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Inequalities in Income, Labor, and Education: The Challenge of Inclusive Growth

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Philippine Institute for Development Studies
Surian sa mga Pag-aaral Pangkaunlaran ng Pilipinas

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Inequalities in Income, Labor and Education: The Challenge of Inclusive Growth

by

Jose Ramon G. Albert, Ph.D., Jesus C. Dumagan, Ph.D., and Arturo Martinez, Jr.¹

ABSTRACT: While economic growth is important for poverty reduction, the rather stellar performance of the Philippines in economic growth has still not translated into reduction of poverty. This is in large part due to issues pertaining to distribution. Inequalities in income, as well as inequities in labor and education have provided barriers for everyone to participate in growth processes. The study looks at trends in various statistics on poverty and income distribution, and then examines how disparities in opportunities across rural/urban areas, between the sexes, and between the poorest and richest segments of society in labor and education have prevented the country from reducing poverty. It also examines why the conditional cash transfer program can provide opportunities toward more social and economic inclusiveness.

Key words: inclusive growth, poverty, inequality

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1. Introduction

In April 2012² the National Statistical Coordination Board (NSCB) released for the first time official estimates of poverty incidence for the first Semester of 2012 based on the Family Income and Expenditure Survey (FIES)³ and back estimates for the same periods in 2009 and 2006 based on previous conducts of the FIES. The NSCB estimates showed that the proportion of poor Filipinos remained unchanged and, thus, perplexed the government considering all its efforts towards poverty reduction. The immediate reaction from no less than the President of the country was to put to serious question the accuracy of the official poverty statistics. The President thought that the poverty statistics were based on the population census, whose accuracy he questioned in the past. This reaction was quite understandable, since the government had a mantra "*kung walang corrupt, walang mahirap*" (if there are no corrupt, there are no poor). With economic growth, as measured by the growth of Gross Domestic Product (which was also released by the NSCB), being much improved from 2011 onwards compared to the average growth of 4.6 per cent during the period 2003 to 2009, there was expectation that economic growth would automatically result in reduction of income poverty, given the thrust for good governance and high morals in politics, coupled with the extra investments in the social sector, particularly to address input deficits in basic education, and the huge investments made by government for the *Pantawid Pamilya Pilipino Program (4Ps)*, the government's Conditional Cash Transfer (CCT) program.

Such expectations by government, however, were actually unfounded when we look into the history of experiences in the developing world, including this country. Poverty analysts (see e.g., Datt and Ravallion, 1992; Cord et al, 2003) have long established that economic growth alone does not guarantee less poverty; income distribution and inequality, and even starting conditions, matter as well in reducing poverty. Ravallion (2013) also points out that growth in GDP (or GDP per capita) does not always translate into growth into household income or consumption, on which poverty estimates are based. This is why countries, including the Philippines, should have been much more careful in setting their respective country aspirations for the Millennium Development Goals (MDGs), and should learn from this experience for the upcoming post 2015 Development Agenda on the Sustainable Development Goals (SDGs). Global targets of reducing poverty by half need not necessarily be adopted across countries, as some countries will be better at hitting the targets than others. Baseline data for 1990 was also not always present in countries. Historical performances have to be considered when numerical targets are made, otherwise targets will likely not be met.

² http://www.nscb.gov.ph/poverty/2012/highlights_1stsem.asp

³ The FIES is a household survey conducted by the then National Statistics Office (NSO).

For economic growth to be effective in reducing poverty, it needs to be inclusive (Ostry and Berg, 2011; ADB, 2012). That is, we must pay attention to issues on distribution or inequality. In this discussion paper, we examine various statistics on income distribution, including income poverty, especially during the period 2003 to 2009, in the wake of the global economic crisis, which would be enlightening based on available panel data that provide a rich set of information on welfare dynamics during this period. We also examine trends in other non-monetary welfare indicators, particularly on employment and education. We finally discuss the importance of the conditional cash transfer as an investment for improved human capital that will have its pay off in the labor market, and ultimately on poverty and welfare.

2. Trends in Income Poverty

Poverty reduction is viewed by many as the heart of the development agenda, with the MDGs focusing on improving the plight of the poor, and on aspiring to lift as many of them out of their deprived conditions. Poverty is viewed as manifest deprivation of some, if not majority, of life's basic needs, and consequently, poverty has many dimensions. In practice, though, poverty is measured and monitored by countries in terms of a particular welfare indicator, especially in monetary terms such as per capita income or per capita expenditure (Albert, 2008). Globally, the World Bank monitors the proportion of the world's population with incomes (or consumptions) below one US dollar in 1990 prices (now updated to \$1.25 in 2005 prices) in purchasing power parity (PPP)⁴ terms. By these measurements, there is a suggestion that the world has already achieved its MDG target of reducing poverty by half of 1990 baselines five years ahead of schedule, but with progress being uneven across economies (Ravallion, 2013).

In the Philippines, the then National Statistical Coordination Board (NSCB) has been releasing official poverty statistics every three years using per capita income data from the triennial Family Income and Expenditure Survey (FIES), conducted by the then National Statistics Office (NSO), and poverty lines (or thresholds). The latter is generated by NSCB staff using the cost-of-basic needs approach, a fairly standard methodology adopted by many countries. The poverty lines represent the minimum amount of per capita income required by Filipinos to have a decent standard of living (that accounts for basic food and non-food feeds). Figure 1 illustrates the main set of summary measures generated for describing poverty: the poverty incidence (also called the poverty rate or headcount poverty), which represents the proportion of persons with incomes below the poverty threshold. When only food needs are considered, we can also

⁴ To obtain "purchasing power parity" (PPP), the "nominal" exchange rate (e.g., the market rate) between currencies is adjusted by the difference in prices between the countries whose currencies are being converted, one to the other. The result, for example, is that a given amount of Philippine pesos can buy the *same basket of goods* when used directly or when converted to US dollars using the price-adjusted or PPP dollar/peso exchange rate.

generate the share of the population in extreme poverty, otherwise called the food poverty incidence, or **subsistence incidence**.

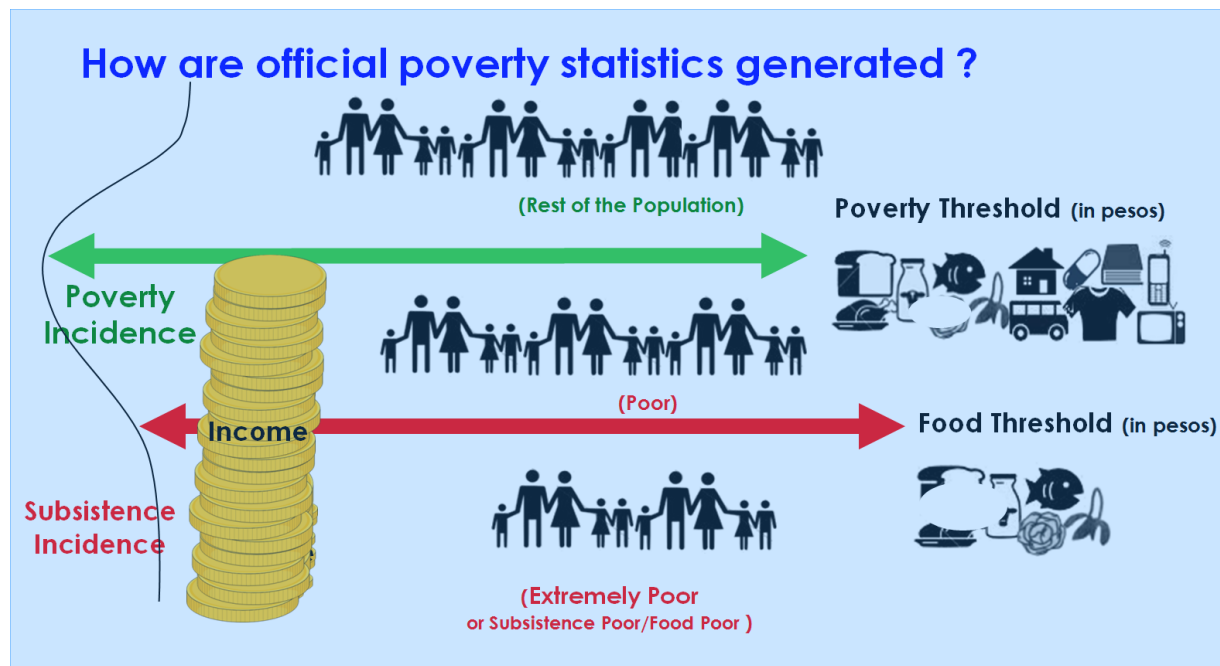


Figure 1. Illustration of the process for generating official poverty statistics using (per capita) income data, and poverty thresholds.

In April 2014, the new agency called the Philippine Statistics Authority (PSA)⁵, which was formed from a consolidation of the NSCB, NSO and other statistical agencies, released official estimates of poverty for the first half of 2013 that were based on the 2013 Annual Poverty Indicator Survey (APIS). Using the PSA estimates of poverty rates, Palace officials have suggested that welfare conditions in the country are improving: “while poverty incidence went down by only 0.2 points during the years of 2006 to 2009 and by only 0.7 points from 2009 to 2012, from 2012 to 2013 it dropped by three (percentage) points.”⁶ Even the World Bank, in its Philippine Economic Update, August 2014 edition⁷, similarly described improving welfare conditions: “after many years of slow poverty reduction, poverty incidence among the

⁵ In December 2013, the Implementing Rules and Regulations of Republic Act 10625, otherwise known as the Philippine Statistical Act of 2013, took effect, which combined the NSCB Technical Staff with the NSO as well as the Bureau of Agricultural Statistics, and the Bureau of Labor and Employment Statistics into the Philippine Statistics Authority (PSA).

⁶ <http://newsinfo.inquirer.net/647199/palace-banners-decline-in-poverty-incidence-amid-slight-increase-in-self-rated-poverty>

⁷ <http://www.worldbank.org/en/country/philippines/publication/philippines-accelerating-public-investment-to-sustain-growth-that-benefits-the-poor>

population declined by 3 percentage points between 2012 and 2013 to 24.9 %, lifting 2.5 million Filipinos out of poverty.” Such descriptions of the trends in poverty merely re-echo a statement from the National Economic and Development Authority (NEDA) about “a remarkable improvement in the poverty incidence in the first half of 2013.”⁸

Although these poverty assessments are based on the official statistics released by the PSA, they are not a good reading of the trends in poverty conditions, since the official poverty incidence figures estimated for the first half of 2013 actually used an instrument *different* from that of the FIES, the typical source of per capita income data to generate poverty incidence (Table 1). While the APIS 2013 made use of a much longer questionnaire that is based on the FIES income module, the APIS 2013 income module was still a simplified version of the FIES income module. Even if the 2013 APIS made use of the income module of the FIES, this may still not be enough to make the per capita income data from the two surveys comparable since the FIES uses a very detailed expenditure module that is asked before the income module. The FIES takes an average of five hours to accomplish, while the 2013 APIS only took an average of 3 hours. The PSA’s technical notes⁹ describe these different data sources and instruments.

Table 1. Official Estimates of Poverty Incidence in the Philippines

Year	First Semester ^a	Full Calendar Year ^b	Source	Remarks
2006	28.8%	26.3 %	2006 FIES	
2009	28.6%	26.1 %	2009 FIES	
2012	27.9%	25.3 %	2012 FIES	78 pages of questions (24 of which on income, 47 on expenditure); average interview time is 5 hours
2013	24.9%		2013 APIS	32 pages of questions (19 of which on income, 6 on expenditure); average interview time is 3 hours

Source: PSA

Notes:

^a = http://www.nscb.gov.ph/poverty/2012/highlights_1stsem.asp ;

^b = http://www.nscb.gov.ph/poverty/2012/highlights_fullyear.asp

In consequence, we actually do not have clear evidence to suggest a reduction in poverty from (the first half of) 2012 to (the first semester of) 2013. We have to await results of the 2014 APIS to get a definitive picture of recent poverty trends, assuming that the 2014 APIS used either the same instrument as the 2013 APIS or the FIES.

⁸ <http://www.rappler.com/business/economy-watch/56708-ph-poverty-incidence-downward-neda>

⁹ <http://www.rappler.com/thought-leaders/75364-real-score-poverty>

⁹ http://www.nscb.gov.ph/poverty/2013/2013_FirstSem_%20TechnicalNotes.asp

Despite this absence of comparable poverty figures, we can still observe three very clear trends, albeit not very recent information, on poverty conditions in the country from official poverty statistics sourced from the FIES:

- (a) poverty rates have been unchanged¹⁰ in the first semester periods from 2006 to 2012, since minute differences in estimates are within margins of error;
- (b) poverty rates also have been unchanged¹¹ in the full year periods from 2006 to 2012;
- (c) estimates of the proportion of people who are poor are lower in the full year, compared to first semester figures, on account of extra income received by income earners from their thirteenth month wages and bonuses, as well as their income received in the second semester.

Also, it can be noted that since poverty incidence is *unchanged*, the number of poor Filipinos has been *increasing* on account of population growth.

How has the Philippines compared to our neighbors' performance in reducing poverty? When examining trends in World Bank estimates of poverty incidence¹² among selected Association of South East Asian (ASEAN) countries (using \$1.25 per day PPP poverty lines), we find that the Philippines has not been at par with neighbors in reducing poverty (see Figure 2). The estimates show that from the mid 1990s to 2010, Vietnam, Indonesia and Cambodia have shown dramatic improvements in welfare conditions, especially as these economies have been experiencing considerable economic growth as well as implementing a number of successful pro-poor programs. By contrast, poverty has been at a practical standstill in the Philippines. Trends in the lack of changes in poverty headcounts, whether using the official poverty lines or \$1.25 per person per day poverty lines, have actually been quite similar. Thus achieving the first of the MDG targets on reducing extreme poverty and hunger by 2015 to half their levels in 1990 is going to be an extra challenge for the Philippines, which suffered from the effects of not only food and oil price shocks that started in 2008, and the global financial and economic crisis that began in late 2008, but also the effects of severe floods in the latter part of 2009. Some may wonder whether the lack of reduction in monetary poverty points to quality issues on the poverty data, or whether economic growth has just not benefited everyone. Since poverty is largely measured in terms of income in official terms, or expenditure in the case of the World Bank estimates, it may be also important to look into other non-monetary welfare indicators.

¹⁰ http://www.nscb.gov.ph/pressreleases/2013/PR-201304-NS1-04_poverty.asp

¹¹ http://www.nscb.gov.ph/poverty/2012/highlights_fullyear.asp

¹² Sourced from World Bank's Povcalnet <http://iresearch.worldbank.org/PovcalNet/index.htm> .

