Poverty Transitions and the Near-Poor in the Philippines

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PHILIPPINE INSTITUTE FOR DEVELOPMENT STUDIES

December 2023

Abstract

This study provides an in-depth analysis of poverty dynamics in the Philippines, focusing on the period from 2003 to 2009. Utilizing panel data from the Family Income and Expenditure Survey (FIES) to examine transitions into and out of poverty, it pays special attention to the near-poor population – those whose incomes hover just above the poverty line. Despite the Philippines experiencing an average growth of 4.8% in real Gross Domestic Product during this period, the overall poverty incidence remained stagnant, highlighting a disconnect between economic growth and poverty reduction. This phenomenon is partly attributed to the low Growth Elasticity of Poverty in the country, indicating that economic growth has not been sufficiently inclusive or pro-poor. The study delves into the characteristics of the poor and near-poor, revealing that these groups have similar profiles: they are predominantly located in rural areas and face vulnerabilities such as labor and employment shocks, price shocks, and natural disasters. The study also explores the socioeconomic dimensions affecting Filipino households, including family size, employment type, education levels, and exposure to natural and man-made disasters. A significant contribution of this research is its analysis of poverty spells and transitions using the FIES panel data. It uncovers that while some households have escaped poverty, others have fallen into it, with the near-poor being particularly susceptible to downward mobility. The study also discusses the resilience and vulnerability of different household types to poverty, offering insights into the factors that enable sustained escapes from poverty. The findings underscore the importance of targeted social protection strategies and policy interventions to support the poor and vulnerable, especially the near-poor, in improving their livelihood prospects and mitigating the impacts of various shocks. The study's comprehensive analysis provides valuable input for policymakers in formulating effective measures to address poverty and inequality in the Philippines.

Keywords: panel data, poverty, near-poor

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1. Introduction

In 2015, the Philippines joined 192 other countries in committing to the 2030 Sustainable Development Goals, a set of 17 goals that includes ending extreme poverty. Official poverty statistics in the Philippines are released every three years, and are based on (i) income per capita data sourced from the triennial Family Income and Expenditure Survey (FIES) conducted by the Philippine Statistics Authority (PSA), and (ii) poverty lines estimated (by the PSA) using a cost of basic needs approach[2]. These poverty lines represent a minimum acceptable standard of per capita income that separates the poor and the non-poor.

The PSA conducts its sample surveys of households such as the triennial Family Income and Expenditure Survey (FIES), the quarterly Labor Force Survey (LFS), and the Annual Poverty Indicator Survey (APIS) using an integrated survey programme based on a master sample framework. To reduce the burden on respondents, these surveys employ a rotation system for the sample households across different surveys and rounds. In the case of the quarterly LFS, each quarter sees the replacement of one group of sample households with a new set from the designated sample regions. When the FIES is conducted alongside the LFS, the same households are revisited after six months to gather data for the second half of the year for the FIES, while also carrying out the LFS. The master sample[3] used prior to 2015 was developed with technical support from the

[2] In the Philippines' official methodology for generating poverty statistics, the poverty threshold is defined as the lowest per capita income a household needs to afford both food and essential non-food items. The food portion of the poverty line (also termed the food threshold) is calculated for urban and rural areas of each province by pricing representative one-day food menus (developed by the Food and Nutrition Research Institute for urban and rural areas of each region) using provincial urban and rural prices The per person per day food cost obtained from the menu is multiplied by 365 to determine the annual food threshold. The menu therefore functions as an artifice for assessing the cost of basic food requirements that meet 100% of the recommended dietary allowance (RDA) for protein and energy (2,000 calories per person daily) and 80% of other nutrients. The non-food part of the poverty line is then estimated as the ratio of the food threshold to Engel's coefficient, the latter calculated as the average proportion of food expenditures to total basic expenditures of households within a ± 10 percentile range of the food threshold. Currently, the average food share is for the 2000 to 2009 period.

[3] The master sample (MS) consists of 2,835 randomly selected geographical areas called primary sampling units (PSUs), which are either barangays (villages) or combinations of barangays. The MS is intended to represent the total Philippine population and efficiently serve the needs of all PSA household surveys. The samples of households and persons for all household surveys are selected through a three-stage design: PSUs within the MS, then enumeration areas within the selected PSUs, and finally housing units within the selected enumeration areas. All households in the housing unit are enumerated, except in rare cases when more than 3 households reside in the unit, in which case only a probability sample of three households are enumerated with equal chance of selection. The number of PSUs in the MS was chosen to be large enough for surveys such as the LFS, FIES and APIS, but this exceeds requirements for other household surveys. Thus, the MS was designed with four replicates, each of 709 PSUs, with each replicate being

Asian Development Bank. Starting 2015, the PSA has made use of a new master sample design. Owing to requests from researchers to have a rich database on dynamics of living standards, all the households (about 10,500) in the second of four replicates of the 2003 FIES were interviewed across two waves of FIES, i.e., the 2006 FIES and the 2009 FIES yielding a household panel data.[4] Dynamics on household poverty, which cannot be looked into with cross section data, can thus be examined on these 2003 FIES-2006 FIES-2009 FIES panel data, which are used throughout this report. Of the 10,500 households that comprised the second replicate in the 2003 FIES, 6529 households were interviewed in the 2006 and 2009 FIES.

During the period 2003-2009, the country had an average of 4.8% growth in real Gross Domestic Product, but this growth did not translate into poverty reduction, with overall poverty incidence stagnant at about a fourth of the population. Even in 2012, poverty rates had also remained at the same rate. Research focusing on growth and poverty highlights the critical role of economic growth in diminishing poverty. Kraay (2004) discovered that in the short to medium term, variations in poverty reduction are predominantly (70%) attributed to shifts in average incomes. The remaining factors are changes in income distribution and variances in the growth elasticity of poverty (GEP). Additionally, Ravallion (2013) indicates that on a global scale, a 1% rise in incomes typically leads to a 2.5% decrease in poverty. However, this reduction is only 0.6% in countries with high income inequality, while it can reach up to 4.3% in nations with more equitable income distribution."

"In the Philippines, previous calculations of the growth elasticity of poverty (GEP) have varied, with figures ranging between 1.4% and 2.0% as reported by Balisacan & Fuwa (2004) and Tabuga & Reyes (2011). However, more recent evaluations by Reyes and Tabuga (2011), which utilized regional GDP data, have indicated significantly lower GEP values, between 0.2% and 0.4%. These findings are echoed by independent analyses and estimation in this study (see Table 1) using the most recent data on the national accounts and the FIES data on poverty for this period, aligning closely with the results of Reyes and Tabuga (2011). Although economic growth is widely regarded as crucial for reducing poverty, the sensitivity of poverty to growth in the Philippines appears to have diminished over time.

Table 1. Poverty Elasticity Estimates for 2003-2006, 2006-2009

	2003	2006	2009
Official poverty headcount	24.9	26.56	26.27
Per capita GDP (constant PHP)	48,954	54,226	58,199
		2003-2006	**2006-2009**

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a national sample. Smaller household surveys can utilize one, two or three of the replicate samples as needed. The PSUs were selected within strata using probability proportional to estimated size sampling based on number of households per 2000 Census. Further stratification within each region used geographic groupings like provinces and highly urbanized independent cities. Within these groups, additional stratification used proportions of strong houses, agriculture households, and per capita income.

[4] The July 2003 LFS sample was interviewed for the 2003 FIES and the January 2004 LFS. The fourth replicate of the July 2003 round of the LFS covering about 12,000 households was interviewed not only for the July 2003 LFS, 2003 FIES, and January 2004 LFS, but also for the 2006 FIES and 2009 FIES (as well as the July 2006 LFS, January 2007 LFS, July 2009 LFS and January 2010 LFS).

Total Percent change		
in official poverty headcount	6.7	-1.1
in per capita GDP	10.8	7.3
Growth elasticity of poverty (in percent)	0.62	-0.15

Note: Author's calculations

The GEP figures for the Philippines are relatively low, especially when compared to the global average outlined by Ravallion (2013). This low GEP from 2006 to 2009 suggests that the economic growth experienced in the Philippines during this period did not significantly alleviate poverty. This is partly because the benefits of growth were not evenly distributed among the poor. The predominant gains were seen by those in higher income brackets, due to high income inequality, which limited the impact of economic growth on poverty reduction. Additionally, this growth was not inclusive or evenly spread across different sectors, with the agricultural sector lagging behind the industry and services sectors, as noted by Reyes and Tabuga (2011).

Despite the overall poverty rates remaining relatively stable from 2003 to 2009, there were dynamic changes within the population, with some households moving out of poverty while others fell into it. Households on the brink of poverty are likely more susceptible to becoming impoverished compared to those who are more financially secure. Addressing the needs of the poor and vulnerable requires understanding their specific circumstances, including barriers to improving their livelihoods and their access to productive resources. Poverty and vulnerability are linked to a household's income potential, the unpredictability of their income due to external shocks, and their capacity to handle the effects of such shocks. Poor households are at risk of staying in poverty, sinking deeper into it, or being trapped in a cycle of poverty, particularly if they lack sufficient opportunities and resources to improve their income situation.

Households in the Philippines are not homogenous, and they may be clustered by a series of interrelated socioeconomic dimensions of welfare. The key shocks and sources of vulnerability affecting Filipino households are conceptually known, and they include those pertaining to labor and employment shocks (job losses and lower wages), price shocks, demographic, reproductive and health-related shocks (illness or death of a household member, unplanned pregnancies), and natural disasters. An examination of the Emergency Events Database (EM-DAT) of the Centre for Research on the Epidemiology of Disasters shows that the Philippines had 109 reported natural disaster[5] events (see Figure 1).

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[5] Following the Hazard-Exposure-Vulnerability model for a natural disaster, CRED (2009, p.15) describes a disaster as an unexpected and often abrupt incident that leads to significant harm, destruction, and human distress, surpassing the coping abilities of the local area and requiring aid from national or international levels. To be included in the EM-DAT database, a disaster event must fulfill at least one of these four criteria: (a) a minimum of 10 fatalities; (b) at least 100 individuals reported as impacted; (c) the declaration of a state of emergency; or (d) a request for international help.

