

RESEARCH ARTICLE

Examining the Inclusiveness of Philippine Growth from 1991 to 2015: The Role of Household Human Capital Inequality and Source of Growth

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Abstract: Defining inclusive growth as growth that has benefited the households who have the lowest human capital levels, this study examines the inclusiveness of economic growth in the Philippines in the past two decades. Combining information from the Labor Force Survey and Family Income and Expenditures Survey for various years, including a panel of 6,500 households from 2003 to 2009, this study classifies households into ordered groups based on human capital level, then compares the performance of the various groups in terms of various employment, income, and expenditure outcomes over time. It finds the evidence to be mixed, although the weight of evidence, especially using panel data, points to those who have lower human capital levels benefiting disproportionately less from economic growth, and thus to non-inclusiveness of Philippine economic growth for most of the period studied; although there appears to have been a notable departure from this pattern from 2012 to 2015. This paper attributes this finding to the slow improvement in the human capital levels of the lowest human capital level households and the pattern of economic growth: driven by high-end services and spurred by overseas employment, which has so far benefited mainly households with already high human capital levels.

Keywords: human capital, inclusive growth, poverty, inequality

JEL Classification: D63, I32, J24

Introduction

This study examines the period of the early 1990s to the mid-2010s for ‘inclusivity’ of Philippine economic growth. The period is of interest because it was marked by relatively high economic growth, especially from the 2000s onwards, but relatively slow decline in poverty and inequality, except at the end.¹ The Human Development Report of 2009 ranked the Philippines as the most unequal among the 10 members of the Association of Southeast Asian Nations in terms of the Gini ratio of income.² Subject to the inherent limitations in the comparability of income data across countries, this means that the Philippines is more unequal than far richer countries like Singapore and Malaysia, as

well as even much poorer countries like Lao PDR, Cambodia, and Myanmar. The Philippine Statistical Authority estimates the Gini ratio of income to have declined only slightly from 2006 to 2015, with most of the improvement occurring in the period 2012 to 2015.

Many have criticized the economic growth the country experienced from the early 2000s to the mid-2010s as non-inclusive, where non-inclusive is taken to mean as not benefitting the poor (Albert, Dumagan, and Martinez, 2015; Mendoza and Mahurkar, 2012; Habito, 2010). This, despite the government having at the same time invested heavily in several anti-poverty programs, in particular the Pantawid Pamilyang Pilipino Program (4Ps) and the KALAHI-CIDSS National Community-driven Development Program.

The evolution of the Philippine economy has been atypical of ASEAN and most (if not all) countries at its level of development. Growth is mainly driven by the services sector, where most recently the primary driver of growth has been the business process outsourcing (BPO) industry and the real estate sector (Price, Francisco, and Caboverde, 2016). Such growth is thought to disproportionately benefit those who are already well off and well educated. The Philippine economy is also heavily reliant on overseas Filipino workers' (OFWs) remittances, which account for more than 20% of total household income, and OFWs come mainly from well off well educated households (Ducanes, 2015).³

This study looks more deeply at the issue of the inclusivity of economic growth in the country for the period of interest. Defining inclusive growth as growth that benefits households with relatively low levels of human capital, this study examines whether households with relatively low human capital levels were able to partake of recent increases in the size of the economic pie, to what extent they were able to partake relative to higher human capital households; and it explores possible reasons for the results.

This paper proceeds as follows. The second section contains a brief review of recent literature on inequality in the Philippines. The third section describes and discusses issues on data and methodology. The results of the statistical analyses are in the fourth section. The last section summarizes and concludes.

Brief Review of Literature

There have been various definitions of inclusive growth. It has been defined as: pro-poor growth; as broad-based growth that is inclusive of a large part of the labor force (Ianchovichina and Lundstrom, 2009); as growth which is not associated with an increase in inequality (Balakrishnan, Steinberg, and Syed, 2013; Rauniyar and Kanbur, 2010); as growth that reduces the disadvantages of the most disadvantaged while benefitting everyone (Ranieri and Ramos, 2013); among many other broader or narrower definitions.

Philippine economic growth in the past two decades has been criticized as being non-inclusive, as it has not resulted in reduced poverty. Albert, Dumagan, and Martinez (2015) attributed this failure of growth to reduce poverty on poor starting conditions, in particular on the existing inequalities in income, education, and

employment. They estimated growth elasticity of poverty to be at a low -0.30 from 2009 to 2012, and an even lower -0.16 from 2006 to 2009.

Balisacan and Fuwa (2004), analysing data for an earlier period, also found the growth elasticity of poverty to be relatively small for the Philippines compared to that of other developing countries. In fact, they found the degree of responsiveness of poverty to aggregate income growth to be 35% smaller in the Philippines compared to the average for developing countries.

Mendoza and Mahurkar (2012) examined disaggregated employment and sector output data and found that employment creation was skewed in favor of workers with more human capital from 2001 to 2009, which they say is why robust economic growth has not translated into robust poverty reduction. The reason is that agricultural and manufacturing sectors, which typically employ a relatively larger number of workers having a lower human capital level, have not grown as much as the services sector.

Habito (2010) likewise cited inequitable access to education and health, as well as infrastructure and productive assets, as the critical impediments to inclusive growth, as these hinder the ability of poor Filipinos to participate in opportunities opened up by economic growth. Focusing on access to basic services, and applying the method of Human Opportunity Index developed by the World Bank, Son (2012) also found household poverty to be an important constraint to accessing water, electricity, and sanitation services, more important than area of residence (whether urban or rural).

This paper takes a slightly different approach in determining the inclusiveness of recent episodes of Philippine economic growth. Rather than looking at how outcomes and opportunities have changed in the aggregate or by area or by income groupings (e.g. poor and nonpoor or by income decile or income quintile), it instead classifies households into ordered groups based on human capital level, and then examines how outcomes and opportunities have evolved for these different groups over time as the economy has grown.

Data and Methodology

Data

This study utilizes the combined Family Income and Expenditures Survey (FIES) and the Labor Force

Survey (LFS) data for various years from the Philippine Statistical Authority, including a special FIES panel data for the years 2003, 2006, and 2009.

The FIES is conducted every three years (starting in 1985) to collect information on the income and expenditure patterns of Philippine households. The unit of analysis of the FIES is the household. For any given FIES year, the survey is conducted in two parts: a first survey in July to get information on the income and expenditure pattern for the first half of the year (January to June); and, a second survey in January of the following year to obtain information for the second half of the FIES year (July to December). The FIES uses (more or less) the same sample of households as the LFS conducted in the same period. The FIES is the main data used for computations of income or expenditure-based poverty and inequality measures.

The LFS is conducted quarterly (January, April, June, and October) to collect information on the employment status, industry of work, occupation, hours worked, job availability, and other related information of household members. The unit of analysis of the LFS is the person (or the household member as opposed to the household as a whole). It is the primary source of unemployment, underemployment, and labor force participation statistics in the country. It also contains the demographic characteristics of all household members, including their age, sex, marital status, education, and relationship to household head. The LFS has a variable that tags whether or not a household member is an overseas Filipino.

Methodology

As stated in the introduction, we group households by human capital level and examine to what extent progress in incomes, outcomes, and opportunities have been achieved by group.

