

Tan, Edita Abella

Working Paper

How we measure poverty understates its extent and depth: Some results

UPSE Discussion Paper, No. 2015-09

Provided in Cooperation with:

University of the Philippines School of Economics (UPSE)

Suggested Citation: Tan, Edita Abella (2015) : How we measure poverty understates its extent and depth: Some results, UPSE Discussion Paper, No. 2015-09, University of the Philippines, School of Economics (UPSE), Quezon City

This Version is available at:

<https://hdl.handle.net/10419/149106>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



UP School of Economics Discussion Papers

Discussion Paper No. 2015-09

September 2015

How We Measure Poverty Understates its Extent and Depth: Some Results

by

Edita Abella Tan

Professor Emeritus, UP School of Economics

UPSE Discussion Papers are preliminary versions circulated privately to elicit critical comments. They are protected by Republic Act No. 8293 and are not for quotation or reprinting without prior approval.

How We Measure Poverty Understates its Extent and Depth: Some Results

Edita Abella Tan

Abstract

The paper examined the methodology used for measuring the country's poverty line and poverty rate. It finds that the poverty line was not based on the cost of meeting an acceptable or minimum standard of living or of meeting basic needs by which to classify families as poor as is customarily done in other countries. The measure uses a simple construct referred to as subsistence poverty line to establish the overall poverty line. The subsistence poverty line is estimated to be the cost of food consumption of low-income families that meets their nutritional requirements. Thirty per cent of the subsistence poverty line is added to it to account for all non-food needs. The allotted budget for non-food needs is too low and not sufficient to meet the cost of all non-food basic needs. Consequently, the poverty line as measured does not meet all basic needs including food and underestimates the country's poverty rate. The underestimation of the poverty rate is seen in the higher rate of deprivation in particular basic needs such as housing, food consumption and education than the official poverty line. The paper concludes by recommending that the government gives high priority to slum clearance and housing program as a strategy for social and economic development. Housing for the poor has not been a priority of the government. So far only about 1% of the national budget goes to housing. At this time, the government has the resources to launch a massive housing program to eradicate the slums in five to ten years time. The paper cites existing and potential sources to finance a massive housing program. It cites the very successful housing program of Singapore and how it contributed to its sustained high rate of economic development.

JEL Codes: I32

Key Words: Measurement and analysis of Poverty

How We Measure Poverty Understates its Extent and Depth: Some Results

Edita Abella Tan

We gathered in unprecedented number, for hours through the cold rains, here in Manila and in Tacloban, Leyte to experience the presence of Pope Francis who we felt shared our hardship and discontent. We appreciated his heartfelt concern for the poor of our society who number in millions and live in extreme deprivation of basic needs – food, shelter, education and healthcare. He was aware that dire poverty has forced children to beg or work in the streets and scavenge in the dumps. He understood that the high unemployment rate and low wage rate in the country have forced millions of young parents to leave their children to work in distant and alien places in order to earn extra income to pay for their children's education or to build them a decent home. He understood the general public's discontent that the nation has failed to progress as well as other countries. He exhorted the youth to have dreams of a better and happy future. But what can the street children, the child workers who have dropped out of school, the seriously undernourished and the abused dream about?

They face little opportunities for developing their inherent abilities. The Pope appears to attribute the sad social situation in the country largely to indifference and corruption. Corruption directly and indirectly causes poverty. P-noy's slogan—"kung walang corrupt walang mahirap" is right to some extent. Directly, corrupt officials have stolen government resources that were intended for education, health, housing and other social services and wasted them in luxurious houses, cars, and travels. Indirectly, corruption has impeded economic growth as government resources for development projects were diverted to bribes and unproductive activities. Evidently corruption has reduced resources for the development of infrastructure, agriculture, scientific research and innovation and other development programs. Corruption does not just divert physical resources for social and economic development but as seriously, it diverts government officials' efforts and competence from their official responsibilities. It demoralizes the honest and competent employees and renders them unproductive. Ultimately, corruption destroys democratic processes and institutions as it creates monopoly of political power among the incumbent who assumes control of government resources, allowing them to remain in power and create corrupt political dynasties. At the same time, corruption encourages dependence by the poor on trivial alms that usually trickle down during election time. Politicians give alms to the poor for funerals, low cost scholarships, medical help and other personal assistance which foster gratitude and loyalty. Politicians find charity an effective alternative to providing community-based infrastructure and social services. Alms are a good cosmetic measure to conceal corruption. Supposedly kind-hearted politicians get repeatedly reelected. Corruption is an unpatriotic act, a crime under our laws and a sin under our religion.

The enviable economic and social progress attained by our neighbors: Japan, Korea, Taiwan, Singapore and Malaysia, has been attributed by many to the integrity and nationalism of their leaders. Corruption was minimal if not absent in these economies. The first four have achieved rich-country status in less than four decades, with Malaysia close to attaining it in the near future. Using the World Bank \$1.25 per day poverty line, they have long eradicated poverty. Thailand has rapidly developed as well and has virtually eradicated poverty: its poverty rate in 2012 was 0.3%. Indonesia, which has roughly same per capita income as the Philippines has a much lower poverty rate at 17% vs our 19%. China's income per capita was less than half of ours in 1985 but it now enjoys about \$5,000 against our

\$3,000.¹ It has succeeded to lift more than 400 Million of its people out of poverty and reports a poverty rate of only 6.3%. The late developer Vietnam has less poor than us, with a poverty rate of only 2.4%. Using their own poverty lines, these countries report slightly higher poverty rates, the Philippines for instance had an official population poverty incidence of 25% versus the WB's 19%.

The paper aims to awaken us to the depth and extent of poverty in our country and its persistence over the past six decades. The economy's volatile and relatively slow growth partly explains this but it is a fact that the government has not taken serious efforts to directly and effectively address the problem. Several agencies, including three departments, have been instituted to address particular facets of poverty but none has exhibited competence and dedication to fulfill its mandate. We have the Department for Agrarian Reform, the Department of Social Welfare and Development, the National Anti- Poverty Commission, the Food and Nutrition Research Institute and the National Housing Authority with its numerous offices. The education and health departments also cater to the poor. Malnutrition rate among children and young adults is still high, large numbers of families continue to live in the slums, the incidence of infectious diseases such as TB, filariasis and diarrhea remains significant while there are still rural areas that suffer from malaria and schistosomiasis. A significant proportion of children do not enroll in primary education and a fairly high proportion of its pupils drop out before completing the elementary grades.

We take note of the fact that these deprivations are not reflected in the official report on poverty since the methodology used is not based on meeting basic needs. It uses a highly simplified construct to estimate the poverty line (income threshold) which is too low to fully capture the extent and depth of the country's poverty. The poverty line does not account for basic needs as it does not estimate a minimum budget (poverty line) for meeting minimum standards of food, shelter, transportation, utilities, health care and education. The paper briefly describes the methodology used by the Philippine Statistical Authority. In lieu of the limitations of the official poverty estimates, we offer an alternative measure and presents data on poverty in major basic needs: shelter, food and education. The paper draws special attention to the dire poverty in shelter as evidenced by the widespread presence of slums. Poverty in housing is insidious as it damages the very essence of family life -the members' dignity and self-worth, their inter-relationship, their social participation, and palpably their human development. Based on the Population and Housing Census, about seven million or 37% of families live in slums under inhuman conditions. Yet this is one face of poverty that the government and all the past administrations have neglected to address seriously. The society as a whole has closed its eyes to the slums.