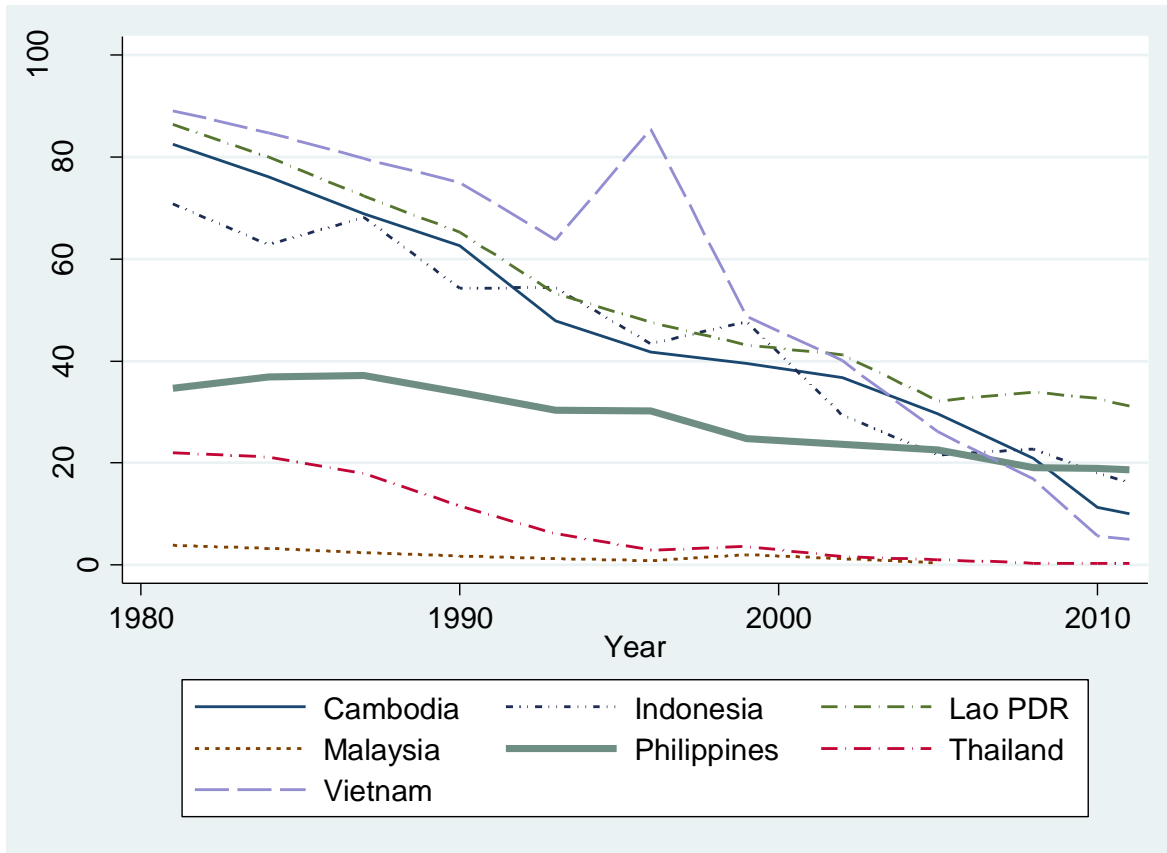


Figure 2: Trends in Headcount Poverty Rates across selected ASEAN countries: 1980-2011.
 (Source: Povcalnet, World Bank)

Kraay (2004) shows that in the short and medium term, growth in average incomes explains 70 percent of the variation in poverty reduction, while the remainder is explained by changes in the distribution, and the differences in the growth elasticity of poverty. As regards the growth elasticity of poverty, Ravallion (2013) suggests that globally, a 1% increase in incomes reduce poverty by 2.5%, on average, but by 0.6% in the most unequal countries, and by as much as 4.3% in the most equal ones. In the Philippines, Balisacan and Fuwa (2004) estimated this elasticity of poverty reduction at 1.6%, while Tabuga and Reyes (2011) yielded estimates of 1.4% to 1.8% for all regions in the country, and 1.6% up to 2.0% for regions with less inequality. In addition, using Gross Regional Domestic Product, Reyes and Tabuga (2011), even yielded much lower estimates of between 0.2% to 0.4%. An independent estimation using recent national accounts data and official poverty figures from the FIES (see Table 2) yields figures similar to those of Reyes and Tabuga (2011).

Table 2. Poverty Elasticity Estimates for 2006-2009 and 2009-2012

	2003	2006	2009	2012
Official poverty headcount		26.56	26.27	25.23
Per capita GDP (constant PHP)	48525.93	53982.09377	57649.88	65266.08
Total percent change		2003-2006	2006-2009	2009-2012
in official poverty headcount			-1.1%	-4.0%
in per capita GDP		11.2%	6.8%	13.2%
Growth elasticity of poverty			-0.16	-0.30

Note: Authors' calculations based on National Accounts and Official Poverty Estimates.

3. Income Dynamics amidst the Global Financial Crisis

In order to understand why poverty rates have hardly changed and why the elasticity of poverty reduction in the Philippines is quite low, it can be informative to look into the period 2003-2009, when the country had an average of 4.8% growth in GDP, and when growth also did not translate into poverty reduction (Table 3) especially since panel data is available for scrutiny. Official statistics on (headcount) poverty incidence remained at about a fourth of the population (24.9% for 2003, and 26.5% for 2009), while the proportion of Filipinos in extreme (or subsistence) poverty (both in 2003 and 2009) was around one in ten.

Table 3. Distribution of the Poor and Non-poor Population in the Philippine (in '000s) across Urban and Rural Areas: 2003 and 2009

Poverty Status		2003			2009		
		Urban	Rural	Philippines	Urban	Rural	Philippines
Poor	Subsistence Poor	1477	7326	8803	1728	7709	9437
	Poor but not Subsistence Poor	2886	8108	10994	3979	9720	13699
	Total Poor	4363	15434	19797	5706	17429	23135
Non-poor	Nearly Poor	1231	2437	3668	1492	2716	4208
	Non-poor and not nearly Poor	33417	22491	55908	35964	24074	60037
	Total Non-Poor	34648	24928	59576	37456	26789	64245
Total	39011	40361	79373	43162	44218	87380	

Note: Authors' calculations on FIES 2003 and FIES 2009

Noticeably, extremely poor Filipinos account for about half of the poor in rural areas. In contrast, the extremely poor constitutes about a third of the poor in urban areas. Note also that one out of every twenty persons in both the urban and rural populations are nearly poor¹³, and

¹³ The "nearly poor" is defined here as the segment of the non-poor population whose (per capita) income is less than 20% beyond the poverty line. Such a threshold is rather arbitrary. As of this writing, the Department of Social Welfare and Development (DSWD) defined the near-poor threshold at 10% beyond the poverty line.

that a more detailed profile of the nearly poor would actually show similarities to that of poor Filipinos. These nearly poor are at high risk of falling into poverty. The minimal changes in overall poverty rates is partly on account of income mobility, as will be illustrated in the next sections.

While poverty incidence is easy to articulate, it, however, does not account for the depth and severity of poverty experienced by the poor. To describe these, we can consider the poverty gap ratio¹⁴ and the squared poverty gap¹⁵ to respectively measure the depth and severity of poverty. Table 4 shows that the poverty gap and poverty squared gap, just like poverty incidence, have been rather stagnant in the Philippines from 2003 to 2009.

Table 4. Poverty Incidence, Poverty Gap and Poverty Squared Gap in the Philippines, by Urban and Rural Areas: 2003, 2006, and 2009

Area	Poverty Incidence			Poverty Gap			Poverty Squared Gap		
	2003	2006	2009	2003	2006	2009	2003	2006	2009
Urban	0.112	0.129	0.132	0.027	0.032	0.031	0.010	0.012	0.011
Rural	0.382	0.395	0.394	0.116	0.117	0.112	0.049	0.047	0.044
Philippines	0.249	0.264	0.265	0.072	0.075	0.072	0.030	0.030	0.028

Note: Authors' calculations from FIES 2003, FIES 2006, FIES 2009

Following Datt and Ravallion (1992), we can readily obtain a decomposition of the changes in poverty from 2003 to 2009 (see Table 5) on account of income growth and effects of changes in distribution. Had per capita income distribution not changed from 2003 to 2009, poverty incidence could have fallen from 25% to as much as 13% (with poverty in rural areas falling 38% to 19%). However, changes in the (per capita) income distribution (and interaction factors) resulted in a net increase in the national poverty incidence in the Philippines by 2.05 percent. These results suggest that poverty incidence in the country has been unchanged because of high levels of income inequality, which has been a barrier to changes in income distribution.

Table 5. Growth in Income and Changes in Inequality Effects on Headcount Poverty Rate

Headcount Poverty Rate	2003-2009		
	Urban	Rural	National
In 2003	11.19	38.24	24.94
In 2009	13.24	39.42	26.48

¹⁴ The poverty gap is the average of the gaps in income required by the poor to reach the poverty line, in relation to the poverty line. This measure is the second indicator in the Millennium Development Goals for monitoring the reduction of extreme poverty and hunger.

¹⁵ The squared poverty gap is a weighted average of the poverty gaps, where the weights are the poverty gaps themselves.

Change in Headcount Poverty Rate	2.05	1.18	1.54
Growth Component	-6.17	-19.62	-12.07
Redistribution Component	13.40	22.49	17.41
Residual	-5.17	-1.70	-3.80

Note: Authors' calculations from FIES 2003 and 2009.

Some experts (see, e.g., Picketty, 2003) argue that income inequality is not necessarily a problem. As an economy expands, entrepreneurs with command on assets and capital are in the first position to capitalize on economic growth. Thus, income inequality grows since some people's incomes are just growing faster than the income of the rest, as a result of their efficiency to use their resources to generate more income. In this school of thought, the benefits of economic growth will start to trickle down to the masses as entrepreneurs create more jobs, and at this point, variations in economic outcomes will then just be a reflection of differences in the levels of effort, i.e. inequality of outcomes (Roemer 1993). On the other hand, inequality of opportunities (see, e.g., Bowles and Gintis, 2002) arise when socio-economic advantage and disadvantage accumulate over time.

Recently, Martinez *et al.* (2014a and 2014b) identified economic mobility as a means to differentiate these two types of inequalities. Broadly speaking, economic mobility refers to the patterns in which people move from one socio-economic status to another over time (Fields 2008). The level of economic mobility is low when people remain in the same socio-economic status over time and it increases as more people move from one status to another. Experts believe that low economic mobility can be associated to inequality of opportunities because in such case there is not much incentive to work hard due to limited opportunities for economic movements (Brunori, Ferreira and Peragine 2013). In the next sections, we investigate trends in labor and employment, as well as education, and suggest that improvements in education opportunities would be the pathway to improvements in the labor market, and consequently to less inequality in income distribution, and that government's investments in the conditional cash transfer program would be the main avenue for poverty reduction, and inclusive growth.

In Table 6, we show some selected statistics on income distribution and income inequality in the Philippines from 2003 to 2009, as indicated by data from several ways of the FIES. Average nominal incomes of various segments of income distribution were rising across the years (by around 43 percent between 2003 and 2006, and by around 40 percent between 2006 and 2009), and even across various income classes. Thus, it is not true that only the rich has become richer, and the poor poorer. From 2003 to 2009, the poorest 20 percent though only had about 5 percent of the total national income. And as indicated by the Palma ratio, a measure of income inequality, the income of the top 10 percent has been steady at around three times that

of the income of the bottom 40 percent. The Gini¹⁶ coefficient, another measure of income inequality, has been around 0.5 across the period 2003 to 2009.

Table 6. Selected Statistics on Income Inequality and (Per Capita) Income Distribution in the Philippines: 2003, 2006 and 2009

Statistics	2003	2006	2009
Average Per Capita Income (in Nominal PHP)			
Poorest 20 Percent	7015	9494	14022
Lower Middle 20 Percent	12461	16747	24396
Middle 20 Percent	19476	26404	37606
Upper Middle 20 Percent	32014	44247	62129
Richest 20 Percent	85891	127926	176863
TOTAL	31369	44963	62997
Share of Bottom 20 Percent in National Income	4.48%	4.22%	4.45%
Palma ratio (i.e., income of the top 10% to bottom 40%)	3.09	3.47	3.27
Gini	0.495	0.516	0.506

Note: Authors' calculations from FIES 2003, 2006 and 2009.

How does inequality fare in the Philippines in relation to neighbors? The Gini for income/expenditure of selected ASEAN countries is listed in Table 7. It can be readily observed that generally, countries that have made significant improvement in reducing poverty among ASEAN economies are those with low levels of inequality, or reduced inequality.

Table 7. Gini across Selected ASEAN Countries: 1990, 2000, and Latest Year

Country	1990	2000	Latest	Country	1990	2000	Latest
Cambodia	0.383 (1994)	0.419 (2004)	0.36 (2009)	Philippines	0.438 (1991)	0.461	0.43 (2009)
Indonesia	0.292	0.29 (1999)	0.381 (2011)	Thailand	0.453	0.428	0.394 (2010)
Malaysia	0.477 (1992)	0.379 (2004)	0.462 (2009)	Vietnam	0.357 (1993)	0.376 (2002)	0.356 (2008)

Source: World Development Indicators

¹⁶ The Gini coefficient measures the extent to which income distribution deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of income received against the cumulative number of recipients, starting with the poorest individual. The Gini index measures the area between the Lorenz curve and a hypothetical line of perfect equality, expressed as a percentage of the maximum area under the line. The Gini ranges from zero (which reflects complete equality, i.e., all persons have exactly the same income) to one (which indicates complete inequality, where one person has all the income while all others have none). While a larger Gini coefficient signifies more inequality, the interpretation of the Gini is more straightforward when the figures are compared across time and space.

Since poverty has various dimensions beyond income, it is useful to examine the wealth of information on living standards beyond FIES, including data from APIS¹⁷ and the Labor Force Survey (LFS).¹⁸ Income is also correlated with ownership of durable goods (Table 8).