We compute what we call the household human capital level index. The index is computed as the ratio of the actual education over the potential education of the adults in the household. For example, a household with two adult members who are both older than 21 years old would have an assumed potential education of 28 years (14 years each: 6 years of primary education, 4 years of secondary education, and 4 years of college education).⁴ If one is exactly a high school graduate and the other a college graduate, then they have actual education of 24 years (10 for the high school graduate and 14 for the college graduate; and the education index

of the household is $(24/28$ or $0.86)$.⁵ Households are then divided into 5 equal groups from lowest to highest based on this index. The index of human capital is similar to that employed in Balisacan (1997).⁶ Only household members 16 years old and older (no upper bound) were considered in the computation of the index. We then relate this information on household human capital level with data on income, expenditure, various measures of quality of employment, and poverty. All the computations employ the sampling weights embedded in the labor force surveys to get the population equivalent of the observations.

Analysis and Results

The unit of analysis is the household, the assumption being that individuals within a household pool or share their incomes with other members of the household. Note that this is the implicit assumption when using household per capita income or expenditure to identify a household and its members as either poor or nonpoor. The question of interest is whether economic growth over the past two decades has improved the lot for households who have low human capital level relative to households who have high human capital level, in terms of access to better-quality jobs, incomes and expenditures, and other indicators.

There has been significant human capital broadening over the past two decades as measured by the human capital index of the household. Table 1 shows that the mean ratio or index of actual to potential education of adults has been increasing across all education quintiles. For the lowest quintile (lowest human capital households), the index has increased from 0.23 in 1992 to 0.31 by 2016. It should be noted that this is still quite low, however, and roughly equal to an increase in educational attainment from Grade 3 to Grade 4 for a single adult who is more than 21 years of age. For the highest quintile (highest human capital households), the index has increased from 0.87 to 0.92, roughly equal to a move from second year college to third year college in terms of a single adult who is more than 21 years of age. In fact, the largest gains were achieved in the middle quintile, where the index increased from 0.56 in 1992 to 0.67 in 2016, roughly equivalent to an increase from second year high school to third year high school in terms of a single adult who is more than 21 years of age.⁷

Table 1. *Mean Human Capital Level (HCL) index by Household HCL quintile (1992 to 2016)*

HH HCL Quintile	Mean HCL Index				Change from 1992 to 2001	Change from 2001 to 2016	Change from 1992 to 2016
	1992	2001	2013	2016			
Lowest 20 percent	0.23	0.25	0.30	0.31	0.03	0.06	0.08
Second 20 percent	0.44	0.47	0.53	0.53	0.03	0.06	0.09
Middle 20 percent	0.56	0.61	0.68	0.67	0.05	0.06	0.11
Fourth 20 percent	0.69	0.74	0.78	0.77	0.05	0.03	0.08
Highest 20 percent	0.87	0.90	0.92	0.92	0.03	0.02	0.05
Total	0.55	0.60	0.63	0.64	0.04	0.04	0.09

Source of basic data: Philippine Statistical Authority's Labor Force Surveys, various years

Note: The observations are weighted using the LFS sampling raising factor variable to get their population equivalent.

Underemployment and Unemployment

Tan, de Dios, and Ducanes (2002) and de Dios and Dinglasan (2015) have observed that in the case of the Philippines, it is underemployment rather than unemployment that has been more closely linked to poverty. These studies argued that the poor have little choice but to take on poor quality (i.e., low paying) jobs rather than be unemployed. And because these jobs often do not pay enough, those employed in such frequently express a desire for additional hours of work (which is how underemployment is defined).

Individuals from households who have low human capital level are more likely to be employed in poor-quality jobs that lead to underemployment. Table 2 shows the ratio of the underemployed to the working age population from 1992 to 2013 by household education quintile. Overall, underemployment fell from 1992 to 2001, and then rose more sharply from 2001 to 2013, thereby exceeding its 1992 level. From 2013 to 2016, underemployment fell.

By HH human capital level (HCL) quintile, the pattern is monotonic from 1992 to 2013, with underemployment rising most sharply for households who have the lowest human capital level, and the least for households who have the highest human capital level. By this measure, at least, growth over this period, but in particular from 2001 to 2013, has not been favourable to households who have the lowest human capital level. But in stark contrast, from 2013 to 2016, underemployment fell the most for those in lowest HCL quintile; whereas it remained about the same or even rose slightly for those in the top HCL quintiles.

If the unemployed is added to the underemployed and the same ratio to the working age population is computed, we get Table 3, which shows overall improvement from 1992 to 2001 (except for households who have the lowest human capital level) lowest, and deterioration from 2001 to 2013 (except for the group with the highest human capital level), and then an overall improvement from 2013 to 2016.⁸ By HCL quintile, combined underemployment and unemployment increased in both the 1992-2001 and the 2001-2013 periods for the lowest, and declined in both periods for the highest. For households in between, there was a decline in the 1992-2001 period and an increase in the 2001-2013 period. The observed increases in the 2001 to 2013 period was significantly higher for the lower human capital level households compared to the higher human capital level households, so that the gap between them widened considerably over the 1992 to 2013 period. In the most recent 2013 to 2016 period, however, the pattern was reversed as there was a decline in combined unemployment and underemployment across all HH HCL quintile, but most notably for the lowest HCL quintile.

Employment: Class of Work

Whether economic growth has been more inclusive can also be seen by the types of jobs that have been created for workers of differing skill levels. Wage and salary jobs are considered better quality jobs and households who have low human capital level typically have poorer access to them. There are wage and salary jobs both in the private sector and in government.

Table 2. *Underemployed (as % of working age population) by HH HCL Quintile*

	1992	2001	2013	2016	Percentage-point change from 1992 to 2001	Percentage-point change from 2001 to 2013	Percentage-point change from 1992 to 2013	Percentage-point change from 2013 to 2016
Lowest 20 percent	12.5	12.3	18.7	16.1	-0.2	6.4	6.2	-2.7
Second 20 percent	13.6	10.0	15.6	14.9	-3.6	5.5	1.9	-0.7
Middle 20 percent	10.8	7.9	12.7	12.3	-2.8	4.7	1.9	-0.3
Fourth 20 percent	8.0	7.0	9.2	9.4	-1.0	2.3	1.2	0.2
Highest 20 percent	6.1	4.8	6.7	6.8	-1.3	1.8	0.6	0.2
Total	10.1	8.3	12.4	11.8	-1.8	4.2	2.3	-0.7

Source: PSA's Labor Force Surveys, various years

Note: The observations are weighted using the LFS sampling raising factor variable to get their population equivalent.