¹ The author was invited to keynote the Forum on China-ASEAN Forum on Financial Integration by the Guangxi University ASEAN Research Institute, Nanning. Nanning is a relatively small city of two million people. But it is a very well planned modern city with tree-lined highways, a well-landscaped university of large modern buildings. Residences come in clusters of high rise apartments beside shopping centers. The city is very clean, no garbage is visible along the streets, the people are clean and healthy looking with no emaciated children or beggars in the street. Quilin, a tourist city about 400 kilometers from Nanning, is as modern and clean as Nanning. Its long river has been developed into a tourist attraction. All its banks have been planted with trees and lighted. Traditional structures including a tall golden pagoda were built to enhance the gardens. China's per capita income was just like ours when the city plan was implemented.

The data being presented may have been perused by Pope Francis before coming to the Philippines, as he called on us to open our minds and hearts to the plight of the poor and use our hands to uplift their life. The Pope was candid in blaming government corruption for the persistence of so much poverty and inequality. Quoted below is his straightforward admonition to government officials when he made his official visit to the President:

“As many voices in your nation have pointed out, it is now, more than ever, necessary that political leaders be outstanding in honesty, integrity and commitment to the common good. In this way they will help preserve the rich human and natural resources which God has blessed this country. Thus will they be able to marshal the moral resources needed to face the demands of the present and to pass on to coming generations a society of authentic justice, solidarity and peace.

Essential to the attainment of these national goals is the moral imperative of ensuring social justice and respect for human dignity. The great biblical tradition enjoins all peoples the duty to hear the voice of the poor. It bids us to break the bonds of injustice and oppression which give rise to glaring, and indeed scandalous, social inequalities. Reforming the social structures which perpetuate poverty and the exclusion of the poor first requires a conversion of mind and heart”

In one of his weekly columns in the Philippine Daily Inquirer, Dennis Murphy of the Urban Poor Associates quoted St. John Paul II from the Pontifical Committee on Justice and Peace in 1997 *“Any persons or families who are forced through no fault of their own to live in indecent housing are victims of injustice.”* We may consider the extensive presence of slums as a national shame, not worthy of a middle-income Catholic nation. It is indeed a shame to have extensive slums of the direst conditions in the midst of very affluent gated compounds of mansions and elegant homes. Have the slums remained so extensive because of sheer apathy and exclusiveness of the national leaders and the rich? Did we deliberately close our senses and sensibility to the destitution of so many of our countrymen? Or did we ignore their plight because we felt that the problem was so enormous and beyond our resources to solve? The paper corrects this notion for we are rich enough to readily eradicate the slums.

The paper proceeds to describe the limitation of the methodology used by Philippine Statistical Authority (PSA) for setting the poverty line by which families are classified as poor or non-poor. The poverty line is set too low and so underestimates the poverty rate, i.e. the proportion of families and of the population that is counted as poor. The paper adjusts upward the poverty line to provide a more reasonable budget for non-food basic needs such as shelter, utilities, healthcare and education. The adjustment would raise the poverty line and correspondingly the poverty rate. At the same time, the poverty rate reported by the PSA may have been underestimated by the under-sampling of the poorest families. The under-sampling of the poor is reflected in the large difference between the actual count of slum dwellers given by the Census of Population and Housing and the reported poor housing obtained by the PSA in its family income and expenditure surveys.

The paper concludes by suggesting direct policy thrusts in solving the slum problem. The poor have to be assisted in acquiring a decent home for their income is too low to rent a decent home or to save for a house. The current fiscal accounts of both the national and local governments can definitely

finance a massive housing program to eradicate the slums. The program is expected to generate revenue from slum clearance that would free valuable land for high value commercial and real estate uses. A progressive real property tax is also suggested for it will discourage wasteful investments in unproductive luxurious residences and idle lands. It would be fair for a rich family to forego an extra bathroom or extra bedroom and use the money to pay extra property tax. Slum clearance is expected to give high private and social returns. Singapore offers us a model that “greening the city” by way of slum clearance, strict zoning and beautifying it with greenery and good public transport gives high returns. The investments succeeded to attract foreign investments and tourists and fostered unity and stability to the young nation. The current National Development Plan continues to depend on growth as the solution to poverty reduction. The last decades’ record of high growth brought little relief to poverty. The poverty rate declined very slowly and the slums continued to grow fast. As Balisacan observed in one of his numerous studies on poverty, the Philippines has a relatively low elasticity of poverty rate relative to economic growth. We need to directly attack poverty as we are doing with education through the CCT program. Empirical studies show that CCT has significantly raised the enrolment rate of young children and the national government has substantially increased the budget for CCT. A similar direct strategy for slum clearance and housing development is recommended.

II. The Official Poverty Line, Trend and Regional Distribution²

The (PSA) reported that poverty rate has been falling but at slower rate in the last decade. The poverty rate among families fell quite fast from 29.7% to 21.0% in 1991 to 2006 but slowed down later - 19.7% in 2012, 18.8% in 2013 and 20.2 in 2014 (Table 1). The poverty rate among the population has been higher than for families since the poor tend to have more children. Note that the number of poor families has been rising from 3.56 Million in 1991, 3.81 Million in 2006 and 4.21 Million in 2012. The economy’s higher and more stable growth in the last decade has failed to raise enough jobs for the rapidly growing population and improve the productivity (or wage rate) of the employed, thus the rise in the number poor. There is serious inequality in poverty rate across regions with the rate in 2012 ranging from just 2.6% in Metro Manila to 48.7% in ARMM. The poverty rate is 1/3 or higher in six out of 15 regions. The poverty rate in most regions declined but it worsened in the poorest regions: Regions VIII, X, XII and ARMM. It is very worrisome that the poverty rate in ARMM rose quite substantially from 26.9% in 1991 to 40.5% in 2006 and 48.7% in 2012. The long lasting armed conflict in ARMM must have wrought destruction of its human and physical capital and impeded its economic development.

² A simple numerical measure like our poverty line or the World Bank \$1.45 PPP per capita per day does not give us much insight into the life of the poor. Alternative indicators of poverty have been applied in various economies. At the international level, human development indicators are used such as enrolment rate, life expectancy, infant mortality rate, mal or under nutrition rates. In the US, social services programs set standards for housing, food consumption and child care. In some Western European countries, poverty line is set as a fraction of the average national income, usually 50% to 60%. The measure considers that the standard of living of the poor should not deviate too far from the average. Another tack takes families who spend more than 35% of income on food as poor. Note our poor spend about 60% of their income on food and the national average is about 50%.

