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Poverty and Agriculture in the Philippines: Trends in Income Poverty and Distribution

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and Maria Blesila G. Datu*

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Poverty and Agriculture in the Philippines: Trends in income poverty and distribution

DRAFT
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Abstract

Poverty incidence in the Philippine is rising based on the national official data released by the National Statistical Coordination Board. Poverty incidence among population rose from 24.9 percent in 2003 to 26.4 percent in 2006 and then inched up further to 26.5 percent in 2009. This is in reverse of the downward trend and is a major deviation from the path towards achieving the Millennium Development Goals. The disparities across the regions remain wide both in terms of poverty and inequality measures. In this paper, we show the salient features of the country's poverty situation in a hope to contribute to the existing knowledge about the poverty condition and to the formulation of better strategies for reducing poverty. It focuses on agriculture because it plays a central role in the poverty condition that continues to persist despite recent episodes of high economic progress the country has achieved.

Keywords:

Philippine poverty profile, inequality, agricultural poverty, multidimensional poverty

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Poverty and Agriculture in the Philippines: Trends in income poverty and distribution

Introduction

With the release of new poverty estimates by the National Statistical Coordination Board based on a newly-improved methodology, we come up with an updated profile of the poverty situation in the country. In this paper, we show the salient features of the country's poverty situation in a hope to contribute to the existing knowledge about the poverty condition and to the formulation of better strategies for reducing poverty. The emphasis on agriculture owes to the fact that ever since agriculture plays a central role in the poverty condition that continues to persist despite recent episodes of high economic progress the country has achieved and various government poverty reduction efforts implemented.

The paper is divided into two key sections – the general poverty profile and a report on the poverty condition involving the agricultural sector. In the first section, the poverty situation of the country and the regions are discussed based on the official estimates and international poverty benchmarks. The trends in other measures of poverty like gap and severity are likewise presented. A discussion on income inequality and how it has factored into worsening of the poverty situation is also included in the first section. To complete the picture, the multidimensionality of poverty is captured by looking at trends in access to basic amenities. The second section elaborates more on poverty and agriculture. The poverty incidence among agricultural households is analyzed in more details to provide a deeper understanding of the issues. A comparison of the poor agricultural and poor non-agricultural households was also shown. The paper then wraps up with a summary and conclusion.

Part 1: Poverty Profile of the Philippines

Poverty Condition

The poverty situation in the Philippines is worsening. Both poverty rate and magnitude are increasing based on the official estimates. Poverty incidence among population, though fell from 33.1 percent in 1991 to 24.9 percent in 2003, rose to 26.4 percent in 2006 and then inched up further to 26.5 percent in 2009. The number of poor which has risen by about a million in a span of three years necessitates effective poverty reduction strategies that can prevent such a huge movement into poverty. These recent poverty estimates show that at the current rate of progress, the MDG target of halving the poverty rate may not be achieved by 2015.

The National Statistics Coordination Board (NSCB) came up with new refinements in the methodology of estimating official poverty measures. The main changes involved were the 1) use of a provincial food bundle developed based on an indicative national food bundle that passed the Test of Revealed Preference 5, and 2) the use of a standard/benchmark for non-food basic needs that is comparable across space and over time. These enhancements were to ensure that province-specific characteristics are captured in the estimation of provincial poverty statistics, the food bundle chosen for the province is “superior” over another bundle based on preferences, that is, the former will provide the least cost but with same level of utility and the poverty measures are comparable across space and over time. Regardless however of the differences in methodology, the trends clearly show a consistent pattern of poverty rate and that is an increasing one (see Figure 1).

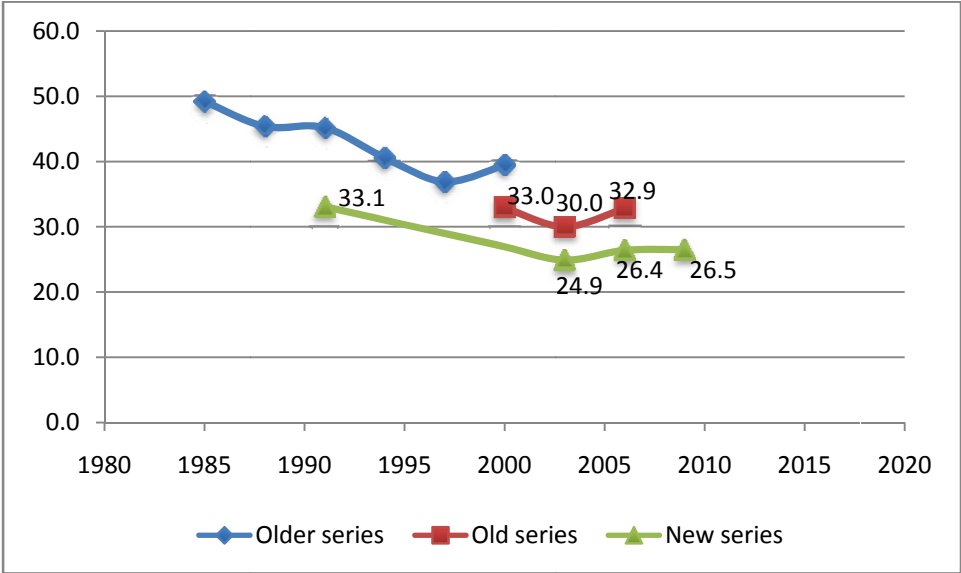


Figure 1. Proportion of poor individuals, 1985-2009, Philippines

Note: 1985 to 2000 series (in blue line) refers to the older series using the regional thresholds; 2000 to 2006 series (in red line) refers to the old series using provincial thresholds; 2003 to 2009 series (in green line) refers to the new series based on the new methodology using provincial thresholds.

Meanwhile, the poverty incidence of families has recently declined from 21.1 in 2006 to 20.9 in 2009, but is still slightly higher than the estimate in 2003 of 20 percent (see Figure 2). The headcount poverty rate of the country based on the international benchmark of poverty measurement, the 1 dollar a day or 1.25 dollars, is on a downward trend as well. In 2009, the poverty rate based on the USD1 a day went down significantly from 10.9 in 2003 to only 3.9 in 2009. Based on USD 1.25 a day cut-off, the poverty rate went down by half within a period of 6 years (see Table 1).

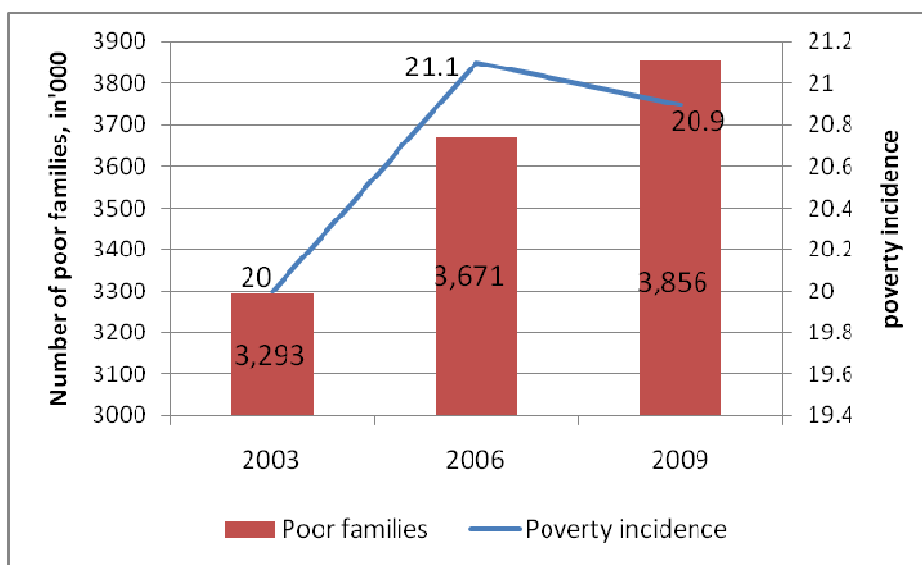


Figure 2. Poverty incidence among families and number of poor families

Year	US 1 per day		US 1.25 per day	
	Number (in '000)	Percent	Number (in '000)	Percent
1985	18,854	34.8	25,728	47.5
1988	14,803	26.5	21,448	38.4
1991	11,794	18.7	18,406	29.2
1994	10,197	15.1	16,658	24.7
1997	7,817	10.8	13,603	18.7
2000	9,213	11.9	15,546	20.2
2003	8,647	10.9	14,426	18.2
2006	6,837	8.2	12,555	15.0
2009	3,416	3.9	7,618	8.7

Note: Using FIES datasets

Not only is the official poverty incidence rising but also in terms of absolute number. In 2009, about 23.2 million people did not have sufficient income to obtain the basic food and non-food needs. This magnitude is 0.9 million higher than the 2006 estimates. The figure below shows that in all the three different series of poverty estimates, the magnitude of poor population is shown to be increasing. As shown earlier, there are also now more poor families than before (from 3.6 million poor families in 2006, there are now 3.8 million).

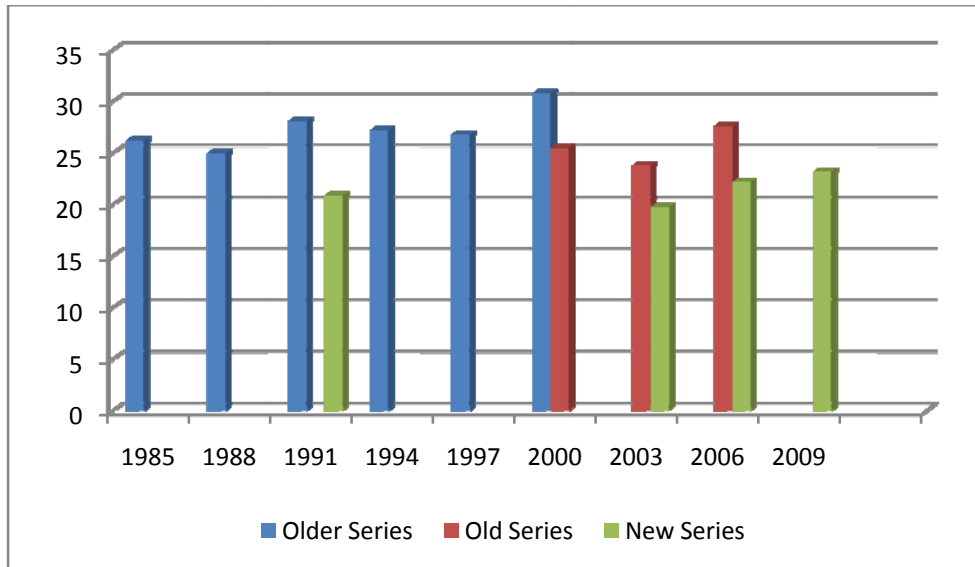


Figure 3. Number of income poor individuals, 1985-2009, Philippines

The country is geographically diverse; therefore, aggregate estimates grossly mask the situation in the regions. A main feature of the Philippine poverty condition remains to be the presence of wide disparities across regions. The 2009 poverty incidence in CARAGA (47.8%) is more than 10 times that in NCR (4%) (see Figure 4). The standard deviation in the poverty rates of regions has in fact risen, from 12.2 in 2006 to 12.8 in 2009. Region-specific or targeted strategies have been prescribed ever since to address the disparities.

The rise in the national poverty head count rate was attributed to an increase in poverty rate in 8 out of 16 regions. These included Caraga with the biggest increase of 3.8 percent followed by Zamboanga Peninsula, 3.3 percent, ARMM, 3.1 percent, SOCCSKSARGEN and Western Visayas, 2.6 percent, Eastern Visayas, 2.4 percent, CALABARZON, 1.6 percent and Central Luzon, 0.1 percent. Meanwhile, the top 3 regions with lowest poverty incidence in 2006 also had the lowest poverty incidence in the year 2009. These were NCR, CALABARZON and Central Luzon, among these three only NCR's poverty rate did not increase (see Appendix Table 1).

The poor are distributed across all regions, but are more densely located in several regions. In 2009, Bicol Region has the highest share of poor population at 10.5 percent, Central Visayas has the second highest share at 10.2, followed by Western Visayas at 9 percent, while CAR has lowest at 1.5 percent. In 2006, Central Visayas has the highest share of poor population of 10.9 percent (see Appendix Table 2).