Table 3. *Unemployed and Underemployed (as % of Working Age Population) by HH HCL Quintile*

	1992	2001	2013	2016	Percentage-point change from 1992 to 2001	Percentage-point change from 2001 to 2013	Percentage-point change from 1992 to 2013	Percentage-point change from 2013 to 2016
Lowest 20 percent	15.6	16.7	21.4	17.9	1.0	4.7	5.7	-3.4
Second 20 percent	17.7	16.0	19.9	18.2	-1.7	3.9	2.1	-1.6
Middle 20 percent	16.0	14.8	17.7	16.5	-1.2	2.9	1.7	-1.2
Fourth 20 percent	14.5	14.3	15.0	14.0	-0.2	0.7	0.5	-1.0
Highest 20 percent	12.6	11.4	11.3	10.7	-1.1	-0.2	-1.3	-0.5
Total	15.3	14.6	17.0	15.5	-0.7	2.4	1.7	-1.5

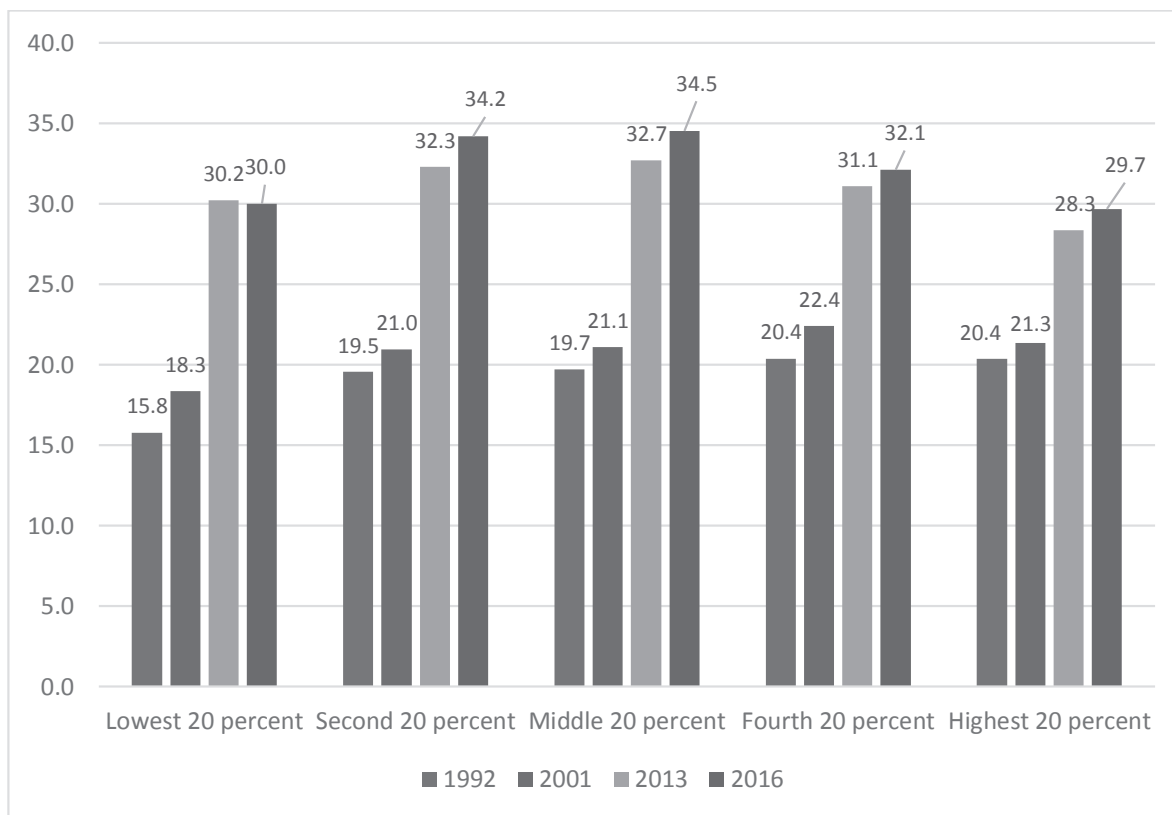
Source: PSA's Labor Force Surveys, various years

Note: The observations are weighted using the LFS sampling raising factor variable to get their population equivalent.

See footnote 6 for change in definition of unemployment beginning April 2005

Figure 1a shows the ratio of people employed in private sector wage jobs to the total working age population by HCL quintile. As expected, the share of working age members in private sector wage jobs is typically higher for high human capital level households compared to low human capital level households. From 1992 to 2001, the share in private sector wage jobs increased across the board but it increased the most for the lowest human capital level households. From 2001 to 2016,

the share in private sector wage jobs again increased across the board, and by much larger amounts, again more so for households with lower human capital levels compared to households with higher human capital levels. By 2016, there is a larger percentage of working age members in the lowest education quintile households working in private wage and salary jobs compared to those in the highest education quintile, reversing the initial pattern.



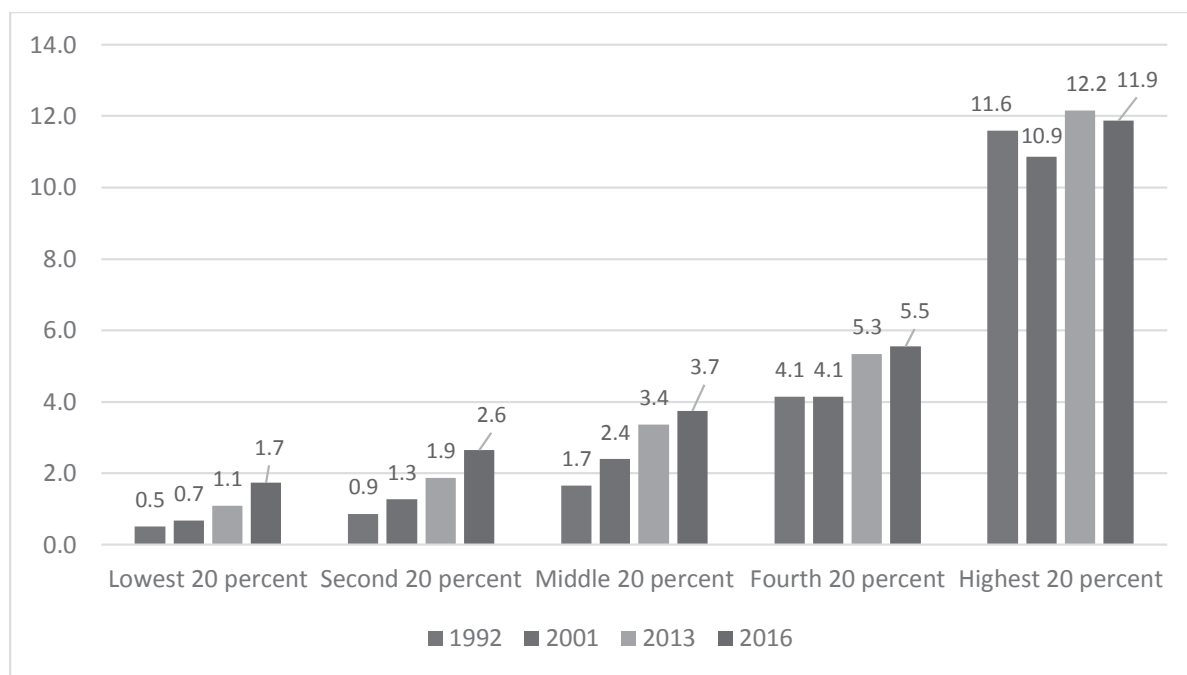
Source: PSA's Labor Force Surveys

Figure 1a. *Share of Working Age Population Employed in Wage and Salary Jobs in Private Sector*

Figure 1b shows the ratio of people employed in government sector wage jobs to the total working age population by household human capital level. Access to these jobs is much more unequal across household human capital level and is essentially dominated by households from the top HCL quintiles. From 1992 to 2001, the share of the working age population in government sector wage jobs increased the most for the middle education quintile households and even declined for the highest education quintile households. But from 2001 to 2013, the shares monotonically increased across quintiles, with those in the highest education quintile obtaining the highest gains in government wage jobs. For the longer 1992 to 2016 period, the pattern of gain is bell shaped, with the middle education quintile households obtaining the most gain and the lowest and highest education quintile