Figure 1. Number of Natural Disaster Events in Philippines, by Type: 2003-2009.
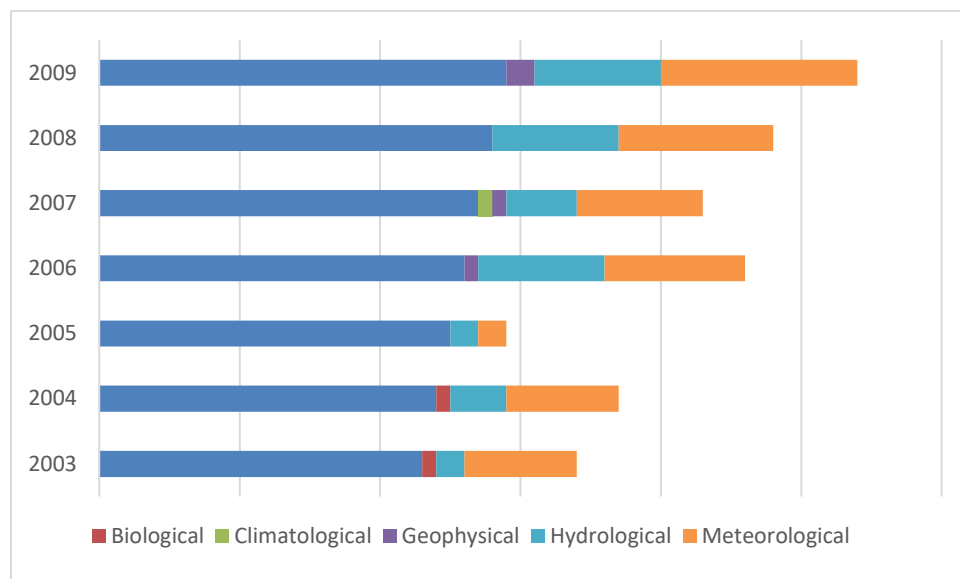
Note: Author's calculations based on data from EMDAT, CRED.

In 2009 alone, EMDAT data suggests that the Philippines had the greatest number of natural disasters among countries across the world with its experience of 25 disaster events[6]. These natural disasters were rather intense making the country rank third in natural-disaster-caused mortality (with its 1,307 disaster related deaths during 2009) following India and Indonesia. Since the Philippines lies in the typhoon belt, the active volcanic region of the world called "the Pacific ring of Fire", it is highly prone to natural disasters, particularly typhoons, floods, landslides, volcanic eruptions, earthquakes, and tsunamis. Aside from problems from these natural disasters, the country also experiences a number of person-made disaster events, such as those arising from insurgency, transportation accidents, and industrial accidents. The extent of exposure to natural and person-made disasters is diverse across the regions, with some regions being more disaster prone. Regions in Luzon, especially Bicol and Southern Tagalog, have generally been the most visited by typhoons, and has most number of persons affected by storms. Regions XI and XII experience the most number of floods, while Metro Manila, with its high population, has the most incidence of fires (and casualties from fires) and the Autonomous Region of Moslem Mindanao (ARMM) having the most reported events of armed conflict. A profile of poverty and inequality across the regions suggests a relationship between being prone to natural disasters or civil strife and income inequality.

Vulnerability is not solely the realm of the poor (Albert and Ramos, 2010; Mina and Reyes, 2017). Non-poor households may find themselves at risk of falling into poverty, especially with rising prices of basic commodities, loss of jobs of members of the households, and when major income earners falling into illness or death. Risk and uncertainty are thus a concern of both the poor and the non-poor. Among the non-poor segments of society, however, those who are nearly poor are

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[6] See 2009 Annual Disaster Statistical Review compiled by the Centre for Research on the Epidemiology of Disasters (available at http://www.preventionweb.net/files/14382_ADSR2009.pdf)

likely to be more susceptible to falling into poverty. It is worthwhile examining the sources of household risk and vulnerability to poverty, by looking into poverty trajectories in the panel data[7], as well as profiling the near-poor households in order to come up with specific policy instruments and mechanisms that will support Filipino households who require protection and assistance in improving their current and future living conditions. Although a number of studies have examined the 2003-2006-2009 FIES panel data (e.g., Reyes *et al*., 2010; Reyes *et al*., 2011; Albert *et al*, 2015), as well as past panel data from the 1997 FIES and 1998 Annual Poverty Indicator Survey (Tabunda and Albert 2002), this report provides the very first examination of the near-poor *vis a vis* poverty transitions.

The general objective of this study is to analyze the drivers of sustained and transitory escapes from poverty based on the available FIES panel data from the period 2003 to 2009. In particular, it aims to examine whether being "near poor" makes households more likely to fall into poverty over time compared to the non-poor. It also aims to assess whether the same sources of resilience that protect against transitory poverty escapes also function in similar ways for "near poor" households. The next section presents the characteristics of the poor and near-poor, while the third section describes poverty spells from 2003 to 2006 to 2009. The fourth section describes and shows results of an econometric model that identifies determinants of sustained and transitory poverty escapes. The final section summarizes the key findings of the study and policy implications.

2. Profile of Poverty and the Near-Poor

During the period 2003-2009, the Philippines had household poverty rates[8] (20.0% in 2003, 21.1% in 2006, and 20.9% in 2000) that were not significantly different (Table 2). Estimates of the proportion of the population whose income was less than the food poverty line, i.e. the incidence of food poor[9], (8.2%, 8.6%, and 7.9% in 2003, 2006, 2009, respectively) were also not significantly different across the period 2003 to 2009. The food poor, which may be interpreted as extremely poor households, account for half of the poor population in rural areas, while in urban areas, the food poor is about two-fifths of the urban-poor.

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[7] The necessary panel data weights to ensure the panel is nationally representative across years are not provided by the PSA. In this report, post-stratification panel weights were calculated by adjusting the household weights within per capita income deciles across survey waves. This accounts for differences in attrition rates across the income distribution. From 2003 to 2009, the total attrition rate of the panel was 38 percent. However, the attrition rate was lower (35 percent) among the bottom seven per capita income deciles compared to 44 percent for the top three income deciles. Since FIES is intended to have reliable regional sampling, the panel weights utilized income decile post-stratifications by region.

[8] The household poverty rate, also called household poverty incidence, is the proportion of households that are poor. In the Philippines, a household is poor if its per capita income is less than the poverty line. Poverty rates may also be computed for total population by considering all members in a poor household as poor

[9] The food poor (also called subsistence poor) are those who belong to households with income (per capita) less than food needs (i.e. the food threshold). They may be viewed as extremely poor persons.

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Table 2. Distribution of Households (in Thousands) across Urban and Rural Areas, by Income Group: 2003-2009.

Year	Income Group	Urban	Rural	Total
2003	Food Poor	173.7	1143.6	1317.3
	Poor but Not Food Poor	395.8	1558.0	1953.8
	Near Poor	468.5	1219.3	1687.8
	The rest of the Households	6492.4	5029.1	11521.5
	Total	7530.4	8950.0	16480.4
2006	Food Poor	222.0	1243.3	1465.3
	Poor but Not Food Poor	427.9	1723.9	2151.8
	Near Poor	587.4	1293.1	1880.6
	The rest of the Households	6826.3	5075.3	11901.6
	Total	8063.6	9335.5	17399.2
2009	Food Poor	232.3	1206.4	1438.7
	Poor but Not Food Poor	591.0	1779.6	2370.6
	Near Poor	542.2	1393.9	1936.1
	The rest of the Households	7103.3	5600.1	12703.4
	Total	8468.8	9980.0	18448.8

Note: Author's calculations on 2003-2006-2009 FIES panel data.

Just like the poor, the near-poor families[10] (whose per capita incomes are below 125 percent of the poverty line) are largely concentrated in rural areas (Figure 2) . About two-thirds of the poor reside in rural areas; further about four-fifths of poor families dwell in rural areas). In contrast, families who are neither poor nor nearly poor typically stay in urban areas. Overall, the incidence of the near poor (which comprises about one in eight of the non-poor in both the urban and rural populations) is practically the same from 2003 to 2006.

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[10] We do not differentiate in this report between households and families.

Figure 2. Percentage Distribution of Households in Urban and Rural Areas, by Income Group: 2003-2009.
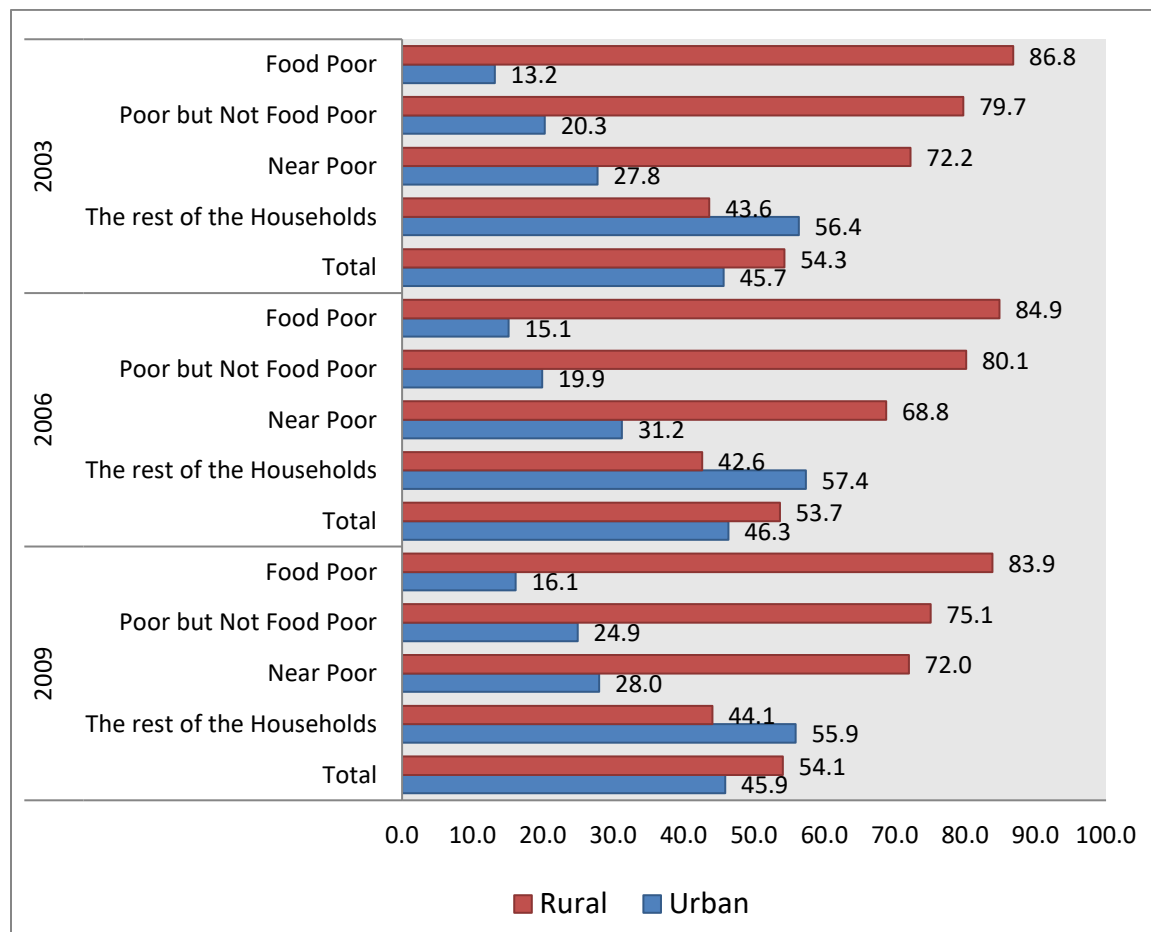
Note: Author's calculations on 2003-2006-2009 FIES panel data.