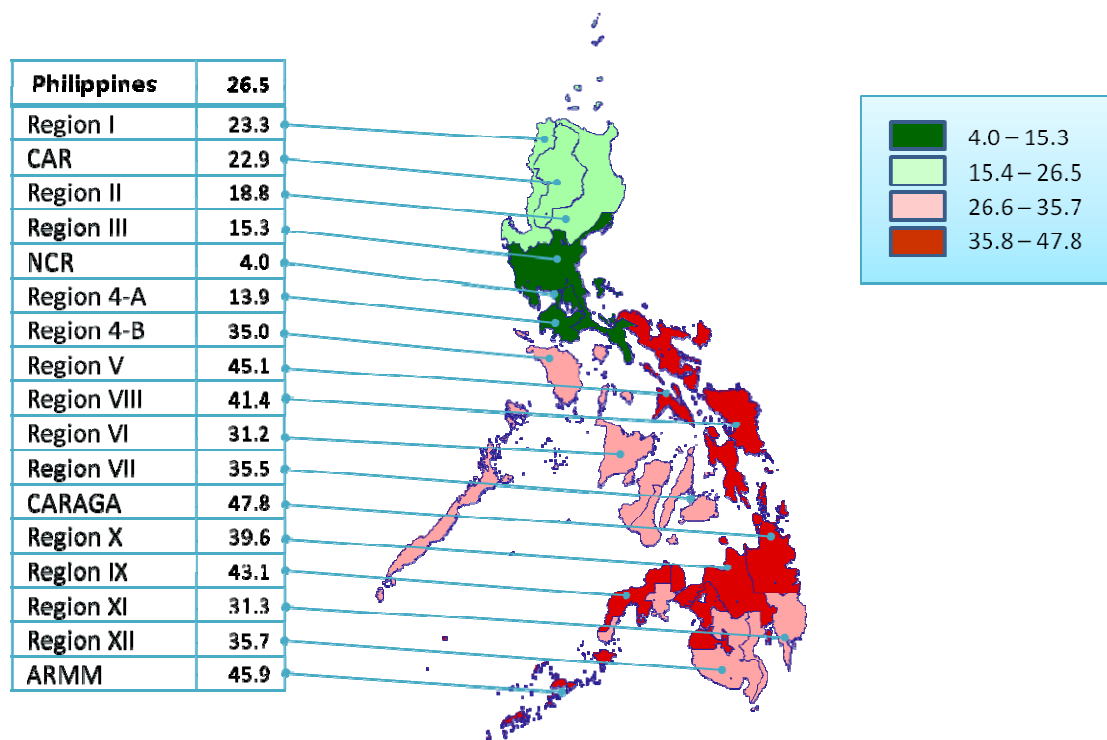


Figure 4. Poverty incidence by region, 2009

Owing to its large population, Luzon has the highest share in the magnitude of poor at 38 percent, Mindanao has the second largest share at 35 percent and Visayas has the lowest at 27 percent. Nonetheless, Visayas has two of the three regions that have the highest shares among all regions as earlier mentioned (i.e. Central and Western Visayas).

In terms of the location-specific poverty situation, urban poverty is seen to be on the rise. In 2003, the poverty rate of country's urban population was 11.2 percent. This rose to 12.9 in 2006 and further to 13.2 in 2009. The regions which experienced increases in urban poverty in 2009 are CAR, CALABARZON, Bicol, W. Visayas, E. Visayas, Zamboanga Peninsula, and Caraga. Among these, Eastern Visayas and Caraga have the largest leap at 8.6 and 7.6 percentage points, respectively. On the other hand, ARMM and MIMAROPA have experienced improvements in poverty among urban dwellers (see Appendix Table 3).

The urban poor are concentrated mostly in highly urbanized regions particularly in Luzon. Central Luzon (12%), Central Visayas (11.6%), and CALABARZON (10.6%) have the highest share in these urban poor.

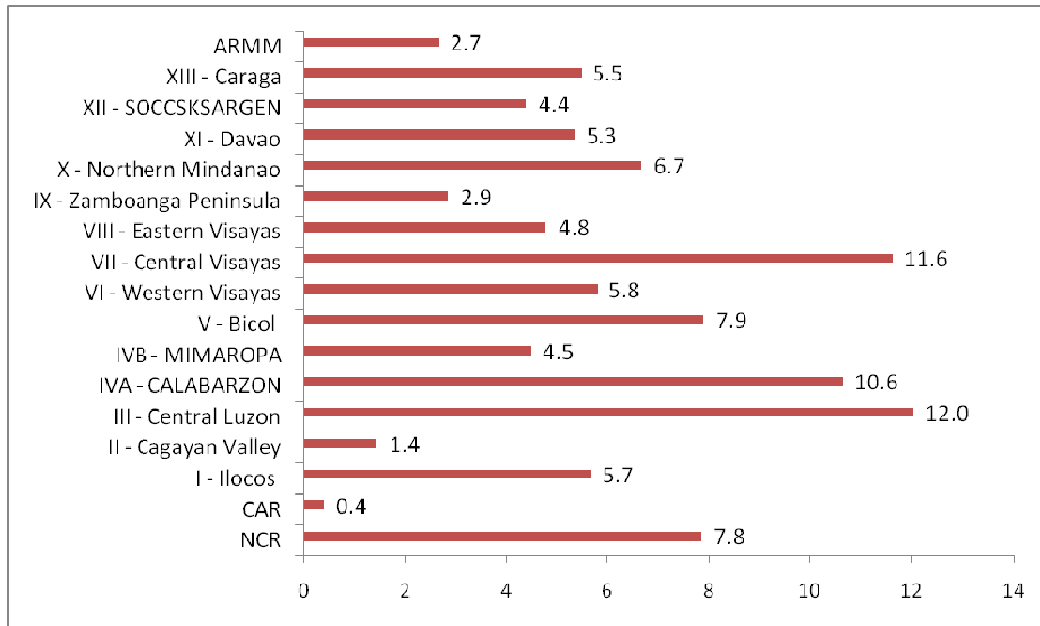


Figure 5. Share of regions in the urban poor population, 2009

Meanwhile, the rural poverty remained at 39 percent in 2009, slightly higher compared to 2003's 38.2 percent (see Appendix Table 4). The regions that have suffered worsening rural poverty rates are SOCCSKSARGEN, Caraga, and ARMM (each with around 4 percent points increment). Meanwhile, MIMAROPA and Ilocos Region have seen lower poverty rates among their citizens living in the rural areas. In terms of distribution, the largest contributions in the number of rural poor come from Bicol (11.3%), Western Visayas (10.2%), and Central Visayas (9.8%).

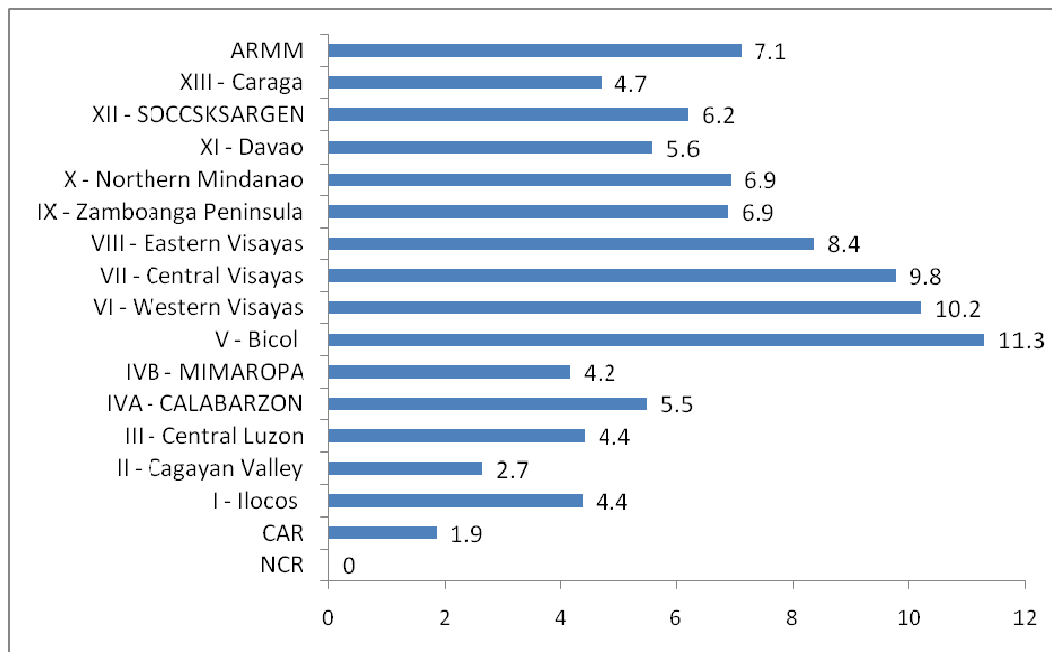


Figure 6. Share of regions in the rural poor population, 2009

Poverty Gap and Severity of Poverty

Aside from the poverty incidence, poverty situation can also be assessed using the poverty gap index and severity index. The poverty gap is the total income shortfall (expressed as a proportion of the poverty threshold) of families with income below the poverty threshold, divided by the total number of families (1997 Philippine Poverty Statistics, NSCB). The higher the poverty gap, the greater is the depth of poverty. In 2009 the poverty gap slightly decline from 7.24 percent in 2003 to 7.16 percent in 2009. The severity of poverty is likewise measured by the poverty severity index. It takes into account the income distribution among the poor where the worse distribution denotes a more severe poverty. Figure 7 below shows also the decline in severity index from 2.96 percent in 2003 to 2.76 percent in 2009.

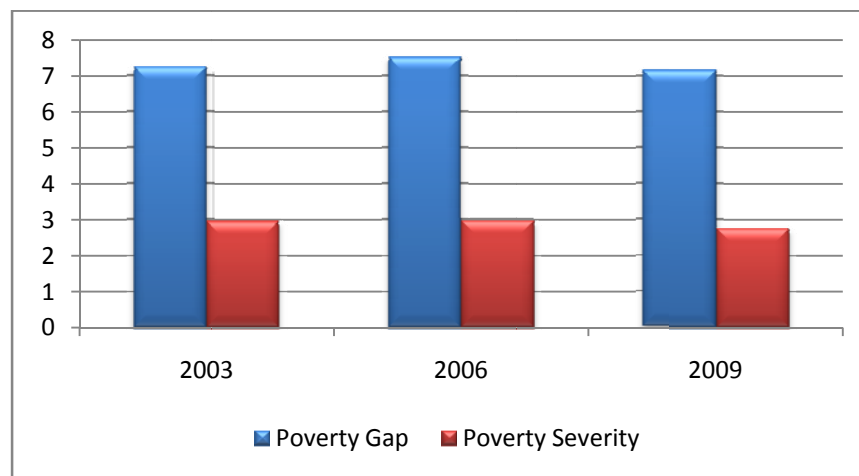


Figure 7. Poverty Gap and Severity Indices, 2003-2009, Philippines
Source of basic data: FIES, National Statistics Office (NSO)
(Historical poverty gap and severity)

Among the regions, NCR had the lowest poverty gap index in 2009 of 0.7 while the regions Caraga, Zamboanga Peninsula, and Northern Mindanao have the highest poverty gap with 15.3, 14, and 12.7 respectively. Regions that have shown improvement in their poverty gap from 2003 to 2009 are Zamboanga Peninsula which had the biggest decrease of 3.8 and Bicol Region with 2.9. In terms of severity, three regions in Mindanao posted the highest poverty severity index namely Caraga (6.6) followed by Zamboanga Peninsula (6.1) and Northern Mindanao (5.5). Again, In 2009 NCR had the lowest poverty severity index at 0.2 (see Appendix Table 5).

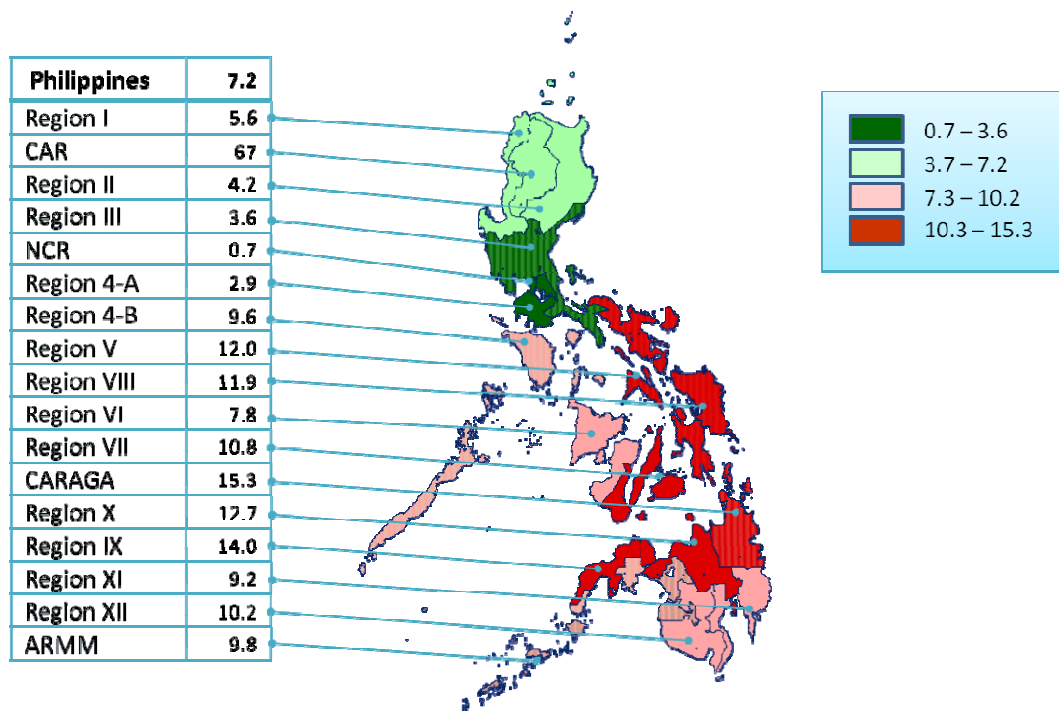


Figure 8. Poverty gap by region, 2009

Subsistence Incidence

The subsistence incidence is a measure of extreme poverty. Being subsistence poor refers to not having enough income to meet even the basic food needs. In contrast with the trend of poverty incidence, the proportion of individuals declined, from 11.1 percent in 2003 to 10.8 percent in 2009. A notable decline from 2006 (11.7 percent) can be observed. The number of subsistence poor, however, owing to the high population growth rate, is still higher than the 2003 estimate.