Table 8. Percentage of Filipino Households across Poverty Status that own Durable Goods, by Durable Good: 2003 and 2009

Durable goods	2003 Poverty Status					2009 Poverty Status				
	Food Poor	Poor but not Food Poor	'Nearly' Poor	Non-poor but not Nearly Poor	Total	Food Poor	Poor but not Food Poor	'Nearly' Poor	Non-poor but not Nearly Poor	Total
Vehicle	0.1%	0.1%	0.0%	7.5%	5.7%	0.3%	1.2%	1.7%	10.2%	7.9%
Motor	0.5%	1.7%	2.2%	8.7%	6.9%	2.5%	5.9%	8.6%	20.8%	16.9%
personal computer	0.0%	0.1%	0.0%	5.8%	4.4%	0.2%	0.2%	0.4%	14.7%	11.1%
air conditioner	0.1%	0.4%	1.0%	8.0%	6.1%	0.2%	0.3%	0.5%	11.7%	8.8%
washing machine	0.7%	2.7%	6.1%	36.3%	28.2%	1.2%	4.2%	8.1%	40.6%	31.3%
Refrigerator	1.7%	5.3%	8.5%	47.8%	37.3%	2.7%	7.1%	12.9%	51.5%	40.2%
vtr/vhs/vcd/dvd	2.4%	7.1%	11.5%	45.7%	36.2%	11.7%	23.6%	31.6%	62.6%	52.2%
Television	13.3%	30.2%	40.1%	76.3%	64.2%	27.0%	46.6%	55.3%	84.2%	73.6%
Radio	45.6%	56.6%	60.4%	70.6%	66.5%	34.7%	44.1%	46.1%	56.8%	52.9%
Stereo	2.3%	5.9%	9.7%	30.6%	24.5%	3.7%	7.0%	7.6%	28.0%	22.4%
Phone	0.8%	2.7%	4.9%	41.7%	32.2%	25.6%	43.4%	51.1%	78.3%	68.4%
Sala	6.7%	13.6%	18.7%	52.5%	42.7%	9.3%	18.4%	24.2%	58.6%	48.0%
Dining	6.8%	11.8%	17.0%	47.1%	38.4%	9.7%	17.4%	22.4%	54.6%	44.8%
Oven	0.0%	0.1%	0.1%	6.8%	5.2%	0.0%	0.1%	0.1%	9.7%	7.3%

Note: Authors' calculations from 2003 FIES and 2009 FIES

¹⁷ The APIS is conducted on non-FIES years (when funds are made available for its conduct); and the survey has a half-year reference period. The 1998, 1999, 2002 APIS had the second and third quarter as reference period. Starting 2004, the NSO set the reference period for the APIS as the first semester. The APIS was first conducted in 1998 to provide information on the extent of the impact of the Asian financial crisis on poverty, especially from non-monetary based welfare indicators. Questionnaires across APIS waves, however, have varied. The 2004 APIS asked questions on self-rated welfare status, the reasons for the change in welfare and detailed information on labor and employment, but these questions were discontinued in subsequent waves. Starting 2007, a simpler module on labor and employment was used in the APIS questionnaire. In addition, experience of hunger, availment of scholarships and other government programs by household members, and sources of loans were asked starting in 2007.

¹⁸ The quarterly LFS provides information on employment and labor participation (and when the FIES is conducted, the poverty data can be related to information on decent labor and employment).

As one goes higher in the income distribution, there is a higher likelihood of possessing various durable goods. For instance, in 2003 about two thirds (64%) of households across the country owned at least one television set, but the percentage of ownership is much lower among the poor (23%) than the non-poor (74%). It is worth noting that a significantly bigger proportion of households own durable goods, such as motor cycles (17%), personal computers (11%), phones (68%), television sets (74%) and dvd players (52%) in 2009, compared to 2003, both among the poor and the non-poor. A slightly smaller percentage of households though report owning radios in 2009 (53%) compared to 2003 (66%). This decline may be due to substitution of or upgrade to tv and dvd which increased from 2003 to 2009. Even among the extremely poor (or food poor), we find improvements in ownership of durable goods: in 2003, less than one percent of the extremely poor owned phones, but six years later, a quarter (26%) of them own phones (whether landlines or cellphones). This may be indicative that trends in income poverty do not necessarily show a complete picture of welfare conditions, and it may be important to ask if income should be the welfare indicator that should be tracked for poverty measurement.

Household surveys of the NSO, such as the triennial FIES, the quarterly LFS, and the APIS (which is conducted on non-FIES years when budgets are provided), follow an integrated survey programme through a master sample¹⁹ design. Sample households across household surveys of the PSA follow a rotation scheme to minimize respondent fatigue. For the quarterly LFS, one rotation of the sample households are dropped every quarter and replaced by a new set of sample households from the respective sample areas. For the quarters when the FIES is a rider to the LFS, a semester later, the same households targeted to be visited for the FIES are visited

¹⁹ The master sample (MS) comprises 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 population of the Philippines, and to efficiently serve the needs of all NSO household surveys. The samples of households and persons for all household surveys are selected via 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 for rare cases when more than 3 households reside in the housing unit, in which case, only a probability sample of three households are enumerated with each of the households in the housing unit given equal chance of being selected. The number of PSUs in the MS was chosen to be large enough to satisfy the needs of surveys such as the LFS, FIES and APIS, but this is larger than necessary for other household surveys. The MS was thus designed as a combination of four replicates, each of 709 PSUs, with each replicate being a national sample design. Smaller household surveys can consist of one, two, or three of the replicate samples as desired. The PSUs were selected within a set of strata using probability proportional to estimated size sampling, where the measure of size was the number of households in the PSU according to the 2000 Census of Population and Housing (CPH). Within each region, further stratification was performed using geographic groupings such as provinces and highly urbanized independent cities. Within each of these groups formed in a region, further stratification was done using proportions of strong houses and of households in agriculture in the PSUs and a measure of per capita income as stratification factors. Sample households across household surveys and survey rounds follow a rotation scheme, to minimize respondent fatigue. For the quarterly LFS, one rotation of the sample households are dropped every quarter and replaced by a new set of sample households from the respective sample areas. The PSA has on-going efforts to re-design the MS based on data from the 2010 CPH, and other information gathered by the PSA.

to get the second semester information for the FIES and also to conduct the LFS. Between 2003 and 2008, all households in the fourth replicate of the 2003 FIES were interviewed by the then NSO across subsequent FIES and APIS rounds to yield panel data²⁰.

While focusing too much on income poverty does not show a complete picture of living standards, but because monetary poverty is of policy interest, it is important to examine changes in monetary indicators (both income and expenditure) across the FIES-APIS panel.

Gross changes in poverty rates observed across time do not provide information regarding flows in and out of poverty. For such purposes, it is helpful to examine available panel data from the FIES and APIS that provide information on changes in household characteristics, especially as regards income. Panel data from the FIES and APIS waves in the period 2003 to 2008²¹ allow a rich examination of the dynamics in welfare conditions experienced by Filipino households in the period 2003 to 2008, especially in the wake of various shocks, such as price, income, labor, health, and demographic shocks. Information from changes in the characteristics of the panel can suggest the costs of shocks and coping strategies to shocks.

Across the two FIES waves in 2003 and 2006, we can readily obtain the poverty transition matrix for the population in 2003 (Tables 9) and find that poverty inflows exceeded outflows for the entire population.

Table 9. Poverty Transition Matrix (in Percent of Total Population in 2003): 2003 – 2006

Poverty Status 2003	Poverty Status 2006		
	Non-poor	Poor	Total
Non-poor	66.88	8.28	75.15
Poor	7.90	16.95	24.85
Total	74.77	25.23	100.00

Note: Authors' calculations from panel data in FIES 2003 and FIES 2006

²⁰ The July 2003 LFS sample was interviewed for the 2003 FIES and the January 2004 LFS. Likewise, the July 2006 LFS sample was interviewed for the 2006 APIS and the January 2007 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 across the APIS waves in 2004, 2007, and 2008.

²¹ While there is interest to make comparisons of coping behavior among Filipino households during various periods, the APIS and FIES questionnaires only permitted limited comparisons. The APIS questionnaire underwent some changes across survey waves. See Ericta and Luis (2009) for details. The 2008 APIS was conducted in July 2008 when some of price shocks started to arise, but a much richer comparison will have to await the release of the 2009 FIES, including the panel data from this wave, as well as poverty lines based on the new official methodology.

Table 9 shows that, 75.15 percent of the population in 2003 was non-poor, and, of which 66.88 percent remained non-poor but 8.28 percent became poor in 2006. Similarly, in 2003, 24.85 percent of the population was poor, of which 16.95 percent remained poor but 7.90 percent became non-poor in 2006. Thus, a slightly larger percentage of the population that was non-poor became poor (8.28%) than of the population that was poor that became non-poor (7.90%). Of an estimated 20.5 million poor persons in 2003, 6.5 million moved out of poverty, but 6.8 million moved into poverty.

The estimated number (2.4 million) of households that either moved into or out of poverty, which may be viewed as the relatively vulnerable households, are slightly more than the estimated number (2.2 million) of households that were poor in both 2003 and 2006. All these figures are based on the 6,701 panel households from FIES 2003-APIS 2004- FIES 2006-APIS 2007-APIS 2008 weighted to take account of panel attrition.

Unfortunately, the estimation provided in Table 9 may not be extended to the APIS waves because of the difference in survey instruments.²² Income dynamics from FIES and APIS waves are still examined in this report albeit in limited form, largely by inspecting the changes in per capita income quintile ranks²³ of the panel household across survey periods. For the nearly seven thousand (6,701) households interviewed across 2003 FIES, 2004 APIS, 2006 FIES, 2007 APIS and 2008 APIS, changes in the per capita income of these households may be examined, but with some caveats.²⁴ It was observed that about three quarters of those in the bottom 20 percent in 2003 continue to be in the bottom 20 percent across the years, and about half (44%) of those in the richest 20 percent in 2003 continue to be in the richest 20 percent from 2004 to 2008. While from year to year, about half of households stay within their quintile ranks, about 40 percent are moving one quintile rank up or down, and the rest (about 10 percent) are

²² The FIES and APIS have varying questionnaire lengths for obtaining income and expenditure data, and there are differences in reference periods for these surveys (with APIS only referring to half year data), so that poverty comparisons cannot strictly be done.

²³ If the bottom quintile of per capita income serves as a proxy of the poor segment of society in a particular year, then increases by 2 or more quintile ranks from the lowest quintile suggests exit from poverty. If a household in the bottom quintile moved up at least two quintiles and continued to stay on throughout the period of examination up to at worst the second quintile, then the household has permanently moved out of poverty. But if a poor household that has exited poverty, goes back to the first quintile at some point, then it has temporarily moved out of poverty.

²⁴ Appropriate panel data weights that are needed to make the panel nationally representative, are not readily available from the NSO. In this report, panel weights were computed by adjusting the household weights within the per capita income deciles of the survey waves, to account for attrition biases across the income distribution. Note also that income data are not fully comparable in FIES and APIS because FIES has a more detailed set of questions.

moving up by two or more quintile ranks), suggesting considerable income movements. Such income dynamics were similarly noticed and examined by Martinez *et al.* (2014a and 2014b).

About a fifth of the household population was poor in 2003. Thus movements in per capita income quintiles, especially into the bottom quintile, can proxy the household's vulnerability to income poverty.²⁵ Table 10 shows that among the estimated 16.5 million households in 2003, about three fourths of the bottom 20 percent of (per capita) income distribution, were in the bottom 20 percent in the period 2003 to 2008, and may thus be thought of as persistently poor, while a quarter of the bottom 20 percent in 2003 moved out of poverty either permanently or temporarily.

Table 10. Distribution of Filipino Households in 2003 by Urban-Rural Location (in 2003), and by Movements in and out of Vulnerability from 2003 to 2008

Vulnerability Status (2003 to 2008)	Urban	Rural	Total
Always Poor	2.06	12.56	14.62
Poor in 2003, but exited poverty permanently	0.92	2.78	3.7
Poor in 2003, but exited poverty temporarily	0.32	1.37	1.69
Always Non-poor	40.85	21.86	62.72
Non-poor in 2003, but entered poverty permanently	3.42	8.26	11.68
Non-poor in 2003, but entered poverty temporarily	2	3.59	5.59
Total	49.56	50.44	100

Note: Authors' calculations based on panel data from the FIES 2003, APIS 2004, FIES 2006, APIS 2007, and APIS 2008

Among the upper 80 percent of the per capita income distribution in 2003, one out of every five nonpoor have moved into poverty between 2004 and 2008 (either permanently or temporarily). One can also note that the relatively vulnerable households that moved in and out of the bottom twenty percent of income distribution (comprising about 23% of all Filipino households) is larger than the number of households that were persistently poor from 2003 to 2008 (comprising about 15% of all Filipino households).

Of the 2.4 million households estimated as persistently poor from 2003 to 2008, about 86 percent reside in the rural areas. Even among the 2.8 million non-poor households in 2003 that fell into poverty or moved in and out of poverty in the period 2004 to 2008, about two thirds (69%) of them live in the rural areas. Consequently, poverty, whether transient or chronic, is more of a rural phenomenon. However, interventions for the chronic and transient poor clearly must be differentiated, as the chronic poor may need long term investments (such as the 4Ps)

²⁵ However, to account for possible measurement error issues from FIES to APIS, we only consider movements out of the bottom quintile by at least two income quintiles as proxy for movements out of poverty. Changes in per capita income quintile across FIES and APIS may be a result of measurement error from differences in FIES and APIS instruments, but drastic changes are viewed and assumed to be the result of actual income dynamics.

to help them exit from poverty, while the transient poor would need safety nets to mitigate the income volatility they face.

The persistently poor belong to households that have a very large family size (of about 6, with 3 dependent members), and these households have the least income among the groups identified in Table 10. In contrast, the never poor belong to households that have a small family size (of about 4, with 1 dependent member). Those belonging to families that were non-poor in 2003, but moved into poverty had about an average family size in 2003, but by 2008 had one more dependent member. In contrast, those that were poor in 2003 but moved out of poverty had a family size of five in 2003, but by 2008, had one less dependent.

Poor households that managed to exit poverty appear to have a substantial increase of shares of employment within the household outside of agriculture from 2003 to 2006, especially among female members, while non-poor households that fell into poverty have increasing shares of employment of members in agriculture from 2003 to 2006. This may suggest the importance of having households get into the nonfarm economy.

Figure 3 shows the savings rates of Filipinos in 2003 and 2006 (see Figure 3). About 6% of total income is saved by the population. The poor, though, especially the extremely poor, are net dis-savers. This is why the poor have higher exposure to risks, in contrast to the non-poor, especially those that are not nearly poor. The nearly poor are found to save about 1% of their income, while those not nearly poor save as much as 11.5% of their income.