Table 1. Poverty Rate and Number of Poor Families Per Region 1991-2012

Region	Poverty Incidence among Families (%)					Subsistence Poverty Incidence among Families (%)					Underweight Rate of School age children by Region (2003)
	1991	2009	2012	2013	2014	1991	2009	2012	2013	2014	2013
PHILIPPINES	29.7	20.5	19.7	18.8	20.0	14.4	7.9	7.5	7.5	7.6	
NCR	5.3	2.4	2.6	...	...	1.1	0.3	0.3	...	...	15.7
CAR	36.7	19.2	17.5	...	...	22.3	9.0	7.1	...	...	21.7
REGION I	30.6	16.8	14.0	...	...	14.2	5.3	3.9	...	...	28.8
REGION II	37.7	20.2	17.0	...	...	17.2	6.4	4.3	...	...	19.5
REGION III	18.1	10.7	10.1	...	...	6.7	3.2	2.7	...	...	17.7
REGION IV-A	19.1	8.8	8.3	...	...	5.8	1.9	2.3	...	...	22.5
REGION IV-B	36.6	27.2	23.6	...	...	18.5	9.8	8.4	...	...	32.2
REGION V	48.0	35.3	32.3	...	...	15.0	12.0	7.6	...	...	36.1
REGION VI	32.3	23.6	22.8	...	...	14.9	7.9	7.7	...	...	30.8
REGION VII	38.2	26.0	25.7	...	...	20.9	11.1	11.1	...	...	25.0
REGION VIII	42.3	34.5	37.4	...	...	23.1	14.7	15.3	...	...	35.0
REGION IX	36.4	39.5	33.7	...	...	19.1	21.1	14.8	...	...	29.9
REGION X	42.6	33.3	32.8	...	...	23.7	16.1	15.9	...	...	26.7
REGION XI	34.1	25.5	25.0	...	...	16.5	11.1	10.1	...	...	22.7
REGION XII	47.4	30.8	37.1	...	...	26.4	12.2	17.8	...	...	29.7
Caraga	48.5	46.0	31.9	...	...	28.3	24.6	13.0	...	...	31.7
ARMM	26.9	39.9	48.7	...	...	9.4	10.8	19.5	...	...	23.7
Poverty Incidence in the Philippines	22.7	26.3	25.2	...	...	...	...	...	...	...	...

Source: PSA's 2012 Full Year Official Poverty Statistics

We show here that the method for measuring the poverty line and the poverty incidence or rate used by the Philippines Statistical Authority (PSA) substantially underestimates the poverty problem in the country. The common practice is to set the poverty line based on an acceptable minimum standard of living. A family's standard of living is determined by the degree of satisfaction of its needs such as food, shelter, utilities, transportation, healthcare and education. The PSA poverty line measure is somewhat arbitrary. It sets a subsistence or food poverty line based on an estimate of the cost of modest menus for the day that are popularly consumed by low income families. The food components

of the daily menus have to meet the nutritional requirements for a family of six. The cost of the menus comprises the food or subsistence poverty line. The PSA then adds a budget equal to 30% of the food or subsistence poverty line to account for all non-food basic needs. The estimation does not set minimum budgets for the non-food basic needs. The total poverty income is thus set to equal the food or subsistence poverty line multiplied by (1.30). It is argued that the poor's non-food basic needs would cost more than 30% of the food or subsistence poverty line. Setting the poverty line too low underestimates the poverty rate, setting it too high overestimates the poverty rate.

Described below is the PSA's estimation procedure. Panel A shows a sample day's menu that meets the nutritional requirement for a family of six. Principal food groups such as carbohydrates and protein-rich foods are derived from the sample menu. The menu is costed at prevailing market prices.

Sample Menu	Food basket in grams	Per family	Per capita
<u>Breakfast</u>	Rice	2,442.0	407.0
Dried fist	Bread	108.0	18.0
Boiled rice	Pork	108.0	18.0
Coffee with sugar	Dried fish	126.0	21.0
<u>Lunch</u>	Noodles	46.2	7.8
Noodle soup	Condiments	104.4	17.4
Laing	Sugar	37.2	6.2
Boiled rice	Fruits	405.0	67.2
Banana	Cooking oil/gata	93.0	15.5
<u>Supper</u>	Kangkong/malungay,		
Pork sinigang with	kamote tops or gabi		
kangkong, kamote tops	leaves	120.0	50.0
Boiled rice			
<u>Snack</u>			
Bread			

For 2012, the NSA estimated the food or subsistence poverty line, sPL at P13,232. Non-food needs are assumed to equal 30% of the total poverty line, PL. Thus the poverty line, PL is equal to $sPL \times (1.30) = P17,202$. Would 30% of food or subsistence poverty line - here P3,969 - suffice to meet the cost of non-food needs? In the US when the poverty rate was first officially estimated in 1964, the non-food basic needs were assumed to cost two times the food threshold. The multiplier was based on the nation's

average per capita non-food consumption of about 2/3 of family income, or food at 1/3. The poverty line was thus set equal to food poverty line times three, i.e. $PL = SPL(1+2)$. Here the multiplier is only 1.3. If we take the national average non-food consumption of 51.8 instead 30% used by the NSA, the poverty line would equal subsistence food poverty line divided by 48.2% or $P13,232/.482 = P27,452$. The non-food threshold is P14,220, instead of P3,970. The multiplier is 2.07 instead of 1.30. .

The PSA reports on food/subsistence poverty rate based on families whose incomes fall below the food threshold. This is not a very meaningful poverty concept since poor families would not devote all their income on food. They still have to allocate some income to non-food basic needs. In urban areas for instance, transportation to place of employment, to schools and services is essential. Utilities are essential and must be allocated some income. It is only in very primitive economies where food absorbs most of people's income. Thus we find in Table 1 that food/subsistence poverty rate is very much lower than the poor nutritional rate of children and adult. Metro Manila for instance has virtually zero food/subsistence poverty rate but a fairly high child undernutrition rate of 15.7% in 2003.

How well are poor families able to meet the needed nutritional requirements at food/subsistence threshold income? Table 2 gives the families' food consumption as a percentage of the food threshold across the first five deciles. The poorest 10 percent of families meet the food threshold by only 57.6% in Metro Manila, 59.2% in Central Luzon, 62.7% in Bicol, 59.5% in Eastern Visayas and 60.4% in ARMM. Families increasingly meet the food threshold as their income increases. But it is only in the 4th decile of family income distribution that families meet the food threshold. The families' inability to spend enough for food results in malnutrition of the members especially their children.