Meanwhile, although the national trend shows a downward movement, the subsistence incidence of families increased in 8 regions out of 17 regions from 2003. Among these, Eastern Visayas had the biggest increase of 3.7 percent points, Caraga, 3.6, and CAR, 2.7. The most remarkable improvements were seen for Zamboanga Peninsula and Bicol which have shown decreases from 2003 to 2009 of 6.3 and 6.2 percentage points, respectively.

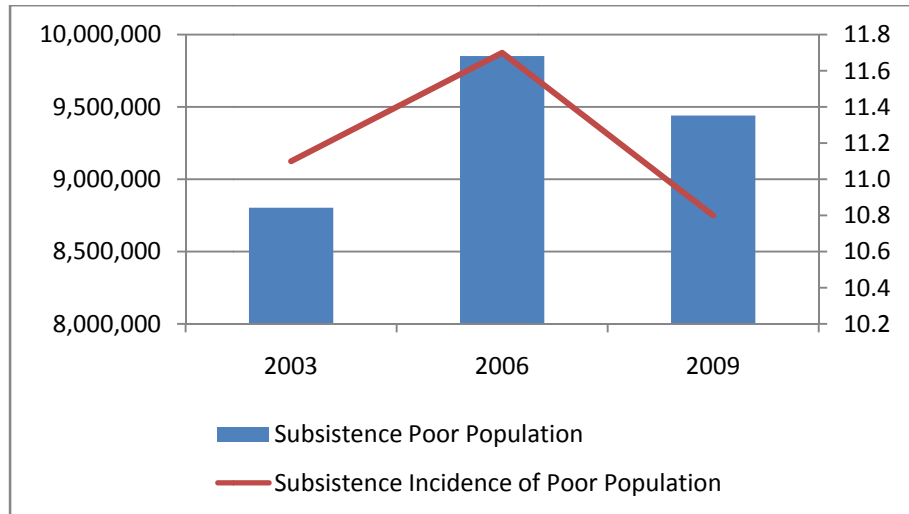


Figure 9. Subsistence incidence and magnitude of subsistence poor population, 2003-2009, Philippines

If one picks priority areas for intervention in view of extreme poverty, Caraga (25.3%), Zamboanga (23.5%), Northern Mindanao (20.7%), Eastern Visayas (19%), Bicol (17.8%), and Central Visayas (17.1%) should make it to list. Meanwhile, the three regions with the lowest subsistence incidence in 2009 were NCR, 0.6 percent, CALABARZON, 3.7 percent and Central Luzon. 5.0 percent (see Appendix Table 6).

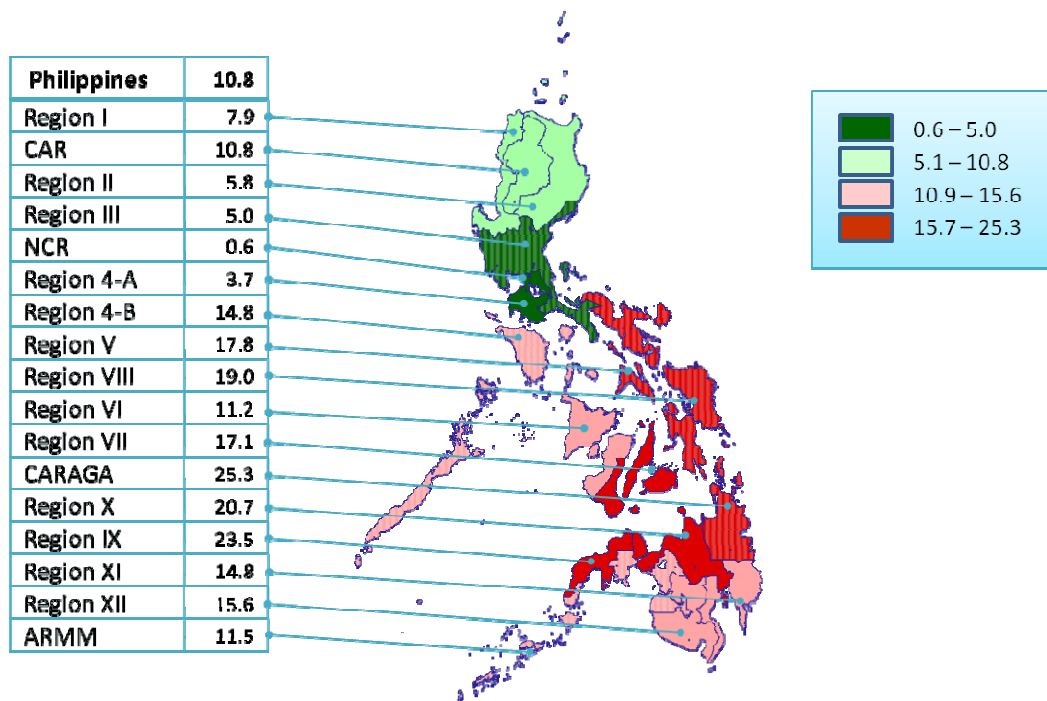


Figure 10. Subsistence incidence by region, 2009

Correlates of Poverty

Poverty is associated with bigger family size, lower educational achievement, and engagement in agricultural activities as established in the literature. Recent data further attest to this. The table below shows that the poverty incidence increases as the number of family size increases. Poverty incidence among larger family size has increased from 2003 at 46.8 percent to 47.8 percent in 2009 while that for smaller families has been declining.

Meanwhile, higher poverty is closely related to lower educational levels. In 2009 for instance, 62 percent of the households headed by someone who did not go to school are poor while only 9.2 percent of those who have reached college are. Worse, the poverty rate among the uneducated is rising. In 2003, the rate was only 44.4 percent; this has continuously worsened to 56 percent in 2006 and to 62 percent in 2009.

Agriculture-related occupations have always been associated with being income poor. In 2009, the poverty incidence among households headed by farmers, forestry workers and fishermen is 46.2 percent, while those whose heads are employed as professionals, for example, is only 0.7 percent. The poverty incidence among laborers and unskilled workers is also high at 41.8 percent. The sectors which have the lowest poverty incidence are education (3.2%) and financial intermediation (3.3%) (see Appendix Table 7).

Table 2. Poverty incidence by family size and educational attainment of the head				
Characteristic		Poverty Incidence, %		
		2003	2006	2009
<u>Family Size</u>				
	All Families	20	21.1	20.9
	1	4.7	3.6	3.3
	2	7.2	7.6	7.2
	3	9.9	9.8	9.8
	4	14	14.3	14.1
	5	20.1	22.6	22.8
	6	28.3	30.3	31.9
	7	36	37	39.4
	8	40.3	42.9	42.5
	9	45.3	49.6	46.8
	10 or more	46.8	44.1	47.8
<u>Educational attainment of the head</u>				
	All individuals	20	26.4	26.5
	No Grade Completed	44.4	56.1	62.4
	Elementary Undergraduate	36.8	44.6	46.6
	Elementary Graduate	25.4	36	34.1
	High School Undergraduate	20.7	28.3	30.3
	High Graduate	11.1	16.5	16.6
	College Undergraduate	4.5	6.9	7.5
	At least College Graduate	1	1.2	1.7
	Post Graduate	0.8	0	0

Note: PIDS ESD Estimates; Sources of basic data: Family Income and Expenditure Survey (FIES), NSO

Poverty reduction programs often identify program beneficiaries based on the pockets of poverty concept. A common notion used in identifying the pockets of poverty is that people living in the slums are poor. To see whether this is true in terms of income, we tabulated the poverty incidence of families based on tenure status. The results show that among all types of families, those who are occupying rent-free lots with the consent of the owner have the highest poverty incidence at 38 percent, followed by those who are also house-owners but are renting their lot (26.5%). It appears that 23 percent of the families considered as informal settlers (those that are occupying lot without the permission of the owner) are income poor in 2009. The types which have the lowest poverty rates are those that are renting both house and lot (only 7%), and those who are owners of house and lot (19%). Income poverty therefore is associated with not owning a lot (except for those who can afford to rent both house and lot).

The subsistence incidence, a measure of extreme poverty (food poverty) also has about the same result when tabulated by type of tenure status. Those who own their house but are occupying lots with consent of the owner have the highest subsistence incidence. Informal settlers have a relatively lower food poverty of around 9 percent.

These findings were cross-checked using other welfare indicators like access to basic amenities. The same trend is shown. Being an informal settler does not always mean that they are the most deprived segment in the society, except that with respect to decent shelter (see Table 4).

Tenure status	Poverty incidence			Subsistence incidence		
	2003	2006	2009	2003	2006	2009
All Families	20	21.1	20.9	8.2	8.7	7.9
Own or owner-like possession of house and lot	18.6	20	19	7.6	8.1	7.1
Rent house/room including lot	4.8	5.1	7.2	1.3	1.1	1.8
Own house, rent lot	24.5	23.2	26.5	10.4	9	8.4
Own house, rent-free lot with consent of owner	35.3	36.8	38.1	15.1	15.6	15.8
Rent-free house and lot with consent of owner	18	17.5	22.4	7.3	7.1	8.5
Informal Settlers	24.2	23.3	23.4	10.8	10.8	8.8

Note: PIDS ESD Estimates

Sources of basic data: 2003-2009 Family Income and Expenditure Survey, NSO

Household Tenure Status	Proportion of population			
	with access to electricity	with access to potable water	with access to sanitary toilet facility	living in makeshift housing
Own or owner-like possession of house and lot	86.9	83.5	88.7	1.1
Rent house/room including lot	97.0	91.2	96.0	1.5
Own house, rent lot	87.2	78.6	84.9	1.8
Own house, rent-free lot with consent of owner	72.9	70.2	71.1	2.5
Rent-free house and lot with consent of owner	86.0	84.4	86.2	2.2
Informal settlers	83.1	79.6	78.2	3.3

Note: PIDS EDS Estimates; Sources of basic data: 2003-2009 Family Income and Expenditure Survey, NSO

Other dimensions of poverty

In contrast to the rising official poverty rates, many access indicators show that the country is making progress with respect to the other dimensions of well-being. The access to electricity, potable water, sanitary toilet facility, and decent shelter has been improving. Meanwhile, the high rate of urbanization has resulted to increasing proportion of population living as informal settlers.

The proportion of population with access to electricity increased from 77.0 percent in 2003 to 85.6 percent in 2009. The current data is 46 percent higher than the estimate 24 years ago. This translates that every year the proportion of population getting access to electricity grows by about 1.6 points.

Despite the overall progress, electrification needs to be further expanded in underserved areas like ARMM. While NCR enjoys a 99 percent coverage, only over half (57%) of the population in ARMM have this privilege. The rate however at which ARMM has improved through recent years is remarkable. From 2003, its coverage has widened by 20 percentage points. At this rate, ARMM will have covered around 87 percent of its population by 2015. Other regions which have significantly improved in terms of access to electricity are Eastern Visayas (23% points increase), and Caraga (18% points) (see Appendix Table 8).

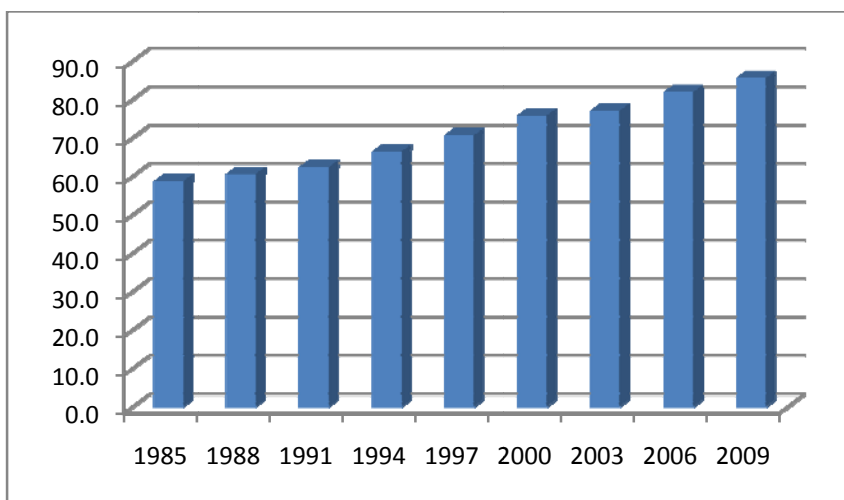


Figure 11. Access to electricity, 1985-2009, Philippines

In 2009, 81.4 percent of the population has access to potable water. Compared to improvements in electrification, the rate of progress in achieving access to potable water is rather slow, only about half a percentage point per year. The proportion of population gaining access has increased by only 11 points in 24 years. The Philippines lag behind other ASEAN countries like Thailand (94%) and Singapore (100%) in providing access to improved water source (ASEAN).

There are wide gaps across regions as well. For example, Central Luzon has an access of 97.4 percent while ARMM only has about 40 percent. ARMM has experienced a decline in this proportion based on its 2003 data of 42 percent. On the other hand, several regions which have low access have made notable progress through the years, improving at a rate that is higher than that of the national data. These are Western Visayas, Eastern Visayas, Zamboanga Peninsula, and Northern Mindanao.