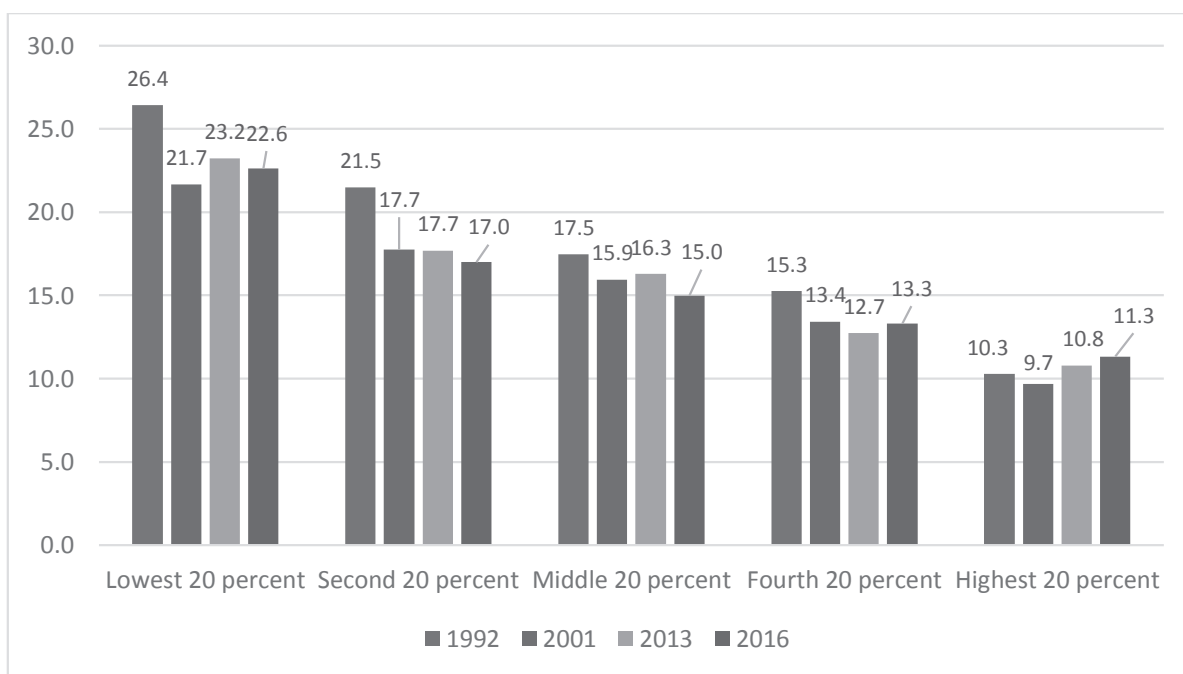
households experiencing the least (but still positive) gain.

Finally, Figure 1c shows the ratio of people in self-employment (without any employees) to the total working age population by household human capital level. In contrast to government wage jobs, the pattern is reversed with shares decreasing as HCL level increases. Looking at the movement over the entire 1992 to 2016 period, the share of self-employed workers declined for each HCL quintile except for the highest HCL quintile, for which it even increased. It should be noted, of course, that the self-employed jobs available for those with high human capital levels (e.g., practicing professionals and proprietors of business) could be very different for those with low human capital levels (e.g. farmers and vendors).



Source: PSA's Labor Force Surveys

Figure 1b. *Share of Working Age Population Employed in Wage and Salary Jobs in Public Sector*



Source: PSA's Labor Force Surveys

Figure 1c. *Share of Working Age Population in Self Employment (without employees)*

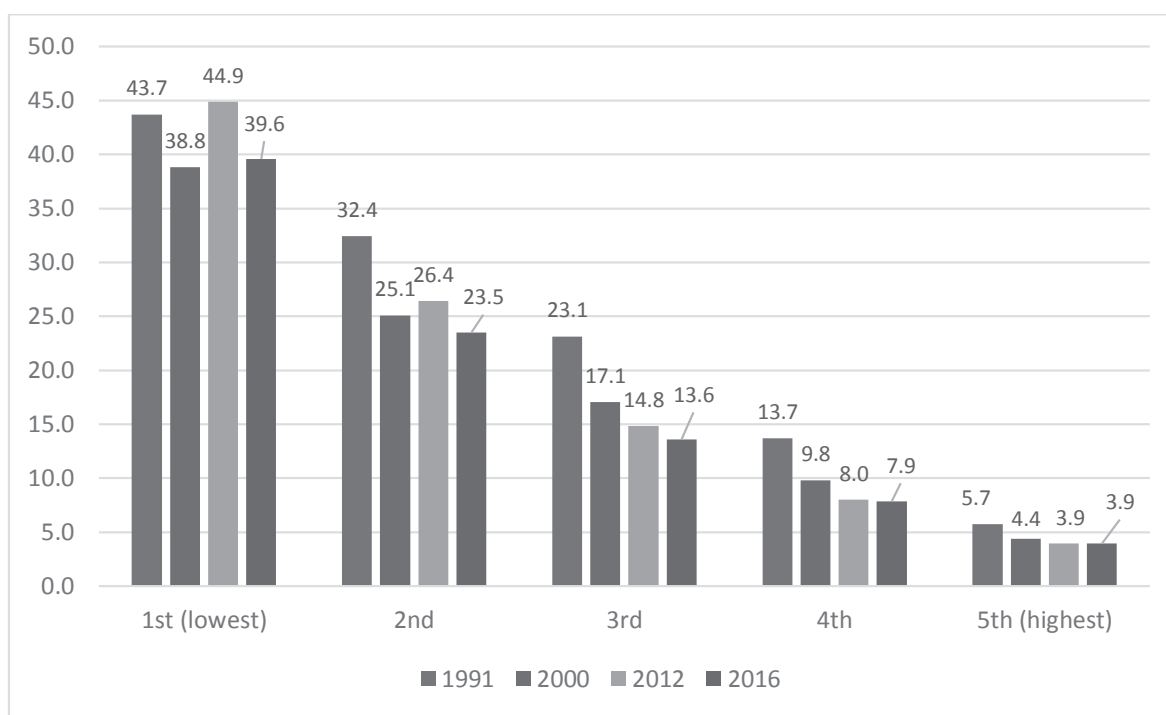
Employment: Kind of Business

Jobs in the industry and services sector are typically much more productive than agricultural jobs. In the 2016 Labor Force Survey, for example, the mean basic pay per day for agricultural workers was Php201 per day, compared to Php361 for industry (80% higher compared to agriculture), and Php440 for services (120% higher compared to agriculture). Households in the bottom two HCL quintiles dominated employment in agriculture over the entire period (Figure 2a). From 1992 to 2016, the employment share of agriculture declined across HCL quintiles, but relatively slowly for those in the lowest HCL quintile; and there was no decline at all if looking at the 2000 to 2016 period.

From 1992 to 2001, the industrial sector value added grew an average of 3% per year. But this did not translate to increased intensity of employment in the sector as the share of the working age population employed in industry even declined slightly. However, the pattern was not uniform across household education quintiles; as those in the bottom 3 quintiles actually experienced gains, whereas those in the top two quintiles experienced losses.