Table 2. Per Capita Food Expenditure and Ratio to Food Threshold, 2009

Decile		Region				
		NCR	Central Luzon	Bicol	Eastern Visayas	ARMM
1st Decile	Food Expenditure (P)	6933	7618	7406	6772	7085
	Ratio (%)	51.6	59.2	62.7	59.5	60.4
2nd Decile	Food Expenditure (P)	9678	9497	9647	9322	9052
	Ratio (%)	72.1	73.8	81.7	81.9	77.2
3rd Decile	Food Expenditure (P)	10641	11262	11161	10718	10565
	Ratio (%)	79.3	87.5	94.5	94.2	90.1
4th Decile	Food Expenditure (P)	13189	12778	12894	12601	12430
	Ratio (%)	98.2	99.3	109.2	110.7	106
5th Decile	Food Expenditure (P)	15011	14936	14540	14364	13164

Ratio (%)	111.8	116	123.1	126.2	112.3
-----------	-------	-----	-------	-------	-------

Source of basic data: PSA's FIES 2009

Table 3 shows how niggardly are the poor's expenditures on each basic need. The per capita daily consumption of food of the poorest was only P19 in Metro Manila, P20.9 in Central Luzon, P19.6 in Bicol, P18.6 in Eastern Visayas and P19.4 in ARMM. Expenditures for utilities were respectively P3.5, P2.5, P2.3 P1.9 and P1.8. Just as minimal were the expenditures on transportation and education. Expenditures on each need increase as income increase but the amounts are still quite low and do not reach P50 for food and P10 for utilities, transportation and education up to the fifth decile.

Table 3. Household daily per capita expenditures by commodity group by region, 2009

Region	Food Expenditure	Rice Expenditure %	Meat, Fish and Marine Products %	Fuel, Light and Water Expenditure	Transport and Comm. Expenditure	Clothing , Footwear and other wear in	Educational Fees Expenditure
First Decile							
NCR	19.0	10.6	4.7	3.5	1.1	0.9	0.3
Central Luzon	20.9	21.6	4.7	2.5	1.1	0.6	0.3
V - Bicol Region	20.3	23.1	3.8	1.9	0.9	0.5	0.4
VIII - Eastern Visayas	18.6	21.5	4.1	1.9	0.8	0.4	0.4
ARMM	19.4	24.3	2.8	1.8	1.2	0.7	0.3
Second Decile							
NCR	23.5	5.3	5.4	4.1	2.1	0.7	0.4
Central Luzon	26.0	8.2	6.1	3.2	2.0	0.9	0.6
V - Bicol Region	26.4	9.3	6.1	2.6	1.4	0.5	0.6
VIII - Eastern Visayas	25.5	10.1	6.5	2.7	1.5	0.8	0.6
ARMM	24.8	9.2	4.6	2.4	2.0	0.9	0.6
Third Decile							
NCR	29.2	5.7	7.2	5.1	2.5	1.1	0.5
Central Luzon	30.9	8.8	7.8	4.1	2.6	1.1	0.8
V - Bicol Region	30.6	0.8	11.9	3.0	2.2	1.0	0.9
VIII - Eastern Visayas	29.4	11.3	7.6	3.2	2.0	0.9	1.1
ARMM	28.9	9.0	6.0	2.8	2.8	1.1	1.0
Fourth Decile							
NCR	36.1	6.3	9.0	6.2	3.5	1.4	0.6

Central Luzon	35.0	9.0	9.4	5.1	3.7	1.3	0.9
V - Bicol Region	35.3	9.5	8.6	4.0	2.7	1.3	1.6
VIII - Eastern Visayas	34.5	11.8	9.2	4.2	2.7	1.2	1.4
ARMM	34.0	10.2	7.4	3.8	3.6	1.1	1.1
Fifth Decile							
NCR	41.1	6.7	10.1	6.8	4.7	1.5	1.0
Central Luzon	40.9	9.1	11.1	6.2	4.9	1.6	1.4
V - Bicol Region	39.8	10.7	10.0	4.8	3.9	1.5	1.7
VIII - Eastern Visayas	39.4	11.8	12.3	5.0	3.8	1.4	1.9
ARMM	36.1	9.8	7.8	4.1	4.2	1.6	1.7
Tenth Decile							
NCR	121.0	10.0	26.9	34.3		9.2	20.0
Central Luzon	96.8	10.9	25.3	24.2		8.8	18.6
V - Bicol Region	98.5	11.4	27.1	21.7		6.6	17.5
VIII - Eastern Visayas	88.2	12.4	26.9	19.5		8.4	14.1
ARMM	89.4	15.1	25.7	18.2		13.1	10.1

Source: PSA's FIES 2009

There could be variation in menu as well as prices within a region due to distance-cost to markets, topography, seasonality and perishability. Within a region, the price of rice and sugar does not vary as much as the price of perishable fish, vegetables or fruits. The relative price of fish in coastal areas is lower than in the hinterland. Farm families and fisher-folks tend to have unvaried diet as they eat what they produce. On the other hand, families in rural areas possibly have lower cost of transportation, fuel and water. Differences in taste and lack of information on nutrition further complicate the determination of a standard food basket. Variation in demographic variables such as age distribution of family members would also determine cost of basic needs.

III. Alternative Methods of Measuring Poverty

There are varied approaches to setting the poverty line but the underlying methodology is based on the standard of living that a society considers to be acceptable. The absolute poverty line approach is the oldest measure. It accounts for the cost of basic needs. The World Bank's \$1 a day per capita consumption is based on the absolute poverty line used in the poorest countries. The US also uses the absolute poverty line method but allows for higher standard of living. The advanced European economies use relative poverty income which is set as some proportion of mean or median income, currently between 40% and 60%. They look at the average per capita income or consumption as a standard to be attained and set the poverty line as a fraction of the standard. Additionally, there is the subjective measure based on how families rate themselves as poor or non-poor and how much it would

take to meet their needs in order not to be poor. In the US the subjective poverty line is based on what income to “get along”. Here the Social Weather Station has been collecting data on self-rated poverty. The main question is whether they consider themselves as poor or not poor, and if poor, how much additional income they would need to not be poor. Note that the poverty rate obtained by the Social Weather Station has always substantially exceeded the PSA poverty rate.

In some ways, the PSA methodology follows the US absolute measure which is also based on low-cost food consumption. However, the US poverty line allots an adequate budget for non-food basic needs in setting its poverty line. The method was pioneered by Mollie Orshansky (1964) as a basis for President Lyndon Johnson’s “War on Poverty “. She obtained from the Department of Agriculture a measure of the economic cost of a food basket for a family four. The poverty line was estimated at roughly three times the economic food cost or that the food cost was taken to be only 1/3 of the poverty line. The value 3 of the food multiplier is based on the national average proportion of non-food consumption to total consumption. Later, Orshansky found that the Department of Agriculture’s economic food budget was too low to guarantee the intake of required nutrition and raised the food threshold to one recommended by the Bureau of Current Population Survey. There were criticisms of the methodology but the US government has continued using the Orshansky measurement in order to provide a consistent time series on poverty. Technical studies have been undertaken to adjust the US poverty line for after tax income, social benefits and tax credits, as well as demographic variables. Some suggested that because of the major economic, social and technical developments in the US, the share of non-food budget should be raised from three to six times the food threshold. Urbanisation alone raises the cost of transportation, communications and utilities. The revised estimations of poverty line and poverty rates are treated as part of macro information and applied in designing anti-poverty and related programs. In our case, only 1/3 of the food threshold or subsistence poverty line is allotted to non-food needs as compared to Orshansky’s three times the low-cost food budget.