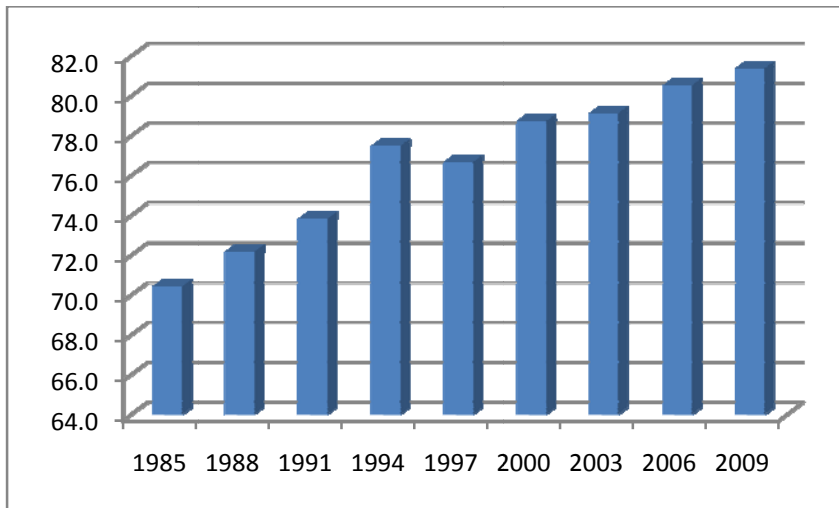


Figure 12. Access to potable water, 1985-2009, Philippines

In 2009, 86 percent of the population has access to sanitary toilet facility. This is an improvement from the 2003's estimate of 82 percent in 2003 but is still way below other ASEAN counterparts like Thailand (99%) and Singapore (100%). From 1985 to 2009, this proportion has risen by 0.7 percentage point every year, a rate that is slightly faster than that of the proportion with access to potable water. Again, there are wide gaps across geographic areas. ARMM had the lowest access at 50.1 percent while NCR had the highest access at 97.5 percent.

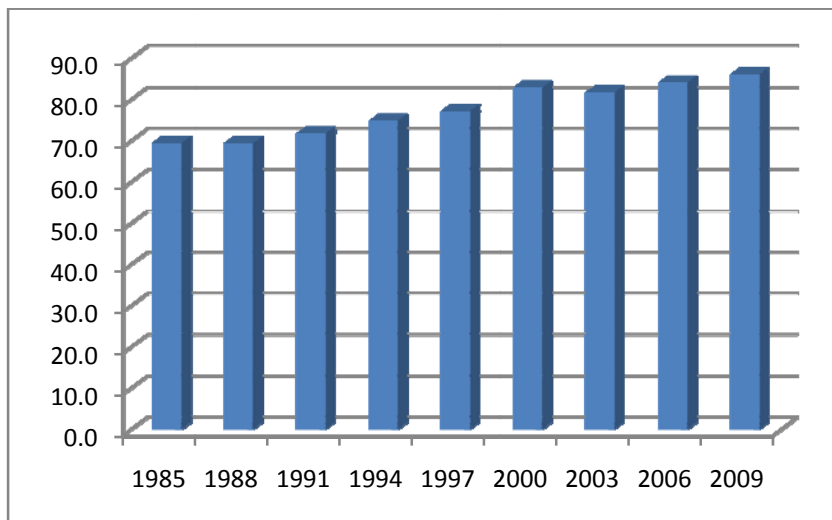


Figure 13. Access to Sanitary Toilet Facility, 1985-2009, Philippines

On the other hand, only 1.4 percent of all people are living in makeshift houses in 2009. The proportion of population living in makeshift housing has been declining since 1994. A slight upward movement happened in 2006 but it went back down in 2009, from 1.75 to 1.42 percent. This indicates lower deprivation of shelter and hence an improvement in this aspect of welfare.

Eleven regions experienced a decline but several, most of them poorest regions, have suffered rising deprivation to shelter. The proportion of population in makeshift houses in ARMM, SOCCKSARGEN, and Eastern Visayas has recently increased. Deprivation to shelter is highest in ARMM at 2.56 percent; CAR, meanwhile, has the lowest proportion of population in makeshift houses at 0.5.

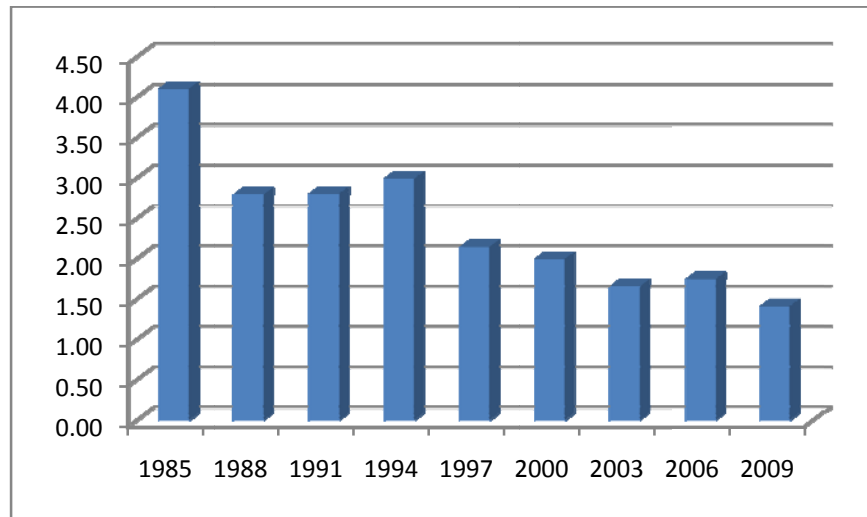


Figure 14. Population Living in Makeshift Housing, 1985-2009, Philippines

While the country has achieved progress in the abovementioned aspects, it is not in terms of tenure status. Apart from a recent improvement where the proportion of informal settlers went down from 4 percent to 3.6, the long term trend shows an upward direction hence more people as informal settlers. These refer to those who are occupying lots without the consent of the owner. In 2009, 3.6 percent are living in informal settlements or what is more commonly referred to as squatters.

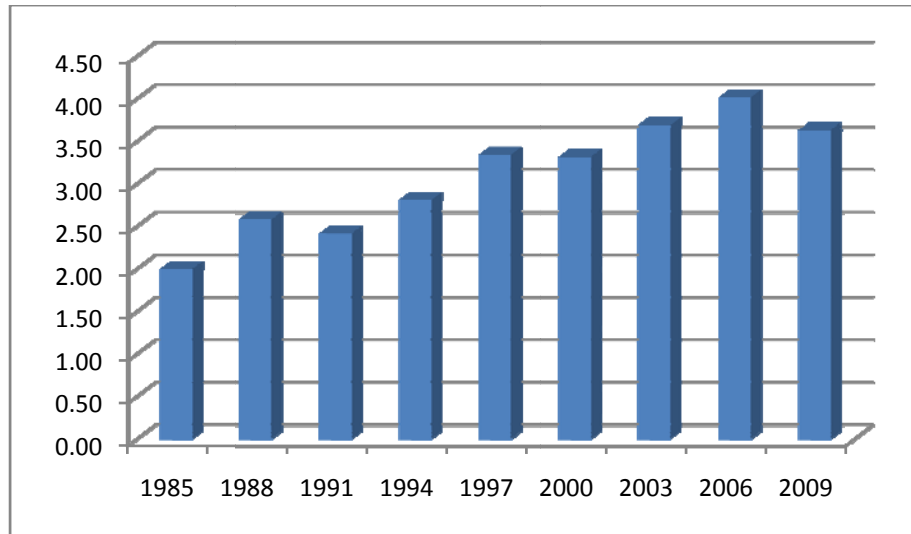


Figure 15. Proportion of informal settlers, 1985-2009, Philippines

One in every ten persons living in the metropolitan NCR is considered an informal settler. The trend for NCR is alarming because its estimate has nearly doubled since 2003 (see Figure 16). Other regions that have high proportion of informal settlers are Western Visayas (5%), Zamboanga (5%), and SOCCSKSARGEN (4.2%).

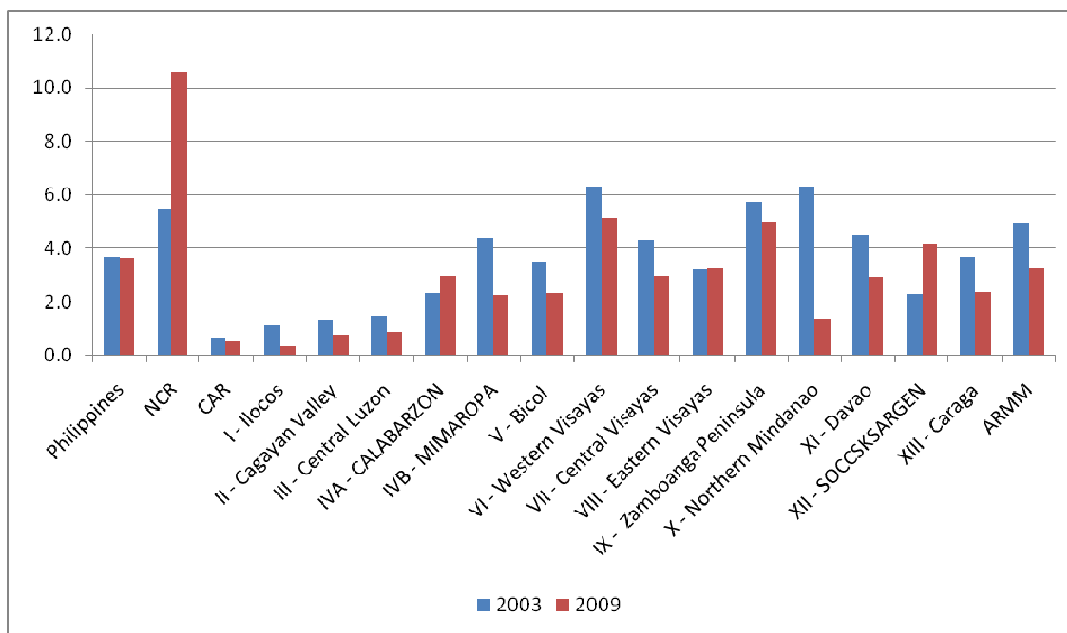


Figure 16. Proportion of population in informal settlements by region, 2003 and 2009

Income inequality

Income equality is a key concern not only in relation to poverty but it is in itself a welfare goal. Several indicators of inequality show that income is modestly becoming equalized. But there are still concerns especially with respect to worsening inequality in the rural areas. In Reyes and Tabuga (2011), the role of inequality in the rise of poverty incidence was shown. One reason why there hasn't been any reduction in the poverty rate during a period of high economic growth was because of worsening income inequality in several regions.

Indicators of income distribution such as the share of bottom 20 percent, decile dispersion ratio and Gini index all consistently show improvement. The share of bottom 20 percent is increasing, while decile dispersion and Gini index are declining. The chart below shows that the bottom 20 percent owns only 5 percent of the total income there is. This is relatively higher than that in 2000 of 4.4.

Meanwhile decile dispersion has been decreasing, more significantly in recent years. From 1988 to 2000, the dispersion ratio stayed constant at 22 to 23 but from 2000 onwards, the decline became continuous. In 2009, the ratio was down to around 18 from about 23 in 2000. The decile dispersion ratio is the ratio of the income of the richest to the poorest decile. The higher the ratio, the wider the gap is, hence less equal distribution.

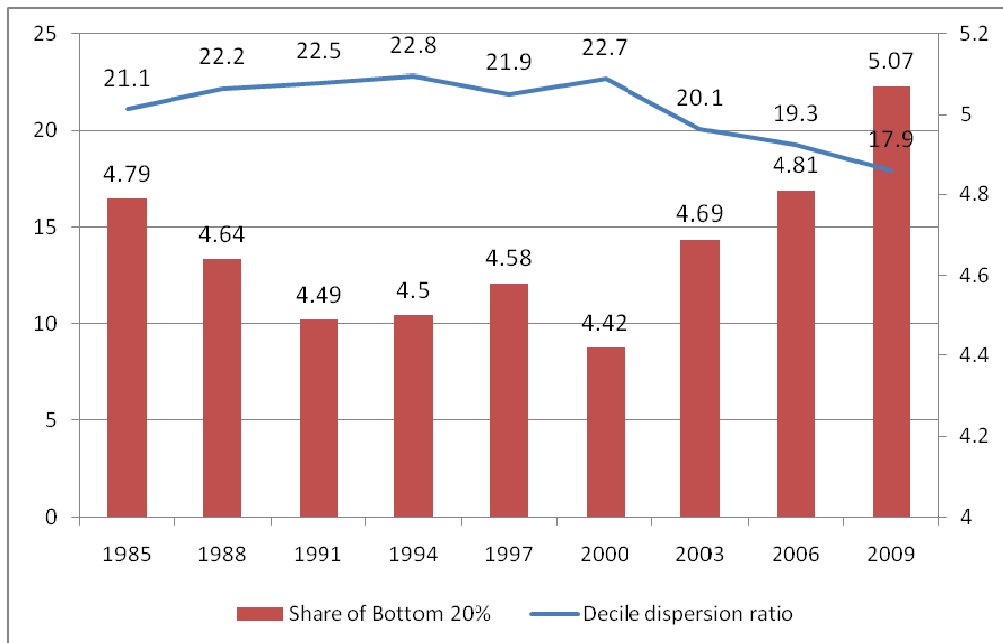


Figure 17. Share of bottom 20% and decile dispersion ratio, Philippines, 1985-2009

The Gini index, which is another measure of inequality, has been dropping as well since 1997. In 2009, the Gini is only 0.474, way lower than 1997's estimate of 0.507. This decline in the

Gini is attributed to the reduction in the Gini index in the urban areas. The Gini index in the rural areas is increasing and is becoming a concern especially because poverty rate is much higher in the rural than in the urban areas.