Among the three major islands of the country, the biggest concentration of the near-poor is in Luzon, which has about 45 percent of the near-poor (Table 3). About half of all the near-poor in Luzon are in CALABARZON and Central Luzon, which are neighbors of Metro Manila (the National Capital Region). In total, these two regions, together with the other two regions Western Visayas and Central Visayas that have a considerable share of the near-poor, have about two-fifths of the total near-poor in the country. In contrast, the biggest concentration of poor families who are not food poor are in Bicol, Central Visayas, Western Visayas, while food families are concentrated in Central Visayas, Bicol, Zamboanga, and Northern Mindanao.

Table 3. Share of Households (in %) across Income Groups, by Region: 2003-2009.

	2003				2006				2009			
Region	Food Poor	Poor but Not Food Poor	Near Poor	Not Near Poor	Food Poor	Poor but Not Food Poor	Near Poor	Not Near Poor	Food Poor	Poor but Not Food Poor	Near Poor	Not Near Poor
Region I - Ilocos Region	4.8	14.3	10.2	70.7	7.5	13.1	13.3	66.1	5.9	11.3	14.1	68.6
Region II - Cagayan Valley	3.9	11.8	10.7	73.7	4.0	10.4	11.3	74.4	3.9	9.6	11.5	74.9
Region III – Central Luzon	1.6	7.5	8.9	82.0	3.7	7.6	11.7	77.1	4.1	8.1	7.5	80.4
Region IVA – CALABARZON	2.2	7.2	9.0	81.6	2.6	7.5	7.9	82.1	2.6	7.5	8.2	81.7
Region IVB – MIMAROPA	10.8	17.1	15.8	56.3	14.5	18.7	11.1	55.7	11.3	16.2	12.8	59.6
Region V- Bicol Region	17.5	21.0	9.7	51.8	15.7	21.1	14.5	48.7	12.9	23.8	11.9	51.3
Region VI - Western Visayas	9.0	14.3	12.7	64.0	8.0	13.3	14.3	64.4	7.1	15.6	12.2	65.0
Region VII – Central Visayas	15.9	13.4	13.6	57.1	15.0	16.6	11.6	56.8	12.6	17.0	11.3	59.1
Region VIII – Eastern Visayas	10.6	18.3	14.6	56.5	13.9	17.0	13.0	56.1	13.6	19.5	12.9	54.0
Region IX – Zamboanga Peninsula	26.1	15.1	11.7	47.2	19.7	17.1	11.7	51.5	18.3	18.0	10.8	53.0
Region X - Northern Mindanao	15.7	15.4	12.4	56.5	15.2	15.2	11.5	58.1	16.1	16.9	12.9	54.1
Region XI – Davao Region	13.0	13.1	10.3	63.6	10.7	14.5	11.7	63.2	11.1	13.9	12.4	62.6
Region XII – SOCCSKSARGEN	10.8	17.4	11.6	60.2	11.1	16.9	11.3	60.7	12.0	14.8	14.4	58.8
National Capital Region	0.3	2.1	2.8	94.8	0.5	2.8	3.1	93.7	0.3	1.8	4.5	93.4
Cordillera Administrative Region	4.9	11.2	7.2	76.6	9.0	9.4	9.8	71.8	7.5	9.7	8.9	73.9
Autonomous Region of Muslim Mindanao	5.1	22.1	18.9	53.9	10.8	28.0	22.4	38.8	7.6	34.2	21.5	36.7
Caraga Region	16.9	18.5	15.5	49.2	16.6	18.6	13.1	51.6	18.4	20.6	11.5	49.5
Total	**8.0**	**11.9**	**10.2**	**69.9**	**8.4**	**12.4**	**10.8**	**68.4**	**7.8**	**12.8**	**10.5**	**68.9**

Note: Author's calculations on 2003-2006-2009 FIES panel data.

Compared to poor households, the near-poor tends to have similarly large family sizes, whether we consider data from 2009, or even earlier years (i.e., 2006 and 2003) (Figure 3). On average, near-poor households comprise more than 5 members (just like poor households who have about 6 members), lower than an average family size of four members among households that are neither poor nor nearly-poor. While this does not mean that family size causes poverty, but it suggests that those with low incomes may be further weakening purchasing power of households as they have more household members to support.

Figure 3. Average Family Size by Income Group: 2003-2009.
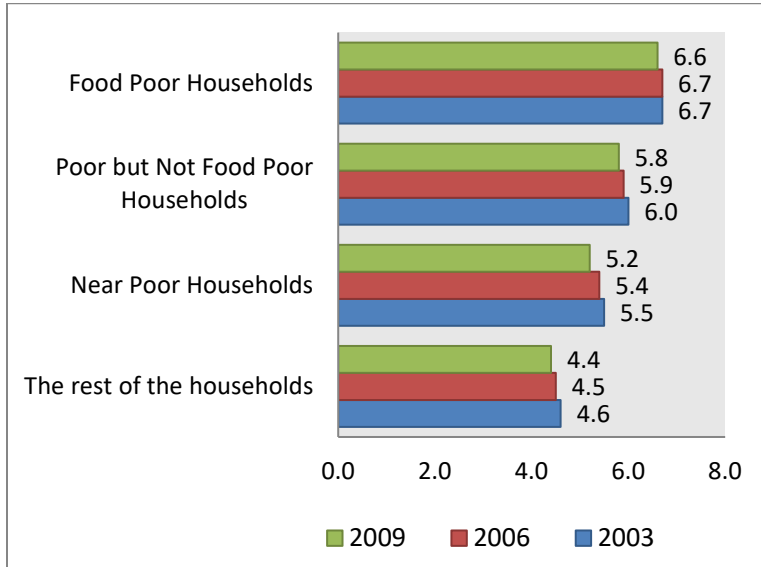
Note: Author's calculations on 2003-2006-2009 FIES panel data.

Between 43 to 45 percent of near-poor households rely on salaried jobs, while for households that are neither poor nor near-poor, a similar proportion rely mainly on wages and salaries (Figure 4). In contrast between 35 to 39 percent of poor households rely on salaried jobs, and a similar share are on income other than wages, salaries, and entrepreneurship, while the remaining quarter of poor households are largely dependent on (small-scale) entrepreneurial activities. Among near-poor households, a quarter rely on entrepreneurial activities and a third rely on other sources of income.

Figure 4. Major Source of Income, by Income Group: 2003-2009.

Year	Income Group	Wages and salaries	Entreprenuership	Other income
2003	Food Poor	32.31	39.13	28.56
	Poor but Not Food Poor	35.22	38.80	25.99
	Near Poor	40.91	34.44	24.64
	The Rest of the Household	41.90	26.25	31.85
	Total	40.24	29.61	30.15
2006	Food Poor	34.68	38.21	27.11
	Poor but Not Food Poor	35.90	38.43	25.66
	Near Poor	39.13	34.38	26.49
	The Rest of the Household	39.46	25.84	34.70
	Total	38.58	29.36	32.06
2009	Food Poor	36.06	34.57	29.37
	Poor but Not Food Poor	36.69	34.56	28.76
	Near Poor	38.62	32.13	29.25
	The Rest of the Household	39.67	24.37	35.96
	Total	38.89	27.29	33.82

■ Wages and salaries ■ Entreprenuership ■ Other income

Note: Author's calculations on 2003-2006-2009 FIES panel data.

Half of near-poor household heads (and half of poor household heads) are engaged in vulnerable employment (as own- account workers or contributing family workers, including unpaid ones), while among heads of households who are neither poor nor near-poor, the share of vulnerable employment is lower at about two-fifths (Figure 5).

Figure 5. Class of Worker of Household Head, by Income Group: 2003-2009.
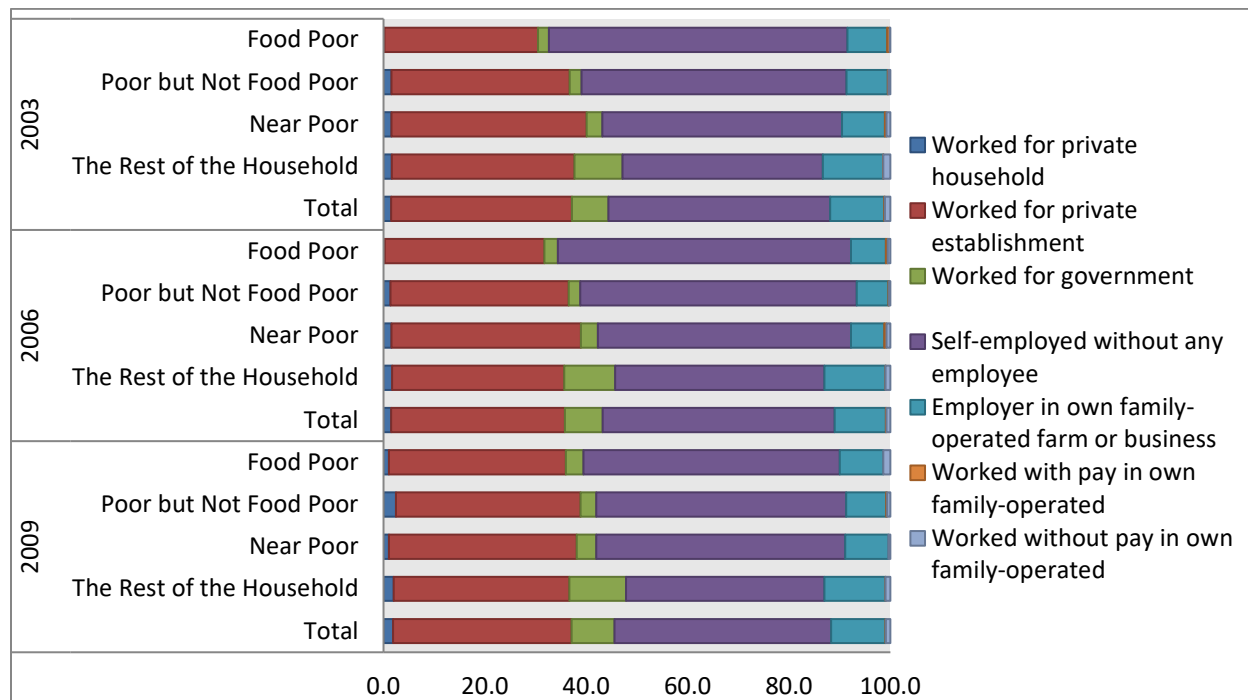
Note: Author's calculations on 2003-2006-2009 FIES panel data (merged with Labor Force Surveys for second quarter or the reference period).