Ravallion and Locksin (2009) find that countries tend to set their poverty line depending on their standard of living or income per capita. Except for the poorest countries where the poverty line tends to approximate the low WB \$1.25 level, poverty line increases as income per capita increases. The European OECD countries set their poverty line as a fraction ranging from 0.4 to 0.6 of the national average consumption level. Their poverty lines tend to rise as income per capita rises but partly depending on the change in the distribution of income. Examining the poverty lines across countries, the authors estimated the elasticity to be about 0.6. The positive and fairly high poverty line-income per capita elasticity is reflective of the adjustment of poverty line to prevailing standard of living. The poorest countries’ poverty lines are close to the WB’s dollar-a-day per capita income. It was originally based on the poverty line applied by a relatively small number of very poor countries in the 1990s, adjusted to countries’ inflation rate. Reddy, Visaria and Asali (2008) questioned the universal applicability of the WB poverty line where the standard of living, taste and market conditions vary widely across countries.

IV. Poor Nutrition

The Food and Nutrition Research Institute or FNRI undertakes anthropometric surveys, especially of infants and children. The inadequacy of food intake has resulted in poor nutritional status of children as indicated by underweight, UW, and underheight, UH status. Underheight or stunting is a cumulative result of past under-nutrition. Poor nutritional status has declined for all age groups since 1989-1990 but has remained high (Table 4). In the last survey in 2013, close to 20% of the youngest group of children were underweight. The stunting (UH) rate tends to be higher than the underweight (UW) rate among 0-5 years old children - 30.3% vs. 20%. This implies long years of malnutrition and the adjustment of food intake to height. The UW rate of the next age group, 6-10, is higher than for the younger group at 29.1% but the stunting rate remained the same. As children grow, their food requirement rises and if not filled results in stunting. Thus we find stunting to be lowest among infants of age 0 to one year old, but the UW and UH rates increase monotonically every year up to year 3, then remain about the same in year 4 and 5 (Table 5). Expectedly, income is highly correlated with UW and UH rates (Table 6). The UW and UH of children aged 0-5 in the lowest quintile were 31.5% in urban areas and 29.3% in rural areas. The UW rates monotonically decreased as family income increased from quintile to quintile in both urban and rural areas. The UH rates were higher for each income quintile than the UW rates and monotonically fell also as income increased. Stunting reaches a level when the growing period ends so that it tends to be higher than UW among younger ages. Both UW and UH were lower in rural than in urban areas across all income quintile. Possibly, some foods especially fish and vegetables and fruits were cheaper in rural than in urban areas. The more perishable fish and the more bulky and low-valued vegetables have higher transport cost and tend to be cheaper in rural areas. In fact there is fairly small variation in the price of rice and meat across regions. Livestock is not perishable for it is transported live (Table 6).

Table 4. Nutrition Rate of Underweight, Underheight and Overweight Children , 1989-2013

	UNDERWEIGHT				UNDERHEIGHT		OVERWEIGHT	
Column1	0-5 Years Old Underwt	6-10 Years Old Underwt	11-19 Year Old Male Underwt	11-9 Years Old Female Underwt	0-5 Years Old Underht	6-10 Years Old Underht	0-5 Years Old Overwt	6-10 Years Old Overwt
Year	0-5 Years Old	6-10 Years Old	11-19 Year Old Male	11-9 Years Old Female	0-5 Years Old	6-10 Years Old	0-5 Years Old	6-10 Years Old
1990	27.4	34.2	...	...	44.7	44.8	1.0	...
1992	26.6	32.5	...	...	40.6	42.8	1.1	...
1993	23.8	30.5	29.2	30.7	38.9	40.2	1.5	...
1996	23.6	28.3	...	...	39.9	39.1	1.6	...

1998	25.5	30.2	33.1	33.1	38.9	40.8	1.4	...
2001	23.0	32.9	...	...	35.9	41.1	2.0	...
2003	20.7	32.1	20.5	10.1	33.9	36.4	2.4	5.8
2005	20.2	30.9	...	...	33.1	34.0	2.5	6.8
2008	20.7	32.4	...	...	32.3	33.9	3.3	6.6
2011	20.2	32.0	...	...	33.6	33.6	4.3	7.5
2013	19.3	29.1			30.3	29.9	5.0	9.1

Source: Food and Nutrition Research Institute

Table 5. Nutrition Rate Through First Five Years of Life

Year	Under weight	Under height	Wasting
0-5	12.2	13.1	13.4
6-11	15.2	16.2	11.4
1 year	20.1	31.5	10.6
2 years	21.8	35.7	6.4
3 years	22.3	35.4	5.8
4-5 years	21.0	32.7	5.5

Source: Food and Nutrition Research Institute

Table 6. Nutrition Rate by Household Income of Children aged 0-10, Rural, Urban, 2013

Quintile Income	Underweight				Underheight			
	Urban		Rural		Urban		Rural	
	0-<5	5-10	0-<5	5-10	0-<5	5-10	0-<5	5-10
1	31.5	40.0	29.3	43.1	44.2	44.5	45.0	48.9
2	22.9	34.7	23.8	33.9	33.9	32.8	37.1	36.3
3	20.4	30.7	17.3	26.0	29.0	27.2	27.9	26.0
4	12.9	19.4	12.7	19.8	20.8	16.6	19.5	17.2
5	8.4	9.7	9.1	11.0	13.1	9.3	14.0	10.0

Source: Food and Nutrition Research Institute.

V. Poverty in Housing

The country's poverty appears to be most serious in housing than in the other basic needs. Slums are widespread in Metro Manila. Slums also exist in smaller cities and towns. Most slums are located in public lands and abandoned private properties that are close to the poor's sources of livelihood such as dumpsite for scavenging, roadsides for itinerant vending, and residential areas for domestic services. In Metro Manila, slums proliferate along river banks, clogged streams, railroad properties, roadsides and parks, all public domain. They are also found in high-valued real estate, public and private, that for a time was unutilized. There are slums in Manila's tourist and historical places such as Intramuros, Ermita, and Chinatown, and along major roads, including those that lead to Malacanang Palace, the President's official residence and office. The spacious campus of the University of the Philippines also contains thousands of squatter/slum families. The poor possibly think they have a right to build their homes on public land and abandoned private properties. The government, on the other hand, has been tolerant of their illegal occupancy considering that it has not offered them much alternative. Besides there is a law that allows slum demolition only if an alternative residence is available to the affected families. There is no substantial national or local government program for solving the slum problem through relocation and housing improvement. The National Housing Authority is a fairly large office with six coordinating agencies, including financing arms such as the Home Mortgage and Finance Corporation and the Home Guarantee Corporation. The NHA has assumed modest objectives and targets and obtained very limited budget. The local government, on the other hand, has ignored the housing need of their poor constituents. The slum dwellers comprise a large voting population and politicians patronize them with alms for funerals, baptism and wedding celebrations, and medicine in exchange for their vote come election time.