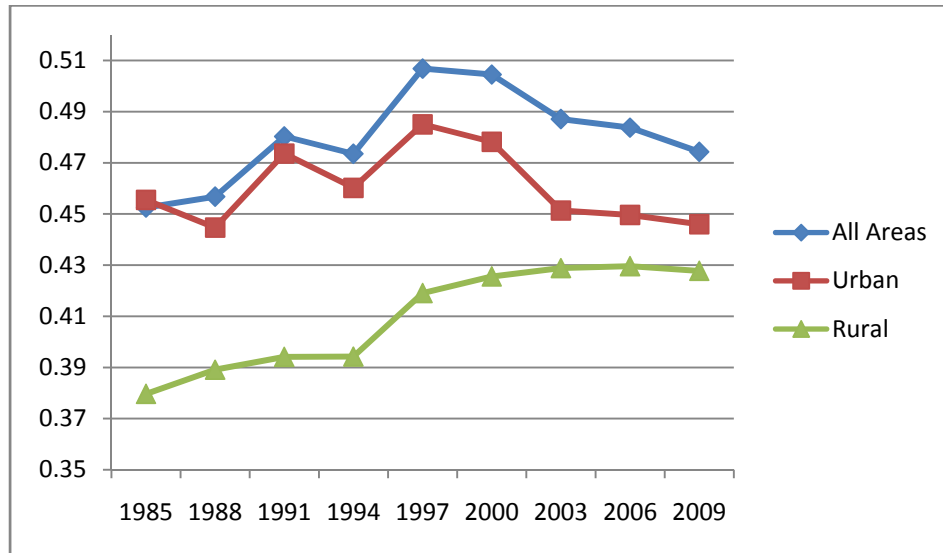


Figure 18. Gini Concentration Ratios by Area, 1985-2009, Philippines
 Note: PIDS ESD Estimates; Sources of basic data: Family Income and Expenditure Survey (FIES), NSO

Although the aggregate estimates of inequality show that income is becoming less unequal. The experiences in the regions vary. In fact, some of them are undergoing significant increases in income inequality. ARMM for instance suffered around 40 percent reduction in the share of bottom 20 percent within 3 years (2006 to 2009). Other regions which had recent decline in the share of bottom 20 percent are NCR, Ilocos, Central Luzon, W. Visayas, and E. Visayas. Meanwhile, SOCCSKSARGEN also saw a 25-percent rise in its decile dispersion ratio during the same period.

Regions which have improved recently in terms of distribution are CAR (whose share of bottom 20% has doubled between 2006 and 2009), Zamboanga and Bicol (which experienced both lower dispersion ratio and Gini coefficient).

Part 2: Poverty in Agriculture

Philippine poverty remains highly agricultural in nature. In 2009, poverty incidence among agricultural households (57%) is thrice that of the non-agricultural (17%). Three in four poor individuals live in the rural areas. This section contributes to the pool of knowledge in agricultural poverty using more updated data in aid of policy decision making.

We profile and identify the agriculture sector's poverty condition using the FIES based on the NSO's definition of agricultural households¹, the head's primary occupation, and the sector of business in the head's primary occupation. In other words, we may also identify a household agricultural if the head is primarily employed in the agricultural sector. We augment this by looking at poverty profiles of individuals by using the Labor Force Survey (LFS) information of the FIES respondents.

This section begins with an overall discussion of the poverty measures. The analysis gets deeper as layers of characteristics of poor agricultural households are shown. The multi-dimensionality of agricultural poverty is also discussed. After these, the section also looks into income distribution. Lastly, the section probes into the heterogeneity of the poor in the agricultural/rural areas.

Poverty condition

There is a concrete proof as to why most poverty reduction strategies are aimed at the rural/agricultural areas - that is, poverty has always been agricultural. In 2009, poverty incidence among agricultural households (57%) is thrice that of the non-agricultural (17%). The poverty rates of both types of households have significantly increased since 2003, but the gap to some extent has narrowed. Nevertheless, majority still of the poor population are considered as agricultural households.

¹ Technically, the NSO defines an agricultural household in the FIES as one whose income derived from agricultural sources is equal to or higher than that derived from non-agricultural sources.

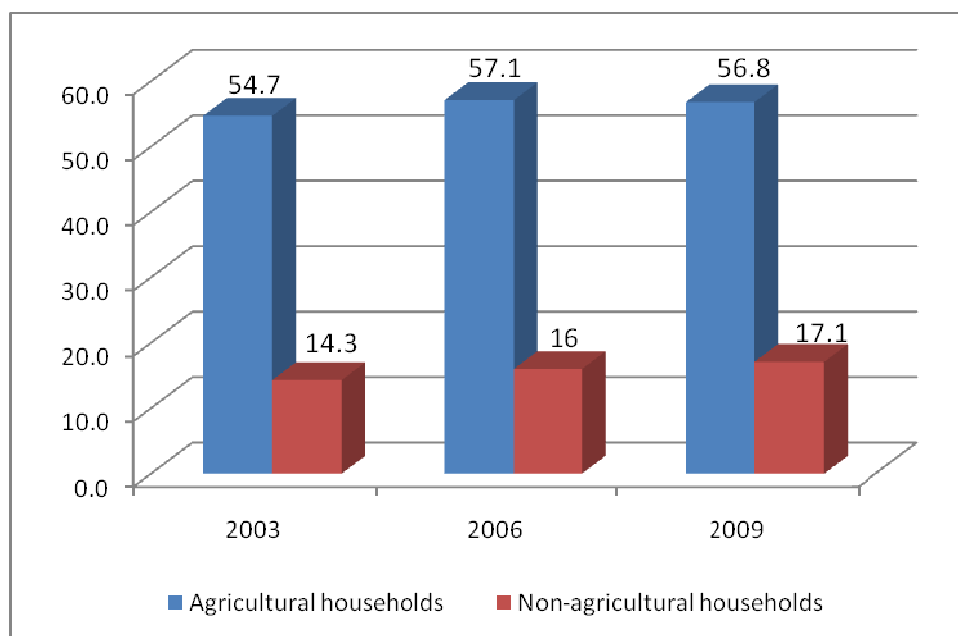


Figure 19. Poverty rate by type of households, 2003-2009, Philippines

Note: A household is considered as agricultural if total income earned from agricultural activities is greater than or equal to the total income earned from non-agricultural activities.

Sources of basic data: Family Income and Expenditure Survey (FIES), NSO

In the regions, the poverty rate in agriculture is far worse. In Central Visayas, 74 percent of agricultural households are poor. Bicol, Zambaoanga Peninsula, and Caraga all have 70 percent agricultural poverty rate. Notably, all regions in Visayas and Mindanao have agri poverty rates above 50 percent. In contrast, in the entire Luzon, only MIMAROPA has a rate that is higher than 50 percent. Meanwhile, Caraga has the highest poverty rate among non-agricultural households at 39 percent. One-third also of those in Bicol is considered poor based on income.

A great proportion (around 30%) of all agri-poor households are in Bicol, Western Visayas, and ARMM while Central Visayas, Bicol, and CALABARZON have the bulk of non-agri-poor.

Region	Incidence		Share to total poor	
	Agricultural households	Non-agricultural households	Agricultural households	Non-agricultural households
Philippines	56.8	17.1	100	100
NCR	3.9	4	0.0	3.9
CAR	47	12	1.9	1.1
I - Ilocos	47.2	17.8	3.5	5.9
II - Cagayan Valley	31.2	8.7	3.5	1.2
III - Central Luzon	43.1	11.2	4.4	8.2

IVA - CALABARZON	46.3	10.3	4.5	9.1
IVB - MIMAROPA	53.2	23.1	5.0	3.5
V - Bicol	70	34.9	9.3	11.7
VI - Western Visayas	59.5	20.1	9.6	8.6
VII - Central Visayas	73.9	27.4	7.3	13.3
VIII - Eastern Visayas	64.2	29.1	8.0	6.9
IX - Zamboanga Peninsula	69.6	25.4	7.5	4.2
X - Northern Mindanao	68.1	26.4	7.4	6.3
XI - Davao	53.6	18.7	6.7	4.3
XII - SOCCSKSARGEN	52.7	21.2	7.7	3.8
XIII - Caraga	69.8	38.6	4.2	5.6
ARMM	56.1	25.2	9.7	2.2

Note: PIDS ESD Estimates; Sources of basic data: Family Income and Expenditure Survey (FIES), NSO

Subsistence incidence, a measure of food poverty, among agri-hh, at 27 percent is more than twice the national estimate of 10.8, and about 5 times that for the non-agri-hh with 5.8 percent. Of the total 9.4 million subsistence poor individuals, 59 percent are from agri-hh.

Subsistence poverty is highest in Caraga with 47 percent of all agri-hh being food poor. The regions which have above 30 percent food poverty are Bicol, Central Visayas, Eastern Visayas, Zamboanga, and Northern Mindanao. At the same time, food poverty among non-agricultural households is likewise highest in Caraga at 16 percent. The table below shows the distribution of food poor across regions.

Region	Incidence		Share to total poor	
	Agricultural households	Non-agricultural households	Agricultural households	Non-agricultural households
Philippines	27.1	5.8	100.0	100.0
I - Ilocos	19.5	5.2	3.0	5.2
II - Cagayan Valley	10.2	2.2	2.4	0.9
III - Central Luzon	20.2	2.8	4.3	6.2
IVA - CALABARZON	15.1	2.4	3.1	6.3
IVB - MIMAROPA	27.1	6.8	5.3	3.0
V - Bicol	31.6	12.2	8.8	12.1
VI - Western Visayas	25.0	5.8	8.5	7.4
VII - Central Visayas	42.3	11.9	8.7	17.0
VIII - Eastern Visayas	33.2	11.4	8.7	8.0
IX - Zamboanga Peninsula	43.0	10.7	9.7	5.3
X - Northern Mindanao	41.3	11.1	9.4	7.9

XI - Davao	28.8	6.8	7.6	4.6
XII - SOCCSKSARGEN	25.1	7.5	7.7	4.0
NCR	0.0	0.6	0.0	1.8
CAR	25.0	4.3	2.1	1.1
ARMM	13.5	7.5	4.9	2.0
XIII - Caraga	47.0	16.1	5.9	7.0

The poverty gap, the average shortfall from the poverty line, is highest among households headed by farmers, forestry workers and fishermen, with 13.6. Laborers and unskilled workers, and other occupation have likewise high poverty gap measures (see Appendix Table 13). Poverty is also most severe in the said types of households.

The agricultural sector is a broad category. To get a more nuanced look at agricultural poverty, the headcount index for each sub-sector within the sector was calculated. Among the subsectors of agriculture, those engaged in forestry activities have the highest incidence of poverty at 68 percent while animal farming has the lowest with only 19 percent. Meanwhile, almost half of all households headed by one who engages in fishing activities are income poor (48%), while those in agricultural services have 49 percent. Other subsectors with high poverty rates are coconut growing (56%), sugarcane growing (53%), and growing of coffee, cacao (54%). The headcount poverty rate among rice (*palay*) farmers is lower at 42 percent. Nevertheless, the share of *palay* growers in the number of poor is the largest at 30 percent. The second largest share is that of corn growing with 17 percent, fishing with 15 percent, and coconut growing (14%).

Among the types of crops - the results show that households whose head is primarily employed in corn growing have the highest poverty incidence in 2009 at 64 percent compared to other crop growers. This is followed by coconut growing with 56 percent. Among the crop growers, those who are into banana and other crops have relatively lower incidence of poverty at 36 percent and 31 percent respectively.

In terms of being food poor, or what we call as subsistence poor, those engaged in corn growing have the highest incidence at 37 percent, followed by those in the forestry activities (33%), growing of other crops and coconut (27 and 26%, respectively). Again, the animal raisers have the lowest incidence at only 8.5 percent.

There are relatively more food poor among corn growers (37%) than other types of crop growers. The subsistence incidence among growers of other crops, coconut, vegetables, and sugarcane, are also high. The food poverty rate among *palay* growers is lower at 20 percent.

Kind of business in primary occupation of household head	Head count rate	Share to total poor	Head count rate	Share to total food poor	Share to total population based on the FIES
	Poverty incidence		Subsistence incidence		
Growing of palay	41.5	30.0	19.5	30.4	34.6
Growing of corn	64.1	17.4	37.0	21.6	13.0
Growing of coconut	56.2	13.9	25.7	13.7	11.9
Growing of banana	35.5	2.2	14.8	2.0	3.0
Growing of sugarcane	53.2	3.7	22.5	3.3	3.3
Growing of other fruits	30.6	0.7	13.9	0.7	1.2
Growing of vegetables	48.1	7.5	23.9	8.1	7.5
Growing of coffee, cacao	53.6	0.5	19.5	0.4	0.5
Growing of other crops	50.6	1.6	27.0	1.9	1.5
Animal farming/raising	18.9	1.4	8.5	1.3	3.4
Agricultural services	49.2	4.0	18.0	3.2	3.9
Hunting and trapping wild animals	35.7	0.0	13.4	0.0	0.0
Forestry activities	68.1	2.3	32.6	2.4	1.6
Fishing	48.0	14.6	16.8	11.0	14.5
Total	47.9	100.0	22.2	100.0	100.0

* Authors' computations based on the 2009 FIES

Correlates of and multi-dimensionality of agricultural poverty

The relationship between poverty and agriculture can be illustrated using the table below where the poverty rate of households depending on the share of agricultural income to total income was calculated. It shows that the more a family relies on agriculture, the greater is the poverty incidence. Families that heavily rely on agricultural income also have more members and young children.