Education significantly explains variations in living standards across the Philippines. Lack of education of the household head, which proxies the low education of household members, limits earning potentials of the household. From 2003 to 2009, low education attainment has been a key feature of poor and near-poor household heads, and that increased educational attainments of the household head correlates very strongly with income. Among the near-poor, about three-fifths of household heads have finished at most primary schooling a, compared to two-thirds and three-fourths, respectively for the poor-but-not-food poor, and food-poor heads of households (Figure 6). In contrast, only a third of household heads from households that are neither poor nor near-poor have finished at most primary schooling. A third of near-poor household heads have attained at most some high school, while only three-tenths and a-fifth have attained at most some high school among poor-but-not-food poor, and food-poor heads of households. Meanwhile, over a third of household heads from households that are neither poor nor near-poor have attained at most some high school.

Figure 6. Highest Grade Completed of Household Head by Income Group: 2003-2009.
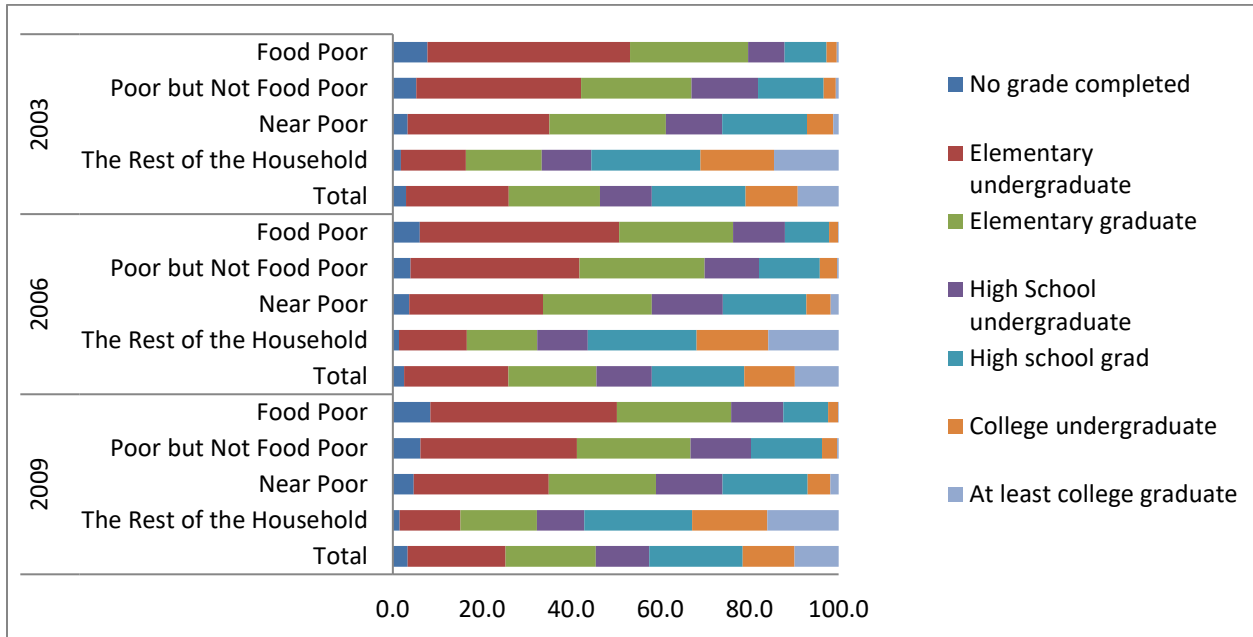
Note: Author's calculations on 2003-2006-2009 FIES panel data.

Near-poor households, just like poor households, have been spending for health and for education between 1 to 2 percent of their total household expenditures, while the rest of Filipino households have double this spending pattern (Figure 7). Near-poor households spend around 58 to 59 percent of total expenditures on food, while poor-but-not-food-poor and food-poor households have a share of food to total expenditures of about 61 and 65 percent respectively.

Figure 7. Shares of Expenditures on Health, Education and Food by Income Group: 2003-2009.
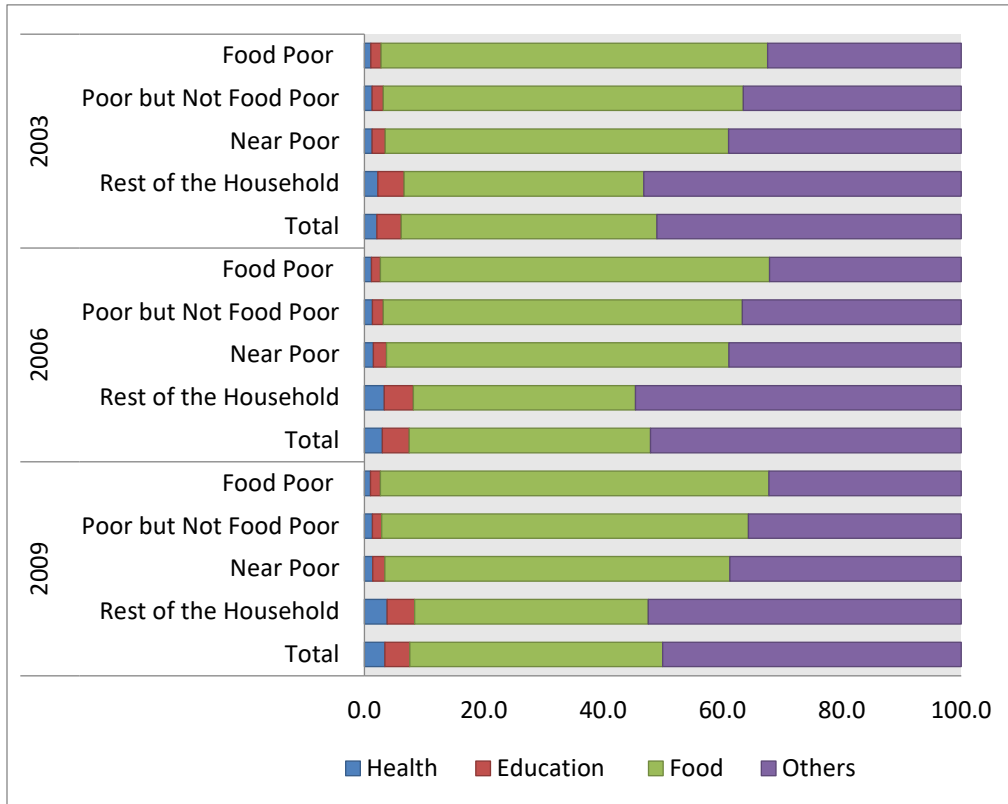
Note: Author's calculations on 2003-2006-2009 FIES panel data.

Overseas Filipino workers (OFW) have always been considered the new heroes of the country, having contributed remittances regularly to the country's economic performance. Figure 8 shows that a majority of OFWs (about 9 out of every 10 belong to families who are neither poor nor near-poor, while the poor-but-not-food-poor and near-poor each have about one out every twenty OFWs.

Figure 8. Families of Overseas Filipino Workers (OFWs) by Income Group: 2003-2009.
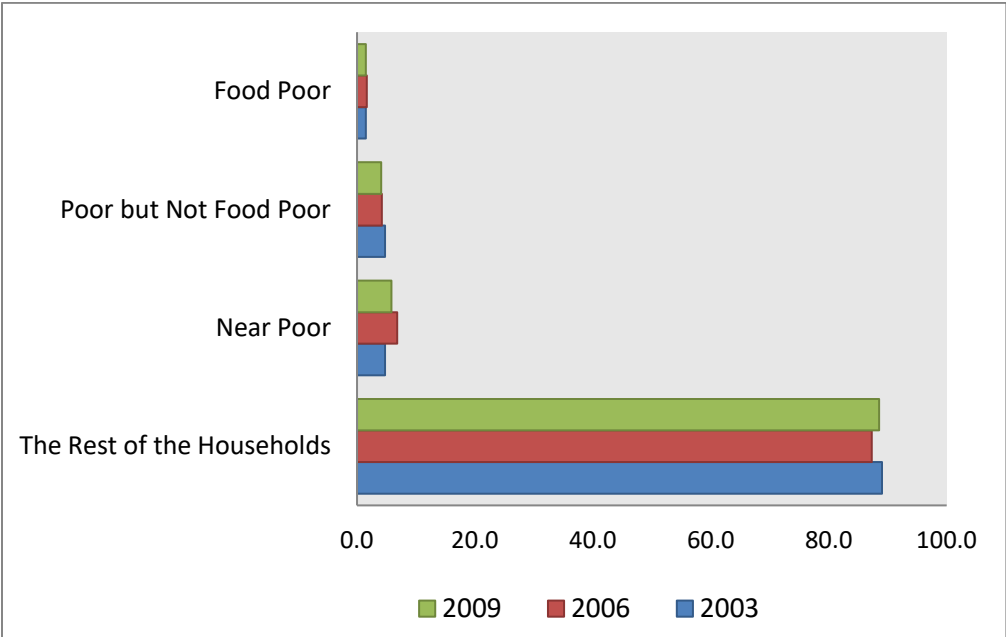
Note: Author's calculations on 2003-2006-2009 FIES panel data.

3. Poverty Dynamics

Observed changes in overall poverty rates over time do not provide insights into flows into and out of poverty. The panel data spanning 2003-2009 from the three FIES survey waves contains information on changes in household characteristics, especially income. This panel dataset enables an in-depth examination of the dynamics of welfare conditions faced by Filipino households during 2003-2009, particularly following various shocks like prices, income, labor market, health issues, and demographic shifts. The longitudinal nature of the data facilitates analysis of transitions into and out of poverty based on changes in household incomes and situations.

Between various FIES waves in 2003, 2006 and 2009, we can obtain the poverty transition matrix with reference to the household population in a starting period to a subsequent period Table 4a shows that of about 3.3 million poor households in 2003 (comprising a fifth of the total household population), a third (comprising 1.1 million households) exited poverty, but 1.3 million of the non-poor households in 2003 moved into poverty by 2006. Of these non-poor households that fell into poverty, about half are near-poor households. From 2003 to 2006, estimated total poverty inflows exceeded outflows by about 200 thousand households.