From 2001 to 2016, the industrial sector grew an average of 5.1 percent per year and the share of the working age population employed in industry increased. Again, there was an increased share of the working age population employed in industry for the bottom 3 household education quintiles and losses for the top two quintiles (Figure 2b). Over the entire 1992 to 2016 period, the most notable increase in the share of the working age population employed in industry was achieved by the lowest household education quintile, but followed closely by those in the next two quintiles. Those in the top two quintiles experienced losses. Clearly, industrial sector growth in the past two decades has favored households with relatively low human capital levels in terms of employment generation.

The picture is somewhat different for the services sector, which has led Philippine GDP growth for most of the past two decades. The share of working age members employed in the services sector is monotonically related to the human capital level of the household (Figure 2c). Growth in the sector has also favoured households who have higher human capital levels. From 1992 to 2001, services sector value added grew an average of 3.8 percent per year, and from 2001 to 2016, it grew at 6 percent per year.

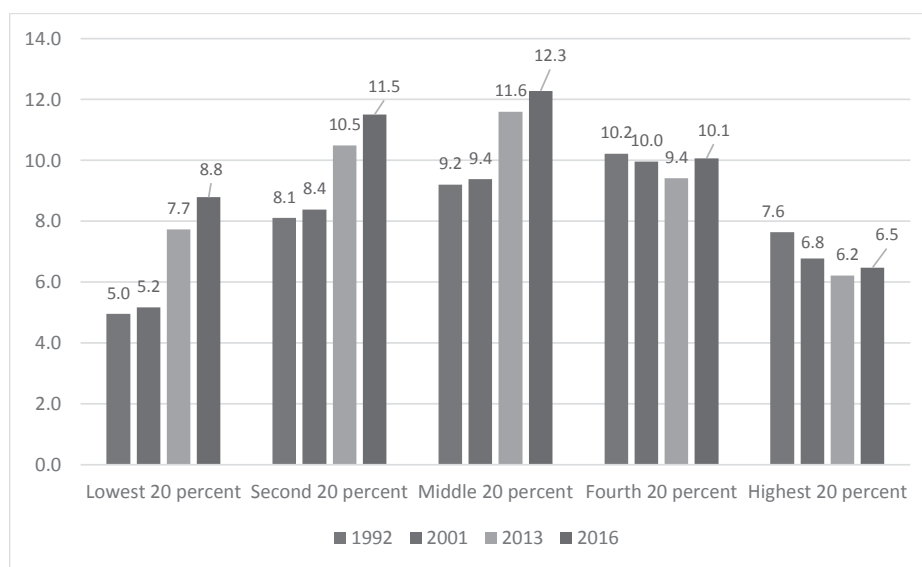


Source: PSA's Labor Force Surveys

Figure 2a. *Share of Working Age Population Employed in Agriculture*

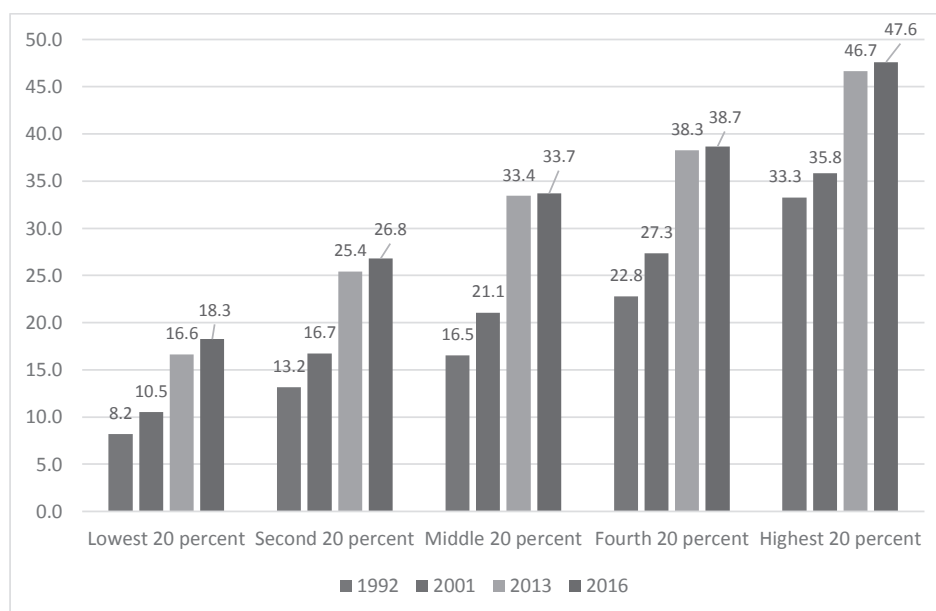
In both periods, the share of working age members employed in the services sector increased across all household human capital levels, but more substantially, especially for the 2000 to 2013 period, for households who have higher human capital levels. (The pattern was reversed a little bit in the 2013 to 2016 period, as the lowest HCL quintile managed the highest gain in

services sector employment, but not enough to change in the overall trend from 1992 to 2013). Services sector growth has provided greater employment for the households with the lowest human capital levels but to a significantly lesser extent than households with higher human capital levels. In that regard, it has not been very inclusive.



Source: PSA's Labor Force Surveys

Figure 2b. Share of Working Age Population Employed in Agriculture



Source: PSA's Labor Force Surveys

Figure 2c. Share of Working Age Population Employed in Agriculture

Mean per capita Income and Expenditure

The evolution of real mean per capita income and real mean per capita expenditure by household human capital level over the past two decades and a half is presented in Tables 4 and 5. The results show that the lowest human capital level households gained the least in terms of per capita income from 1992 to 2000 - in fact its per capita income declined. But then they gained the most from 2001 to 2012 in terms of per capita income, and especially from 2012 to 2015. Similarly, the lowest human capital level households gained the least in terms of per capita expenditure from 1991 to 2001, but then gained the second most in terms of per capita expenditure (next to middle education quintile) from 2000 to 2012, and gained the most from 2012 to 2015. For the period 1991 to 2012, the lowest human capital level households ended up gaining the least in terms of both income and expenditure; but the 2012 to 2015 period appeared much more inclusive in that low HCL households experienced the most gains. This is supported by Table 6 showing poverty incidence by HH HCL quintile, which shows that the decline in poverty incidence among households in the lowest HCL quintile in the period 2012 to 2015 was even higher than its decline for the much longer 2001 to

2012 period; and that most of the decline in poverty incidence in the period was to be accounted for by the two lowest HCL quintile households.⁹

Panel Data Analysis

There is no nationally-representative panel data in the Philippines that spans the past two decades which would allow for a more rigorous examination of the inclusiveness of the country's economic growth by household human capital level over the period. However, it is possible to look at the same issue using panel data over a shorter time period. The National Statistics Office (now under the PSA) followed the same subset of 6,500 households in its 2003, 2006, and 2009 Family Income and Expenditures Surveys.

The years 2003 to 2009 were a period of relatively robust economic growth that more or less mirrors the pattern of growth of the economy over the past two decades. GDP grew at 4.8% annually, with the services sector leading the way (5.8% per year), in particular finance and the real estate sector. At the same time, industry and agriculture also grew, although at more modest rates (2.9% and 3.7% per year, respectively).