To understand agricultural poverty better, one has to be able to discern it from poverty in the non-agricultural sector. For one, the mean family size among agri-poor is smaller at 6.6 than that of the nonagri-poor with almost 7. There are also more children among non-agri poor (see Table_). The average number of employed persons is slightly higher among non-agricultural poor than the agri-poor. Moreover, non-agri poor households have more access to basic amenities like electricity (77 against 50%), potable water (75% versus 56%), and sanitary toilet facility (77% versus 59%).

Forty-two percent of the agri-poor rely on dug well and springs/rivers/streams for their water source, while only about 20 percent of the non-agri-poor do. Three-fourths of the nonagri-poor do have access to community water system and tubed/piped well, only 56 percent of the agri-poor do. Meanwhile, 4 out of 10 agri-poor do not have access to sanitary toilet facility, only 23 percent of the non-agri-poor do not. One in four agri-poor does not have any toilet facility at all, while 16 percent of its counterpart in the non-agri does not.

In terms of the dwelling units, most non-agri poor have strong housing materials. Meanwhile, agri poor households have higher proportion of those using light materials in their roof or walls. However, there is higher percentage of non-agripoor who live in makeshift housing (or those houses made of salvaged materials) than the agri-poor. Relatively, more agri-poor are house and lot owners than nonagri-poor. They also have a lower proportion of informal settlers and renters.

Decile	Poverty incidence	Family size	Children (below 14 years old)
1	6.2	5.52	1.83
3	3.7	5.57	1.77
4	11.7	5.65	1.94
5	24.4	5.76	2.14
6	26.1	5.80	2.05
7	35.1	5.80	2.05
8	46.8	5.81	2.19
9	57.8	5.91	2.43
10	60.0	5.90	2.56
Total	26.5	5.71	2.06

Authors' estimates using the 2009 FIES, NSO

Characteristic	Poor	
	Agricultural	Non-agricultural
Mean family size	6.6	6.9
<u>Children below 15 years</u>		
Infants	0.13	0.16
Below 7	1.12	1.15
7 to 14	1.89	1.94
Total	3.15	3.25
Age of head	45.70	47.80

Average employed members	1.99	2.07
With electricity	50.23	77.13
<u>Water source</u>		
Community water system	18.37	35.22
Tubed/piped well	37.26	40.25
Dug well	21.43	12.12
Spring, river, stream, etc	20.36	7.64
Rain	0.84	0.21
Peddler	1.75	4.55
<u>Toilet facility</u>		
Water-sealed	43.09	67.22
Closed pit	15.92	9.64
Open pit	14.07	5.14
Others (pail system, etc)	2.42	1.81
None	24.51	16.2
<u>Materials of roof of the dwelling unit</u>		
Strong material(galvanized, iron, al, tile)	58.4	68.9
Light material (cogon, nipa, anahaw)	40.3	29.4
Salvaged/makeshift materials	1.2	1.7
<u>Materials of walls of the dwelling unit</u>		
Strong material(galvanized, iron, al, tile)	42.8	55.4
Light material (cogon, nipa, anahaw)	55.6	41.5
Salvaged/makeshift materials	1.6	3.1
<u>Tenure</u>		
Own or owner-like possession of house and lot	67.74	62.28
Rent house/room including lot	0.98	3.71
Own house, rent lot	2.38	3.95
Own house, rent-free lot with consent owner	22.27	20.11
Rent-free house and lot with consent of	3.62	5
Informal settlers	3.01	4.9

Authors' estimates based on the 2009 FIES of NSO

Aside from suffering from income poverty, agricultural households also face other dimensions of poverty. In fact, the proportion of population in the agricultural sector deprived from basic amenities like electricity and sanitary toilet doubles that for the country in general. Only 14 percent of the total population do not have access to electricity while 30 percent of those in the agriculture sector do not. While 14 percent overall do not have sanitary toilet facility in their dwelling units, it is 26 percent in the agricultural areas. The deprivation rate in potable water is likewise higher among agricultural population, 15 compared to 9 percent for the country.

Among the sub-sectors of agriculture, those growers of corn (52%), coffee and cacao (51%), and coconut (40%); and those who are engaged in forestry activities (44%) have the highest deprivation incidence in electricity. These same groups also have the least access in potable water. In terms of sanitary toilet facility, those in the sugarcane industry have the highest deprivation rate at 48 percent, followed by those in coffee and cacao (43%), corn (39%), and fishery (38%).

Kind of business in primary occupation of household head	Electricity	Potable water	Sanitary toilet facility	Share to total population based on the FIES
Growing of palay	21.9	7.9	15.2	34.6
Growing of corn	51.7	31.5	38.6	13.0
Growing of coconut	40.0	15.8	31.9	11.9
Growing of banana	21.2	15.5	15.3	3.0
Growing of sugarcane	36.8	19.5	47.6	3.3
Growing of other fruits	19.2	13.6	9.6	1.2
Growing of vegetables	30.5	19.1	27.9	7.5
Growing of coffee, cacao	51.3	30.5	42.7	0.5
Growing of other crops	37.0	21.2	32.7	1.5
Animal farming/raising	9.9	8.2	9.5	3.4
Agricultural services	27.6	4.6	18.4	3.9
Hunting and trapping wild animals	0.0	0.0	0.0	0.0
Forestry activities	43.5	29.3	28.7	1.6
Fishing	28.0	15.4	38.3	14.5
Total agricultural	30.4	15.1	26.1	100.0
National	14.4	9.4	13.9	-

* Authors' computations based on the 2009 FIES

In terms of asset endowments, more non-agriculture households own various types of assets. This is likewise the case of the poor. Except for vehicle,² there is higher proportion of non-agricultural poor owning all types of assets as shown below (see Table 11). Majority of non-agri poor have television sets while only 30 percent of the agri-poor do. The same case is shown for telephone (50% against 30% for the agri-poor). The gap is widest in terms of motorcycle ownership where 7.4 percent of non-agri poor have while only 2.9 percent of the agri-poor do.

² In 2009, there were 67 observations who were poor agricultural households owning a vehicle, the average agricultural income was P84,846 and the mean per capita income was P13,695.

Asset	Among population, %		Among poor population, %	
	Agricultural	Non-agricultural	Agricultural	Non-agricultural
Radio	45.42	55.4	39.6	42.6
TV	43.09	83.86	29.5	54.2
VTR/VHS/VCD/DVD	25.74	62.13	14.5	27.9
Stereo	8.56	26.94	4.1	8.4
Refrigerator	11.56	48.33	3.1	8.7
Air-conditioner	1.31	10.64	0.22	0.45
Sala set	21.79	55.72	11.9	20.2
Dining set	19.9	52.01	12	19.2
Vehicle	3.42	9.43	1.42	0.56
Telephone	41.88	79.69	29.8	50.1
Computer	1.19	14.24	0.16	0.31
Oven	0.85	9.09	0.06	0.16
Motorcycle	8.45	20.89	2.9	7.38

Authors' estimates, basic source of data FIES 2009

One clear issue that binds poverty with agriculture is underemployment. To illustrate, almost 7 out of 10 poor workers (68%) in 2009-2010 who are underemployed are primarily engaged in agriculture, forestry, or fishery. The incidence of underemployment is highest among workers engaged in agriculture, hunting or forestry (28.4% of total employed workers) and mining and quarrying (31.4%). More than half (52%) of all underemployed workers in agriculture were poor, while 59 percent in mining and quarrying were. At the national level, 35.8% of all underemployed workers were poor in 2009, while only 19.6% of the fully employed were.

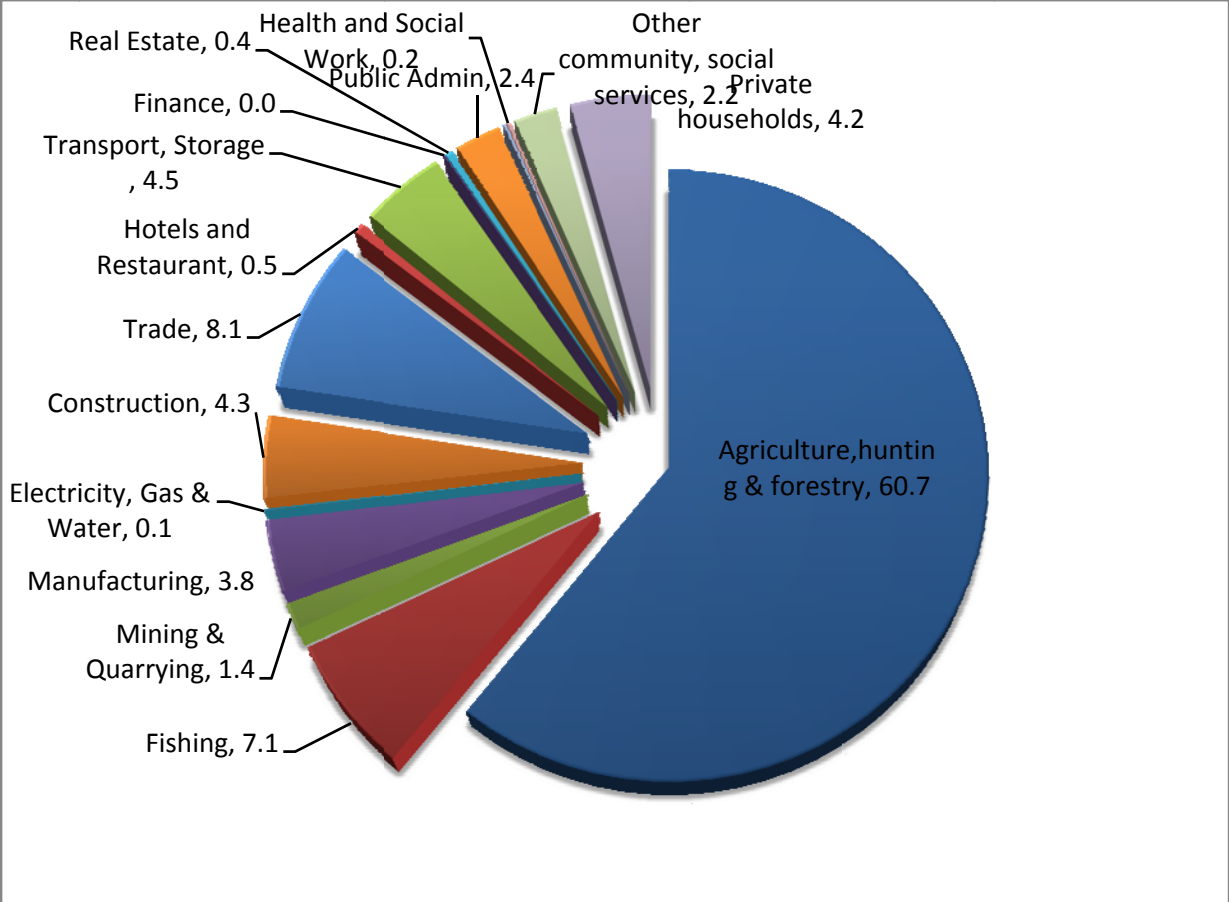


Figure 20. Distribution of poor underemployed worker (%), 2010
 Note: PIDS ESD Estimates, Source: Matched 2009 FIES and 2010 January LFS

Appendix Tables

Appendix Table 1. Poverty Incidence among population and families, by Region, 2003, 2006 and 2009						
Region	Population			Families		
	2003	2006	2009	2003	2006	2009
Philippines	24.9	26.4	26.5	20	21.1	20.9
NCR	3.2	5.4	4	2.1	3.4	2.6
CAR	21.7	23	22.9	16.1	18.6	17.1
I - Ilocos Region	22.8	26.6	23.3	17.8	20.4	17.8
II - Cagayan Valley	19.6	20	18.8	15.2	15.5	14.5
III - Central Luzon	12.4	15.2	15.3	9.4	12	12
IVA - CALABARZON	12.1	12.3	13.9	9.2	9.4	10.3
IVB - MIMAROPA	37.5	42.2	35	29.8	34.3	27.6
V - Bicol Region	45.8	45.2	45.1	38	36.1	36
VI - Western Visayas	30.6	28.6	31.2	23.5	22.1	23.8
VII - Central Visayas	37.2	38.8	35.5	32.1	33.5	30.2
VIII - Eastern Visayas	37.6	39	41.4	30.2	31.1	33.2
IX - Zamboanga Peninsula	45.7	39.8	43.1	40.5	34.2	36.6
X - Northern Mindanao	38.8	39.7	39.6	32.4	32.7	32.8
XI - Davao	31	31.7	31.3	25.4	26.2	25.6
XII - SOCCSKSARGEN	33.1	33.1	35.7	27.2	27.1	28.1
XIII - Caraga	44.7	44	47.8	37.6	36.9	39.8
ARMM	31.4	42.8	45.9	25	36.5	38.1