In the period 2003 to 2006, total households grew from 16.5 million to 17.4 million. In 2006, about a fifth of households were poor, and of these 3.6 million poor households in 2006, about four out of eleven, consisting of 1.3 million households, managed to escape poverty in 2009 (Table 4b). However, overall poverty rate also practically remained unchanged at about a fifth of total households since 1.2 million households that were non-poor in 2006 (half of whom were near-poor) fell into poverty by 2009.

While 8.6 percent of households were poor in 2003 but managed to exit from poverty by 2009, 9.2 percent of households that were non-poor in 2003 (of which, two-fifth were near-poor), slipped into poverty by 2009 (Table 4c).

Table 4. Poverty Transition Matrices

(a) 2003 - 2006 (in Percent of Households in 2003)

Poverty Status 2003	Poverty Status 2006				
	Food-poor	Poor but not Food-poor	Near Poor	Rest of Households	Total
Food poor	4.28	3.31	1.30	0.94	9.83
Poor but not Food Poor	2.16	3.64	1.76	2.46	10.01
Near Poor	1.19	2.63	2.56	3.86	10.24
Rest of Households	0.80	3.48	4.91	60.72	69.91
Total	8.44	13.05	10.53	67.99	100.00

Note: Author's calculations on 2003-2006-2009 FIES panel data.

(b) 2006 - 2009 (in Percent of Households in 2006)

Poverty Status 2006	Poverty Status 2009				
	Food-poor	Poor but not Food-poor	Near Poor	Rest of Households	Total
Food poor	4.08	2.44	0.94	0.97	8.42
Poor but not Food Poor	2.05	4.48	2.66	3.18	12.37
Near Poor	0.80	2.68	2.27	5.05	10.81
Rest of Households	0.51	2.98	4.27	60.64	68.40
Total	7.44	12.59	10.14	69.84	100.00

Note: Author's calculations on 2003-2006-2009 FIES panel data.

(c) 2003 - 2009 (in Percent of Households in 2003)

Poverty Status 2003	Poverty Status 2009				
	Food-poor	Poor but not Food-poor	Near Poor	Rest of Households	Total
Food poor	3.38	3.17	1.57	1.71	9.83
Poor but not Food Poor	1.93	2.80	1.78	3.51	10.01
Near Poor	1.12	2.70	1.97	4.46	10.24
Rest of Households	1.12	4.11	4.93	59.75	69.91
Total	7.55	12.78	10.24	69.42	100.00

Note: Author's calculations on 2003-2006-2009 FIES panel data.

A further visual of poverty dynamics across the three survey waves (2003 FIES, 2006 FIES, 2009 FIES) is shown in Figure 9, which shows that while about seven-tenths of households were never poor, the remaining households have been poor at some point. About ten percent of Filipino households were persistently poor, and about two-fifths were poor in one survey wave and exited from poverty in the next wave, or non-poor in one survey wave but fell into poverty in the next wave.

Figure 9. Poverty Dynamics of Households: 2003 – 2006; 2006-2009 and 2003-2009 (as a Percentage of Households in Base Year)
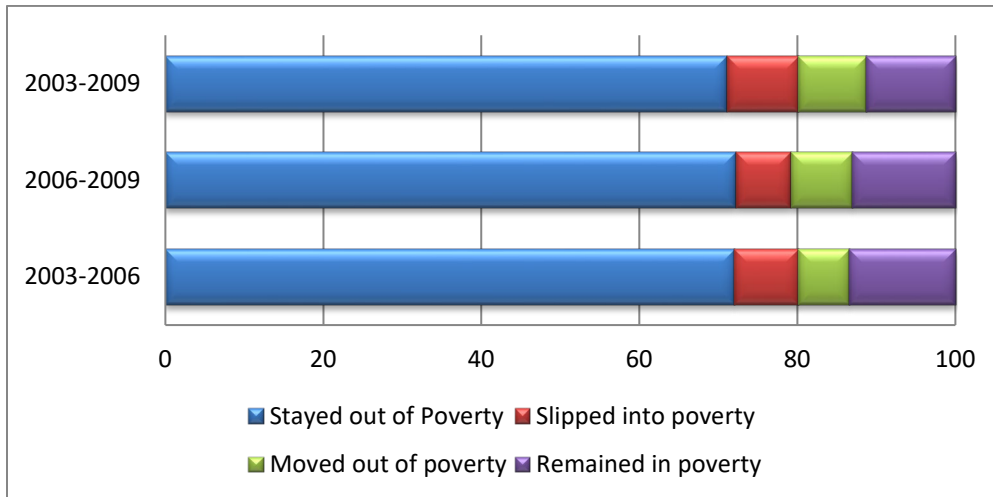
Note: Author's calculations on 2003-2006-2009 FIES panel data.

Figure 10 summarizes the different experiences of poverty spells of households in 2003 across the three waves of the 2003 FIES, 2006 FIES and 2009 FIES. About 10.7 million, three quarters of the total 14.6 million households in 2003 were never poor, while the remaining 3.9 million households experienced at least one spell of poverty. Of the latter, about 1.4 million were chronic poor (being persistently poor throughout the period), slightly over 1.0 million were impoverished (nonpoor in 2003 that became poor in 2009), about 1.4 million were resilient (poor in 2003, but non-poor in 2009), and over 100 thousand experienced transitory poverty (poor in 2003, non-poor in 2006, and fell back into poverty in 2009).

Figure 10. Poverty Trajectories of Households in 2003 – 2009 (as a Percentage of Households in 2003)
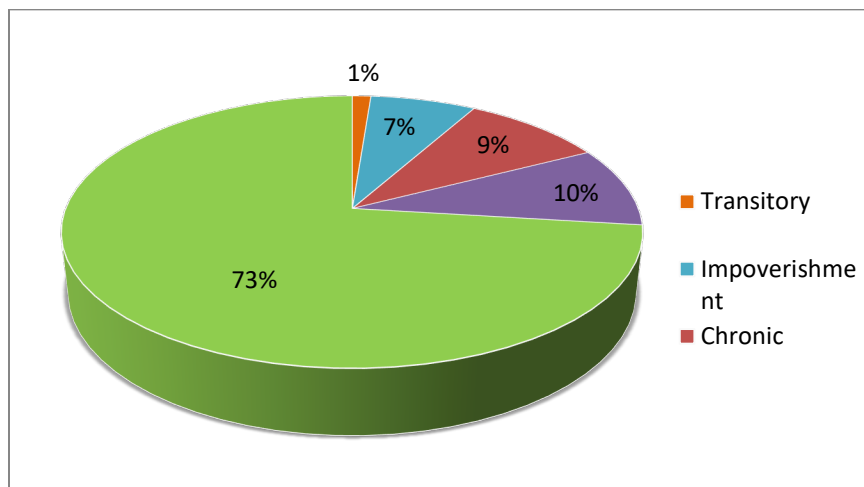
Note: Author's calculations on 2003-2006-2009 FIES panel data.

Nearly all regions in the country, led by the NCR (95.0%) have more than half of households that are never poor (Table 5). The only exceptions were the Autonomous Region of Moslem Mindanao (ARMM) and Zamboanga Peninsula, where 45.9 and 48.8 percent of households, respectively, were never poor. In ARMM, about a fifth (22.1 %) of households were poor in 2003 but got impoverished in 2009; a tenth (11.3 %) were chronically poor, and about a sixth (16.9 %) were resilient (having experienced poverty either in 2003 or 2006, but was non-poor in 2009). In Bicol (20.8%) and several regions of Mindanao, namely, Zamboanga Peninsula (25.3%), Caraga (23.8%), and Northern Mindanao (20.3%), at least a fifth of households were chronically poor. The proportion of households who were resilient was more than fifteen percent in several regions aside from ARMM. These regions include Zamboanga Peninsula (17.1%), Bicol (15.9%) and Eastern Visayas (15.8%).

Table 5. Poverty Trajectories of Households by Region (as a Percentage of Households in 2003)

Region	Chronic	Impoverished	Transitory	Resilient	Never Poor	Total
I - Ilocos Region	8.4	5.0	1.3	10.5	74.8	100.0
II - Cagayan Valley	4.9	5.8	0.3	10.6	78.4	100.0
III – Central	3.2	5.7	0.5	5.6	84.9	100.0
IVA - CALABARZON	2.9	5.9	0.7	5.6	85.0	100.0
IVB – MIMAROPA	16.4	8.6	0.6	13.5	60.9	100.0
V- Bicol	20.8	8.5	1.5	15.9	53.3	100.0
VI - Western Visayas	8.9	7.3	1.7	10.8	71.4	100.0
VII - Central Visayas	15.8	9.0	1.7	13.8	59.7	100.0
VIII - Eastern Visayas	14.4	9.1	1.9	15.8	58.9	100.0
IX - Zamboanga Peninsula	25.3	7.3	1.4	17.1	48.8	100.0
X - Northern Mindanao	20.3	9.7	1.5	9.0	59.5	100.0
XI - Davao	14.6	10.0	3.1	7.3	64.9	100.0
XII - SOCCSKSARGEN	10.8	9.9	1.7	18.1	59.5	100.0
NCR	0.2	1.5	0.0	3.3	95.0	100.0
CAR	5.0	7.1	2.7	8.2	77.0	100.0
ARMM	11.3	22.1	3.8	16.9	45.9	100.0
XIII – Caraga	23.8	9.9	3.8	10.9	51.6	100.0
Philippines	9.3	6.9	1.2	9.5	73.0	100.0

Note: Author's calculations on 2003-2006-2009 FIES panel data.

Regions with the highest shares of never poor households include NCR (19.9%), Calabarzon (16.1%), Central Luzon (13.2%), which together make up half of all households that are never poor (Table 6). On the other hand, regions with the highest shares of chronically poor households (that were poor throughout 2003 to 2009) are Bicol (12.4%), Central Visayas (12.3%), Zamboanga Peninsula (9.5%) and Northern Mindanao (9.3%). Regions with the highest shares (of about a tenth) of households that were impoverished include Calabarzon (11.7%), Central Luzon (9.4%), and Central Visayas (9.4%).