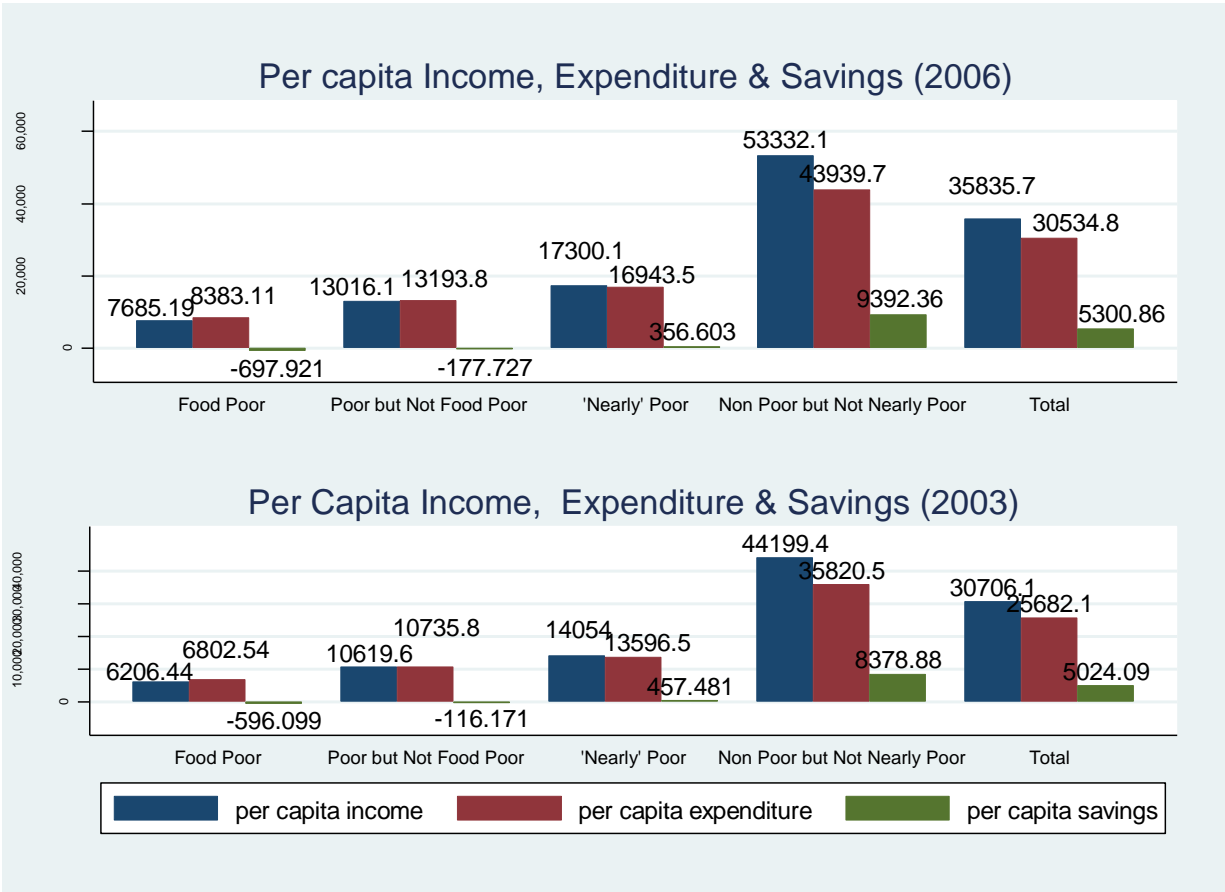


Figure 3: Average Per Capita Income, Expenditure and Savings in the Philippines of the Food Poor, the Poor who are not Food Poor, the Nearly Poor, and the Non-Poor who are not Nearly Poor: 2003 & 2006.
 Source: 2003 FIES and 2006 FIES

Income volatility can be readily observed across the years 2003 to 2008. Year-on-year income dynamics across the panel households can be traced by observing changes in income quintile ranks. (Table 11). Out of an estimated 82 million Filipinos in 2003, 15.3 million were estimated to be persistently poor from 2003 to 2008. About 47.9 million were persistently non-poor. The rest of the population, about 19.3 million persons experienced poverty: some of them were poor who moved out of poverty permanently (3.4 million) or temporarily (1.5 million); some them were non-poor in 2007, but became poor either permanently (9.7 million) or temporarily (4.6 million).

Table 11. Distribution (in Millions of Persons) in 2003 by Household Experience of Income Shocks in 2008 (as compared to 2007) and by Movements in and out of Poverty from 2003 to 2008

Vulnerability Status (2003 to 2008)	Increased Income Quintile by at least Two Ranks	No Change or Hardly any Change in Income Quintile Ranks	Decreased Income Quintile by at least Two Ranks	Total
Always Poor	0	14.62	0	14.62
Poor in 2003, became non-poor at some point, and stayed non-poor	0.9	2.64	0.16	3.7
Poor in 2003, and moving in and out of poverty	0.13	0.9	0.66	1.69
Always nonpoor	3.24	56.99	2.48	62.72
Non-poor in 2003, became poor at some point, and stayed poor	0	10.34	1.34	11.68
Non-poor in 2003, and moved in and out of poverty	2.24	2.61	0.74	5.59
Total	6.5	88.11	5.39	100

Note: Authors' calculations from the FIES 2003, APIS 2004, FIES 2006, APIS 2007, and APIS 2008

Among the 1.5 million Filipinos that were poor in 2003, but managed to exit poverty temporarily, about 40 percent experienced income shocks in 2008 (i.e., significant drops in income which resulted in a decrease in their income quintile status in 2008, compared to the previous year). Of the non-poor in 2003, about 14.3 million persons were estimated to move into poverty either permanently or temporarily: with about 1 in 9 of this group having experienced income shocks in 2008 (of about 11.5% percent). Thus, vulnerability to income poverty is not synonymous to poverty, and strategies for assistance for different types of vulnerability will have to vary: extremely poor households will have to be provided long-term solutions to help them exit poverty, while transitory poor household will have to be given short-term assistance to mitigate the impact of income volatility risks they face.

There was no strong evidence that income shocks here were due to job losses among heads of households. Rather, the loss (gain) of jobs of household members in terms of salaried work and wage earning occupations was a factor for the income change in the household.

About four percent of household income come from domestic transfers while five to seven percent come from overseas remittances. Remittances are a source of income shock for those who moved into poverty, while for those who moved out of poverty, remittances appear to have been one of the household's sources of increased income that assisted the household in its exit from poverty. Domestic remittances are roughly about 3 to 5 thousand pesos in 2003 prices across households of varying vulnerability status. In particular, overseas remittances, which form the bigger share of the total remittances are the source of income shock (coping

mechanism) for those who have moved into poverty (resp. those who have moved out of poverty).

Three in four Filipino households are aware of mechanisms for getting loans irrespective of income class but only a third actually make use of such instruments or have had access to such credit facilities. While lack of access to credit can put a household into poverty if it is non-poor, or if the household is poor, put it further into deeper poverty, there is no strong evidence that this is happening in the Philippines. A slightly higher percentage among those who move in and out of poverty, took out loans as compared with the never poor, and the poor who moved out of poverty. One might be led to conclude from such data that by availing loans, some households may be prolonging their vulnerability. It would have been interesting if data were available regarding the amount of loans that these households availed of from credit facilities.

Persistently vulnerable households and those that experienced income shocks may either be selling or pawning cell phones as a coping mechanism in the midst of these shocks. For these households, about ten percent that had a cell phone in 2007, had at least one less cell phone by 2008. Other assets, such as television sets and vehicles, albeit in a much more limited extent, seem to be also used by these households to smooth their consumption of other goods.

Families that were persistently poor or vulnerable to income shocks in 2008 changed their consumption patterns in the midst of these shocks, by spending (in real terms) about a third less than what they spent on the previous year. While total household spending went down for these vulnerable households from 2007 to 2008, the share of food expenses (to total household expenses) went up by an average of 3 percentage points, while the share of health medical expenses decreased from 5% to 2%. These households did not have enough mechanisms in 2008 to assist them in mitigating the risks they face given their limited insurance coverage compared to other households. The decision by government to expand universal coverage of PhilHealth may be a viable instrument to reduce vulnerabilities of families across the country.

Households tend to spend about 2 to 3 percent of total expenditure on health/medical expenses. About three to four percent of Filipino households, from all segments of the income distribution, experience a health shock²⁶ every year. All households that experienced a health shock in the period 2003-2008 spent around ten percent of total expenditures on health, and on the year when they experienced the health shock, average share of total spending on health could go from about fifteen percent to around forty percent of total household expenditure. As of 2008, insurance coverage, particularly for the biggest sources, was skewed toward urban

²⁶ We consider health shock in terms of outlier behavior in per capita health expenditures. In a particular year, if a household belongs to the j th per capita income quintile, for $j=1, 2, 3, 4, 5$, then it had a health shock if its per capita health expenditure was beyond the median of the income quintile by $j/2$ multiplied by the standard deviation of the per capita health expenditures of the income quintile.

areas, and surprisingly there was no difference in utilization of the government program for affordable medicines between those who belonged to families that experienced a health shock in the period 2003 to 2008, and those who did not experience a health shock.

Between 2003 and 2006, consumer prices rose by 21.2%. It appears that households coped with inflation by decreasing their total expenditures (in nominal terms). Food expenditures dropped in real terms by about 9.5%. The vulnerable who belong to families that were non-poor in 2003 had the biggest decrease (13%) in total family expenditures. Their food expenditures dropped in 2006 in real terms by 15% from their food spending in 2003. Groups that spent in real terms more in 2006 than in 2003 were the poor in 2003 that either moved in and out of poverty (10%), or appear to have permanently moved out of poverty (20%). Those who belong to households that moved out of poverty spent about 9% more on food in real terms in 2006 than in 2003, and thus their food shares dropped from 57% in 2003 to 52% in 2006.

From 2007 to 2008, consumer prices rose by about 9.3% (in 2003 prices). During this period, average household expenditure increased by about 5 percent in real terms, with only one group, the nonpoor that fell into poverty, coped with this price increases by having less family expenditures (specifically, 16% less in real terms than their expenditures in the previous year). For this group, food expenditures were about 15% less in 2008 than the previous year. In addition, in 2008, the family incomes of those who moved into poverty were less than their household expenditure. The biggest gainers in spending more in 2008 than in the previous year were the poor that exited poverty (that spent an average 25 percent more in 2008 than in 2007). For this group, food expenditures increased in 2008 by 18% in real terms from the previous year.

Martinez *et al.* (2014a and 2014b) similarly examine the extent of economic mobility in the Philippines by looking at panel data from FIES from 2003 to 2009. They divide the panel data into extremely poor, moderately poor, lower middle income, middle income, upper middle income and rich, according to its household consumption expenditure per capita and thresholds based on the international poverty lines.²⁷ Table 12 presents the transition matrix they produce from the FIES panel which summarizes how much economic movements occurred among the panel households. The table provides a distribution by rows. That is, the number provided in each row represents the proportion of households starting in a specific economic status and ending up in the same or another status. Thus, the numbers in each row sum up to 100%. The diagonal elements represent households that remain in the same per capita expenditure status. The numbers below the diagonal elements represent households that

²⁷ This has been adjusted to account for inflation and differences in household size.

moved down the expenditure ladder while the numbers above the diagonal elements represent households that experienced improvements in status.

Table 12. Per Capita Expenditure Transition Matrix, 2003 - 2009

		2009					
		extremely poor	moderately poor	lower middle	middle	upper middle	rich
2003	extremely poor	0.494	0.395	0.105	0.006	0.000	0.000
	moderately poor	0.219	0.422	0.334	0.024	0.001	0.000
	lower middle	0.042	0.198	0.566	0.186	0.007	0.000
	middle	0.004	0.023	0.293	0.578	0.093	0.009
	upper middle	0.000	0.000	0.049	0.530	0.364	0.057
	Rich	0.000	0.000	0.022	0.267	0.484	0.228

Source: Martinez et al., (2014a and 2014b)

Note: The distribution here is based on daily per capita expenditure in 2005 PPP US\$. The first group consists of expenditures not exceeding US\$1.25/day (extreme poverty), the second group consists of expenditures falling between US\$1.25 and US\$2 (moderate poverty), the third group consists of expenditures falling between US\$2 and US\$4 (lower middle), the fourth group consists of expenditures falling in between US\$4 and US\$10 (middle), fifth group consists of expenditures falling in between US\$10 and US\$20 (upper middle) and last group consists of expenditures exceeding US\$20/day (rich).

Filipino households are susceptible to key shocks and sources of vulnerability on their incomes and expenditures. These shocks include 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. As far as the latter is concerned, note that in 2009, the Philippines was reported²⁸ by the Centre for Research on the Epidemiology of Disasters (CRED) to have had the most number of natural disasters²⁹ among countries across the world with its experience of 25 disaster events. Using CRED's database but restricting attention to intense³⁰ natural disaster events, Thomas, Albert and Hepburn (2014) pointed out that intense disaster events are on the rise, and that some economies are more at-risk from intense climate-related disasters. Thomas, Albert and Perez (2013) also point out that while the number of cyclones is not increasing in the Philippines from 1971 to 2000, there is evidence that these cyclones are having more precipitation in the recent years. Climate change

²⁸ 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)

²⁹ CRED defines disaster as “a situation or event which overwhelms local capacity, necessitating a request to a national or international level for external assistance; an unforeseen and often sudden event that causes great damage, destruction and human suffering.” The CRED monitors global disasters in its Emergency Events Database (EMDAT), and categorizes them into natural and technological groups. The natural disasters are further divided into five subgroups: (a) geophysical events; (b) meteorological events; (c) hydrological events; (d) climatological events; and (e) biological disasters.

³⁰ Intense disasters are disasters which killed 100 or more people, or affected 1,000 or more persons.

has become a game changer in the Philippines. When one considers the distribution of poverty and population across regions, we observe a nexus among weather-related disaster risks with (population) exposure to these hazards, as well as poverty (which is inversely related to adaptive capacity of communities).

Filipino households are not homogenous, and they may be clustered by a series of interrelated socioeconomic dimensions of welfare. While welfare and poverty are multidimensional, there is little consensus on whether it is useful to consider producing a multidimensional measure of poverty especially since one can always look at deprivation along various dimensions, and adopt specific policy measures to address these dimensions. Monetary poverty (whether income or expenditure) may not be fully sufficient to provide a picture of welfare conditions, but there is a lot of overlap between income poverty and other dimensions of poverty. For instance, those at the lower part of the per capita income distribution do not have enough access to protection mechanisms against health shocks. Table 13 illustrates that even for all sources of insurance coverage, including the top sources such as Philhealth and SSS membership, coverage is very much skewed toward the non-poor, especially those at the upper 30 percent of the (per capita) income distribution.

