

## Measure and determinants of chronic and transient poverty in the Philippines

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he Philippines has a long history of battle against poverty. Unfortunately, despite the government's various poverty reduction and social protection programs, the country still missed its Millennium Development Goal to reduce the 1990 poverty level by half in 2015.

While poverty studies in the country abound, most of these used cross-section data (see Intal 1994; Balisacan and Pernia 2002; Balisacan 2003a; Balisacan 2003b). As such, they only identified the poor at a given point in time and provided inadequate insights on the chronic and transient components of poverty and on the characteristics of the population experiencing these types of poverty. This is despite the fact that chronic poverty in the Philippines has become a major constraint in achieving high levels of sustained growth (Aldaba 2009).

This *Policy Note* addresses this lack of a measure of chronic and transient poverty in the Philippines. It also investigates the determinants that drive households into these kinds of poverty.

### **Measuring chronic and transient poverty**

To come up with a measure of chronic and transient poverty, the 2004, 2007, and 2008 Annual Poverty Indicators Survey (APIS) and 2003, 2006, and 2009 Family Income and Expenditure Survey (FIES) collected by the Philippine Statistics Authority are merged. The paper then adopts the components approach to compute chronic and transient poverty.<sup>1</sup>

<sup>1</sup> In this approach, transient poverty is the variability in consumption relative to the mean welfare indicator over time while chronic poverty is the poverty that persists in mean consumption over time (Jalan and Ravallion 1998; Duclos et al. 2010).

*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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Table 1 presents chronic and transient poverty statistics at the national and rural-urban levels using two welfare indicators: per capita total expenditure and per capita food expenditure. Per capita expenditure is compared against the poverty threshold while per capita food expenditure is compared against the food threshold.

The result revealed that around 9 out of 10 poor households are persistently poor between 2003 and 2009. During the same years, around 8 out of 10 poor households and 9 out of 10 poor households are persistently poor

in urban and rural areas, respectively. Similar figures are noted in the case of food poverty.

In addition, mean chronic and transient poverty (both total and food) is higher for large households, households headed by persons with educational attainment lower than a college degree, households with high dependency burden, households without memberships in nongovernment organizations or cooperatives, and households in areas with armed conflict. On the other hand, both types of poverty decrease with the age of the household head.

**Table 1. Total poverty and total food poverty and their components, overall and urban-rural level**

	Per Capita Expenditure against Poverty Threshold		Per Capita Food Expenditure against Food Threshold	
	Observations	Percent of Total Poverty	Observations	Percent of Total Food Poverty
Overall				
Total poverty	1,954	21.13	1,954	29.87
Total chronic		17.87		25.74
Total transient		3.26		4.13
Rural				
Total poverty	1,266	26.45	1,266	35.07
Total chronic		22.76		30.99
Total transient		3.69		4.08
Urban				
Total poverty	688	11.34	688	20.31
Total chronic		8.88		16.08
Total transient		2.46		4.23

Source: Authors' calculations based on the merged Annual Poverty Indicators Survey–Family Income and Expenditure Survey (APIS–FIES) data sets

## Investigating the determinants of chronic and transient poverty

This paper used a generalized linear model<sup>2</sup> to investigate the determinants of chronic and transient poverty in the Philippines. It found that key variables, such as education, asset ownership, employment, family size, dependency burden, and armed conflict, affect both chronic total and chronic food poverty. However,

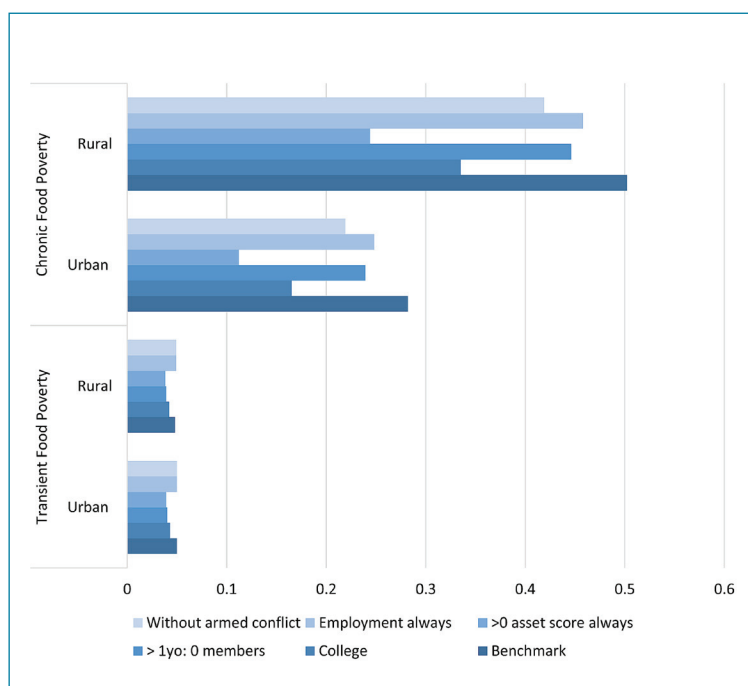
1. College education, asset ownership, and labor market participation decrease chronic food poverty more than they decrease chronic total poverty.
2. Family size, the number of young children, and armed conflict increase chronic food poverty more than they decrease chronic total poverty.

