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Why slum poverty matters

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Notwithstanding the fact that poverty incidence among the Philippine urban population is low at 19 percent vis-à-vis the national average of 32 percent and rural poverty incidence of over 50 percent, urban inequality, however, is higher than rural inequality. On the average, the Gini coefficient in urban areas is estimated at 0.45 compared with 0.43 in rural areas in 2003[1] as shown in Figure 1. Inequalities in both urban and rural areas in the country take various forms, ranging from unequal access to labor, education, and resources to inequalities in income and consumption. In the urban areas, inequalities in the form of shelter deprivation or disparities in living standards or access to basic services/infrastructure are the most evident. It is in cities where one observes wealth and poverty to exist in close proximity with each other, i.e., rich, well-serviced neighborhoods are often located next to dense inner city or peri-urban slum settlements that lack basic services and adequate shelter. These shelter inequalities depict significant polarization in the distribution of the wealth and resources of cities which can deepen poverty for those living in slums.

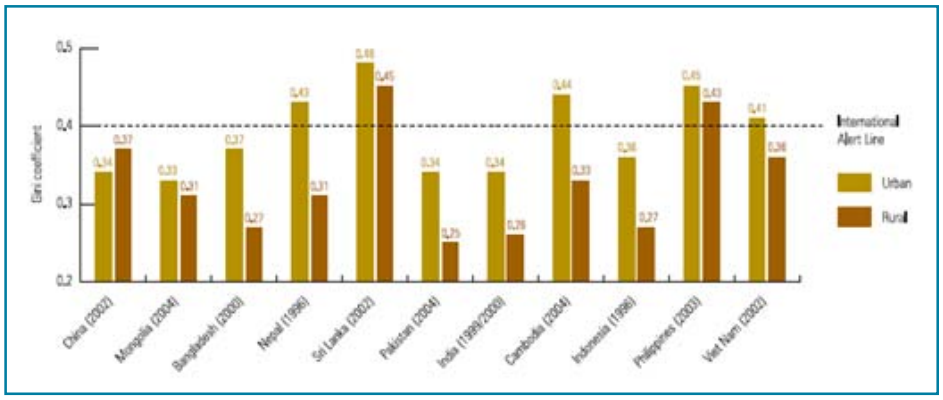
To appreciate the urgency of addressing this situation, this *Policy Notes* elaborates on the key impact channels of deepening poverty in urban slums.

[1] Philippine Gini ratios were obtained from income and consumption data of national household surveys. The comparative country ratios were calculated by the UN-HABITAT Monitoring and Research Division and the UNESCAP Statistics Division. A higher Gini coefficient represents greater inequality.

PIDS Policy Notes are observations/analyses written by PIDS researchers on certain policy issues. The treatise is holistic in approach and aims to provide useful inputs for decisionmaking.

This *Notes* draws from PIDS Discussion Paper No. 2010-33 titled "Linking poverty and the environment: evidence from slums in Philippine cities" by the same author. The author is Senior Research Fellow at the Institute. The views expressed are those of the author and do not necessarily reflect those of PIDS or any of the study's sponsors.

Figure 1. Gini coefficients for urban and rural areas, Philippines and Asia



Source: UN-HABITAT Global Urban Observatory (2008).
Notes: Data from various sources and for various years.
International alert line denotes Gini coefficient value above which inequalities have negative social, economic, and political consequences. Alert line is established by UN-HABITAT in consultation with its partners.

Table 1. Slum population, urban Philippines

	Slum Population 2006	% Slum	Slum Annual Growth Rate (%) (2000–2006)	Projected Slum Population 2010	2020	2050
Urban Philippines	2,936,011	7.10	3.40	3,819,766	6,572,683	12,967,806
Large towns/cities	978,422	5.57	3.49	1,122,335	1,736,317	10,108,036
Metro Manila	1,351,960	12.17	8.55	1,877,003	4,689,943	6,668,187
Metro Manila[1]	4,035,283	36.33	3.14	4,565,951	6,294,181	8,949,102

Source: *Family Income and Expenditure Survey*. Slums are defined as households in illegal settlements (i.e., without consent of owner) or living in makeshift housing.
[1] Data for Metro Manila based on broader definition of slums which include squatter or illegal settlements and settlements under informal arrangements (i.e., no formal or legal documentation of arrangement) and blighted area.
Source of data: Metro Manila Urban Services for the Poor (MMUSP) Project, HUDCC 2008.
Notes: Large towns and cities refer to administrative towns/cities with population as of 2007 above 100,000 to 2,000,000.
Slum population growth rate is estimated using exponential growth; r= ln(Pt/Po)/t; for large towns/cities, period covers 2003–06.
Slum population projected is based on estimated slum population growth rate.