Table 6. Regional Share of Households by Poverty Trajectories (as a Percentage of Households in 2003)

Region	Chronic	Impoverished	Transitory	Resilient	Never Poor	Total
I - Ilocos Region	4.7	3.8	5.7	5.8	5.4	5.3
II - Cagayan Valley	1.9	3.0	0.9	4.0	3.8	3.5
III – Central	3.9	9.4	4.9	6.7	13.2	11.4
IVA - CALABARZON	4.3	11.7	7.5	8.1	16.1	13.8
IVB – MIMAROPA	5.3	3.7	1.5	4.2	2.5	3.0
V- Bicol	12.4	6.8	6.7	9.3	4.0	5.5
VI - Western Visayas	7.2	7.9	10.4	8.5	7.3	7.5
VII - Central Visayas	12.3	9.4	10.3	10.5	5.9	7.2
VIII - Eastern Visayas	6.6	5.6	6.5	7.1	3.4	4.3
IX - Zamboanga Peninsula	9.5	3.7	4.1	6.3	2.3	3.5
X - Northern Mindanao	9.3	6.0	5.3	4.0	3.5	4.2
XI - Davao	7.4	6.8	11.9	3.6	4.2	4.7
XII - SOCCSKSARGEN	4.8	5.9	5.7	7.9	3.4	4.2
NCR	0.4	3.3	0.0	5.3	19.9	15.3
CAR	0.9	1.8	3.8	1.5	1.8	1.7
ARMM	3.0	7.9	7.7	4.4	1.6	2.5
XIII – Caraga	6.0	3.3	7.2	2.7	1.7	2.4
Philippines	100.0	100.0	100.0	100.0	100.0	100.0

Note: Author's calculations on 2003-2006-2009 FIES panel data.

When we examine these income classifications of households in 2003 in relation to poverty spells (Figure 11), we observe that while over half (56.2%) of the near-poor were never poor, about a third (31.2%) got impoverished (i.e., poor by 2009), although about a tenth (12.5%) of near-poor households were resilient (i.e., non-poor also in 2009). The bulk (64.3 %) of households that were food-poor in 2003 were chronic poor (which experienced poverty through the entire period 2003 to 2009), while nearly a third (30.4%) were resilient (i.e., non-poor by 2009) and one-in-twenty (5.3$) experienced transitory poverty (managed to exit poverty in 2006, but only to fall back into poverty in 2009). About half (51.7%) of the poor-but-not-food-poor were resilient (managing to be out of poverty in 2009), but about a third (36.4%) were chronically poor while a tenth (11.8%) were transitory poor. Meanwhile more than nine tenths (92.4%) of households that were neither poor nor near-poor in 2003 were never poor throughout the period.

Figure 11. Poverty Trajectories of Households by Income Groups (as a Percentage of Households in 2003)
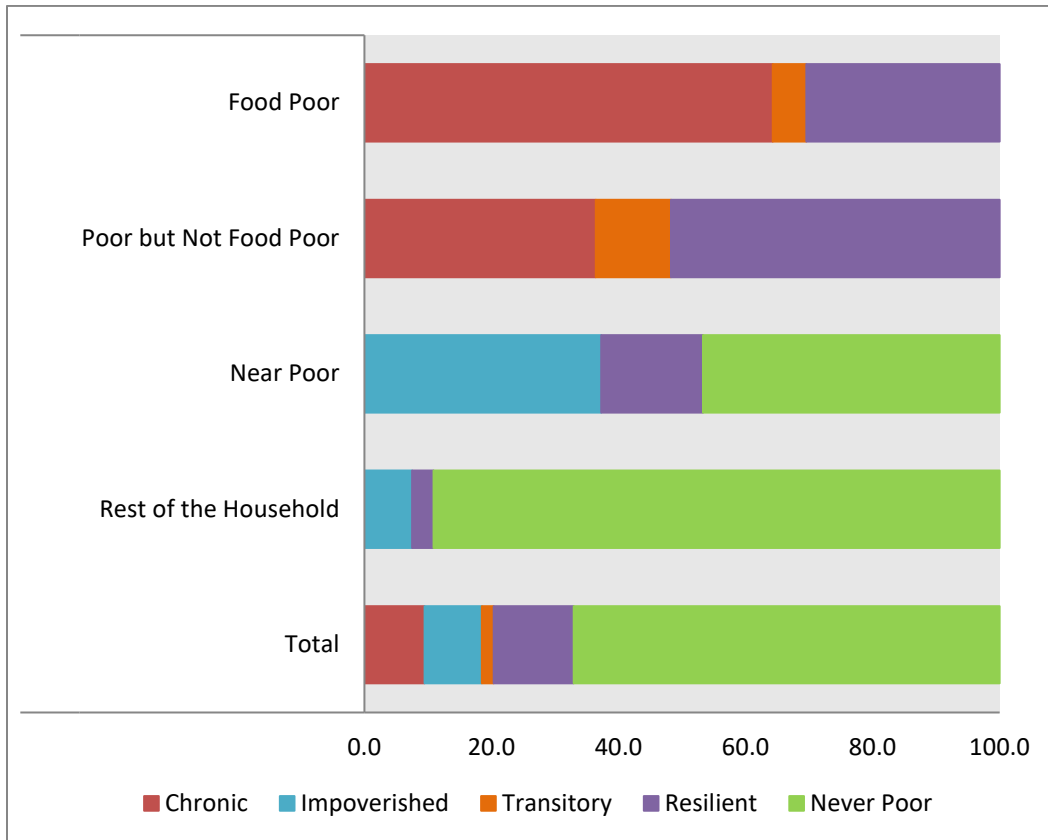
Note: Author's calculations on 2003-2006-2009 FIES panel data.

To examine how the robustness of profiles generated, we considered changing our definition of near-poor households from non-poor households with incomes less than 125 percent of the poverty line, to a threshold of 150 percent. This relaxed definition of near-poor now yields 3.2 million near-poor households (Table 7), of which 68.5 percent resided in rural areas, rather than 1.7 million (Table 2), of which 72.2 percent were rural residents. Essentially, the overall profile and patterns described earlier in this paper would hold, except that the magnitudes would change.

Table 7. Distribution of Households (in Thousands) across Urban and Rural Areas, by Income Group*: 2003-2009.

Year	Income Group	Urban	Rural	Total
2003	Food Poor	173.7	1143.6	1317.3
	Poor but Not Food Poor	395.8	1558.0	1953.8
	Near Poor*	999.7	2176.6	3176.4
	The rest of the Households	5961.2	4071.7	10032.9
	Total	7530.4	8950.0	16480.4
2006	Food Poor	222.0	1243.3	1465.3
	Poor but Not Food Poor	427.9	1723.9	2151.8
	Near Poor*	1137.5	2244.4	3381.9
	The rest of the Households	6276.2	4124.1	10400.3
	Total	8063.6	9335.5	17399.2
2009	Food Poor	232.3	1206.4	1438.7
	Poor but Not Food Poor	591.0	1779.6	2370.6
	Near Poor*	1243.6	2493.9	3737.6
	The rest of the Households	6401.9	4500.1	10901.9
	Total	8468.8	9980.0	18448.8

Note: Author's calculations on 2003-2006-2009 FIES panel data.
*=Near Poor Definition revised to mean Non-Poor Households with Incomes less than 150 percent of the Poverty Line

To further illustrate this point, in Table 8a and & Table 8b, we show the distribution of income groups with the definition of near-poor and the revised (more relaxed) definition, cross-tabulated with poverty movements in the period 2003-2009. While the original definition shows that of the near-poor households, nearly half (46.7%) of the near-poor were never poor and about two-fifths (37.3%) got impoverished, the revised definition yields, over half of the near poor (56.2%) were never poor, and less than a third (31.2%) got impoverished. In consequence, definitions of what we mean by near-poor must be clearly defined, but these definitions, just like the definition of poverty, is to some extent, arbitrary, and serves only as an artifice for providing a picture of welfare in a country.

Table 8. Distribution of Households (in Thousands) by Income Group and by Poverty Trajectories: 2003-2009.

(a) Income Groups with Definition of the Near-Poor

Poverty Trajectories	Income Groups				
	Food Poor	Poor but Not Food Poor	Near Poor	Rest of the Households	Total
Chronic	846.8	712.1	-	-	1,558.9
Impoverished	-	-	629.2	862.6	1,491.9
Transitory	69.6	230.7	-	-	300.3
Resilient	400.9	1,011.0	270.1	393.7	2,075.7
Never Poor	-	-	788.4	10,265.2	11,053.6
Total	1,317.3	1,953.8	1,687.8	11,521.5	16,480.4

Note: Author's calculations on 2003-2006-2009 FIES panel data.

(a) Income Groups with Relaxed Definition of the Near-Poor

Poverty Trajectories	Income Groups				
	Food Poor	Poor but Not Food Poor	Near Poor*	Rest of the Households*	Total
Chronic	846.8	712.1	-	-	1,558.9
Impoverished	-	-	991.8	500.0	1,491.9
Transitory	69.6	230.7	-	-	300.3
Resilient	400.9	1,011.0	398.0	265.8	2,075.7
Never Poor	-	-	1,786.5	9,267.1	11,053.6
Total	1,317.3	1,953.8	3,176.4	10,032.9	16,480.4

Note: Author's calculations on 2003-2006-2009 FIES panel data.

*=Near Poor Definition revised to mean Non-Poor Households with Incomes less than 150 percent of the Poverty Line

4. Determinants of Sustained and Transitory poverty escapes

Households are exposed to various sources of risks to their welfare. A number of key factors can make them more resilient and provide poor households the propensity to escape from poverty, either transitorily or sustainably. These factors include the education and skills of the household members, the number of income-generating household members, the kind of occupations of the household members, access to credit and transfers, including income transfers from overseas workers' remittances, availability of safety nets, the location where the household resides or works (say, whether or not the area is disaster prone, whether or not the area has armed conflict, and whether or not the locality has quality governance).

While the profiles of income distribution, particularly the near poor and household poverty transitions, indicated by graphs and tables discussed in the previous section provide a useful description of the various factors linked with poverty, they only provide single dimension links. A much richer examination may be obtained with a multinomial logit model to investigate the effect of various factors (resource base, attributes and capacities, activities, shocks, and context) on the poverty transitions of households from 2006 to 2012 (whether the type of poverty is chronic, impoverished, transitory, or resilient). We follow standard method of analysis in the literature around poverty dynamics and persistence (see for example, Quisumbing 2007). Results of the multinomial logit model carried out on the FIES-panel data for the years 2003, 2006 and 2009 are shown in Table 9. This model specified the following household characteristics in bas year as explanatory variables for the multinomial logit regression to look into their effects on the poverty transitions experienced by households:

Table 9. Relative Risk Ratios of Factors Explaining Poverty Trajectories from 2003-2009.