Table 13. Percentage of Filipino Households with Members that have some form of Insurance, by Per Capita Income Group: 2007, 2008

Type of Insurance	2007 Per Capita Income Group				2008 Per Capita Income Group			
	Bottom 30%	Middle 40%	Upper 30%	All Groups	Bottom 30%	Middle 40%	Upper 30%	All Groups
GSIS	0.6	4.1	19.9	8.3	0.6	3.9	20.6	8.4
SSS	10	33.1	57.1	34.7	12.2	32.8	57.2	35
Philhealth	25.6	37.4	60.7	41.8	25.1	37.3	63.7	42.5
Private Health Insurance	0.4	1.6	6.6	2.9	0.6*	1.7*	8.2*	3.5*
Health Maintenance Organization	0.1	0.4	2.1	0.8				
Pre-Need Insurance Plan	0.2	0.7	3.8	1.6	0.3	0.7	4.7	1.9
Life Insurance	0.6	1.9	8.5	3.7	1	2.2	8.6	3.9
Others	0.7	2.2	6.8	3.3	1.6	3.2	8.3	4.4
Any Kind of Insurance	31	49.8	73.9	52.6	31.8	48.5	75	52.5

* Private Health Insurance or Health Maintenance Organization membership

Source: APIS 2007 and APIS 2008

Thus government is working toward ensuring that coverage for Philhealth and related programs improves, especially for the poor. But even if households are not poor, those who are nearly poor would similarly require assistance as any health shock may cause them to fall into poverty.

Exposure to risks that affect livelihood of households would depend on a number of key factors, such as 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 (especially if the area is disaster prone, or has security issues), and the quality of governance in the locality.

Unemployment rates are higher for those who belong to households who are non-poor (Table 14), suggesting that the poor are not having enough decent employment. While unemployment rates are still in the single digit levels for the years 2003 and 2006, the unemployment rate among food poor households rose by 1.2 percentage points in 2006.

Table 14. Percentage Distribution of Labor Force Aged 15 years old and above by Sector of Employment and by Sex, across Poverty Status: 2003 and 2006

Poverty Status	Agriculture						Manufacturing					
	2003			2006			2003			2006		
	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes
Food Poor	78.7	61.5	73.3	74.1	58.9	68.5	8.9	8.0	8.9	9.4	6.6	8.8
Poor but not Food Poor	66.5	47.9	60.2	62.8	47.2	56.8	13.1	8.3	12.2	13.2	7.7	12.0
'Nearly' Poor	57.1	41.7	51.2	52.8	39.2	47.5	15.6	9.3	14.4	16.2	8.2	13.9
Non-poor but not Nearly Poor	28.9	15.1	24.0	26.3	13.7	21.4	20.1	12.1	17.6	18.0	10.5	15.4
Total	39.3	23.2	33.6	38.2	23.4	32.4	18.0	11.3	16.1	16.4	9.7	14.2

Poverty Status	Services						Unemployed					
	2003			2006			2003			2006		
	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes
Food Poor	9.5	26.6	14.7	12.7	28.8	18.2	2.9	4.0	3.2	3.8	5.7	4.4
Poor but not Food Poor	16.8	37.8	23.5	19.2	39.9	26.2	3.6	6.1	4.1	4.7	5.2	5.0
'Nearly' Poor	23.6	42.3	29.9	25.2	47.4	33.1	3.7	6.7	4.4	5.9	5.3	5.5
Non-poor but not Nearly Poor	44.9	67.0	52.6	48.1	69.5	56.3	6.1	5.8	5.8	7.6	6.3	6.9
Total	37.2	59.8	44.9	38.8	60.9	47.0	5.4	5.8	5.3	6.7	6.0	6.3

Source: 2003 and 2006 FIES

Unemployment is more an issue among the non-poor than among the poor, as the poor have limited options, while the non-poor may choose to be unemployed. Among the poor, the share of the labor force that was engaged in agriculture dropped by 13.8% (from 65.6 percent). Employment in the services sector rose between 2003 and 2006, with the share of services standing around half percent of the labor force (47.0% in 2006, compared to 44.9% in 2003).

Education correlates with living standards: practically nineteen out every twenty poor persons in 2009 belong to households where the heads have little or no schooling (Table 15). Lack of education of the household head limits earning potentials of the household.

Table 15: Poverty in 2009, by Household Head's Education Level

Educational Attainment of Household Head	Poverty Headcount Rate	Distribution of the Poor	Distribution of Population
At most Elementary Graduate	32.6	96.1	78.0
Some High School	7.5	3.3	11.7
Beyond High School	1.6	0.6	10.3
Total	26.5	100.0	100.0

Note: Authors' calculations from FIES 2009

Education is the best security for a better future, but opportunity costs for poor families to send their children to school are rather high, especially as children may be expected to help out in household income and livelihood. (Albert *et al.*, 2012). Various household surveys of NSO suggest that in 2006, about 3.5 percent of children aged 5 to 15 years old (i.e., 1.1 million children) are engaged in economic activities. This includes (illegal) child labor and the involvement of children in work, although these are not equivalent.³¹ When children are in school and are involved in some labor activity, they are more likely to drop out of school. The proportion of these children at work increases with age, and is higher among boys than among girls. Of these children at work, about nine hundred seventy thousand come from poor families. About seven in ten of these poor children at work are in the agriculture sector.

While a smaller proportion of families in 2008 had children between the ages of 5 to 15 years old that were out of school compared to 2007, even among the persistently poor, there is evidence to suggest that families that were non-poor in 2003 but with income shocks in 2008 were coping with these shocks by deciding not to send their children to school. The profile of families vulnerable to income poverty against those that did not experience income shocks in 2008 also suggests a clear difference as far as non-participation of children in school. Such a coping strategy is clearly going to have its long term impact on the income prospects of families, and may only further exacerbate their future welfare conditions.

Current efforts by government to provide conditional cash transfers (thru the 4Ps) to extremely poor families with the condition that they send their children to school serve well in lessening the opportunity costs of sending children to school. Current targeting systems for the 4Ps though are limited to poor families, and have not extended to nearly poor families, who may be at high risk of falling into poverty, and who may need assistance as has been shown here.

³¹ Pursuant to R.A. No. 7658, the Philippine Department of Labor and Employment, defines "child labor" as "the illegal employment of children below the age of fifteen, where they are not directly under the sole responsibility of their parents or legal guardian, or the latter employs other workers apart from their children, who are not members of their families, or their work endangers their life, safety, health and morals or impairs their normal development including schooling. It also includes the situation of children below the age of eighteen who are employed in hazardous occupations." In consequence, children above 15 years old but below 18 years of age who are employed in non-hazardous undertakings, as well as children below 15 years old who are employed in exclusive family undertakings where their safety, health, schooling and normal development are not impaired, are not engaged in (illegal) "child labor."

4. Inequalities in Labor and Employment

As was pointed out in earlier sections of this report, there has been recognition that economic growth in the Philippines needs to be more inclusive. The World Bank Philippine Country Office (2013) has suggested that creating more and better jobs are necessary to ensure shared prosperity, and reduce poverty. It was pointed out that formal sector employment can be expanded especially with a fast growing economy, but this would not be enough to absorb everyone in need of a job, or a better job. The residual would have to find employment informally, and the challenge here is to raise incomes of those in the informal sector.

Information on labor and employment is regularly generated by the PSA through the quarterly LFS. In 2004, the official definition of unemployment³² was changed by the Philippine Statistical System to align it to suggestions made by the International Labor Organization. Unemployment is currently defined as people who do not have work in the past week, have actively looked for work, and are available for work. When we examine historical data on the unemployment rate (total unemployed in relation to the labor force, which comprises the employed and unemployed) we see that unemployment rates have been fairly stable across the years whether using the current definition or the old definition of unemployment that did not include availability for work (Figure 4).

³² Previous to 2004, the unemployed are persons 15 years old and over as of their last birthday and are reported as: (1) without work, i.e., had no job or business during the basic survey reference period; AND (2) seeking work, i.e., had taken specific steps to look for a job or establish business during the basic survey reference period; OR not seeking work due to the following reasons: (a) tired/believe no work available, i.e., the discouraged workers who looked for work within the last six months prior to the interview date; (b) awaiting results of previous job application; (c) temporary illness/disability; (d) bad weather; and (e) waiting for rehire/job recall. After 2004, the definition of unemployment was changed. A third criterion must also be satisfied, aside from having no work, and actively seeking work --- being available for work, i.e., these persons should be available and willing to take up work in paid employment or self-employment during the basic survey reference period, and/or would be available and willing to take up work in paid employment or self-employment within two weeks after the interview date. This change in definition of the unemployed was carried in fulfillment of the National Statistical Coordination Board (NCSB) Resolution No. 15, Series of 2004, issued on 20 October 2004. International standards on this matter have been laid down in Resolution No. 1 adopted by the 13th International Conference of Labor Statisticians (ICLS) in October 1982 and expounded in the 1990 publication of the International Labor Organization (ILO), *Surveys of Economically Active Population, Employment, Unemployment, and Underemployment: An ILO Manual on Concepts and Methods*. It should be noted that out of 88 countries regularly conducting labor force surveys, in 2004, only 10 countries did not include the availability criterion, and the Philippines was the only country in Asia which did not use the availability criterion

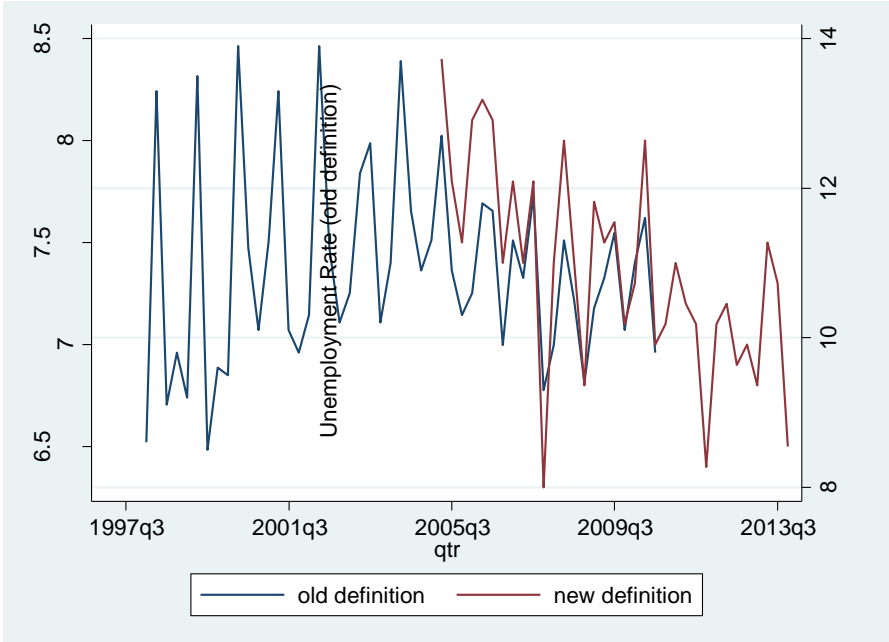


Figure 4. Trends in Quarterly Unemployment Rates in the PH (Using Old and Current Definitions of Unemployment), 1997-2013.

Source: PH Statistics Authority

In addition, it has been observed (see Figure 5) that in some years (2008, 2012, and 2013) when the economy had high growth rates, the corresponding employment growth was low. Analysts have thus described the current economy growth as being a jobless growth.

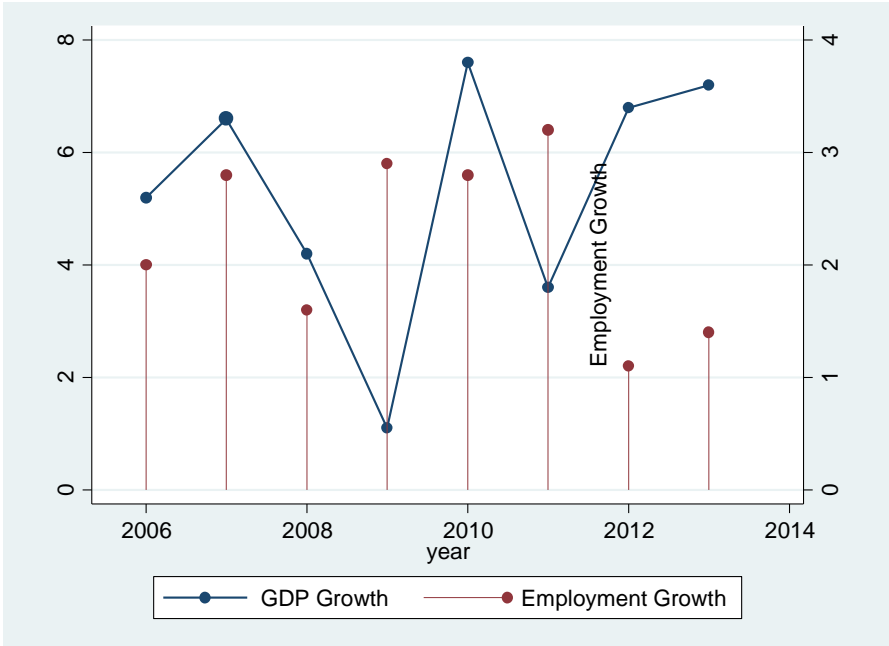


Figure 5. Annual Growth Rates in GDP and Employment, 2006-2013.

Source: PH Statistics Authority

Noticeable also in Figure 5, during recent years when there was low GDP growth, particularly in 2009, ironically there was a surge in employment (and as will be shown later, the creation of more jobs was actually a reaction of the labor market to economic slowdown, but the jobs created here were largely of the vulnerable type of employment).

Aggregate pictures mask dynamics as was shown in the previous section. When indicators such as official poverty rates have measly differences across time that are not statistically significant, that does not necessarily mean that no poor person exits poverty as some areas/subpopulations/sectors may be improving, and some may be deteriorating to yield a net change of zero. In particular, some of the poor have become non-poor, but some non-poor fell into poverty. Similarly, when unemployment rates are flat, does this mean no jobs are being created given that the Filipino population, including our labor force³³, continues to grow? Disaggregating both employment and output data according to major sectors can be very revealing (see Figure 6). The Philippines is dominated by the services sector, whether in output or employment.