To assess the impact of different variables, this study predicted total and food poverty for a household headed by a married person, who is not always employed, has less than a college degree, and has a spouse who is not always employed. It also assumed that households have two members aged less than a year old, one member aged between one to six years old, with asset scores<sup>3</sup> less than zero at times, and located in an area with armed conflict. These constitute the benchmark characteristics.<sup>4</sup> Finally, it predicted total and food poverty by changing one attribute in the benchmark characteristics each time.

Results revealed that college education, lower dependency burden, asset ownership, employment, and absence of armed conflict

reduce poverty (Figures 1 and 2). Among these key variables, asset ownership and college education have the most impact on the reduction of total and food poverty.

Figure 1. Predicted food poverty

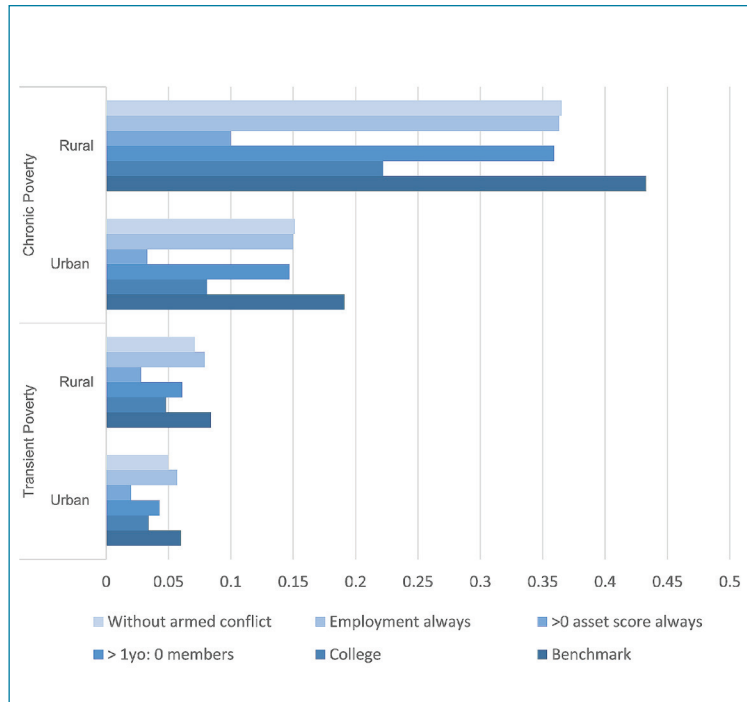


Source: Authors' calculations based on the merged APIS-FIES data sets

<sup>2</sup> Both chronic and transient poverty are bounded between 0 and 1. Buis (2016) argues that the effect of explanatory variables tends to be nonlinear and the variance tends to decrease when the mean gets closer to the boundaries. These violate Ordinary Least Squares (OLS) assumptions of normality and homoscedasticity, and using OLS would lead to biased estimates. In addition, the predicted values resulting from OLS estimates can be outside the 0–1 interval. Therefore, we adopt the generalized linear model, which is an estimator for bounded dependent variables.

<sup>3</sup> Asset scores are generated by the principal component analysis (PCA). The PCA is a technique to reduce the dimension of the data by creating uncorrelated indices or components, where each component is a linear weighted combination of the initial variables. While FIES has detailed data on asset ownership, the assets included in the PCA are those that are collected in both APIS and FIES. These include radio, television, component, refrigeration, washing machine, air conditioning unit car, landline, personal computer, and gas range. The overall Kaiser-Meyer-Olkin measure of sampling adequacy is around 0.86 in each year, which indicates that these assets contain enough similar information to warrant the use of PCA.

<sup>4</sup> Evaluating the marginal effects using benchmark characteristics, or marginal effects calculated at representative values (MER), is different from the marginal effects at the means (MEM) and the average marginal effects (AME) in that the latter two rely on averages.

**Figure 2. Predicted total poverty**

Source: Authors' calculations based on the merged APIS-FIES data sets

### Policy recommendations

1. The government should consider the institutionalization of the *Pantawid Pamilyang Pilipino* Program. While the program has some weaknesses in monitoring health, it has assisted poor households in sending their children to school. It has likewise strengthened their participation in the community.
2. The Affordable Higher Education for All Act, which seeks to institutionalize a tuition-free policy in state universities and colleges, has been signed into law. Given that tuition is just a portion of education-related expenditures, the government should enhance

assistance to address daily expenditures like meals and transportation. These expenses are equally important to ensure that students from poor households will finish college and that public investments in their education are not wasted.