Extent of slum poverty in Philippine cities

The Philippines is among the countries in Asia with a large number of urban slum dwellers. It is estimated that over 5.0 million Filipinos live in slums in major metropolitan cities. Between 2000 and 2006, the slum population grew at an annual rate of 3.4 percent in urban areas and over 8 percent in the premier city of Metro Manila. Metro Manila, which accounts for 37 percent of gross domestic product (GDP) and 13 percent of employment, is home to over 4.0 million slum dwellers or 37 percent of the city's population in 2010 (Table 1). The magnitude is increasing as Metro Manila is considered one of the rapidly urbanizing megacities, ranking 14th among 20 megacities around the world with a population projected to reach 14.8 million by 2025 (UNCHS 2010).

Not all households in the slums, however, are income poor. Only about 32 percent of the slum population (or less than a million people) are poor based on national poverty lines of P20,688 per capita (Table 2). The bulk or more than 50 percent live above the poverty line and can spend between $2 and $4 per day but reside in poor living environment. These are usually minimum salaried or wage earners and casual workers who continue living in slums because there are no alternative shelter in the city and "they cannot afford the cost of traveling from distant less expensive peri-urban regions for

work and income-earning opportunities in urban centers."[2]

At the same time, not all poor live in slum settlements but are scattered around the city with similar physical environment as the slums, having deficit infrastructure and insecurity of tenure.

Table 2. Slum poverty incidence, Philippines, 2006

	National Poverty Line		Subsistence Poor (below $1.25 PPP)		Between $2.00 and $4.00 PPP	
	% to Population	Number of Poor	% to Population	Number of Poor	% to Population	Number of Poor
Urban Philippines	32.48	953,728	11.88	348,872	41.66	1,223,124
Large towns/cities	35.25	344,860	13.83	135,313	37.66	368,436
Metro Manila	20.66	279,361	3.26	44,127	49.00	662,472

Source: *Family Income and Expenditure Survey*

Key impact channels of slum environment on poverty

Slum poverty is primarily an urban environmental poverty arising from shelter deprivation. On a daily basis, slum dwellers are confronted with congestion, substandard housing, and physically deteriorated environment that lack or have poorly maintained public services (roads, drainage system, garbage disposal, electricity, water). Some slums have been formed in hazardous places—fault lines, unstable slope, and riverways, among others—which are vulnerable to natural disasters and climate change. These environmental conditions lead to deepening poverty and rising inequalities through the following channels.

Higher expenditure on basic services

The deficit infrastructure shows slum dwellers paying more for basic services such as clean water and electricity than residents living in adjacent fully serviced neighborhood. In Metro Manila and Cebu City, residents of nonserviced neighborhoods pay 9 to 13 times more for delivered clean water than those households in serviced areas (David et al. 2000).

Higher health risk from urban environmental problems and climate change

The slum dwellers are also confronted on a daily basis with environmental problems which have significant implication on their health status. Urbanization and economic growth have created environmental problems that are particularly related to air pollution, water pollution, flooding, and congestion. Most people in the cities are affected by these problems but the levels of exposure and impact are highest in the slums due to their location, limited infrastructure, and coping strategies.

The health impact of poor housing has been established in several epidemiological studies. These studies show that poor housing environment causes or enhances the incidence of specific diseases. Overcrowding raises the risk of respiratory illness. Contaminated water supply and unsanitary human and household waste disposal causes gastrointestinal problems, skin ailments,

[2] Italics based on MMUSP study (2008).

cholera, typhoid, and other infectious diseases. Long-term exposure to traffic-related air pollution causes problems in the cardiovascular and respiratory systems. Living near dumpsites exposes the poor to harmful bacteria and other parasites which bring a lot of diseases and to furans and dioxins. These pollutants are generally carcinogenic.

Econometric analysis also found a strong relationship between the poor state of health of households and the presence of human and animal waste and of stagnant water in the home environment (Solon 1989). The study showed that as much as 40 percent of children's health status is explained by the housing and environmental conditions and that improving housing characteristics (i.e., roofing, interior space) and neighborhood services such as sewerage and solid waste disposal system enhance the health status especially of children.