The United Nation's Habitat cites five conditions that characterize slum housing: crowded with no sanitary and modern water and toilet facilities, no electrical connection, and poorly constructed with makeshift materials. Statistics on these dimensions of the country's poor housing are provided by the Census of Population and Housing and the Annual Poverty Indicator Surveys (APIS). We rely on the Census distribution of housing units by fairly small sizes starting with housing units of less than five square meters to housing units of more than 200 square meters (Table 7). The Annual Poverty Indicator Survey or APIS provides qualitative statistics on families' use of modern utilities, such as electricity, sanitary water and toilet. We consider housing units of less than 5 square meters and 5-9 square meters to comprise the shanties of makeshift materials built along roads, waterways, dumpsites and in some high value squatter areas. In Metro Manila, the next larger shelters of 10-19 square meters or about 14.5 square meters on average, comprise what we term unstructured makeshift apartments. They make do with whatever materials they could avail of. Many shanty apartments form solid blocks of three or four storey rooms. The shanty apartments are located along major streets of the city such as Quirino, Osmena, and Araneta Avenues and in the notorious slum areas of Leveriza, Baseco and Tondo. Quezon City has an even larger slum population than Manila. Access to community water and electrical systems appears to be minimal or, if available, are shared by many. The 20-29 square meters housing in the cities possibly consists of rented single rooms in old houses in blighted streets not far from the

shanties. They usually have water and electrical connection but the families have to share a common kitchen, bath and toilet, and utilities.

Families in all these three types of poor housing – the small shanties along roads and water ways, the shanty apartments, and the rented single rooms are crowded in varying degrees. These very crowded dwellings allow no privacy among the family members and even among the neighbors. The smallest shanties of less than 10 square meters sizes have no space for any furniture, even a bed or a table and allows just the bare floor for sleeping, cooking and eating. The larger rooms in shanty apartments of 10-19 square meters sizes may have space for small kitchen or a table or a bed. These shanties are tightly built together so there is no outside space except the sidewalk. Children play on the sidewalks when they empty after office hours. Families are also found to bring out chairs to enjoy the space in the evening. The women would do their laundry and other tasks at some corner of the sidewalk during the day.

In the countryside, the small shelters of less than 10square meters are the shanties of nipa huts along fishing coasts, rivers and roadside. The next larger shelters of 10-19 houses comprise the farm houses constructed of nipa and other native materials. They typically have a small bedroom and a veranda for meals and other activities. Majority of these small housing units are independent units for there is still space to build them. The poor in rural areas and small towns have the advantage of space which provides them with healthy place to play, meet friends and breathe fresh air. They generally keep their homes and surroundings clean for traditionally they produce little garbage, which they burn or compost. Rural families, however, suffer greater deprivation of water and electrical facilities.

Based on the 2010 Census, about3.563Million or 19.1% of families lived in makeshift shanties of less than 10 square meters and3.757 Million live in small shelters of 10-19 square meter sizes. In Metro Manila, these consist of shanties and shanty apartments (Table 7). In Metro Manila where the presence of slums is inescapable, 372,500families or 14.1% of families live in shanties of less than 10 square-meter sizes and 390,900 in shanty apartments 10-19 square-meters sizes. These 763,400 shanties comprise Metro Manila slums. The housing situation is slightly better in the more prosperous region of Central Luzon than in Metro Manila but very much worse in the three poorest regions of Bicol, Eastern Visayas and ARMM. Housing units of less than20 square meter areas comprised 28.3% in Central Luzon but 45.2%, 45.6% and 44.5% in the respective poorest regions. The regions outside Metro Manila have a higher proportion of 20-29 square meters, which are small but decent independent houses of nipa and other native materials.

Table 7 Housing Units by Floor Area in square meters, 2010

Area		Total	<5	5-9	10-19	20-29	30-49	50-69	70-89
Philippines	a	19715.7	1225.5	2537.6	3757.9	3376.6	3450.4	2157.7	1075.6
	b	4.7	4.3	4.4	4.6	4.6	4.7	4.7	4.6
	c		6.2	12.9	19.1	17.1	17.5	10.9	5.5
NCR	a	2634.4	157.0	215.5	390.9	492.8	535.5	318.9	1322.0

	b	4.5	4.2	4.2	4.3	4.4	4.6	4.6	4.7
	c		6.0	8.2	14.8	18.7	20.3	12.1	50.2
CL	a	2196.4	103.2	196.0	322.6	360.7	421.9	302.7	166.5
	b	4.6	4.2	4.3	4.4	4.5	4.6	4.7	4.8
	c		4.7	8.9	14.7	16.4	19.2	13.8	7.6
Bicol	a	1102.2	86.1	177.1	235.1	217.1	186.6	90.5	43.6
	b	4.9	4.4	4.6	4.8	5.0	5.8	5.3	8.2
	c		7.8	16.1	21.3	19.7	16.9	8.2	4.0
Eastern Visayas	a	856.7	59.1	131.3	197.7	151.2	129.6	79.4	40.8
	b	4.8	4.4	4.3	4.6	4.6	5.0	5.1	5.3
	c		6.9	15.3	23.1	17.6	15.1	9.3	4.8
ARMM	a	500.2	44.1	73.9	104.3	88.9	61.1	42.3	24.6
	b	6.5	5.9	6.0	6.2	6.4	6.6	6.9	7.3
	c		8.8	14.8	20.9	17.8	12.2	8.5	4.9

Note: a) Total number in (1000)

b) Number of occupants

a c) Percent of total housing units

Source: Philippine Census of Population and Housing, 2010

The absence of an effective housing program has allowed the growth of slums and slum dwelling population throughout the country, especially in Metro Manila (Table 8). From 2000 to 2010, total housing units grew by 32.4% nationwide but at varying rates across regions and across sizes. Migration to the more prosperous Metro Manila and Central Luzon has increased their population and housing rates above the national average. Expectedly, the poorer regions of Bicol and Eastern Visayas had much lower growth rates. But we have no explanation for the relatively high growth rate in ARMM. Note that the smallest housing of less than 10 square meter area grew faster than the 10-19 and 20-19 housing units. Alarmingly, Metro Manila' shanties of housing of less than 10 square meters increased by 61.2%. The shanty apartment units grew at a lower rate of 9.1%. The largest housing units also grew fast leaving the middle sized housing lagging behind. Apparently, the Metropolis attracted both poor and non-poor migrants from the countryside with the latter joining an already crowded slums and the affluent migrants moving into the booming high-rise condominiums and newly developed villages. The largest sized houses had the highest growth rate.

Table 8 Growth Rate of Housing Units by Size (in square meters), 2000-2010

Region	% Total	<10	10-19	20-29	30-49	50-69	70-89
Philippines	32.4	44.3	7.6	20.8	39.7	77.9	62.2
NCR	31.6	61.2	9.1	31.4	43.2	50.4	1112.8
Central LuzonL	37.1	42.9	0.4	13.8	49.3	90.1	74.9
Bicol	24.8	42.3	-19.5	21.0	26.2	62.8	44.4
Eastern Visayas	21.1	22.3	9.8	18.5	27.6	67.2	52.2
ARMM	36.6	50.1	23.9	21.9	18.4	95.8	105.0

Source: Philippine Census of Population and Housing, 2010

As stated earlier, the PSA's Annual Poverty Indicator Survey (APIS) possibly under-sampled the slums for it gave a much smaller proportion of small housing units than the Census. According to APIS, families in the first income decile had housing units of 22.5 square-meters in Metro Manila while the Census shows 38% of families occupied housing units of less than 20 square meters. These families are taken to belong to the poorest group.