Table 4. *Mean Per Capita Income by HH HCL Quintile*

	1991	2000	2012	2015	Annual percent change from 1991 to 2000	Annual percent change from 2000 to 2012	Annual percent change from 1991 to 2012	Annual percent change from 2012 to 2015
Lowest 20 percent	24,382	23,584	27,645	34,679	-0.4	1.3	0.6	7.8
Second 20 percent	25,296	31,015	32,551	39,221	2.3	0.4	1.2	6.4
Middle 20 percent	33,904	40,270	46,406	49,335	1.9	1.2	1.5	2.1
Fourth 20 percent	46,546	59,388	63,733	62,187	2.7	0.6	1.5	-0.8
Highest 20 percent	83,452	111,576	115,782	115,287	3.3	0.3	1.6	-0.1
Total	42,808	53,009	55,747	59,730				
(e)/(a)	3.4	4.7	4.2	3.3				

Source: PSA's merged FIES-LFS data

Note: The observations are weighted using the LFS sampling raising factor variable to get their population equivalent.

Table 5. *Mean Per Capita Expenditure by HH HCL Quintile*

	1991	2000	2012	2015	Annual percent change from 1991 to 2000	Annual percent change from 2000 to 2012	Annual percent change from 1991 to 2012	Annual percent change from 2012 to 2015
Lowest 20 percent	18,688	21,284	24,328	29,181	1.5	1.1	1.3	6.3
Second 20 percent	21,141	26,905	28,020	32,450	2.7	0.3	1.4	5.0
Middle 20 percent	27,038	33,775	39,755	40,495	2.5	1.4	1.9	0.6
Fourth 20 percent	37,008	48,120	51,956	51,264	3.0	0.6	1.6	-0.4
Highest 20 percent	65,644	85,323	89,628	88,725	3.0	0.4	1.5	-0.3
Total	33,998	42,964	45,675	48,117				
(e)/(a)	3.5	4.0	3.7	3.0				

Source: PSA's merged FIES-LFS data

Note: The observations are weighted using the LFS sampling raising factor variable to get their population equivalent.

Table 6. *Poverty Incidence by HH HCL Quintile*

	1991	2000	2012	2015	Annual percent change from 1991 to 2000	Annual percent change from 2000 to 2012	Annual percent change from 1991 to 2012	Annual percent change from 2012 to 2015
Lowest 20 percent	54.8	51.7	45.5	38.3	-3.1	-6.2	-9.3	-7.2
Second 20 percent	48.2	37.1	32.0	27.6	-11.1	-5.0	-16.1	-4.4
Middle 20 percent	33.8	25.2	15.9	15.5	-8.5	-9.3	-17.8	-0.4
Fourth 20 percent	18.2	12.1	8.3	8.2	-6.1	-3.8	-9.9	-0.1
Highest 20 percent	5.5	3.0	2.6	2.1	-2.6	-0.4	-3.0	-0.5
Total	32.3	25.9	21.5	18.5	-6.3	-4.4	-10.8	-3.0

Source: PSA's merged FIES-LFS data

Note: The observations are weighted using the LFS sampling raising factor variable to get their population equivalent.

For this analysis, we classify households according to their household human capital level in 2003 or the beginning period. We use the same classification as we did earlier, where we classify households according to their household education quintile (and also by the education of the most educated member). We then

trace the welfare levels of the different groups over the three survey periods. If growth was equally beneficial across all household human capital levels, then, for instance, per capita income (from domestic sources) or expenditure would be expected to grow at more or less the same rate across the different groups.

Table 7 shows mean real per capita income by household human capital level group for the panel. It shows that households with the highest human capital levels were the main beneficiary of the growth in per capita income over the period. There is almost a monotonic ordering of the percentage increase in income by household human capital level. For the six-year period, real mean per capita income of the highest education quintile households increased by 1.8% per year. In contrast, mean per capita income of the lowest education quintile households increased by

only half a percent per year. The ratio of the income of highest HCL quintile to the income of the lowest HCL quintile also increased from 4.0 to 4.3, indicating increased inequality.

Table 8 is like Table 7 but looks instead at real mean per capita expenditure. Here, the pattern is somewhat similar. The lowest two education quintile households experienced the slowest growth in mean per capita expenditure, much lower than the per capita expenditure growth of the top three household education quintiles.

Table 7. Panel: Mean Per Capita Income by HH HCL Quintile in 2003 (2009 Php)

HH HCL Quintile in 2003	2003	2006	2009	Annual percent change from 2003-2006	Annual percent change from 2006-2009	Annual percent change from 2003-2009
(a) Lowest 20 percent	22,314	22,351	22,964	0.1	0.9	0.5
(b) Second 20 percent	28,171	27,891	30,188	-0.3	2.7	1.2
(c) Third 20 percent	39,052	38,916	42,617	-0.1	3.1	1.5
(d) Fourth 20 percent	57,751	59,226	62,089	0.8	1.6	1.2
(e) Highest 20 percent	88,495	97,246	98,741	3.2	0.5	1.8
All households	43,537	45,126	47,341	1.2	1.6	1.4
(e)/(a)	4.0	4.4	4.3			

Source: Panel of 2003 FIES/LFS and 2006 and 2009 FIES

Table 8. Panel: Mean Per Capita Expenditure by HH HCL Quintile in 2003 (2009 Php)

HH HCL Quintile in 2003	2003	2006	2009	Annual percent change from 2003-2006	Annual percent change from 2006-2009	Annual percent change from 2003-2009
(a) Lowest 20 percent	20,094	20,346	21,300	0.4	1.5	1.0
(b) Second 20 percent	24,909	24,956	26,648	0.1	2.2	1.1
(c) Third 20 percent	32,603	34,003	36,781	1.4	2.7	2.0
(d) Fourth 20 percent	46,407	49,242	52,549	2.0	2.2	2.1
(e) Highest 20 percent	71,558	76,388	78,961	2.2	1.1	1.7
All households	36,396	37,968	40,114	1.4	1.8	1.6
(e)/(a)	3.6	3.8	3.7			

Source: Panel of 2003 FIES/LFS and 2006 and 2009 FIES

Another way of looking at how the different household types have progressed is by tracing their mean income and expenditure rankings over time. Here we use percentile ranking, which means ranking households from poorest to richest, dividing them into 100 equal groups, and assigning those in the poorest one percent a value of one, assigning those in the second poorest one percent a value of 2, and so on until the richest one percent, which is assigned a value of 100.

Table 9 shows the percentile ranking of the panel of households by human capital level for the

six-year period. It shows a substantial drop of 1.5 percentage points in the percentile ranking of the lowest education quintile households and a drop of half a percentage point for the second lowest education quintile households. All other household groups increased their mean percentile ranking. This means that, on average, the income of a household in the lowest education quintile (as classified in 2003), was exceeded by an additional 1.5% of the household population. The same findings can be found using per capita expenditure percentile ranking (Table 10).