Source: National Statistical Coordination Board

Region	Population (in '000)			Share to total poor			Families (in '000)			Share to total poor		
	2003	2006	2009	2003	2006	2009	2003	2006	2009	2003	2006	2009
Philippines	19,797	22,173	23,142	100	100	100	3,293	3,671	3,856	100	100	100
NCR	347	594	448	1.75	2.68	1.94	49	81	64	1.5	2.2	1.7
CAR	300	338	346	1.51	1.53	1.5	45	56	55	1.4	1.5	1.4
I - Ilocos	953	1,193	1,085	4.82	5.38	4.69	156	193	179	4.7	5.3	4.6
II - Cagayan Valley	528	564	545	2.67	2.54	2.36	89	96	94	2.7	2.6	2.4
III - Central Luzon	1,084	1,407	1,457	5.48	6.34	6.3	170	229	244	5.2	6.2	6.3
IVA - CALABARZON	1,245	1,303	1,566	6.29	5.88	6.77	202	211	248	6.1	5.7	6.4
IVB - MIMAROPA	907	1,122	981	4.58	5.06	4.24	149	187	163	4.5	5.1	4.2
V - Bicol	2,200	2,336	2,422	11.12	10.53	10.47	359	364	385	10.9	9.9	10
VI - Western Visayas	1,856	1,849	2,113	9.37	8.34	9.13	298	303	346	9	8.3	9
VII - Central Visayas	2,175	2,426	2,368	10.99	10.94	10.23	390	433	415	11.8	11.8	10.8
VIII - Eastern Visayas	1,417	1,565	1,732	7.16	7.06	7.48	227	253	287	6.9	6.9	7.4
IX - Zamboanga Peninsula	1,326	1,274	1,361	6.7	5.75	5.88	238	224	242	7.2	6.1	6.3
X - Northern Mindanao	1,383	1,530	1,587	6.98	6.9	6.86	240	258	275	7.3	7	7.1
XI - Davao	1,202	1,259	1,279	6.07	5.68	5.53	206	221	226	6.3	6	5.9
XII - SOCCSKSARGEN	1,137	1,204	1,332	5.74	5.43	5.76	193	203	225	5.9	5.5	5.8
XIII - Caraga	921	979	1,131	4.65	4.41	4.89	156	164	187	4.7	4.5	4.8
ARMM	816	1,232	1,389	4.12	5.56	6	126	195	218	3.8	5.3	5.7

Source: National Statistical Coordination Board

Appendix Table 3. Poverty incidence of poor population in urban area by Region, 2003, 2006, 2009						
Region	2003		2006		2009	
	Number (in '000)	%	Number (in '000)	%	Number (in '000)	%
Philippines	4,363	11.2	5,329	12.9	5,713	13.2
NCR	347	3.2	594	5.4	448	4
CAR	16	3.4	18	3.7	23	4.2
I - Ilocos	319	19.4	356	20.8	324	19.4
II - Cagayan Valley	81	13.3	96	12.9	83	10.6
III - Central Luzon	519	9.8	695	12.1	687	11.7
IVA - CALABARZON	447	6.2	401	5.7	608	8.1
IVB - MIMAROPA	147	26.3	262	33.1	256	29.5
V - Bicol	344	25.5	327	25.4	450	29.1
VI - Western Visayas	249	13.8	248	12.2	331	15.6
VII - Central Visayas	524	19	682	21.4	664	19.7
VIII - Eastern Visayas	155	22.3	178	20.8	273	29.4
IX - Zamboanga Peninsula	124	16.6	120	15.5	164	20.7
X - Northern Mindanao	299	22.1	382	23.9	381	23
XI - Davao	245	16.7	304	19	304	18.1
XII - SOCCSKSARGEN	250	21.2	253	23	251	20.9
XIII - Caraga	156	28.1	240	31.9	312	39.5
ARMM	142	21.8	172	35.2	153	30.8

Note: PIDS ESD Estimates

Sources of basic data: 2003, 2006, 2009 Family Income and Expenditure Survey

Appendix Table 4. Poverty incidence and magnitude of poor population in rural area by Region, 2003, 2006, 2009						
Region	2003		2006		2009	
	Number (in '000)	%	Number (in '000)	%	Number (in '000)	%
Philippines	15,434	38.2	16,821	39.5	17,429	39.4
NCR	-	-	-	-	-	-
CAR	284	31	329	33.8	323	34
I - Ilocos	634	25	841	30.4	761	25.5
II - Cagayan Valley	448	21.4	459	22	462	21.9
III - Central Luzon	565	16.2	717	20.5	770	21.1
IVA - CALABARZON	798	25.5	987	28.1	959	25.3
IVB - MIMAROPA	760	40.8	809	44	724	37.4
V - Bicol	1,857	53.6	2,048	52.7	1,972	51.6
VI - Western Visayas	1,607	37.8	1,579	35.8	1,782	38.3
VII - Central Visayas	1,651	53.5	1,682	54.8	1,704	51.6
VIII - Eastern Visayas	1,262	41.1	1,381	43.6	1,459	44.9
IX - Zamboanga Peninsula	1,202	55.8	1,171	50.5	1,197	50.5
X - Northern Mindanao	1,084	49	1,111	48.9	1,206	51.3
XI - Davao	957	39.7	935	39.3	975	40.5
XII - SOCCSKSARGEN	887	39.4	988	39.2	1,081	42.7
XIII - Caraga	764	50.9	712	48.4	819	52
ARMM	674	34.6	1,074	45.2	1,236	48.8

Note: PIDS ESD Estimates

Sources of basic data: 2003, 2006, 2009 Family Income and Expenditure Survey

Region	Poverty Gap Indices, (P1)			Poverty Severity Indices, (P2)		
	2003	2006	2009	2003	2006	2009
Philippines	7.2	7.5	7.2	3.0	3.0	2.8
NCR	0.6	1.0	0.7	0.2	0.3	0.2
CAR	5.7	6.9	6.7	2.1	2.7	2.6
I - Ilocos	5.9	6.7	5.6	2.2	2.4	2.0
II - Cagayan Valley	4.3	4.4	4.2	1.4	1.4	1.4
III - Central Luzon	2.6	3.5	3.6	0.8	1.2	1.2
IVA - CALABARZON	2.7	3.1	2.9	0.9	1.1	0.9
IVB - MIMAROPA	10.1	12.5	9.6	3.9	5.2	3.7
V - Bicol	14.8	13.9	12.0	6.4	5.5	4.4
VI - Western Visayas	8.4	7.2	7.8	3.2	2.5	2.8
VII - Central Visayas	12.7	12.6	10.8	5.9	5.6	4.6
VIII - Eastern Visayas	10.0	11.5	11.9	3.7	4.7	4.6
IX - Zamboanga Peninsula	17.7	14.5	14.0	8.9	6.8	6.1
X - Northern Mindanao	12.9	12.7	12.7	5.7	5.6	5.5
XI - Davao	9.8	9.3	9.2	4.2	3.7	3.8
XII - SOCCSKSARGEN	9.3	9.6	10.2	3.6	3.6	4.0
XIII - Caraga	13.9	13.3	15.3	5.8	5.7	6.6
ARMM	7.6	10.5	9.8	2.6	3.5	3.0

Note: PIDS ESD Estimates

Sources of basic data: 2003, 2006, 2009 Family Income and Expenditure Survey

Appendix Table 6. Subsistence Incidence of Poor Population by Region, 2003-2009			
Region	In percent		
	2003	2006	2009
Philippines	11.1	11.7	10.8
NCR	0.6	1.0	0.6
CAR	8.1	11.3	10.8
I - Ilocos Region	8.3	10.0	7.9
II - Cagayan Valley	5.7	6.4	5.8
III - Central Luzon	3.3	4.9	5.0
IVA - CALABARZON	3.3	4.0	3.7
IVB - MIMAROPA	15.0	20.2	14.8
V - Bicol Region	24.0	21.6	17.8
VI - Western Visayas	13.1	11.3	11.2
VII - Central Visayas	20.0	21.2	17.1
VIII - Eastern Visayas	15.3	18.7	19.0
IX - Zamboanga Peninsula	29.8	22.6	23.5
X - Northern Mindanao	21.2	21.8	20.7
XI - Davao	15.9	15.9	14.8
XII - SOCCSKSARGEN	14.3	14.3	15.6
XIII - Caraga	21.7	21.3	25.3
ARMM	10.3	14.4	11.5

Source: National Statistical Coordination Board

<u>Appendix Table 7. Poverty incidence by primary occupation and sector of business of the head</u>			
<u>Primary occupation of the head</u>	2003	2006	2009
Officials of Government and Special-Interest Organizations, Corporate Executives, Managers, Managing Proprietors and Supervisors	6.8	7.6	9.6
Professionals	0.4	0.6	0.7
Technicians and Associate Professionals	5.2	9.2	7.5
Clerks	5.4	8.7	8
Services workers and Shop and Market Sales Workers	9.4	12.5	12.7
Farmers, Forestry Workers and Fishermen	44.5	46.5	46.2
Trades and Related Workers	19.3	21.7	23.5
Plant and Machine Operators and Assemblers	11.8	13.6	16.6
Laborers and Unskilled workers	37.1	39.6	41.8
Special Occupation/Armed Forces	7.6	6.9	15.3
Non-Gainful Occupation	-	-	0
Other Occupations Not Classifiable	-	27.8	48.1
No job or No business	10.7	12.6	13
<u>Sector of business, head's primary occupation</u>			
Agriculture, hunting and forestry	46.7	47.6	47.8
Fishing	40.8	48	48
Mining & Quarrying	42.5	35	48.7
Manufacturing	14.6	16.4	18.2
Electricity, Gas & Water	4.2	4.4	4.3
Construction	21.9	25.4	25
Wholesale and Retail Trade	10.9	14.1	13.4
Hotels and Restaurant	4.6	4	5.5
Transport, Storage and Communication	12.9	16.4	18.8
Financial Intermediation	1.7	0.7	3.3
Real Estate	5.9	5.9	5.7
Public Administration	8.7	9.9	12.8
Education	0.5	2.7	3.2
Health and Social Workers	4.2	5.5	5.6
Other community, social and personal services/activities	14.8	20.7	16.8
Private households	20.6	23	28.6
Extra-Territorial Organizations	0	0	0
No business	10.7	12.6	13
Total	24.9	26.4	26.5

Note: PIDS ESD Estimates; Sources of basic data: Family Income and Expenditure Survey (FIES), NSO

Appendix Table 8. Proportion of population with access to electricity and potable water by region, 1985 to 2009									
Regions	Proportion of population (%)								
	1985	1988	1991	1994	1997	2000	2003	2006	2009
Electricity									
Philippines	58.7	72.2	62.4	66.4	70.7	75.9	77	82	85.6
NCR	97.9	91.9	96.6	98.6	99.6	99.3	99.3	97.7	98.9
CAR	40.4	67.4	48.7	56.4	55.7	67.3	72.4	78.8	83.9
I - Ilocos	69.1	84.9	72.2	74.4	75.9	83.9	85.6	90.3	93.7
II - Cagayan Valley	56.9	80.1	58.4	62.3	62.8	72.2	73.8	80.9	87.1
III - Central Luzon	81.5	96.2	85.7	86.2	91.3	93.4	93.4	94.5	95.1
IVA - CALABARZON	76.6	79.7	83.6	87.9	90.2	94	92.5	92.3	94
IVB - MIMAROPA	19.5	74.2	30.6	34.5	44.5	50.7	53.9	62	70.4
V - Bicol	46.5	61.9	44.9	51.7	58.5	61.5	64.5	72.1	77.8
VI - Western Visayas	35.4	54.1	44.8	53.8	58.3	64.1	68.5	76.9	81.6
VII - Central Visayas	41.5	57.3	50.1	56.9	59.6	67.1	70.4	78.5	80.7
VIII - Eastern Visayas	28.3	60.8	36.4	45	47.9	56.2	61.5	73.8	84.2
IX - Zamboanga Peninsula	43.9	45.5	47.2	48.4	48.8	53	56.1	65.9	70.1
X - Northern Mindanao	56	69.7	54.4	59.6	64.5	69.9	68	76.2	81.2
XI - Davao	48.6	67.2	51.6	53	64.8	72.8	68.6	75.8	78.3
XII - SOCCSKSARGEN	39.9	77.3	46.2	50.9	61.3	66.2	64.6	69.2	76
XIII - Caraga	58.5	77.3	54.5	54	57.7	66	65.6	79.7	84.1
ARMM	32	21.4	22.2	25.2	35.4	39.7	36.7	49.9	56.6
Safe water									
Philippines	70.4	72.2	73.8	77.5	76.7	78.7	79.1	80.6	81.4
NCR	88.4	91.9	89.4	90.1	87.5	84.9	84.6	89.1	92.1
CAR	64.3	67.4	78.8	82.6	73.8	81.3	81.8	76.7	79.6
I - Ilocos	84	84.9	85.2	88.1	84.4	89.3	89.6	93.2	90
II - Cagayan Valley	77.1	80.1	82.2	83.4	74.3	82.8	83.2	83.6	81.8
III - Central Luzon	96.2	96.2	95.7	97.1	97	96.5	95.4	95.8	97.4
IVA - CALABARZON	78.8	79.7	81.1	85.7	86	84.9	86.9	85.5	89.8
IVB - MIMAROPA	67	74.2	77.5	82	80.6	81.4	73.8	80.1	78.1
V - Bicol	59.2	61.9	65.3	71.1	67.3	72.5	72.1	73.1	74.5
VI - Western Visayas	47.4	54.1	54.4	61.8	64.7	68.1	68.1	66.4	64
VII - Central Visayas	56.6	57.3	62.3	67.4	64.1	71.6	71	72.7	69.6
VIII - Eastern Visayas	64.6	60.8	70.8	74	75.5	79	77.2	80.7	86.8
IX - Zamboanga Peninsula	48.6	45.5	44.2	58.8	61.3	62.5	62.3	65.5	67.8
X - Northern Mindanao	59	69.7	66	69.1	74	78.2	79	81.9	81
XI - Davao	66.5	67.2	69.9	69.8	70.6	70.6	73.8	80.1	80.4
XII - SOCCSKSARGEN	75.9	77.3	76.2	78.7	77.3	79.3	78	80.5	78.6
XIII - Caraga	76.7	77.3	79.6	76.2	78	80.8	78.9	83.1	81.5
ARMM	26.1	21.4	21.6	30.3	33.8	34.1	41.7	35.1	39.7