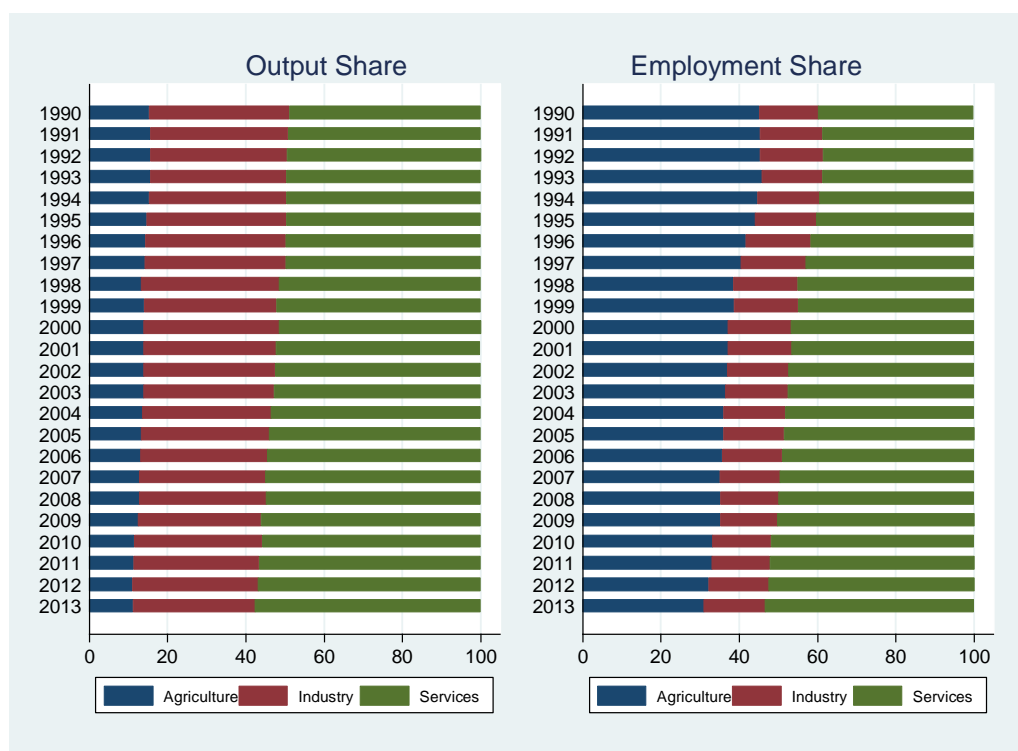


Figure 6. Output and Employment Shares in the Economy, by Major Sector; 1990-2013.

Source: PH Statistics Authority

³³ The Labor Force or Economically Active Population refers to the population 15 years old and over who contribute to the production of goods and services in the country, and who are either employed or unemployed. Those who are not in the Labor Force refers to the population 15 years old and over who are neither employed nor unemployed, e.g. persons who are not working and are not available during the reference week and persons who are not available and are not looking for work because of reasons other than those previously mentioned. Examples are housewives, students, disabled or retired persons and seasonal workers.

With regard to output, as of 2013, the share of services is more than half (57.7%) of total national output. The output share of agriculture to the economy has always been relatively minimal, 15.4% in 1990, and 11.2% in 2013. Even if we trace GDP shares of major sectors all the way back to the 1946, we would find that the shares of agriculture, industry and services sectors were then at 29.7%, 22.6%, and 47.7%, respectively, contrary to the belief of some that we were once an agricultural economy. The economy has only become less agricultural in recent times, with services and industry sectors getting more of the share of the economy.

As regards employment, the agriculture sector has also had decreasing trends in its share of total employment from 45.2% in 1990 to about a third (31.0%) in 2013. In the same period, the service sector took increasing shares of total employment from two-fifth (39.7%) to more than half (53.4%). Industry, which had a share of about a 15.0% of aggregate employment in 1990, had its share decrease slightly to 14.6% in 2009, and increase marginally to 15.6% by 2013.

In 2013, the largest growth in output of 9.5% came from industry, which had also the highest growth in employment (3.4%), while agriculture, which only had a mere 1.1% growth in output, even had a deceleration in employment figures. A structural transformation in the economy may thus be arising, even if overall employment rate has been relatively flat.

Historically, the share of employment in industry has been lowest among the three major sectors. Even the current robust growth in output of the industry sector has not translated into more jobs (and lower unemployment) because of the low base figures of employment in the industry sector. In the short term, for unemployment rates to drop considerably, employment growth must occur in agriculture (which has a bigger share of employment than industry). Volatility in employment (as well as in output) in agriculture, however, has been observed especially on account of extreme weather events. In the long run, employment should start shifting from agriculture to industry, the same path taken by many neighboring economies which are in better development conditions.

Another disaggregation of employment in the country, by full-time and part-time employment³⁴, is equally revealing. Figure 7 shows that full-time employment in the Philippines increased during periods of high economic growth (except for 2012) and contracted during slowdown, while part-time employment has had reversed directions from those of economic growth (except in 2008, the year when the slowdown in the global economy started to take effect).

³⁴ Those in full-time employment work 40 hours or more during the reference week, while those in part-time employment work less than 40 hours during the reference week.

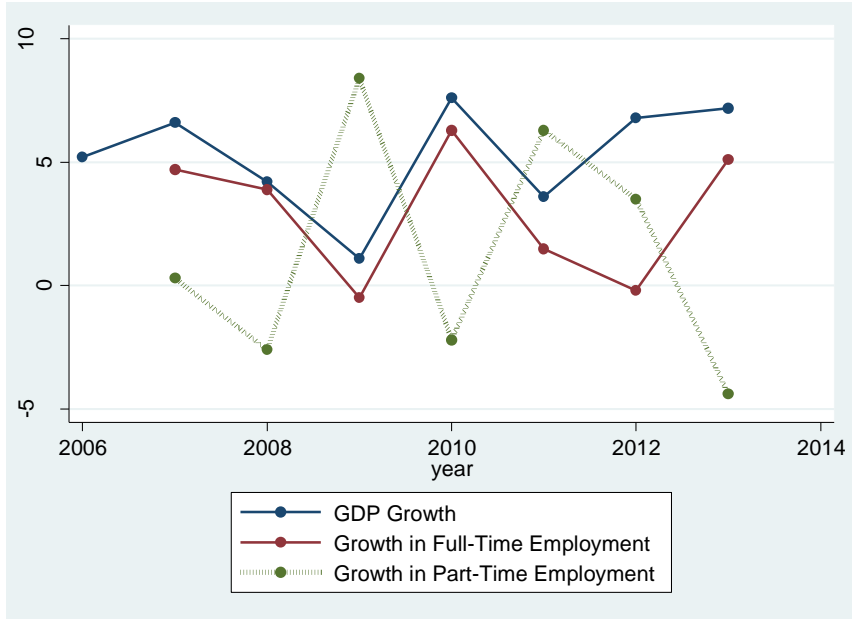


Figure 7. Annual Growth Rates in GDP, Full Time and Part Time Employment, 2007-2013.

Source: PH Statistics Authority

Thus, the economy isn't really having jobless growth! In recent times, the small net changes in the unemployment rates are the result of full-time jobs being created in the industry and services sectors and part-time jobs lost in the agricultural sector. In addition, Figure 8 illustrates a decreasing share of the total employment that is engaged in vulnerable work.

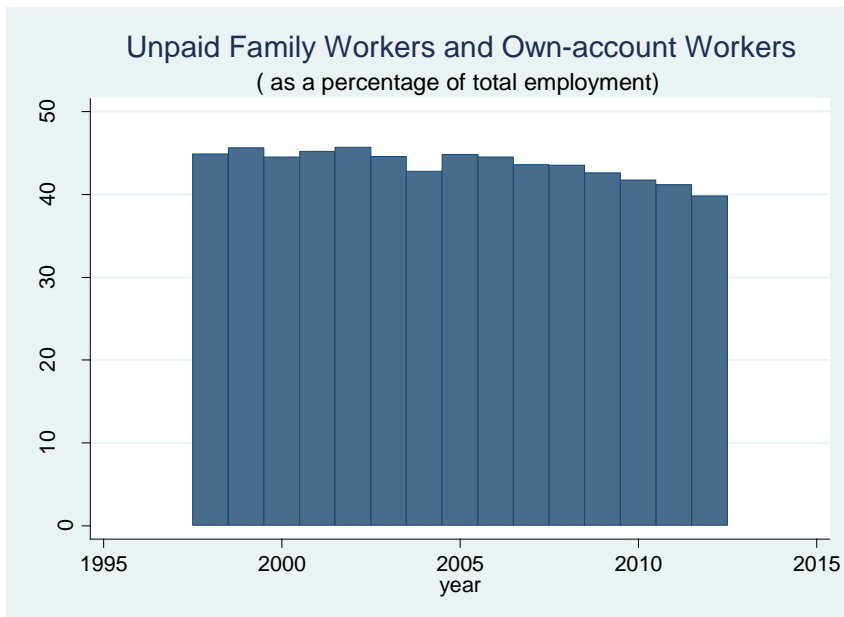


Figure 8. Proportion of Total Employment in Vulnerable Work (Unpaid Family Workers and Own-account Workers); 1998-2012.

Source: PH Statistics Authority

Table 16 lists unemployment rates across South East Asian economies. We easily notice that the Philippines has the highest unemployment rates. However, this should be taken in the proper context. For some neighboring economies, such as Cambodia and Lao PDR that have very low unemployment rates, a considerable portion of those employed in these countries are actually engaged in the informal sector and in vulnerable employment (ADB, 2013).

Table 16. Unemployment Rates in South East Asian Economies, Selected Years 1990 to 2012.

Country Name	1990	1995	2000	2005	2010	2011	2012
Indonesia			6.1	11.2	7.1	6.6	6.1
Cambodia			2.5		0.4	0.2	0.2
Lao PDR		2.6		1.4			
Malaysia	4.5	3.1	3.0	3.5	3.4	3.1	3.0
Philippines	8.1	8.4	11.2	7.7	7.3	7.0	7.0
Singapore		2.2	3.7	4.1	3.1	2.9	2.8
Thailand	2.2		2.4	1.3	1.0	0.7	0.7
Timor-Leste					3.9		
Vietnam			2.3			2.0	1.8

Source: World Bank.

In the Philippines, unemployment is actually not a concern of the poor. Poverty incidence among the unemployed is consistently lower than those employed, whether in 2006, 2009 or 2012 (see Table 17). A considerable share of our unemployed, about 81% in 2012, are not poor (i.e. they may be unemployed by choice, or they may just be choosy in finding jobs). Many of the poor are not unemployed since they cannot afford not to engage in economic activities. The PSA also suggests that among the self-employed and unpaid family workers (engaged in vulnerable employment), poverty incidence is estimated at 29 percent in 2012.

Table 17. Poverty Incidence among the Employed and Unemployed; 2006, 2009, 2012.

<i>Employment Status</i>	2006	2009	2012
Employed	22.9	22.8	21.9
Unemployed	16.5	16.8	18.7

Source: PH Statistics Authority

Figure 9 shows that educational attainments of the unemployed are actually quite high, further confirming that unemployment is less of an issue among the poor than underemployment. The underemployed consists of employed persons who want to have additional hours of work in their present jobs, or an additional job, or a new job with longer working hours. Of these underemployed, some are visibly underemployed, who work less than 40 hours in the reference week of the LFS, while the rest are invisibly underemployed. The latter work 40 hours or more. De Dios (2013) suggests that the bigger challenge in the jobs agenda is addressing underemployment. But, there is some evidence suggesting that structural change is happening

for the visibly underemployed (with part-time employment reducing, and full-time employment on the rise). Despite this decline, however, the magnitude of persons in vulnerable employment is considerable, and will need policy attention so that those in vulnerable employment are provided other sources of income, or mechanisms to mitigate risks from the income fluctuations they likely obtain from this type of employment.

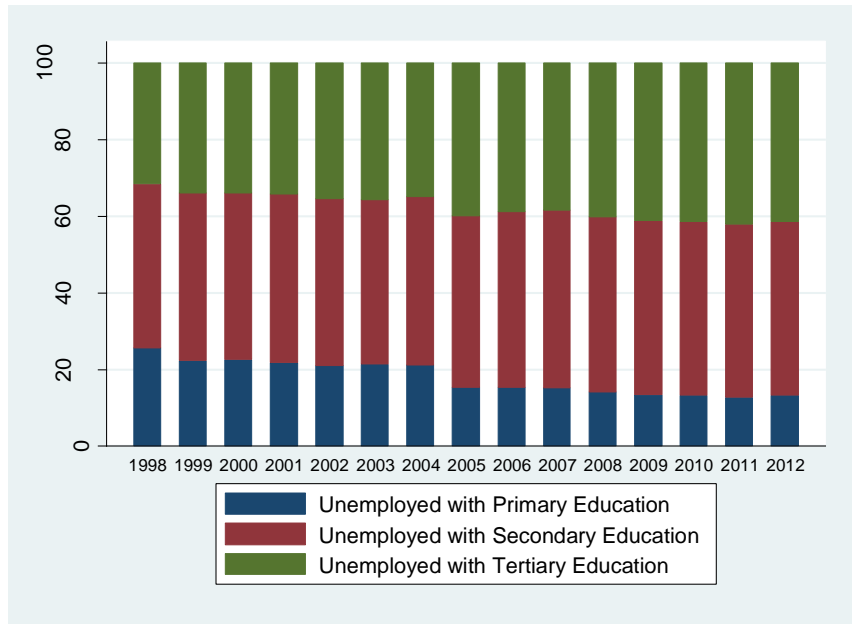


Figure 9. Unemployed by Educational Attainment, 1998-2012.

Source: LFS, PSA

Albert (2012) describes the poor underemployed and the poor unemployed, and suggests that the former are relatively more concentrated in the NCR and neighboring regions, while about 6 of 10 poor underemployed belong to the agriculture sector, and about half of poor underemployed are engaged as laborers and unskilled workers and, about three in ten of them are farmers, forestry workers and fishermen. Table 18 lists the distribution of the poor unemployed and the poor underemployed, from which we see that the bulk of the poor unemployed are young: about three in five have ages ranging from 15 to 24 years, both in 2006 and in 2009, whereas among the poor underemployed. Not surprisingly, most of the poor unemployed are single: about 6 or 7 in ten of them. About three in five are male. About thirteen out of twenty have not completed high school. In contrast, the poor underemployed, who outnumber the poor unemployed by at least five times, are largely among the age group 35-44, mostly married, men. Similar to the poor unemployed, the poor underemployed have limited educational attainments, about 4 in 5 have not finished high school. In consequence, current investments made by government in the conditional cash transfer will improve the chances of the poor to break away from poverty.

Table 18. Distribution of Poor Unemployed and Underemployed by background characteristics; 2006, 2009.

