higher priority to rice and corn farmers in the provision of assistance. From 2005 to 2016, government spending on rice and corn had accounted for about 50 percent of the total spending on agriculture. One form of government assistance to rice and corn farmers is insurance premium subsidy. Since 1981, the government has been subsidizing a significant portion (48–64%) of the insurance premium of the assured rice and corn farmers. In 2014 alone, it allocated about 80 percent of its premium subsidy to rice and corn, reflecting the bias toward these traditional crops. Meanwhile, other crop farmers, such as small-scale vegetable and root crop farmers, have not been receiving any premium subsidy under the PCIC's regular program.

⁴ In PCIC's terminology, these refer to the ratios of total claims paid to total sum insured.

⁵ Probably because PCIC's data series on damage rates is very short.

⁶ 2013 is the earliest year for which PCIC data on claims (and underwriting) are available.

⁷ based on interviews with PCIC Regional Office IV staff and as indicated in the underwriting document (as attachment to policy contract between PCIC and its tree-grower client)

Despite the strong support of the government, rice and corn have been less profitable than HVCs (Briones 2013). On the other hand, HVC farming tends to be more labor intensive as well, implying that it can create more job opportunities. These observations can justify the need for modification of the incentive structure for different types of farmers.

Indemnity claims

Indemnity claims computation has also been an issue for a select group of PCIC clients. For instance, a group of assured coconut farmers from Cavite, Laguna, Batangas, Rizal, and Quezon argued that indemnity claims should be based on yield loss, not on tree mortality. Apparently, they can only receive indemnity payments when coconut trees are blown down or felled.

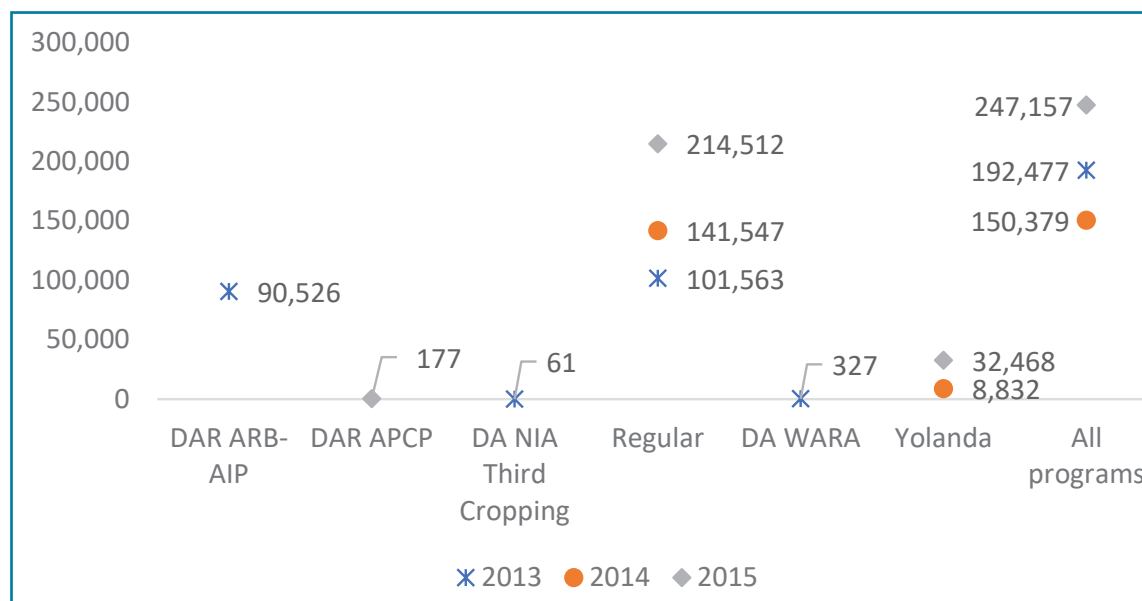
However, coconut tree felling due to a natural calamity rarely happens. Even without tree felling, natural calamities often cause heavy damage on coconut trees, leaving trees unproductive for over a year. More so, recovery of a coconut tree also takes about two years (Lansigan et al. 2017).