Source: FIES, NSO

Appendix Table 9. Proportion of population with access to sanitary toilet facility and living in makeshift housing units, 1985-2009									
Region	Proportion of population (%)								
	1985	1988	1991	1994	1997	2000	2003	2006	2009
Sanitary toilet facility									
Philippines	69.5	69.5	71.8	74.9	77.3	82.9	81.7	84.2	86.1
NCR	87.8	88.6	88.8	95.1	91.8	95.6	93.6	96.8	97.5
CAR	61.4	67.2	58.1	69.3	72.4	79.7	78.4	85.2	85.4
I - Ilocos	87.6	90.7	89.2	90.7	91.8	92	93.2	94	94.9
II - Cagayan Valley	88.8	84.9	91.5	93.8	92.6	94.7	91.9	93.5	93.3
III - Central Luzon	73.2	74.3	77.3	80.6	82.9	91.2	89.9	92.9	94.9
IVA - CALABARZON	67.1	68.2	72.8	79.9	81.4	90.9	89.5	91.5	94
IVB - MIMAROPA	49.2	48.4	54.8	65.6	69	73.6	70.6	75.4	77.3
V - Bicol	61.3	57.8	61.1	63.2	71.6	73.8	74.5	74.8	77.4
VI - Western Visayas	51.4	54.8	55.5	57.3	64.2	69.9	73.7	75.4	78.5
VII - Central Visayas	65.2	62.6	64.4	64.5	68.8	73.4	70.8	74.6	78
VIII - Eastern Visayas	55.3	60.4	59.3	63.9	68.3	71.4	66.9	70.4	75.7
IX - Zamboanga Peninsula	69.9	62.9	70.6	64.1	72.6	73.7	71.9	75.7	77
X - Northern Mindanao	72.2	70.9	75	75.1	73.4	82.9	86.4	82.7	88.6
XI - Davao	75.8	76.9	82	80.5	82.9	86.6	80	86.1	86.4
XII - SOCCSKSARGEN	71	75.6	74.8	77.7	78	83.8	80.5	82	80.5
XIII - Caraga	76.5	78.2	75.1	84	83.9	87.3	84.8	87.8	88.9
ARMM	31.2	19.3	27.7	22.7	27.8	46.6	42.1	48.1	50.1
Makeshift houses									
Philippines	4.11	2.8	2.81	3	2.15	2	1.66	1.75	1.42
NCR	6.46	6.38	4.78	5.66	5.96	2.78	2.34	2.45	1.6
CAR	1.15	0.25	1.39	0.2	1.3	0.77	0.48	0.87	0.52
I - Ilocos	2.94	0.65	1.19	0.88	0.74	1.37	0.65	0.77	0.83
II - Cagayan Valley	0.94	0.53	0.55	0.42	0.81	1.49	0.94	0.79	1.39
III - Central Luzon	4.8	2.93	2.51	2.37	1.76	2.23	1.84	1.72	1.57
IVA - CALABARZON	3.82	2.13	2.1	2.25	1.31	1.57	2.06	1.48	0.84
IVB - MIMAROPA	3.76	2.35	2.06	2.18	1.25	2.06	2.24	1.99	1.12
V - Bicol	5.33	2.5	2.22	2.17	1.97	1.98	1.48	2.94	1.85
VI - Western Visayas	2.11	1.34	2.56	3.46	1.64	2.16	1.51	1.12	1.39
VII - Central Visayas	2.92	2.36	2.17	3.38	1.25	2.16	1.44	1.94	1.3
VIII - Eastern Visayas	2.66	1.94	2.7	1.14	1.3	0.78	0.92	0.8	1.51
IX - Zamboanga Peninsula	2.85	2.56	1.28	4.91	2.27	3.18	1.86	1.85	1.48
X - Northern Mindanao	5.55	3.17	3.1	4.57	2.78	3.2	1.42	2.58	1.38
XI - Davao	7.04	5.26	3.02	3.58	1.85	1.7	1.61	1.21	1
XII - SOCCSKSARGEN	3.18	3.38	5.63	1.33	0.67	0.71	1.03	1.56	2.47
XIII - Caraga	3.65	2.6	7.7	5.93	1.89	2.18	1.39	2.67	1.55
ARMM	5.15	0.32	1.3	1.68	1.12	1.66	2.6	2.13	2.56

Source: FIES, NSO

Regions	Proportion of population living as informal settlers							
	1985	1988	1991	1997	2000	2003	2006	2009
Philippines	2	2.58	2.41	3.34	3.31	3.69	4.01	3.63
NCR	2.96	4.38	4.19	7.57	4.75	5.46	10.13	10.59
CAR	0.46	0.69	0.03	0.45	0.13	0.68	0.8	0.52
I - Ilocos	0.8	0.2	1.13	0.83	0.67	1.1	1.57	0.37
II - Cagayan Valley	1.68	1.05	2.58	2.18	1.92	1.35	0.64	0.77
III - Central Luzon	2.21	5.33	1.7	2.23	1.6	1.46	2.45	0.86
IVA - CALABARZON	1.38	2.06	1.67	2.68	1.7	2.34	1.92	2.96
IVB - MIMAROPA	0.99	1.37	1.19	2.95	4.04	4.38	2.41	2.26
V - Bicol	0.74	2.05	2.37	2.98	4.53	3.54	2.55	2.32
VI - Western Visayas	3.17	2.22	4.39	3.57	4.33	6.32	5.4	5.13
VII - Central Visayas	3.57	1.3	1.29	4.48	3.42	4.29	3.73	2.95
VIII - Eastern Visayas	1.85	1.91	2.82	3.09	4.93	3.22	3.48	3.23
IX - Zamboanga Peninsula	2.55	3.38	1.05	1.38	3.09	5.75	5.16	4.97
X - Northern Mindanao	2.04	1.25	1.66	2.24	2.68	6.33	3.44	1.38
XI - Davao	1.12	4.14	2.61	1.15	4.22	4.52	1	2.92
XII - SOCCSKSARGEN	1.97	3.4	1.96	3.4	4.82	2.29	4.75	4.2
XIII - Caraga	1.58	2.55	4.63	4.83	5.17	3.7	3.69	2.36
ARMM	0.41	0.3	1.28	1.95	3.79	4.94	7.32	3.23

Source: FIES, NSO

Appendix Table 11. Income distribution indicators by region

Region	Share of bottom 20%				Decile dispersion ratio			
	2000	2003	2006	2009	2000	2003	2006	2009
Philippines	5.76	6.03	5.86	6.26	15.6	14.2	14.5	14.1
NCR	5.77	6.67	6.42	4.55	16.4	12.2	12.3	12.1
CAR	4.58	5.23	4.36	9.88	19.5	16.1	21.4	20.3
I - Ilocos	6.13	6.34	6.51	5.71	13.2	12.2	12.4	13.5
II - Cagayan Valley	6.05	6.01	6.17	6.49	14.3	15.1	13.8	16.4
III - Central Luzon	6.83	6.99	5.99	5.81	10.5	9.8	13.4	11.4
IVA - CALABARZON	5.64	5.87	5.55	6.41	15.2	14	14.8	14.1
IVB - MIMAROPA	6.46	6.08	6.28	6.4	13	14.7	13.9	13.2
V - Bicol	5.75	5.57	5.92	5.97	16.2	17.5	15.9	13.7
VI - Western Visayas	5.4	5.84	5.96	4.7	18.1	15.8	14.7	14.5
VII - Central Visayas	4.53	4.45	4.43	5.18	22.2	22.6	21.5	20.3
VIII - Eastern Visayas	5.16	5.5	5.13	4.99	21	18.7	20.1	19.9
IX - Zamboanga Peninsula	4.75	3.98	4.33	4.92	21	28.6	24.5	20.6
X - Northern Mindanao	4.82	4.92	4.91	5.49	20.6	19.9	20.1	19.8
XI - Davao	5.47	5.12	5.59	5.75	15.3	18.6	14.8	15.9
XII - SOCCSKSARGEN	5.52	5.24	6.52	6.58	18.4	20	12.7	15.8
XIII - Caraga	6.26	6.18	5.69	6.01	13.2	13.8	16.8	17.9
ARMM	8.66	8.07	9.12	5.66	8	9.1	7.4	6.5

Note: PIDS ESD Estimates; Sources of basic data: 2000-2009 Family Income and Expenditure Survey, NSO

Region	1985	1988	1991	1994	1997	2000	2003	2006	2009
Philippines	0.4525	0.4568	0.4803	0.4735	0.5068	0.5045	0.4871	0.4837	0.4743
Urban	0.4555	0.4447	0.4736	0.4602	0.4850	0.4782	0.4513	0.4496	0.4460
Rural	0.3796	0.3891	0.3941	0.3942	0.4190	0.4255	0.4288	0.4296	0.4277
1 - Ilocos	0.3806	0.3805	0.4208	0.3950	0.4446	0.4205	0.4118	0.4125	0.4280
2 - Cagayan Valley	0.3947	0.3996	0.4273	0.4242	0.4313	0.4353	0.4598	0.4390	0.4603
3 - Central Luzon	0.4017	0.3923	0.4070	0.3812	0.3722	0.3754	0.3715	0.4123	0.3827
4A - CALABARZON	0.4069	0.4036	0.4115	0.4153	0.4233	0.4324	0.4268	0.4244	0.4290
4B - MIMAROPA	0.4351	0.4396	0.4702	0.4368	0.4176	0.4500	0.4560	0.4461	0.4337
5 - Bicol	0.3985	0.4031	0.3954	0.4346	0.4535	0.4644	0.4870	0.4786	0.4491
6 - Western Visayas	0.4668	0.4250	0.4132	0.4259	0.4484	0.4857	0.4668	0.4488	0.4431
7 - Central Visayas	0.4426	0.4560	0.4587	0.4312	0.4865	0.4710	0.4821	0.4699	0.4691
8 - Eastern Visayas	0.3861	0.3989	0.4313	0.4165	0.4568	0.4930	0.4929	0.5027	0.5107
9 - Zamboanga Peninsula	0.4438	0.4574	0.4207	0.4020	0.4905	0.4903	0.5354	0.5205	0.5014
10 - Northern Mindanao	0.4839	0.4755	0.4501	0.4434	0.5142	0.5001	0.4984	0.5084	0.4886
11 - Davao	0.4125	0.4152	0.4569	0.4533	0.4713	0.4456	0.4715	0.4360	0.4461
12 - SOCCKSARGEN	0.3938	0.4031	0.4303	0.4035	0.4581	0.4902	0.5122	0.4264	0.4742
13 - NCR	0.4360	0.4425	0.4545	0.4311	0.4899	0.4740	0.4293	0.4328	0.4280
14 - CAR	0.4242	0.3936	0.4552	0.4375	0.4924	0.4631	0.4583	0.5028	0.4751
15 - ARMM	0.3373	0.3184	0.3252	0.3298	0.3630	0.3360	0.3675	0.3190	0.2997
16 - CARAGA	0.3658	0.3760	0.4072	0.4224	0.4571	0.4336	0.4462	0.4705	0.4903

Sources of basic data: Family Income and Expenditure Survey (FIES), NSO

Major Occupation Group	Poverty gap			Poverty severity		
	2003	2006	2009	2003	2006	2009
Farmers, Forestry Workers and Fishermen	14.05	14.46	13.58	6.07	6.06	5.54
Other Occupations Not Classifiable	-	7.35	12.51		2.71	4.65
Laborers and Unskilled workers	10.9	11.15	11.75	4.41	4.38	4.6
Trades and Related Workers	4.58	5.22	5.4	1.59	1.85	1.85
Special Occupation/Armed Forces	2.15	2.36	4.1	0.79	0.99	1.41
Plant and Machine Operators and Assemblers	2.4	3.02	3.59	0.76	1	1.14
Services workers and Shop and Market Sales Workers	2.05	3.12	3.22	0.72	1.16	1.16
No job or No business	2.65	-	3.01	0.94	1.12	1.03
Officials of Government and Special-Interest Organizations, Corporate Executives, Managers, Managing Proprietors and Supervisors	1.71	1.81	2.02	0.61	0.62	0.65
Technicians and Associate Professionals	1.31	1.96	1.77	0.51	0.65	0.64
Clerks	1.04	2.39	1.44	0.3	0.96	0.43
Professionals	0.1	0.17	0.27	0.04	0.06	0.11

Non-Gainful Occupation	-	3.17	0	-	-	0
Total	7.24	7.52	7.16	2.96	2.98	2.76

Note: PIDS ESD Estimates; Sources of basic data: 2003, 2006, 2009 Family Income and Expenditure Survey