Table 9. Panel: Mean Percentile per capita Income Ranking by HH HCL Quintile in 2003 (2009 Php)

HH HCL Quintile in 2003	2003	2006	2009	Percentage-point change from 2003-2006	Percentage-point change from 2006-2009	Percentage-point change from 2003-2009
(a) Lowest 20 percent	31.5	30.8	30.0	-0.7	-0.8	-1.5
(b) Second 20 percent	40.2	40.1	39.7	-0.1	-0.4	-0.5
(c) Third 20 percent	51.1	51.7	51.8	0.6	0.1	0.7
(d) Fourth 20 percent	63.7	63.8	64.8	0.1	1.0	1.1
(e) Highest 20 percent	78.6	78.9	79.3	0.3	0.4	0.7
All households	50.5	50.5	50.5			
(e)/(a)	2.5	2.6	2.6			

Source: Panel of 2003 FIES/LFS and 2006 and 2009 FIES

Table 10. Panel: Mean Percentile per capita Expenditure Ranking by HH HCL Quintile in 2003 (2009 Php)

HH HCL Quintile in 2003	2003	2006	2009	Percentage-point change from 2003-2006	Percentage-point change from 2006-2009	Percentage-point change from 2003-2009
(a) Lowest 20 percent	31.1	30.5	30.1	-0.6	-0.4	-1.0
(b) Second 20 percent	40.5	39.9	39.5	-0.6	-0.4	-1.0
(c) Third 20 percent	50.9	51.7	51.9	0.8	0.2	1.0
(d) Fourth 20 percent	64.1	64.3	65.1	0.2	0.8	1.0
(e) Highest 20 percent	78.7	79.0	79.2	0.3	0.2	0.5
All households	50.5	50.5	50.5			
(e)/(a)	2.5	2.6	2.6			

Source: Panel of 2003 FIES/LFS and 2006 and 2009 FIES

The analysis can be extended by looking at how various groups performed from 2003 to 2009 by type of income source. The three main income sources are: wages and salaries, entrepreneurial income, and other income (this includes remittances, dividends, and rental income). Wages and salaries are the most unequally distributed by household human capital level (highest education quintile to lowest education quintile ratio of 6 to 7), followed by other income (ratio of 4 to 5), and finally entrepreneurial income (ratio of 2 to 3).

As it turns out, the growth in wages and salaries disproportionately benefited the households who have the lowest human capital level (Table 11). Per capita income of the lowest education quintile households

grew by 2% per year from 2003 to 2009. In contrast, per capita income of those in the second and third quintiles actually declined, while those in the top two quintiles grew by less than half a percent a year.

For entrepreneurial income, the lowest education quintile households in fact suffered a substantial decline of 2.1% per year, whereas the highest education quintile households managed to grow 4.6 percent a year (Table 12). For other income, the lowest education quintile grew the least at only 1.7% per year (Table 13). The middle quintile grew the most at 4.6% per year, while the highest education quintile grew at 2.4% per year. Table 14 also shows the mean contribution from abroad received (mainly

Table 11. Panel: Mean Per Capita Income from Wages and Salaries by HH HCL Quintile in 2003 (2009 Php)

HH HCL Quintile in 2003	2003	2006	2009	Percent annual change 2003-2006	Percent annual change 2006-2009	Percent annual change 2003-2009
(a) Lowest 20 percent	6,137	6,238	6,900	0.5	3.4	2.0
(b) Second 20 percent	10,441	9,663	10,277	-2.5	2.1	-0.3
(c) Third 20 percent	15,493	13,993	14,615	-3.3	1.5	-1.0
(d) Fourth 20 percent	22,255	20,841	22,625	-2.2	2.8	0.3
(e) Highest 20 percent	42,200	42,529	43,143	0.3	0.5	0.4
All households	17,665	17,010	17,777	-1.3	1.5	0.1
(e)/(a)	6.9	6.8	6.3			

Source: Panel of 2003 FIES/LFS and 2006 and 2009 FIES

Table 12. Panel: Mean Per Capita Entrepreneurial Income by HH HCL Quintile in 2003 (2009 Php)

HH HCL Quintile in 2003	2003	2006	2009	Percent annual change 2003-2006	Percent annual change 2006-2009	Percent annual change 2003-2009
(a) Lowest 20 percent	8,128	7,808	7,143	-1.3	-2.9	-2.1
(b) Second 20 percent	8,603	8,539	8,556	-0.2	0.1	-0.1
(c) Third 20 percent	10,156	10,503	10,493	1.1	0.0	0.5
(d) Fourth 20 percent	14,780	15,831	16,461	2.3	1.3	1.8
(e) Highest 20 percent	14,081	17,059	18,439	6.6	2.6	4.6
All households	10,567	11,208	11,388	2.0	0.5	1.3
(e)/(a)	1.7	2.2	2.6			

Source: Panel of 2003 FIES/LFS and 2006 and 2009 FIES

remittances), which is a subset of other income. The table shows it to be highly unequal, much more unequal than wages, and favoring the highest quintile. But the growth over the period favored those in the second and third quintiles, with the lowest quintile even experiencing a decline in contributions received from abroad.

In other words, wage and salary income became more equal across the different groups in the period, whereas entrepreneurial and other income became more unequal. This is consistent with the earlier finding that it was actually the lower human capital level households that experienced the greater increases in the proportion employed in private sector wage

and salary jobs, although they still report the highest underemployment rates because their overall income has not increased by much.

Finally, Table 15 shows the poverty incidence by human capital level for the six-year period. Poverty incidence was computed at the household level, based on per capita income, and using official province-level poverty thresholds.¹⁰ From 2003 to 2009, poverty incidence actually increased significantly for the lowest education quintile households (by 2.6 percentage points) and middle education quintile households (0.4 percentage point), whereas it declined or changed only marginally for all other household types.

Table 13. Panel: Mean Per Capita Other Income by HH HCL Quintile in 2003 (2009 Php)

HH HCL Quintile in 2003	2003	2006	2009	Percent annual change 2003-2006	Percent annual change 2006-2009	Percent annual change 2003-2009
(a) Lowest 20 percent	8,048	8,305	8,922	1.1	2.4	1.7
(b) Second 20 percent	9,127	9,689	11,355	2.0	5.4	3.7
(c) Third 20 percent	13,404	14,419	17,509	2.5	6.7	4.6
(d) Fourth 20 percent	20,718	22,555	23,003	2.9	0.7	1.8
(e) Highest 20 percent	32,213	37,658	37,159	5.3	-0.4	2.4
All households	15,305	16,908	18,176	3.4	2.4	2.9
(e)/(a)	4.0	4.5	4.2			

Source: Panel of 2003 FIES/LFS and 2006 and 2009 FIES

Table 14. Panel: Mean Per Capita Contributions from Abroad by household skill level in 2003 (2009 Php)

Household Education Quintile in 2003	2003	2006	2009	Percent annual change 2003-2006	Percent annual change 2006-2009	Percent annual change 2003-2009
(a) 1st (lowest)	1,118	1,379	1,038	7.2	-9.0	-1.2
(b) 2nd	1,748	1,796	2,793	0.9	15.9	8.1
(c) 3rd	3,835	4,973	6,490	9.0	9.3	9.2
(d) 4th	8,286	8,816	7,343	2.1	-5.9	-2.0
(e) 5th (highest)	11,715	13,423	12,995	4.6	-1.1	1.7
Total	4,625	5,319	5,620	4.8	1.9	3.3
(e)/(a)	10.5	9.7	12.5			

Source: Panel of 2003 FIES/LFS and 2006 and 2009 FIES

Table 15. *Panel: Poverty Incidence (%) by HH HCL Quintile in 2003*

HH HCL Quintile in 2003	2003	2006	2009	Percentage-point change 2003-2006	Percentage-point change 2006-2009	Percentage-point change 2003-2009
Lowest 20 percent	40.5	45.6	43.0	5.1	-2.6	2.6
Second 20 percent	30.6	31.3	30.0	0.7	-1.3	-0.6
Third 20 percent	16.2	17.3	16.6	1.2	-0.7	0.4
Fourth 20 percent	7.0	6.7	5.9	-0.3	-0.8	-1.1
Highest 20 percent	1.6	1.8	1.3	0.3	-0.5	-0.2
All households	21.3	22.9	21.6			

Source: Panel of 2003 FIES/LFS and 2006 and 2009 FIES

Note: Uses per capita income and official provincial poverty lines.