APIS survey allows us to see the quality of housing, consumption and education distribution by family. Bearing in mind the possible under-sampling of the poor, we interpret the APIS distribution to underestimate the degree of deprivation of the poor. First we find that housing size monotonically increases as income increases for all regions (Tables 9 and 10). We take note of families who enjoyed their own utilities and those who either share them or else use primitive or unsanitary ones. Fifty one per cent of families have their own piped community water system, 67.8% have their own toilet and 89.5% have their garbage collected. Over 24% of families share their piped water supply and 17.9% share their modern toilet. Possibly these are the families who rent small single rooms and share utilities with other families. In Metro Manila, about 10% of families make do with water from wells, public tap and peddlers. Eight per cent of families use open pit and other unsanitary toilet facilities. About 23% of families still use kerosene, charcoal or wood for cooking. The poverty in facilities and utilities used are expected to be correlated to housing size, family income and nature of employment.

Table 9. Percentage Distribution of Families by Electricity and Source of Water used, 2010

Region	Electricity	Own dwelling	Yard & Public Tap	Others			
				Well	Spring	Rivers/ Stream / Pond/ Lake/ Dam & Rain Water	Tanker/ Truck/ Peddler
Philippines	87.4	44.2	12.3	33.2	6.0	1.0	3.3
Lowest 30%	68.7	15.9	17.4	47.6	12.9	2.4	3.9
Highest 70%	95.4	56.3	10.1	27.0	3.0	0.5	3
NCR	99.3	83.9	9.4	2.1	...	...	4.7
Lowest 30%	87.0	50.2	23.8	3.6	...	...	22.4
Highest 70%	99.8	85.2	8.8	2.0	...	...	4
Central Luzon	96.9	50.5	9.2	37.8	1.0	...	1.2
Lowest 30%	90.8	26.3	7.9	59.4	2.5	...	3.2
Highest 70%	98.1	55.3	9.4	33.6	0.8	...	0.8
Bicol	81.2	29.8	16.5	40.1	8.8	1.2	3.6

Lowest 30%	66.6	10.3	19.6	51.0	12.4	2.0	4.6
Highest 70%	92.3	44.5	14.0	32.0	6.1	0.5	2.8
Eastern Visayas	84.4	34.9	25.6	32.7	2.7	...	2.4
Lowest 30%	73.1	20.1	33.1	37.9	4.2	...	3
Highest 70%	93.9	47.4	19.3	28.3	1.6	...	1.9
ARMM	57.7	5.8	7.6	65.2	12.6	5.3	3.6
Lowest 30%	46.9	3.6	9.3	66.3	10.3	6.2	4.4
Highest 70%	73.5	8.9	5.1	63.6	15.9	4.2	2.4

Source: Annual Poverty Indicators Survey 2010

**Table 10. Families by Type of Toilet ,
2010**

Region	Type of Toilet			
	Flush Toilet owned	Flush toilet shared	Other consist of Open Pit and Pail	No Toilet
Philippines	78.1	10.3	7.0	4.6
Lowest 30%	57.8	14.2	16.3	11.6
Highest 70%	86.7	8.6	3.1	1.6
NCR	87.6	11.7	0.4	0.3
Lowest 30%	70.8	21.5	4.5	3.3
Highest 70%	88.2	11.3	0.3	0.2
Central Luzon	87.5	10.2	1.9	0.4
Lowest 30%	70.3	22.8	5.1	1.9
Highest 70%	90.9	7.7	1.2	0.2
Bicol	72.2	8.1	8.1	11.6
Lowest 30%	55.8	10.1	11.8	22.4
Highest 70%	84.7	6.6	5.4	3.5
Eastern Visayas	73.5	10.9	4.1	11.5
Lowest 30%	60.6	14.0	6.2	19.1
Highest 70%	84.3	8.2	23.0	5.2
ARMM	24.6	35.1	35.5	4.8
Lowest 30%	20.0	32.6	40.9	6.6
Highest 70%	31.2	38.9	27.7	2.2

Source: Annual Poverty Indicator Survey, 2010

VI. The Poor's Access to Education

The government has, historically, placed high priority on education and has allocated a fairly large share of the national budget to its provision. The Constitution provides for equal access to quality

education at all levels. An extensive state supported educational system from elementary to higher education has been established. Public elementary schools are present in most barangays and public high schools have been opened in most towns and large villages. Now present in the regions are 110 state universities and colleges and 90 local government-supported tertiary institutions. Elementary and high school education is provided for free. Students who could not be accommodated in existing public high schools are provided tuition subsidy for enrolment in private high schools. Education in the SUCs and local government schools are heavily subsidized as students pay tuition at only a small fraction of total cost.

There is generally a strong appreciation of the benefits of education. Education is the singular opportunity for escaping poverty. A high school education opens opportunities for employment in the formal system where minimum wage rates and social security benefits are enforced by law. Foreign jobs also require at least a high school education. College education qualifies one for formal employment as professionals, scientist, artists and at least clerical positions. The rate of return to college education is about double that of high school and elementary education. Education is one service that the government has been able to provide extensively at highly subsidized rate. Yet a significant number of young and older children do not enroll in school. The net enrolment rate in public and private elementary schools was 90% in 2010-2011 after rising from 84.4% in 2005-2006. The completion rate in the elementary level was only 75%, meaning that about 25% of the children drop out before completing the grades (Table 11). Note that education is a sequential process with qualification for admission into each grade depending on the completion of the preceding grade, i.e. Grade 1 to 2 to 3 and so on. Completed high school is required for admission into college and so on. The large proportion of young children (about 25%) who do not complete the elementary grades are forever barred from pursuing high school and college, and those who do not enroll in high school lose the opportunity to pursue college education. We consider dire poverty to be the main reason that discourages families from sending their children to school.