Climate change is expected to increase the severity of health risks in slums. Flooding, which is primarily caused by heavy rains due to typhoons, is the main impact of climate change in Philippine urban areas (World Bank 2010). A large part of slum settlements are located in coastal and low-lying areas where the depth and occurrence of floods are highest. A health assessment study in Metro Manila showed the level of risk associated with direct and indirect exposure to polluted floodwaters. The study specifically measured the probabilities of gastroenteritis caused by E. coli in polluted waters for different inundation level (from less than 50 cm to greater than 200 cm). The accidental ingestion of polluted water through bathing, laundry, swimming, or playing increases with depth level and thus the risk of infection is also higher (JICA 2010). Children, in particular those aged 4 to 15 years old, are the most affected since they tend to ingest twice as much compared to adults. On the average, the risk of infection of the population is 0.0134 percent for inundation depth of less than 50 cm (street level flooding) and 0.19 percent for floods above 200 cm (first floor of the house is flooded). The health risks could be higher considering that polluted waters carry other vectors aside from E. coli.

Weakening of the social fabric

Poor environment also affects mental health that weakens family relations and psychological and subjective well-being. A survey on slum communities shows a major incidence of crimes—theft, robbery, drugs, child rape/molestation. Absenteeism in school and work is frequent for reasons ranging from lack of sleep due to noise and heat to difficulty in going to school due to street flooding or muddy streets brought about even by normal rains. The subjective well-being, specifically of women, is low as reflected in early marriages and focus on their child-bearing role. Population growth in barangays with large slum communities is noted to be significantly higher than the growth in the districts or cities comprising the barangays. This high rate is primarily due

to net natural increases rather than net migration into the slum community (Table 3).

Significant damage to lives and property of the slum poor due to climate change

The adverse effects of climate change on the lives and property of slum dwellers have been demonstrated by the recent flooding caused by Typhoon Ondoy, which hit the country in 2009. Typhoon Ondoy affected the eastern part of Metro Manila, specifically settlements along the Pasig River and Laguna Lake. The slums along the river lines experienced above 200 cm depth of flood which receded only after two months. Many households were displaced and moved to evacuation centers or with relatives and friends. Lives have been lost due to both drowning and flood-related illnesses such as *leptospirosis*. Houses were washed out or damaged and some households have not been able to rebuild their homes a year after the typhoon. An estimated 15,000 families, mostly from slum communities along the Pasig River and Laguna Lake, have been relocated (GOP et al. 2010). The disaster affected mainly the productive and social sector (i.e., housing) with damages and losses valued at about PHP 150 million. For housing alone, it is estimated that recovery and reconstruction support will amount to PHP 75 million.

Table 3. Comparative population growth rate, cities/districts vs. slum barangays

City/District/Barangay	% Annual Growth Rate
Metro Manila (1990–2007)	2.21
Manila City (1990–2007)	0.21
District of Tondo, Manila	0.76
Brgy. 105 (dumpsite slum area)	5.57
Port Area District, Manila	10.06
Brgy. 649 (coastal slum area)	10.77
Quezon City (1990–2007)	2.78
Brgy. Holy Spirit (slums along main roads/highways)	4.58
Municipality of Cainta (1995–2007)	3.44
Brgy. San Andres (slums along the floodway)	6.47

Sources: Socioeconomic profiles of the sites
Local Government Unit (LGU) and Barangay Census
Note: Slum growth rate is estimated based on exponential growth.

What can be done?

Living in bad environment deprives people of a quality of life that allows them to have better incomes and gainful employment. Poor environment lowers the physical and mental health status of households which adversely affects productivity, lowers the performance of children in schools, and increases their vulnerability to crimes and violence and climate-induced risks. The slum environment also implies that the poor and low-income households pay more for basic services. Addressing slum poverty would permit people at the lower end of the wealth or income scale to fully exploit their capabilities and contribute to human capital development and accelerated economic growth.

Slum poverty, however, cannot simply be addressed by traditional poverty programs such as cash transfers. It has in fact been argued that possible trade-offs exist between bad housing and medical care and also between bad housing and education. Moreover, the existence and growth of slums is not a natural consequence of urban growth which will disappear over time with improvements in income. Slum formation and growth is not only

caused by rapid urbanization or income poverty but by factors such as regulatory framework on planning and delivery of land for settlements and government spending on infrastructure (Arimah 2010).

The approach to slum poverty thus involves effective town and shelter planning and expansion of urban infrastructure to underserviced and informal settlements. The housing components that tend to matter most in terms of health and vulnerability index to environment and climate risks are public good types—drainage, sewer facilities, asphalt roads, solid waste management, pollution enforcement, etc.—which an individual household cannot provide or enforce by itself. This "good" requires government investments and regulatory actions. It also implies strong national government presence, specifically for investments and environmental concerns that cut across administrative boundaries.

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