Summary and Conclusion

This study examined whether economic growth in the two and a half decades in the Philippines up to 2016 has been inclusive, in the sense of benefiting lower human capital level households, especially the households with the lowest human capital level. The findings from analyzing the combined LFS and FIES data for the survey years 1991-1992, 2000-2001, and 2012-2013 are mixed, although the weight of evidence indicates that it has been non-inclusive for most of the period, but that it suddenly appeared to have been very inclusive from the periods 2012-2013 to 2015-2016.

Excepting the period 2012-2013 to 2015-2016, underemployment, which has been empirically observed to be very highly correlated with poverty, is found to have increased most sharply for most of the past decade and a half for households who have the lowest human capital level, suggesting growth has not generated enough good quality employment for them. The sum of underemployment and unemployment has also increased the most for the lowest human capital level households. On the other hand, households who have the lowest human capital level experienced the biggest increase in private sector wage employment. Because wage and salary jobs provide greater security (especially for workers with low human capital), this indicates some inclusiveness in the job generation pattern.

The lowest human capital level households have gained the most from increased employment in the industry sector, although the sector has the smallest share in total employment among the three sectors.

The services sector has led economic growth in the past two decades, and has increased employment across all household human capital levels, but disproportionately more for households who have higher human capital levels.

The relative gap between the per capita income (and per capita expenditure) of households with the lowest human capital and the highest human capital widened from 1991 to 2000 but narrowed from 2000 to 2012, and narrowed much more noticeably from 2012 to 2015. Based on per capita income, the gap was higher in 2012 compared to 1991.

Looking only at the period 2003 to 2009 and using available data, the findings are clearer. Per capita income and per capita expenditure grew more rapidly for households with higher human capital levels in the period. Low human capital level households generally fell in the percentile income and expenditure rankings, especially the elementary undergrad households. The lowest human capital level households experienced a real decline in entrepreneurial income from 2003 to 2009, which offset increases in wage income and other income. More worryingly, poverty incidence increased for the lowest human capital level households (although poverty gap and severity declined slightly) even while the economy was experiencing fairly decent growth. These all suggest that for the period 2003 to 2009, growth has not been inclusive in the sense of benefiting the households with the lowest human capital.

As has been noted by many, the key to inclusive growth is the broad provision of quality employment. This means good paying jobs even for members of

households that have low human capital level. The country's recent pattern of growth, which so far has been led by the high-end services sector (i.e., BPOs, real estate, and finance), favours those who relatively have a high human level (Zhuang, Kanbur, and Rhee, 2014). According to the 2016 LFS, for example, 65% of workers in the call center industry were college graduates and 22% were college undergraduates. Most of those who have low human capital and the poor are still in the rural areas doing agricultural work. Overseas employment, which is another venue for Filipinos to get well-paying jobs, has also mainly benefitted those who are better educated.

This suggests a two-pronged approach. First is to develop the sectors which have a high employment elasticity of growth for those who have lower human capital (industry, agriculture, tourism). This involves improving governance, transportation (roads and airports), and communication infrastructure, especially the network between more developed and poorer regions (Zhuang, Kanbur, and Rhee, 2014). A conscious effort should be made to spread economic development outside Metro Manila and the traditional city centres. As part of the latter, it is desirable to continue to spread BPO facilities outside Metro Manila and Cebu to take advantage of the many higher education institutions (including over 100 state universities and colleges) all over the country and their supply of tertiary graduates.

Second is to enhance the capability of households who have low human capital levels to partake of the benefits of higher-end services sector growth. Mainly, this means investing in the human capital of these households. The improvement in the human capital level of the lowest human capital level households has been slow. At the minimum, such investment means continuously improving access to and the quality of the public school and health system. This also means continuing the conditional cash transfer program that targets poor households with school-age children, but perhaps better, to refine this program to especially target the lowest human capital level households (e.g., those households with no high school graduate adult at least), as they are the least socially mobile and, as the data shows, most prone to be trapped in poverty. For these households, assistance should extend to making sure that the beneficiaries at least graduate from and possibly get past high school.

Notes

- ¹ From 1991 to 2016, Philippine GDP growth averaged 4.6% per year; and from 2000 to 2016 it averaged 5.3% per year. Meanwhile, Gini of per capita expenditure changed little over the period, from 42.9 in 1991 to 41.3 in 2015 (Ducanes and Balisacan, 2019). Household poverty incidence was also slow to decline during the high-growth period of 2000 to 2012, where it was at around 20%, and only declined significantly beginning 2015 (PSA, 2016).
- ² Admittedly, caution should be made in interpreting this, as data is not usually uniform across countries, and inequality levels depend crucially on what measure of income is used, whether income or expenditure, and whether total or per capita.
- ³ The possibility of overseas labor migration is an inducement to raise human capital (Dacuycuy and Lim, 2014; Lupdag-Padama et al., 2014).
- ⁴ The data sets used were before the implementation in the country of the Senior High School Program and the mandatory kindergarten program, which would have increased the potential years of education by three years.
- ⁵ In the LFS prior to 2016, the reported grades can be inexact. For instance, elementary undergraduate is reported in elementary rather than actual grade; or high school undergraduate instead of actual grade is reported in high school. In these cases, for the elementary undergraduate, the assumed actual grade is grade 3 (mid-point of grades 1 to 5) and for high school undergrad the assumed year is 2nd year (mid-point of 1st to 3rd years). For consistency in the analyses, the 2016 LFS were coded the same way as the previous ones.
- ⁶ In the LFS prior to 2016, those who undertook technical and vocational schooling are not identified, which implies that any additional years spent in school acquiring such education are not properly accounted for in the human capital level index used in this paper. For consistency in the analyses, the 2016 LFS were coded the same way as the previous ones.
- ⁷ For the second quintile, the change over time is roughly equivalent to an increase in highest educational attainment from Grade 6 to first year high school for a single adult who is more than 21 years of age. And for the fourth quartile, the change over time is roughly equivalent to an increase in highest educational attainment from fourth year high school to first year college.
- ⁸ A note of caution, however. The official definition of unemployment in the Philippines was changed in April 2005 to add the criterion of availability for work to make it consistent with the International Labor Organization standard definition, which is followed by most countries. The practical effect of this was to immediately reduce the measured unemployment rate in the country by

three percentage points (comparing April 2005 to January 2005 unemployment rate) or by more than five percentage points (comparing April 2005 to April 2004). The qualitative nature of the findings reported would not change even if the older definition of unemployment was used.

⁹ The poverty incidence estimates was at the individual-level, and used per capita income, and national-level poverty thresholds from PSA (2015) except for the year 2000. The poverty thresholds used were Php21,753 for 2015, Php18,935 for 2012, Php10,792 for 2000, and Php5,949 for 1991. The 2000 threshold was obtained by adjusting the 1991 threshold for inflation, as there was not poverty threshold for the year provided in PSA (2015).

¹⁰ See National Statistical Coordination Board (2011) for the poverty thresholds used.

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