**Table 11. Net Enrollment Rate in Public and Private Elementary Schools
SY 2002-2003 to SY 2010-2011**

A. Elementary				
Region	2002-03	2005-06	2009-10	2010-11
PHILIPPINES	90.3	84.4	87.9	89.9
NCR	97.4	92.6	89.6	90.2
Central Luzon	93.6	90.8	89.3	90.6
Bicol Region	91.0	85.4	91.6	93.7
Eastern Visayas	86.0	80.0	88.6	91.5
ARMM	92.7	87.3	74.3	71.9
B. High School				
Region	2002-03	2005-06	2009-10	2010-11

PHILIPPINES	59.0	58.5	59.5	61.3
NCR	75.3	75.0	76.6	77.8
Central Luzon	67.7	68.9	68.1	70.2
Bicol Region	54.9	53.2	55.0	55.6
Eastern Visayas	49.0	50.1	52.7	55.4
ARMM	23.7	35.6	39.8	33.8

Source: Department of Education

Living in inhuman housing of shanties with no space for sleeping and studying and no convenient utilities for bathing and personal hygiene discourage children from going to school. It would take so much more effort by the mother to prepare her child for school when there is no running water and toilet, and cooking space and fuel to prepare her food. At the same time, the family income may not be high enough to afford adequate food, clothing and transportation for the children's needs. A poorly nourished child lacks energy and enthusiasm to participate in classroom activities. Out-of-pocket costs tend to rise with schooling level given the poorer physical access to high school and college. High schools are located mostly in small towns and large villages while colleges and universities are located in big towns and cities. All these constraints impede the education of the poor. Table 12 shows that enrolment rate is significantly unequal, rising as family income rises. The enrolment rate of the youngest children aged 3-5 starts at only 20.8% for the poorest families in the first decile and rise monotonically to 65.6% for the richest 10% of families. There is less difference in the enrolment rate of elementary aged children, 6-11, as enrolment rate of the poorest decile at 90.8% and rising monotonically to 98.8% for the richest families. We see larger differences in high school enrolment of children 12-15 years old, starting at close to 80% for the poorest and rising to almost 100% for the richest. At the tertiary level for those aged 16 to 24, the enrolment rate starts at 25.9% and rises to 53.0%.

Table 12. Shares of Children Currently Attending School, 2011

Decile	Age Group			
	3-5	6-11	12-15	16-24
1st	20.8	90.8	79.8	25.9
2nd	24.7	93.3	85.1	28.3
3rd	30.4	93.8	87.4	28.2
4th	31.5	96.5	90.7	29.2
5th	39.1	97.0	92.1	31.9
6th	39.1	97.9	94.2	32.5
7th	44.9	98.5	95.9	38.3
8th	49.0	98.8	96.2	40.1
9th	55.1	99.0	98.1	47.6

10th	65.6	98.8	99.0	53.0
Source: APIS 2011, NSO				

5. Discussion on the Poverty Situation and Policies

Of the four basic needs – food, shelter, health and education, the extent and depth of poverty is most serious in housing. The attention of both the national and local governments as well as the educated and affluent class of society is called to address the unconscionable extensive existence of slums. Life in the slum damages the dwellers very humanity – their dignity, their self-worth and their social identity. It causes ill health and discourages children from going to school. The degradation is exacerbated by the nature of employment of slum families who earn their living by scavenging from dumps and other sources of garbage or as itinerant vendors along streets where they face risk of vehicular accidents and health hazards from air and noise pollution. Perhaps we have ignored the problem not because of callousness or selfishness but because we thought it to be so dauntingly massive as to require resources that are beyond our means. But we do have the resources to provide decent housing for all and build it in a decade or shorter time. The following sources of funding could be readily tapped to eradicate the slums: saving from corruption; the perennial unspent budget of the national and local governments; reallocation of the budget to favor housing for the poor; more efficient collection of real estate taxes; adopting a progressive property tax; and capital gains from the clearing of slum and squatter areas.

How much would it cost to build a decent 15 square meter apartment for the dwellers in the 3.563million shanties and 3.375million shanty apartments? Do we build them over five years or over ten years? Do we prioritize the slum houses in Metro Manila which are of poorer conditions than those in the countryside? Metro Manila slums number only 763,400. How much of the responsibility do we assign to local governments, how much to the national housing agencies? President Aquino proudly announced that he has approved a three trillion budget for 2015. Allotting 10% of the large budget could finance substantial decent housing for the poor. Large budget increases have recently been given to education that includes the CCT program. Health is also enjoying a large increase this year. Housing has not gotten special attention. The annual cost of eradicating the slums in 5 to 10 years is roughly estimated below.

Simply allowing 10% of the current and future budgets for housing would suffice to eradicate the nation's slums in ten years- time. Based on casual consultations, the approximate construction cost per square meter is P20,000. A 15-square meter-apartment would cost about P300,000, a 20-square meter apartment would cost P400,000. A 15-square meter apartment would be a one room shelter with small bath-toilet and kitchen. An alternative 20-square meter apartment would allow for a very small bedroom.

There are 7.321 Million slum housing. Building 15-square meter apartments to replace them at P300,000 each would cost P2,196billion, building 20-square meter apartments would cost P2,928billion. Spreading construction over five years would entail P439billion for the 15 square meter-apartments and P586 billion for the 20 square meter apartments. Extending the completion time to ten years would halve the annual cost of each type: P220 billion for the small apartment and P293 billion for the 20 square-meter apartment. The cost if spread out over a ten-year period would amount to less than 20% of the current P3 trillion budget and of all future budgets. Other sources such as from increased property tax could be used to accelerate the pace of housing development.

Priority may be given to slum clearance in Metro Manila where housing of the worst conditions exists. Metro Manila has 763,400 shanties and shanty apartments. It would cost P229billion to build 15-square meter apartments and P305billion to build 20-square meter apartments. If spread over 5 years, the annual cost would be only P46billion for the small units and P61billion for the 20 square-meter units. Metro Manila earns large and increasing property tax from the rapidly developing commercial and real estates. They could readily finance slum clearance in five years with or without the help of the national government. The Metro Manila government has no serious housing program. Greening its cities would attract more tourists and stimulate its hospitality and entertainment industry. Greening Metro Manila means slum clearance, good transport, green parks, anti-flooding and adequate water and sewage system.

Rough calculations show that the cost of slum clearance, especially in Metro Manila, is well within the resources of the government. Prioritizing slum clearance may require drastic reforms of the agencies engaged in housing and urban development. High private and social returns to slum clearance are to be expected. It is noted that in 2010-2012, less than 1% of the national government was allocated to housing. The housing program is just one of the agencies under the Office of the President. The President just announced (July 12, 2015) the three trillion peso 2016 national government budget with large allocation to education and infrastructure. There was also a large increase in the budget for health. But as before, nothing was said about housing.

References:

1. Aldi Haganaars and Kalus de Vos, 1987, "The Definition and Measurement of Poverty," The Journal of Human Resources, XXIII.2
2. Martin Ravallion, Shaohua Chen and Prem Sangraula, 2008, "Dollar a Day Revisited," World Bank Policy Research Working Paper, 4620.
3. Sanjay Reddy, Sujata Visaria and Muhammad Asali, "Inter-Country Comparison of Income Poverty Based on a Capability Approach," <http://ssrn.com/abstract+916406>
4. National Statistical Coordinating Board, 2013, "The 2012 Full Year Official Poverty Statistics."
5. NSO-ADB TA33656-PHI: Improving Poverty Monitoring Surveys: Study II Estimating Food Threshold and Poverty Incidence Using Food Basket Across Income Groups and Bottom 30% Income Groups.
6. The National Statistics Office, The 2010 Philippine Census of Population and Housing.
7. _____, Annual Poverty Indicator Survey, various years.
8. _____, Family Income and Expenditure Survey, various years.
9. Lee Kuan Yew, From Third World to First, 2011, Harper Collins Publishers.