<i>Background Characteristics</i>	<i>Poor Unemployed</i>				<i>Poor Underemployed</i>			
	2006		2009		2006		2009	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Age group								
15-24	205,683	55.3	288,969	62.1	460,243	20	490,663	20.2
25-34	64,500	17.3	67,339	14.5	581,442	25.3	489,789	20.2
35-44	52,108	14	54,532	11.7	682,816	29.7	693,391	28.6
45-54	23,705	6.4	29,158	6.3	382,671	16.6	487,988	20.1
55-64	3,794	1	18,050	3.9	151,391	6.6	33,009	1.4
65 and over	22,273	6	7,058	1.5	40,611	1.8	228,279	9.4
Total	372,062	100	465,106	100	2,299,172	100	2,423,118	100
Sex								
Male	230,918	62.1	298,669	64.2	1,650,073	71.8	1,705,143	70.4
Female	141,144	37.9	166,437	35.8	649,100	28.2	717,975	29.6
Total	372,062	100	465,106	100	2,299,172	100	2,423,118	100
Marital Status								
Single	226,807	61	316,260	68	545,202	23.7	586,215	24.2
Married	133,284	35.8	132,534	28.5	1,659,194	72.2	1,694,231	69.9
widowed	8,024	2.2	5,137	1.1	64,504	2.8	109,447	4.5
divorce/	3,946	1.1	10,314	2.2	30,272	1.3	31,779	1.3
unknown	0		861	0.2	0	0	1,445	0.1
Total	372,062	100	465,106	100	2,299,172	100	2,423,118	100
Highest grade completed								
no grade completed	7,822	2.1	9,588	2.1	84,897	3.7	113,519	4.7
elementary undergraduate	81,453	21.9	91,942	19.8	814,085	35.4	856,947	35.4
elementary graduate	68,928	18.5	74,245	16	580,574	25.3	578,208	23.9
high school undergraduate	79,528	21.4	111,550	24	392,904	17.1	406,840	16.8
high school graduate	98,016	26.3	131,293	28.2	332,403	14.5	361,292	14.9
college undergraduate	25,093	6.7	30,871	6.6	77,043	3.4	87,379	3.6
college graduate or higher	11,221	3	15,617	3.4	17,266	0.8	18,933	0.8
Total	372,062	100	465,106	100	2,299,172	100	2,423,118	100

Source: LFS and FIES, PSA

In consequence, as far as labor is concerned, the ultimate focus of government, and more importantly the private sector (which is the main engine of the economy), should be on creating quality jobs to sustain the growth momentum in the economy. But this focus cannot be taken in isolation of required investments in education (both on the supply side and the demand side).

5. Inequities in Basic Education

In the previous section, we noticed that underemployment and the quality of employment have been barriers for improved income, especially for the poor. Inequalities in education attainment have been the root of vulnerable employment, thus improving opportunities for school participation and other education outcomes for the poor would be the mechanism for social inclusiveness so that everyone, whether poor or non-poor, rural or urban folk, can fully participate in economic growth processes and the progress of Philippine society.

Inequities in education are intrinsically important to address since these are unacceptable to any society. Since the adoption of the Universal Declaration of Human Rights in 1948, education, especially basic education, has been viewed as a human right. Various global human rights treaties, such as the 1960 United Nations Educational, Scientific and Cultural Organization (UNESCO) Convention against Discrimination in Education, the 1966 International Covenant on Economic, Social and Cultural Rights (1966), the 1981 Convention on the Elimination of All Forms of Discrimination against Women, and the 2006 Convention on the Rights of Persons with Disabilities, have affirmed this view of education. In addition, the Education for All (EFA) initiative and the Education Goals in the Millennium Development Goals (MDGs) also affirm the right, particularly, of children to primary education. The High Level Panel (HLP) Report (<http://www.post2015hlp.org/accessible-report/>) that initiated the emerging post 2015 Development Agenda on Sustainable Development Goals has also identified the importance of education as a key driver for improving capabilities and opportunities for the poor, the vulnerable and other marginalized sectors.

Education inequities limit people's empowerment, capabilities and full participation in social and, ultimately, in economic growth processes. The basic skills and competencies gained from increased levels of education offer much better income prospects for rural folk, for those in the informal sector, for those in vulnerable employment. More education also enables those in paid formal employment to have higher wages. Psacharopoulos and Patrinos (2002) also estimate that globally, every additional year of schooling yields generally 12% returns in wages, although such returns vary considerably across countries and income levels. Higher incomes brought about by improved education attainment ultimately boost innovation and higher productivity, which, in turn, drive growth in an economy (Barro, 2013).

The latest report of ADB (2014) on a framework for inclusive growth discusses the importance of education as a pathway for inclusive growth. In the report, estimates of education poverty rates and extreme education poverty rates are presented for select countries, including the Philippines. Table 19 shows that between 1993 and 2008, the proportion of the youth (aged 15–24) in the country with less than 4 years of schooling (called education poverty rate) had hardly changed from 5.3% in 1993 to 4.9% in 2008. Wealth, gender and rural-urban disparities are challenges to achieving equity in years of schooling of the youth. Notice that the males are more education poor than females, rural areas are more education poor, and the share of our youth with less than 4 years of schooling among the poor (19.0%) was as much as four times the national average (5.3%). Extreme education poverty, or the proportion of the youth with less than 2 years of schooling, was also unchanged at 1.9% from 1993 to 2008, and similarly have gender, wealth and rural-urban disparities that need to be addressed. The country also has had little improvements in years of schooling among the youth in the period 1993 to 2008, before government expanded the coverage of *Pantawid*.

Table 19. Proportion of Youth Aged 15 -24 in the Philippines with less than 4 years of schooling (education poverty rate) and less than 2 years of schooling (extreme education poverty rate), 1993 and 2008.

	Extreme Education Poverty Rate		Education Poverty Rate	
	1993	2008	1993	2008
Lowest Quintile	7.2	19.0	7.2	18.8
Highest Quintile	0.6	1.2	0.3	0.7
Rural	3.0	8.5	3.2	7.9
Urban	1.0	2.7	0.7	2.3
Male	2.1	6.7	2.2	6.5
Female	1.7	3.9	1.6	3.3
National	1.9	5.3	1.9	4.9

Note: Taken from ADB (2014). Estimates prepared by ADB staff using data from 1993 and 2008 National Demographic Health Survey, conducted by PSA.

A report on Out of School Children (OOSC)³⁵ prepared by PIDS (2012) for UNICEF and DepED suggests that in school years 2007-2008 and 2008-2009, estimates of school participation in the Philippines vary depending on the data source (see Table 20). In school years 2007-2008 and 2008-2009, administrative data from the Department of Education (DepED) together with projections of school-age children suggest that school participation of primary age children at the primary level was around 90% (while survey-based estimates are around 95%). School participation rates of secondary age children at the secondary level are estimated at around 60% also from the administrative data (while survey based estimates are around 5 percentage

³⁵ Out of school children refer here to (a) five year old children who are not in preprimary or primary school; (b) children of primary-school age (6 to 11) who are not in primary school or secondary school; and (c) children of secondary-school age (12-15) who are not in primary school or secondary education.

points higher, i.e. 65%). The statistics on school participation from surveys in Table 20 yield an estimated number of five to fifteen-year-old OOSC at 2.9 million in 2008-2009.

Table 20. School Participation/Attendance Rates in 2007 and 2008 by Age and by Data Source

Age Group	2007				2008					
	BEIS	APIS	LFS July	UIS	BEIS	APIS	LFS July	FLEMMS	LFS Oct	UIS
5 Years Old	47.9 ^a	67.2	67.3		56.3 ^a	65.8	65.9	-	65.9	
Primary Age (6 to 11 years old)	88.3 ^b (88.7 ^c)	94.4 (89.8 ^d)	93.8	87 (88 ^c)	89.2 ^b (89.6 ^c)	95.2 (90.8 ^d)	94.9	92.3 (85.2 ^d)	94.8	88 (88 ^c)
Secondary Age (12 to 15 years old)	59.9 ^b (59.9 ^c)	88.5 (65.8 ^d)	87.8	60	60.5 ^b (60.5 ^c)	89.6 (66.3 ^d)	90.0	87.2 (60.1 ^d)	88.9	61

Notes: ^a based on BEIS enrollment in public and private kindergarten schools, as well as DSWD data on children served in day care centers; ^b based on revised projections of school-age population; ^c adjusted net enrollment ratio (ANER) is the ratio of the number of children in an age range that is enrolled in the proper education tier (or higher) relative to the number of children of the school-age range; ^d adjusted net attendance rates (ANAR) is the ratio of the number of children in an age range that attends the proper education tier (or higher) relative to the number of children of the school-age range

Recent waves of the APIS suggest that the number of five to fifteen-year-old OOSC have decreased to 2.6 million by 2010, and further to 1.8 million by 2011. The decrease in OOSC is largely on account of the increase in school participation of 5 to 14 year old children, on account of the *Pantawid Pamilya Pilipino* Program (4Ps), the conditional cash transfer (CCT) program implemented by government. Pantawid was designed to assist poor households to break free from intergenerational poverty by investing in the education of their children, and health of their household members.

Household surveys ask the reasons why children are not in school. Table 21 lists these reasons among five year old OOSC and among primary school-age children in 2007 and 2008.

Table 21. Percentage of Five year old and Primary School-Age OOSC in 2007 and in 2008, by Reason for Nonattendance in School, by Data Source.

Reason for Nonattendance	Five year old Children (%)		Six to eleven year old Children (%)		
	APIS 2007	APIS 2008	APIS 2007	APIS 2008	FLEMMS 2008
Lack of personal interest	3.83	6.94	24.49	31.68	23.78
High cost of education	4.53	3.62	12.90	11.52	13.32
Too young to go to school	83.52	80.46	34.03	29.21	34.86
Illness/disability	0.54	1.06	8.08	9.48	6.76
Lack of nearby schools	4.53	3.88	8.61	7.45	7.66
Employment	0.00	0.00	0.31	0.13	0.09
Other reasons (e.g., school records, marriage*, housekeeping)	3.05	4.04	11.55	10.53	13.53

Source: APIS 2007, APIS 2008, and FLEMMS 2008, PSA; *including marriage by children

In both 2007 and 2008, about four out of every five were viewed as too young for schooling. In 2007, among five year old OOSC, about one out of twenty-five was reported to lack interest, while in 2008, this rate increased to one out of fifteen. When data are further disaggregated into urban and rural areas, we find that in 2007 and 2008, another prominent reason cited in urban areas, aside from being too young or lacking interest was cost of schooling. In the rural areas, on the other hand, school accessibility was the more prominent reason for nonattendance of five year old children. The reasons for nonattendance of five year old

children hardly varied by sex: the share of boys (82.9 percent) that were too young for schooling is practically the same as that of girls (77.5 percent).

Among primary school-age children (aged six to eleven), about three-fifths of primary school-age children were not in school either because the children were thought to be too young for schooling (especially among six year old and seven year old children) or because the children lacked personal interest. About ten percent of six to eleven year old children were not in school because of cost issues while five percent were not in school due to school accessibility issues (with the figures higher in rural areas). Among boys six to eleven years old who were not in school, the primary reason for being out of school was lack of interest while among girls of the same age group, the major reason for nonparticipation continued to be that the child was considered too young for schooling.

A logistic regression model³⁶ explaining lack of interest in school (see Table 22) suggests that the mother's level of education explains some of this lack of interest along with advancing age and having a male household head. Some qualitative investigations suggest that while parents, principals, and teachers report that some parents do not support their children's schooling, majority of the parents do. Mothers tend to spend time with children who are in the younger grades, helping them with the children's assignments, projects, and accompanying them to school every day. The mother guides the children through school assignments until at least the middle of primary school. Field work and Table 22 show that a child's lack of interest for schooling is a capacity issue on the part of the parent (especially the mother), which ultimately affects the child's interest in schooling. Thus, special school-based interventions like remedial classes for children who are behind in reading or math skills, can augment shortcomings in support provided by mothers. In the higher grades, however, parents who have little education need to provide at least emotional and resource support. It can be unreasonable to expect parents with little or no education to be able to provide similar quality support provided by more educated parents. These parents may not even attend parent-teacher association (PTA) meetings or may not show up when guidance counselors call them in as they find it difficult to understand what is going on and more importantly, they really cannot afford to take time out

³⁶ A logistic regression explains a binary outcome (here, whether a child not in school lacks interest or is not reported to lack interest) from a set of explanatory variables X_1, X_2, \dots, X_k , that may be binary, continuous, or a mix of any of these. The relationship between the binary response variable and the explanatory variables is given by:

$$\log\left(\frac{\theta}{1-\theta}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k$$

where θ and $1-\theta$ respectively represent the probability of being an OOSC and the probability of attending school. Note also that for categorical explanatory variables, a set of binary indicator variables are first generated to represent membership (or non-membership) in the categories, with one of the indicator variables serving as base or reference to compare other categories with.

from work, unlike parents with more education who may have better capacity to take time off from their occupations to attend to these matters.

Table 22. Log Odds of Logistic Regression Model Predicting Lack of Interest.

Explanatory Variables	Lack of interest
Log per capita expenditure of household	-0.02
Indicator for Age = 7 (base Age = 6)	1.45***
Indicator for Age = 8	1.59***
Indicator for Age = 9	1.56***
Indicator for Age = 10	1.69***
Indicator for Age = 11	1.60***
Mean pupil-teacher ratio in region	0.00
Urban indicator (rural base)	-0.26
Female child Indicator (male base)	-0.37**
Number of children in household	0.01
Number of adults in household	0.09
Number of retired persons in household	0.00
Mother has some secondary education (base mother at most primary)	-0.57**
Mother has beyond secondary education (base mother at most primary)	-0.91**
Indicator for male household head	-0.29
Age of household head	0.00
Constant	-1.16

Source: Calculations using data from BEIS 2008—09 (census of public schools) and APIS 2008 (APIS n=40,613)
 Note: *p<.05; **p<.01; ***p<.005

Another logistic regression to identify determinants of the lack of school participation is provided in Table 23. The basic source for the model is data from the 2008 APIS, supplemented by average pupil-to-teacher ratios (PTRs) in the regions sourced from the 2008-09 BEIS. The PTR, which for the primary school level, is the ratio of the total number of students enrolled in primary school to the total number of primary school teachers, is a proxy for quality of schooling. (Lee and Barro, 1997). The higher the PTR, the lower the relative access of students to teachers and the less attention provided by the teacher to students, especially for students who may need more attention than others and are therefore more likely to lose interest in schooling. A parental perception of overcrowding may also influence the decision to allow their children to attend school. Various individual and household characteristics can also explain lack of school participation. The explanatory variables considered in the logistic regression model, include: (1) individual characteristics, namely, the sex and age of the child; (2) household characteristics, including household per capita expenditure (in logarithmic terms) and the number of children, adults, and retired persons in the household; location of household residence (urban/rural); age of the household head; sex of the household head; educational

attainment of the child's mother; and, (3) average PTR in the region. A separate regression was run for primary school-age and for secondary school-age children, with the latter model including in its list of explanatory variables an indicator on whether or not the child is engaged in labor.

Table 23. Log Odds of Logistic Regression Models for Nonattendance in School.