This issue, however, concerns any assured fruit-bearing and other tree growers (e.g., mango, banana, calamansi, cashew, falcata/mahogany, rubber, orange, paper). Currently, the only risk insured is death of tree(s) resulting from typhoon, flood, drought, or earthquake.⁷ Moreover, the PCIC does not offer yield-based insurance for these types of crops, which would be more appropriate.

Risks covered

During the study's regional visits, a number of farmers expressed that the PCIC does not currently

Figure 2. Distribution of agricultural producers who availed of term insurance alone, Philippines, by program, 2013–2015



DAR = Department of Agrarian Reform; ARB-AIP = Agrarian Reform Beneficiaries-Agricultural Insurance Program; ACP = Agrarian Production Credit Program; DA = Department of Agriculture; NIA = National Irrigation Administration; WARA = Weather-Adverse Rice Area
Source of basic data: PCIC (various years)

cover some major risks like strong winds not induced by typhoon, accident and disease of livestock/poultry, and pests and diseases that frequently affect crops (e.g., rice bug), among others. As such, some potential clients refuse to get insurance because risks currently covered have only minimal impacts on their agricultural assets.

Term insurance

The PCIC is offering term insurance package, such as life and accident insurance, and loan repayment protection plan to extend protection to agricultural producers, and not only to their agricultural assets. In 2012, the said package already exceeded the combined shares of all other products, including the insurance cover intended for rice and corn. The offering of term insurance is reasonable as long as it is bundled with a main product line.

However, PCIC's Agricultural Producer Protection Plan (AP3) and Accident and Dismemberment Security Scheme (ADS2) packages indicate that eligible clients are "agricultural producers, preferably with existing agricultural and/or crop insurance coverage with PCIC". The term *preferably* connotes that the availment of agricultural insurance is not *required* among those who would get AP3 and ADS2. In fact, PIDS (2016) found that some PCIC clients availed of term insurance but did not get crop/livestock/noncrop agricultural asset insurance. PCIC (various years) show that a considerable number of these agricultural producers had been enrolled under the regular and sponsored programs of their local government units (LGUs) (Figure 2). Such observation is true despite the fact that premium rates for both AP3 and ADS2 packages, particularly the former, are relatively



The Philippine government has long been giving higher priority to rice and corn farmers in the provision of assistance. In fact, the government spending on these traditional crops from 2005 to 2016 alone had accounted for about 50 percent of the total spending on agriculture. Despite the strong support of the government, this study found that rice and corn have been less profitable than high-value crops, such as pineapple and mango. Given this scenario, it recommends the modification of the incentive structure for different types of farmers. (Photo: Philip Brookes/Flickr)

higher than those charged by a major life insurance company (Virola 2017).

Another issue with eligibility requirement is that family members up to fourth degree of consanguinity/affinity (e.g., great-great-grandparent or great grandparent-in-law) can avail of term insurance packages. Moreover, it is not explicitly stated in the guidelines that those members have to be employed in the agriculture sector. It is thus possible that some people can still be covered even if they are not agricultural

workers, as long as they are related to an agricultural producer up to fourth degree.

Age requirement is also an issue. In 2014, PCIC extended the age limit for those availing of term insurance to 80. As mentioned in Virola (2017), setting of insurable age up to 80 is not reasonable as people of this age are considered as poor risks.

Indeed, potential market for PCIC's term insurance packages can be large because of lax

eligibility requirements. While this can lead to higher premium earnings, PCIC should also be wary that this may “jack up loss ratios” in the future (Virola 2017, p. 79).

Recommendations

Given these key design issues, this *Note* recommends the following:

Product objective/Amount of insurance cover

PCIC insurance is basically a production cost insurance. It does not cover market risk, which is another major challenge Filipino agricultural producers face. As such, the amount of insurance cover must be sufficient to protect agricultural producers against production risks at the very least. Given that the national government provides insufficient premium subsidies, the PCIC can encourage farmers, particularly those financially able ones, to pay for additional amount of cover for their insured commodities. The PCIC can also strengthen its partnership with LGUs, which can provide additional financing to pay for the additional premium to increase insurance cover.

Premium rate

To differentiate between premiums paid by individual and/or subsistence farmers and those paid by wealthy plantation and/or export companies, the PCIC has to modify premium structure of HVC insurance under its regular program. For instance, it can explore classification of cover into commercial and noncommercial, similar to those for livestock insurance.