Variable Names	Remarks	Coefficient	Standard Error	Coefficient	Standard Error	Coefficient	Standard Error
	4: resilient (base)	**1: chronic**		**2: impoverished**		**3: transitory**	
log_pcexp	Log (per capita annual expenditures)	0.01*	0.01	298.01*	108.790	0.07*	0.04
appliances_asset	composite index with equal weights for having radio, television, video tape recorder, stereo, refrigerator, washing machine, air conditioner, sala set, dining room, phone, personal computer, or oven	0.64	0.48	0.22*	0.130	0.21	0.23
ownership_vehicle	indicator on ownership of car or motorcycle/tricycle	0.71	0.78	0.14*	0.130	0.24	0.53
pwater	Indicator for having potable water	1.03	0.18	0.78	0.133	1.00	0.25
stoilet	Indicator for having sanitary toilet	0.90	0.16	1.18	0.200	1.37	0.34
elec	Indicator for having electricity	0.53*	0.10	0.66*	0.120	0.83	0.21
hhsize	Household size	1.06	0.05	1.05	0.050	0.93	0.07
share_chil0to14	Share of children to household size	3.65**	3.06	3.05**	2.260	0.26	0.28
share_dep	Share of dependents to household size	1.45*	0.22	1.21	0.190	1.53*	0.32
hhage	Age of household head	0.86*	0.04	0.91*	0.030	0.92**	0.05
hhage_sqrd	Squared age of household head	1.00*	0.00	1.00*	0.000	1.00	0.00
hhfemale	Indicator on whether household head is female	0.65	0.21	0.98	0.260	0.62	0.28
hhnogrd	Indicator on whether household head has no education	2.99*	1.14	1.24	0.500	1.60	0.80
hhatmostelem	Indicator on whether household head has attained at most some primary schooling	1.72*	0.30	1.25	0.220	1.19	0.31

hhatleastsec (BASE)	Indicator on whether household head has attained at least secondary schooling	1					
hhemp	Indicator on household head being employed	1.34	0.00	1.28	0.390	2.25	1.26
hhemp_agri	Indicator on whether household head employed in agriculture sector	1.17	0.30	0.69**	0.160	1.22	0.44
p_emp_tmem	Proportion of total members employed	0.69	0.54	2.56**	1.500	1.82	1.72
p_emp_tmem_agri	Proportion of total members employed in agriculture	2.50	1.99	0.88	0.510	0.66	0.62
cashassist	Indicator on whether household has remittances from domestic or international sources	0.77**	0.12	0.75**	0.110	0.87	0.20
loanoutfamily	Indicator on whether loan has been given to outside family members	0.81.	0.31	2.14*	0.700	1.73	0.83
haveloans	Indicator on whether any member of household has received loans	1.32	0.25	1.16	0.210	1.20	0.34
hrural	Indicator on whether household resides in a rural area	0.93	0.19	0.84	0.150	0.61*	0.17
ilocos	Indicator for Region I (Ilocos)	2.77	3.10	10.36*	6.560	1.15	1.35
cagayan	Indicator for Region II (Cagayan)	0.67	0.78	19.02*	12.710	0.47	0.59
cenluz	Indicator for Region III (Central Luzon)	6.89**	7.80	16.13*	10.160	1.68	2.03
calabarzon	Indicator for Region IVA (Calabarzon)	0.87	0.99	9.65*	6.000	0.79	0.93
mimaropa	Indicator for Region IVB (Mimaropa)	0.39	0.44	16.05*	10.610	0.11**	0.15
bicol	Indicator for Region V (Bicol)	0.58	0.65	8.32*	5.270	0.34	0.41
westvis	Indicator for Region VI (Western Visayas)	1.47	1.65	33.95*	21.220	1.05	1.21
cenvis	Indicator for Region VII (Central Visayas)	3.60	4.03	20.42*	12.820	0.55	0.67
eastvis	Indicator for Region VIII (Eastern Visayas)	0.84	0.95	50.63*	32.910	0.25	0.31

Variable Names	Remarks	Coefficient	Standard Error	Coefficient	Standard Error	Coefficient	Standard Error
zamb	Indicator for Region IX (Zamboanga)	2.28	2.61	64.09*	44.220	0.65	0.81
normin	Indicator for Region X (Northern Mindanao)	9.56*	10.87	70.98*	48.400	3.59	4.28
davao	Indicator for Region XI (Davao)	5.94**	6.61	39.16*	25.790	2.36	2.80
soccks	Indicator for Region XII (SOCCSARGEN)	1.66	1.88	22.71*	14.990	0.99	1.18
car	Indicator for Region XIV (Cordillera Administrative Region)	0.27	0.31	21.24*	14.210	0.61	0.74
armm	Indicator for Region XV (Autonomous Region of Moslem Mindanao)	1.02	1.18	82.25*	54.510	1.82	2.16
caraga	Indicator for Region XIII (Caraga)	12.42*	14.04	89.88*	60.510	3.15	3.76
log_pc_medicexp	log of percapita medical expenses	1.1**	0.06	0.96	0.050	0.93	0.08
philhealth	Indicator on whether household member is member of national government health insurance program	0.98	0.16	0.88	0.140	1.33	0.31
ntyps3_dam	number of strong typhoons (i.e. signal number 3 cyclones) in the province where household resides	3.63	0.56	1.46*	0.190	2.33*	0.60
ncr (base)	Indicator for Region XVII (National Capital						
_cons	constant	5.51E+16	2.04E+17	7.65E-25	2.88E-24	1.65E+10	8.24E+10

Note: Authors' calculations on 2003-2006-2009 FIES panel data with other data merged from LFS, APIS and administrative reports.

* = significant at 0.05 level; **= significant at the 0.01 level

Variable Names	Remarks	Coefficient	Standard Error	Coefficient	Standard Error	Coefficient	Standard Error
	4: resilient (base)	**1: chronic**		**2: impoverished**		**3: transitory**	
log_pcexp	Log (per capita annual expenditures)	0.01**	0.01	285.72**	104.11	0.07**	0.03
asset_index	composite index with equal weights for having radio, television, video tape recorder, stereo, refrigerator, washing machine, air conditioner, sala set, dining room, car, phone, personal computer, oven, or motorcycle/tricycle	0.96	0.06	0.87**	0.04	0.87	0.08
pwater	Indicator for having potable water	1.04	0.18	0.79	0.14	1.01	0.25

stoilet	Indicator for having sanitary toilet	0.90	0.16	1.19	0.20	1.35	0.33
elec	Indicator for having electricity	0.54	0.10	0.67*	0.12	0.86	0.22
amrtrealprop	Indicator on whether household spent for real property	1.87	1.74	1.07	0.96	7.41*	6.74
hhsize	Household size	1.06	0.05	1.05	0.05	0.93	0.07
share_chil0to14	Share of children to household size	3.59	3.02	2.94	2.17	0.25	0.26
share_dep	Share of dependents to household size	1.45*	0.22	1.21	0.19	1.54*	0.32
hhage	Age of household head	0.86**	0.04	0.91**	0.03	0.91	0.05
hhage_sqrd	Squared age of household head	1.00**	0.00	1.00*	0.00	1.00	0.00
hhfemale	Indicator on whether household head is female	0.65	0.21	0.99	0.26	0.65	0.29
hhnogrd	Indicator on whether household head has no education	3.01**	1.15	1.21	0.49	1.65	0.82
hhatmostelem	Indicator on whether household head has attained at most some primary schooling	1.72**	0.30	1.26	0.20	1.20	0.31
hhatleastsec (BASE)	Indicator on whether household head has attained at least secondary schooling	1.00	-	1.00	-	1.00	-
hhemp	Indicator on household head being employed	1.34	0.50	1.27	0.39	2.19	1.23
hhemp_not agri	Indicator on whether household head employed outside of agriculture sector	1.18	0.30	0.71	0.16	1.29	0.47
p_emp_tmem	Proportion of total members employed	0.69	0.54	2.60	1.52	1.90	1.80
p_emp_tmem_agri	Proportion of total members employed in agriculture	2.49	1.97	0.86	0.50	0.61	0.57
cashassist	Indicator on whether household has remittances from domestic or international sources	0.77	0.12	0.76	0.11	0.88	0.20
loanoutfamily	Indicator on whether loan has been given to outside family members	0.81	0.31	2.11*	0.69	1.91	0.93
haveloans	Indicator on whether any member of household has received loans	1.28	0.25	1.15	0.21	1.05	0.31
ntyps3_dam	number of strong typhoons (i.e. signal number 3 cyclones) in the province where household resides	3.63**	0.56	1.46**	0.19	2.31**	0.59
log_pc_medicexp	log of percapita medical expenses	1.10	0.06	0.97	0.05	0.94	0.08

philhealth	Indicator on whether household member is member of national government health insurance program	0.98	0.16	0.88	0.14	1.32	0.31
hrural	Indicator on whether household resides in a rural area	0.93	0.19	0.83	0.15	0.61	0.18
ilocos	Indicator for Region I (Ilocos)	2.72	3.04	9.34**	5.90	1.08	1.26
cagayan	Indicator for Region II (Cagayan)	0.66	0.77	18.06**	12.03	0.44	0.55
cenluz	Indicator for Region III (Central Luzon)	6.76	7.65	15.03**	9.43	1.52	1.83
calabarzon	Indicator for Region IVA (Calabarzon)	0.86	0.99	9.47**	5.88	0.76	0.90
mimaropa	Indicator for Region IVB (Mimaropa)	0.38	0.43	14.81**	9.77	0.10	0.14
bicol	Indicator for Region V (Bicol)	0.57	0.65	7.93**	5.01	0.32	0.39
westvis	Indicator for Region VI (Western Visayas)	1.46	1.63	32.42**	20.22	0.99	1.14
cenvis	Indicator for Region VII (Central Visayas)	3.52	3.94	19.10**	11.96	0.49	0.59
eastvis	Indicator for Region VIII (Eastern Visayas)	0.82	0.94	47.54**	30.82	0.22	0.28
zamb	Indicator for Region IX (Zamboanga)	2.25	2.57	59.39**	40.79	0.60	0.75
normin	Indicator for Region X (Northern Mindanao)	9.43*	10.72	67.27**	45.81	3.25	3.88
davao	Indicator for Region XI (Davao)	5.75	6.50	37.39**	24.56	2.18	2.58
socks	Indicator for Region XII (SOCCSARGEN)	1.64	1.86	21.53**	14.18	0.92	1.10
car	Indicator for Region XIV (Cordillera Administrative Region)	0.26	0.31	20.33**	13.59	0.53	0.65
armm	Indicator for Region XV (Autonomous Region of Moslem Mindanao)	1.00	1.15	78.70**	52.06	1.62	1.92
caraga	Indicator for Region XVI (Caraga)	12.17*	13.76	86.06**	57.84	2.83	3.37
ncr (base)	Indicator for Region XIII (National Capital Region)	1.00	-	1.00	-	1.00	-
_cons	constant	6.36E+16	2.36E+17	1.22E-24	4.57E-24	3.36E+10	1.69E+11

Note: Authors' calculations on 2003-2006-2009 FIES panel data with other data merged from LFS, APIS and administrative reports.