Explanatory Variables	Primary- School Age	Secondary- School Age
Log (per capita expenditure)	-0.498***	-0.873***
Indicator for Age = 6 (BASE)		
Indicator for Age = 7	-2.228***	
Indicator for Age =8	-3.086***	
Indicator for Age = 9	-3.476***	
Indicator for Age = 10	-3.412***	
Indicator for Age = 11	-3.223***	
Indicator for Age = 12 (BASE)		
Indicator for Age = 13		0.552***
Indicator for Age = 14		1.073***
Indicator for Age = 15		1.300***
Mean Pupil to Teacher Ratio in Region (Elementary Level)	0.035***	
Mean Pupil to Teacher Ratio in Region (High School Level)		0.005**
Indicator for Residing in Urban Area	0.064	-0.182**
Indicator for Female	-0.295***	-0.567***
Indicator for Mother Attaining At Most Primary (BASE)		
Indicator for Mother Attaining Secondary Education	-0.680***	-0.796***
Indicator for Mother Attaining Education Beyond Secondary Level	-0.538***	-1.451***
Indicator for Male household Head	-0.223*	-0.275**
Age of Household Head	0.006	0.007
Number of Children in Household	0.065***	0.006
Number of Adults in Household	0.016	-0.029
Number of Retired Persons in the Household	-0.085	-0.223
Child Engaged in Labor		1.956***
Memo Notes:		
Number of Observations	20809	14373
Pseudo Rsquared	0.2844	0.2517

Source: Calculations based on data from BEIS 2008-2009 and APIS 2008

The logistic regression model shows that, assuming all other explanatory variables are constant (*ceteris paribus*):

- Children who come from families with more per capita expenditure are more likely to be in school. For primary school-age children, every one percentage change in per

- capita expenditure is associated with a 0.50 percent decrease in the odds for not attending school. For secondary school-age children, the decrease in odds for not attending school is 0.87 percent;
- Age matters. Compared to six-year-old children, children aged seven to eleven years old are less likely to be out of school. Secondary school-age children in the thirteen-to-fifteen-year-old age range are more likely to be OOSC than twelve-year-old children;
 - Every unit increase in pupil-to-teacher ratio is associated with an increase in the odds of nonattendance in school by 3.5 percent in primary school-age children and 0.5 percent in secondary school-age children;
 - Secondary school-age children residing in rural areas are more at risk of being out of school compared to children residing in urban areas. Urban-rural differentials are not significant for primary school-age children;
 - Boys are more at risk of being out of school. Primary school-age girls are 1.3 times more likely to be in school than their boy counterparts; secondary school-age girls are 1.8 times more likely to attend school than boys in their age range;
 - Compared to children with mothers who have attained, at most, primary level of education, children with more educated mothers tend to be less prone to being out of school;
 - Children belonging to families with many children are more at risk of being out of school;
 - Secondary school-age children who are not engaged in some labor activities are more likely to be in school. Those engaged in child labor are seven times more likely to be out of school; and
 - Primary school- and secondary school-age children who are part of families where the household head is male tend to be less at risk of being OOSC.

6. Investing in Human Capital: the CCT

Whether we examine the lack of school participation, or the lack of interest in schooling, these phenomena are largely economic, and would thus require some economic intervention. *Pantawid*, the government's CCT has been designed precisely to address this, to provide incentives to poor households to compensate for the income they lose by sending their children to school instead of having them work at an early age. In addition, CCT household beneficiaries are given cash grants to incentivize them to send their household members (especially pregnant women and children) to avail of health services. The CCT is a concrete step to ensure children's rights to a full life that were articulated in Convention on the Rights of the Child and adopted by United Nations General Assembly on Nov. 20, 1989.

There has been a lot of scrutiny of the CCT, since it is by far the government’s largest social protection program. From having a 2007 budget of P50 million to support 6,000 households³⁷, *Pantawid* has been upscaled across the years starting with a nationwide launching in 2008 to assist 300 thousand poor households with a budget of P299 million.³⁸ The 2014 budget has been raised to P62.6 billion to assist 4 million households with the start of the extension of assistance to children in high school.³⁹

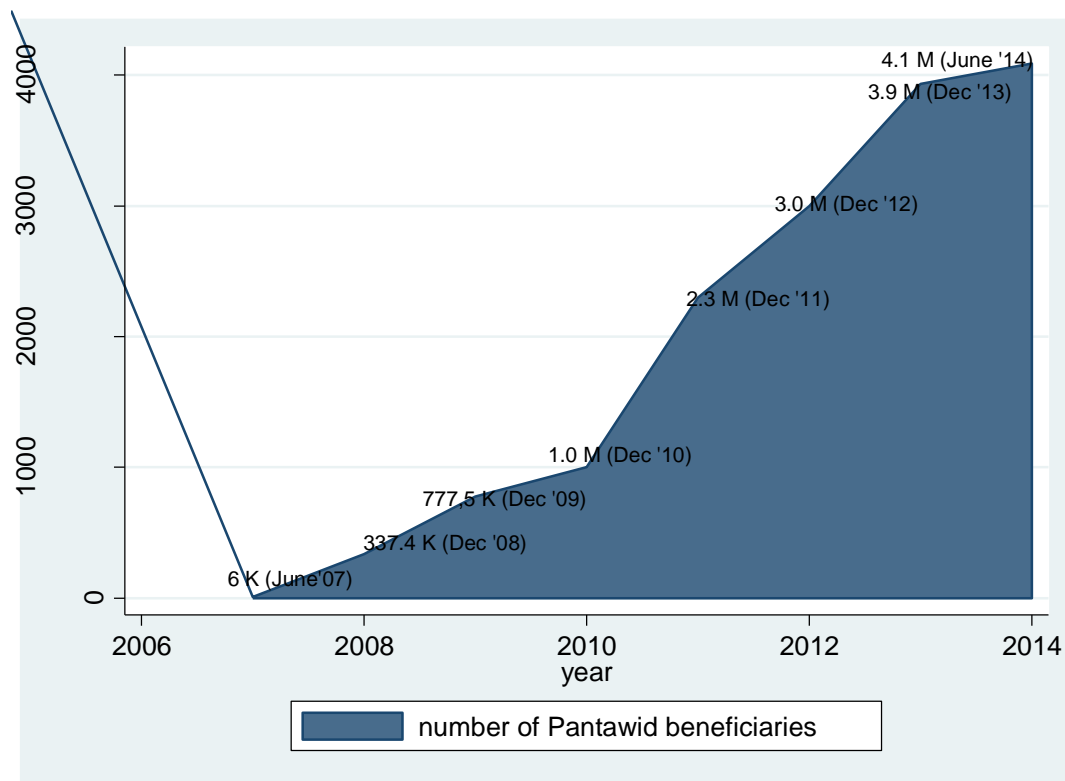


Figure 10. Number of Pantawid Beneficiaries, 2007-2014.

Source: DSWD

³⁷ The pilot of the CCT was implemented in the municipalities of Sibagat and Esperanza in Agusan del Sur in the municipalities of Lopez Jaena and Bonifacio in Misamis Occidental, and in the cities of Pasay and Calocan with a 50 million peso- budget.

³⁸ These households were selected from the 20 poorest provinces (with the exception of three ARMM provinces) and the poorest province in each of the 5 regions which were not represented by the 20 poorest provinces. In each of the poorest provinces, the poorest municipalities are selected based on the small area estimate (SAE) of poverty incidence released by the now defunct NSCB, and on the peace and order situation there at. A household enumeration of these areas was then administered in the selected municipalities. Subsequently, households were then selected on the basis of a proxy means test for identifying poor households in the enumerated areas.

³⁹ During the 2013 State of the Nation Address (SONA), the President of the Philippines announced the expansion of *Pantawid* to include children aged up to 18 years old starting in 2014 in order to allow children-beneficiaries to finish high school. Exit in the Expanded CCT program is no longer after five years, but rather, after the three children beneficiaries in a household beneficiary graduate from high school, or reach 18 years old, whichever comes first.

Many have criticized the CCT from various angles: its cost, its targeting system, and the entire scheme of giving support to the poor. While the program is costly in aggregate, but the amounts given to each Pantawid household beneficiary has not been much. Using data from the APIS 2013, the World Bank estimated that in 2013, Pantawid beneficiary families received an average of P1,407 of monthly cash grants, if they sent their 3 beneficiary children to school, and received health services for their household members. Without the cash grants, these families had an average per capita income of P13,293, whereas the poverty line per person then was P19,262. Thus, the amounts given will not really help them cross the poverty line, but are only truly “Pantawid.”

Some argue that the money given to the poor only go to alcohol, but hard data, from independent evaluations, show otherwise. About half of cash grants are used for food, a quarter (25%) on education-related expenses, while 7% is used on health, and close to nothing is used for recreation or alcohol.

Some also suggest that Pantawid has not brought down poverty rates, and is thus ineffective. Actually, Pantawid was not designed to be a quick fix to reduce poverty. In 2012, poor families, which have an average family size of 6, needed, on average, P29,765 to cross the poverty line, while CCT beneficiary families only received a maximum of PHP 15,000 grants in 2012 (PHP 300 per child per month for 10 months for a maximum of 3 children, plus PHP 500 per month for twelve months for health support), if they satisfied their co-responsibilities. Pantawid was meant as a human capital investment, i.e., to encourage the poor to send their children to school so that they can, in the future, find a means of escaping the cycle of poverty. These beneficiary children are still in school, and it is expected that with more schooling, they will have better income prospects once they join the labor market.

Using data from the 2013 APIS, the World Bank has suggested that the official poverty rate (of 25% in the first semester of 2013) could be as much 26.4% without Pantawid. Even the extreme poverty rate (of 11.1%), would be 1.4 percentage points higher without Pantawid (12.5%).

Table 25. Estimates of Poverty Incidence (using Total Poverty Line and Food Poverty Line) with and without *Pantawid Pamilya*.

	National		Among <i>Pantawid</i> beneficiaries	
	Without <i>Pantawid</i>	With <i>Pantawid</i>	Without <i>Pantawid</i>	With <i>Pantawid</i>
Poverty rate	26.4%	25.0%	64.5%	58.1%
Extreme poverty rate	12.5%	11.1%	35.3%	28.7%

Note: Estimates generated by World Bank Staff using data from national household surveys conducted by PSA, as presented in DSWD forum on *Pantawid Pamilya* 2nd Wave Impact Evaluation, Nov 14, 2014.

Among CCT beneficiaries, the increase in poverty rate without *Pantawid* is even higher. Poverty among beneficiaries (at 58.1%) would be 6.4 percentage points higher (64.5%) without the CCT. Doesn't this suggest that some CCT households are not "poor"? Certainly, but independent evaluation by the Social Weather Stations shows that most of these non-poor beneficiaries are nearly-poor. Note that while government estimates poverty through income data collected meticulously in surveys of the PSA, the DSWD, through their *Listahanan*, on the other hand, obtains information on facilities (such as electricity, toilets, walls, roofs) and assets (such as refrigerators, television sets, and the like), and on the basis of a statistical model estimates household income. There are certainly errors in identifying poor households (when a non-poor household is thought to be poor, or a poor household is tagged as non-poor), but DSWD has a process for delisting the non-poor, and also for having the poor who are not in its list to be enlisted, subject to verification. Further, the World Bank estimates that more than four fifths (82%) of *Pantawid* beneficiaries are from the bottom 40 percent of income distribution, and more than half (53%) are from the bottom 20 percent. Figure 11 shows that when *Pantawid* is compared in targeting accuracy with other CCTs, the DSWD program performs better than all CCTs with a large coverage in the population (of more than 15%), except for that of Brazil.

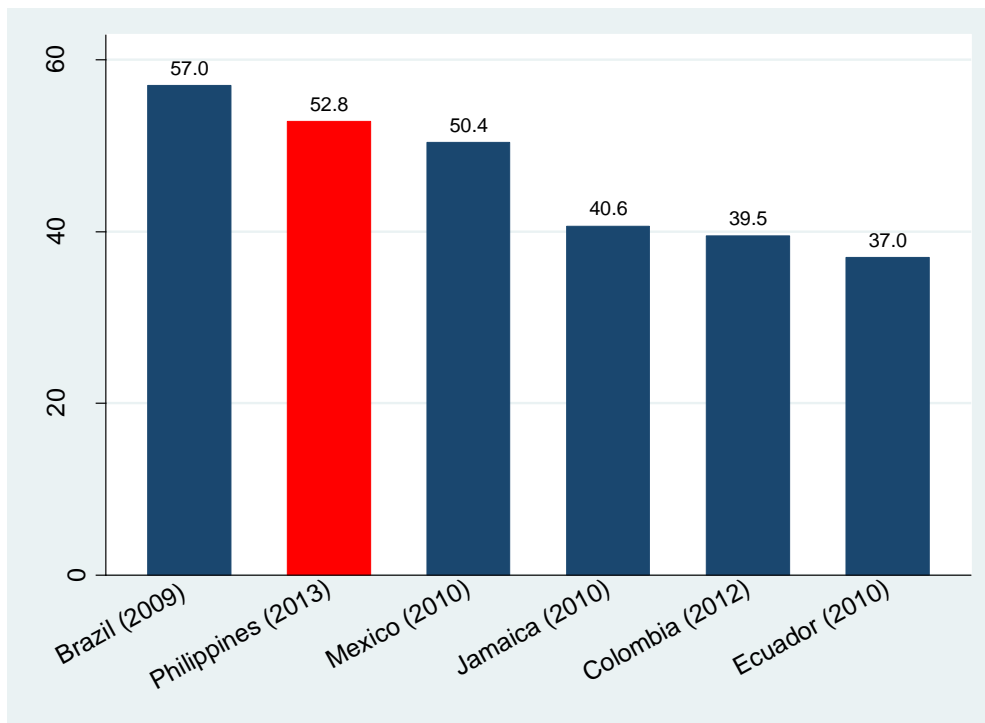


Figure 11. Targeting accuracy to the poorest 20 percent of CCTs with more than fifteen percent coverage of the population.

Note: Estimates generated by World Bank Staff, as presented in DSWD forum on *Pantawid* Pamilya 2nd Wave Impact Evaluation, Nov 14, 2014.

The World Bank also estimates using APIS 2013 data that *Pantawid* has increased income of beneficiaries so that they have moved closer to the poverty line: per peso cash grant, the poverty gap has been reduced by 61 centavos. It is no wonder why many serious poverty analysts are convinced that had we implemented *Pantawid* a decade ago, we would be reaping benefits of lower poverty incidence, lower poverty gap and lower income inequality today. There are certainly challenges in making economic growth inclusive and in making prosperity shared. The CCT is a worthy program to protect the poor from getting forever trapped in poverty by investing in their human capital, but in isolation, it will not be enough, especially in the short term, to reduce poverty. We all have roles to play, especially our taipans, in improving the economic mobility of those at the lower end of income distribution. The year 2015, the target year for the MDGS, is fast approaching, and as the world starts crafting and embarking on a post-2015 agenda, we have to ensure that no one, whether poor or nonpoor, male or female, urban or rural folk, Christian or Muslim, employed or unemployed, is left behind in development.

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