3. The possible role of assets in consumption smoothing is also emphasized. Accumulation of assets, not only financial but also social and human capital, is assured when livelihoods are stable. Along this line, the government should explore the role of social enterprises (SEs), which use local knowledge and resources to address not only financial but also social and environmental issues within the community. The Department of Social Welfare and Development can link its Sustainable Livelihood Program (SLP), through its Employment Facilitation track, with SEs by giving them incentives to put up enterprises for communities where SLP is in place.

Ballesteros and Llanto (2017) identify the following government support for SEs: a) legal/regulatory framework to facilitate experimentation and innovation, b) incentives for mixed financing, and c) improving the suitability of the environment for grants, international aid, and venture capitalists.

4. Armed conflict contributes to the destruction of different assets. For instance, it damages human assets by disrupting schooling and workers' mobility. It displaces people so it damages social assets, such as

informal network within the community. It disrupts the delivery of social protection programs to the affected communities, a problem which drives the poor further down the poverty line. While resolving conflict is complex because it is an outcome resulting from the interactions of various factors, the government can initially engage stakeholders to understand the needs of the community, come up with feasible initiatives, and develop strong ownership for these initiatives. The plan of the former environment secretary to involve the New People's Army in the Department of Environment and Natural Resources' projects is a step toward achieving sustainable use of the environment for

livelihood, ending armed conflict, and eventually addressing chronic poverty.

5. The country is on the right track to address poverty resulting from high dependency burden, as seen in the enactment of the Responsible Parenthood and Reproductive Health Act in 2012. However, the law has faced several setbacks, such as the issuance of temporary restraining order on government's procurement, selling, distribution, and promotion of the birth contraceptive Implanon, the voiding of eight key provisions of the law, and the fragmented support of the local government units. With these issues, the current administration

*“Armed conflict... damages human assets by disrupting schooling. It also disrupts the delivery of social protection programs to the affected communities, a problem which drives the poor further down the poverty line.”*



Photo source: Feed My Starving Child/flickr.com

should continue showing full support to the law. The signing of Executive Order No. 12 is a laudable undertaking to intensify and accelerate the implementation of programs in advancing modern family planning by 2018.

While the discussion above pertains to factors that affect chronic poverty, transient poverty is just as important. For example, job layoffs may create new pockets of poverty, which can be transient and may become chronic depending on the ability of households to smooth consumption and on the social protection in place. The paper found that education, asset ownership, and dependency burden are key variables that affect transient poverty as well. Therefore, addressing issues on these key variables will target chronic and transient poverty alike. 📄

### References

- Aldaba, F. 2009. *Poverty in the Philippines: Causes, consequences, and opportunities*. Mandaluyong City, Philippines: Asian Development Bank.
- Balisacan, A. 2003a. Poverty and inequality. In *The Philippine economy: Development, policies, and challenges*, edited by A. Balisacan and H. Hill. New York City, NY: Oxford University Press.
- Balisacan, A. 2003b. Poverty comparison in the Philippines: Is what we know about the poor robust? In *Reducing poverty in Asia: Emerging issues in growth, targeting, and measurement*, edited by C.M. Edmonds. Cheltenham, United Kingdom: Edward Elgar Publishing, Inc.
- Balisacan, A. and E. Pernia. 2002. The rural road to poverty reduction: Some lessons from the Philippine experience. *Journal of Asian and African Studies* 37:147–167.
- Ballesteros, M. and G. Llanto. 2017. Strengthening social enterprises competitiveness for inclusive growth: Philippines. PIDS Discussion Paper No. 2017-04. Quezon City, Philippines: Philippine Institute for Development Studies.
- Buis, M. 2016. Proportions as dependent variables. 2016 German Stata Users Group Meeting, Cologne, Germany. <http://www.maartenbuis.nl/presentations/UKsug06.pdf> (accessed on April 10, 2017).
- Duclos, J., A. Araar, and J. Giles. 2010. Chronic and transient poverty: Measurement and estimation, with evidence from China. *Journal of Development Economics* 91:266–277.
- Intal, P. Jr. 1994. The state of poverty in the Philippines: An overview. In *Understanding poverty and inequity in the Philippines*, edited by P.S. Intal Jr. and M.C.S. Bantilan. Pasig City, Philippines: National Economic and Development Authority.
- Jalan, J. and M. Ravallion. 1998. Transient poverty in postreform rural China. *Journal of Comparative Economics* 26:338–357.

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