It can also justify the complexity of its insurance premium structure by regularly

updating premium rates and not only risk classification of areas, especially in recent times when climate is said to be changing. Updating only risk classification does not really address regional differences in terms of effects of climate variability.

While the use of PCIC data on damage rates in updating the rates is reasonable in an actuarial perspective, this does not allow rates adjustment in areas (e.g., province or part of it) with no assured farmers. It may then be possible that rates remain unadjusted (with effects of climate variability) in these nonprogram areas until the time when there will be enrollees. As such, this study recommends the use of DA's historical data on damages in updating premium rates as this can truly provide extent of damages on agricultural commodities due to climate variability.

Premium subsidy

The PCIC should remove the bias toward rice and corn. Moreover, the provision of premium subsidies (under its regular program) should cover all crops, including HVCs.

Indemnity claims


The PCIC should base the indemnity claims for insured trees on yield loss, not on tree mortality. This will allow assured tree growers to receive some amount that would help them recover from production losses due to natural calamities.

Risks covered

Similar to premium rates, the PCIC should also regularly update its list of covered risks to incorporate production risks that have become major causes of production losses in recent years.

Term insurance

The authors believe that the offering of term insurance alone is not part of the PCIC's mandate. In fact, private insurance companies currently offer and have comparative advantage in this type of product. Thus, the PCIC should bundle this insurance product with its main product lines.

It should also not extend its eligibility up to fourth degree of consanguinity/affinity nor up to age 80. Instead, it should limit the eligibility to client's immediate family members. Also, given that life expectancy at birth of Filipinos in 2015 is 65 for males and 72 for females (WHO 2017), insurable age should be set at 70 (Virola 2017). 

References

- Bordey, F.H., P.F. Moya, J.C. Beltran, and D.C. Dawe, Editors. 2016. *Competitiveness of Philippine rice in Asia*. Nueva Ecija, Philippines: Philippine Rice Research Institute and Laguna, Philippines: International Rice Research Institute.
- Briones, R.M. 2013. Impact assessment of the agricultural production support services of the DA on the income of poor farmers/fisherfolk: Review of the evidence. PIDS Discussion

- Paper No. 2013-23. Makati City, Philippines: Philippine Institute for Development Studies.
- Corpuz, J.M. 2013. Case study: Loan guarantees and insurance in the Philippines. Paper presented at the 4th World Congress on Agricultural and Rural Finance, September 26–28, Paris, France.
- Department of Agriculture (DA)-Regional Field Office (RFO) No. 02. 2010. Hybrid yellow corn cost structure. Cagayan, Philippines: DA-RFO No. 02.
- Ginintuang Masaganang Ani (GMA) Rice Program*. 2009. Cost and return analysis by region. Quezon City, Philippines: Department of Agriculture.
- Lansigan, F.P., C.E. Reano, L.N. Comia, N.A. Tandang, R.V. Collado, J.R.S. Reyes, R.S. Arana et al. 2017. Evaluation of the impact of the agricultural insurance program of PCIC on agricultural producers in Region IV-A. PIDS Discussion Paper No. 2017-15. Quezon City, Philippines: Philippine Institute for Development Studies.
- Philippine Crop Insurance Corporation (PCIC). Various years. Farmers' lists 2013–2015. Quezon City, Philippines: PCIC.
- Philippine Institute for Development Studies (PIDS). 2016. 2016 Impact Evaluation Survey on Agricultural Insurance. Quezon City, Philippines: PIDS.
- Reyes, C.M., C.D. Mina, R.A.B. Gloria, and S.J.P. Mercado. 2015. Review of design and implementation of the agricultural insurance programs of the Philippine Crop Insurance Corporation. PIDS Discussion Paper No. 2015-07. Makati City, Philippines: Philippine Institute for Development Studies.
- Virola, R.A. 2017. Evaluation of the financial sustainability of the agricultural insurance programs of the PCIC. PIDS Discussion Paper No. 2017-07. Quezon City, Philippines: Philippine Institute for Development Studies.
- World Health Organization (WHO). 2017. Philippines: Statistics. <http://www.who.int/countries/phl/en/> (accessed on May 25, 2017).

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