* = significant at 0.05 level; **= significant at the 0.01 level

- Resource Base: Assets and Household Amenities
  - log pc expenditures
  - whether or not household resides in a dwelling with a strong roof
  - whether or not household resides in a dwelling with a sanitary toilet
  - whether or not household has electricity in dwelling
  - asset index (equally weight index on ownership of a vehicle, personal computer, airconditioner, component, washing machine, refrigerator, dvd, television, cell phone or landline, sala, radio, dining room, or oven)
  - whether or not household has real property
- Attributes and Capacities
  - household size
  - share of dependents, i.e. number of household members aged below 15 or 65 and over to total household size
  - age of household head
  - squared value of age of household head (to capture non-linear relationships between family size and welfare)
  - female head (indicator)
  - head with at no education
  - head with some primary education
  - head attained at least some secondary education
- Activities
  - head is employed
  - share of employed persons
  - share of members employed in major sectors
  - household received remittances
  - household received loans
- Shocks
  - log health expenditures
  - membership in Philhealth (i.e., national health insurance program)
  - number of strong intensity typhoons (i.e. signal number 3) in province where household resides
- Context and region
  - whether or not household resides in a rural area
  - regional indicators (with National Capital Region, i.e., Metro Manila, as base region)

Some of these explanatory variables, such as the share of dependents, share of employed persons and share of members with non-farm employment, were obtained from the second quarter round of the LFS to which the FIES wave was a rider, while still another, viz., Philhealth membership was sourced from waves of another survey called the Annual Poverty Indicator Survey (APIS) that is conducted on non-FIES years, and another one, the number of cyclones of strong intensity, was sourced from an administrative report. In consequence of the extra merging of households between

FIES and APIS rounds, the number of households used for the econometric model was only 2250[11] households (that experienced poverty during at least one of the FIES waves).

Risk resilience can be built by wealth or asset accumulation. Asset ownership and the presence of household amenities in a dwelling differentiate the poverty experienced by poor households, whether these households are chronically poor, impoverished, or transitorily poor as compared to the poor who are resilient. Results of the multinomial logit model suggest that *ceteris paribus*, if a sometimes-poor household has assets, or if a household has electricity, then the household is less likely to be impoverished than a household that has exited poverty sustainably. And as is to be expected, chronic poor, impoverished and transitory poor households have a lower relative risk ratio than resilient households given rising per capita expenditures, *ceteris paribus*.

As far as household attributes and capacities, the multinomial logit model also suggests that there is practically no difference between transitory poor and resilient poor. Some household demographic characteristics and human capital factors though help differentiate the chronic poor and impoverished from the resilient households. In particular, all other things being equal, there is a higher chance for households to be chronic poor (than resilient) if the households have large shares of dependents or if the household head is younger. Furthermore, human capital matters, i.e., if the household head has no or little educational attainment, then it has a higher risk of being persistently poor (than households that have exited poverty sustainably). All other things being equal, the relative risk of being transitory poor relative to being resilient is higher for every increase in the share of dependents in the household. The age of household head also has an effect (though a nonlinear one) on the relative risk of being impoverished in relation to being resilient.

With regard to household economic activities, there is no clear evidence to differentiate poor households. While lack of access to credit can put a poor household into deeper poverty, there is also no strong evidence that this is happening in the Philippines, as it appears that all forms of households that have been poor manage to have loans. Similarly, there is no clear evidence that remittances have an effect on resilience building, although there is weak evidence that chronic poor and impoverished are less likely to receive remittance. Further, it should be noted that was no data collected on the extent to which remittances and loans are put to productive use.

As regards shocks to household welfare, there is strong evidence that intense climate disasters appear to have a negative effect on living conditions, as households are more likely to be chronic poor, impoverished or transient poor (than resilient) if they live in provinces that have experienced more strong typhoons.

Regarding residence, all things being equal, households residing in Northern Mindanao and Caraga are more likely to be persistent poor than those living in Metro Manila. Households in all regions (outside Metro Manila) are more likely to have become impoverished than those in Metro Manila, *ceteris paribus*. Transitory and resilient poor appear have similar profiles across the regions.

The econometric results shown here further drive the point that resilience building is extremely important, that strategies and policies will be required not only to assist the persistently poor, but

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[11] In the FIES panel comprising 6514 households, 2484 households experienced poverty either in 2003, 2006 or 2009. Of the 6514 households, 5,909 households were also interviewed in the APIS waves in 2004, 2007 and 2008.

also those who move in and out of poverty, as well as the non-poor who have moved into poverty into having better chances of exiting poverty sustainably. Clearly, the strategies for assistance for different types of households will have to vary: chronic poor households will have to be provided long-term solutions to build their capacities to exit poverty, while transitory poor impoverished households, and those that have sustainable exited poverty will have to be given short-term safety nets for assisting them to mitigate the impact of income volatility risks they face from macroeconomic, community and idiosyncratic shocks to welfare. This way, the country can ensure that everyone can sustainably participate in and benefit from socio-economic growth, and not be left behind as the country pursues its development path.

5. Summary and Policy Implications

This study provides valuable insights into the complex dynamics of poverty in the Philippines from 2003-2009. Despite economic growth, poverty rates persisted, especially among the precarious near-poor segment - those living just above the poverty line. The paper reveals several key findings:

- Firstly, economic growth failed to sufficiently trickle down and reduce poverty, as evidenced by the low Growth Elasticity of Poverty (GEP). This highlights how aggregate economic growth statistics often mask stark inequalities in distributions of the gains.

- Secondly, the near-poor face distinct vulnerabilities tied to their rural locations, employment in vulnerable sectors, and lack of assets or safety nets. Shocks like natural disasters, commodity price hikes, or job losses can easily push them into poverty. The fluidity of poverty transitions in the FIES data underscores this income instability.

- Few poor households exit from poverty sustainably, especially given various shocks to their welfare conditions.

These findings have critical policy implications:

- Targeted social protection for the near-poor is urgently needed to prevent descent into poverty due to shocks. While the Department of Social Welfare and Development has developed a definition of the near-poor, it has not provided specific policies targeted for the near-poor, whose profile is similar to the poor. Safety nets, insurance, cash transfers and assets can buffer income instability, that are critical in the face of a serious macroeconomic crisis, pandemic, or some idiosyncratic schock.

- More inclusive growth policies are essential to evenly distribute gains and improve incomes for poorer groups. Policy levers include expanding rural economic opportunities, boosting agricultural productivity, investing in education and infrastructure, and creating better jobs. Very little attention has been given to produce disaggregated data systematically for key statistics.

- Building resilience of vulnerable households is key, via disaster preparedness, access to finance, and protections against market volatility.

- Continued poverty monitoring and understanding poverty dynamics should inform policy responses. It would also be important to regularly examine vulnerability to income poverty.

- Finally, regional tailoring of policies is warranted given geographic disparities in poverty profiles.

In summary, reducing poverty amid growth requires nuanced, multifaceted policies targeted at the near-poor and understanding poverty as a fluid, complex phenomenon. Sustainable solutions must promote inclusive growth and resilience alongside protection of the vulnerable. The policy insights from this study can powerfully inform such policy-making. Ideally, the Philippine Statistics Authority should explore the possibility of having panel data available to provide critical inputs in policy development for poverty especially as the poor are heterogenous, and would require differentiated interventions.

References

Albert, J.R.G., Dumagan, J.and Martinez, A. Jr. (2015). Inequalities in Income, Labor, and Education: The Challenge of Inclusive Growth. Discussion Paper Series 2015-01. Philippine Institute for Development Studies. [online] https://dirp4.pids.gov.ph/webportal/CDN/PUBLICATIONS/pidsdps1501.pdf [Accessed 30 August 2017]

Albert, J. R. G. and Ramos, A. P. (2010). Trends in Household Vulnerability. Discussion Paper Series No. 2010-01. Philippine Institute for Development Studies. [online] https://dirp4.pids.gov.ph/ris/dps/pidsdps1001.pdf [Accessed 30 August 2017]

Balisacan, A. and Fuwa, N. (2004). Going Beyond Cross-Country Averages: Growth, Inequality and Poverty Reduction in the Philippines. World Development 32 (November 2004): 1891-1907. [online] http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.620.7218&rep=rep1&type=pdf [Accessed 15 October 2017]

Hulme, D., Moore K., and Shepherd, A. (2001). Chronic poverty: meanings and analytical frameworks. Chronic Poverty Research Centre Working Paper 2. [online] http://www.chronicpoverty.org/uploads/publication_files/WP02_Hulme_et_al.pdf [Accessed 15 October 2017]

Kraay, A. (2004). When Is Growth Pro-Poor? Cross-Country Evidence. IMF Working Paper 04-47. [online] https://www.imf.org/external/pubs/ft/wp/2004/wp0447.pdf [Accessed 15 October 2017]

Mina, C. D. and Reyes, C. M. (2017). Estimating Filipinos' vulnerability to poverty. PIDS Policy Note 2017-14. Philippine Institute for Development Studies. [online] http://dirp4.pids.gov.ph/ris/dps/pidsdps0922.pdf [Accessed 30 August 2017]

Reyes, C.M., Tabuga, A. D., Mina, C.D., Asis, R. D., and Datu, M. B. G. (2010). Chronic and Transient Poverty. Discussion Paper Series No. 2010-30. Philippine Institute for Development Studies. [online] https://dirp3.pids.gov.ph/ris/dps/pidsdps1030_rev.pdf [Accessed 30 August 2017]

Reyes, C.M., Tabuga, A. D., Mina, C.D., Asis, R. D., and Datu, M. B. G. (2011). Dynamics of Poverty in the Philippines: Distinguishing the Chronic from the Transient Poor. Discussion Paper Series No. 2010-30. Philippine Institute for Development Studies. [online] https://dirp4.pids.gov.ph/ris/dps/pidsdps1131.pdf [Accessed 30 August 2017]

Tabunda , A. M. and J. R. G. Albert. 2002. Philippine Poverty in the Wake of the Asian Financial Crisis and El Niño. In Impact of the East Asian Financial Crisis Revisited, edited by Shahid Khandker. The World Bank Institute and the Philippine Institute for Development Studies. [online] https://dirp4.pids.gov.ph/ris/books/pidsbk02-impact.pdf [Accessed 30 August 2017]

Ravallion, M. (2013), How Long Will It Take to Lift One Billion People Out of Poverty? [online]
http://www-
wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2013/01/22/00015834
9_20130122091052/Rendered/PDF/wps6325.pdf [Accessed 15 October 2017]

Reyes, C. and Tabuga, A. (2011), A note on economic growth, inequality, and poverty in the
Philippines. PID Discussion Paper 2011-30. [online]
http://dirp3.pids.gov.ph/ris/dps/pidsdps1130.pdf [Accessed 15 October 2017]