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Regional Integration, Inclusive Growth, and Poverty: Enhancing Employment Opportunities for the Poor

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

Regional Integration, Inclusive Growth, and Poverty: Enhancing Employment Opportunities for the Poor

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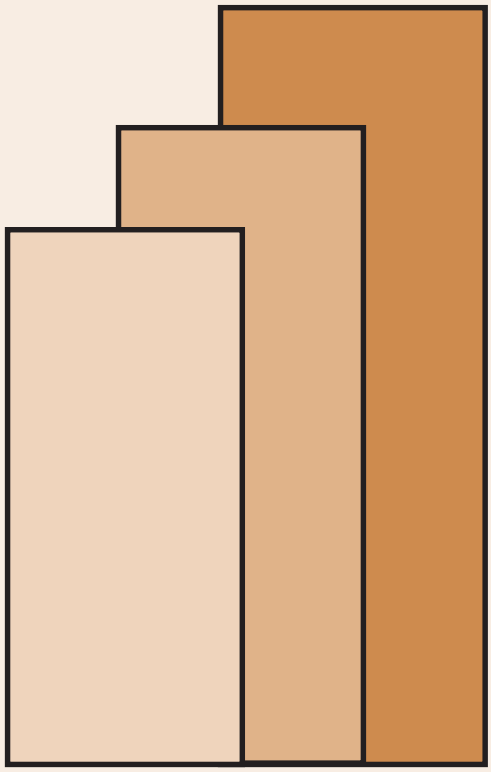
DISCUSSION PAPER SERIES NO. 2013-10



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The Research Information Staff, Philippine Institute for Development Studies
5th Floor, NEDA sa Makati Building, 106 Amorsolo Street, Legaspi Village, Makati City, Philippines
Tel Nos: (63-2) 8942584 and 8935705; Fax No: (63-2) 8939589; E-mail: publications@pids.gov.ph
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Regional Integration, Inclusive Growth and Poverty: Enhancing Employment Opportunities for the Poor

Celia Reyes, Aubrey Tabuga, Christian Mina and Ronina Asis[1]

Abstract

Regional economic integration in East Asia is characterized initially as a market-driven process of increased trade and foreign direct investment (FDI) inflows, and eventually by formal arrangements to liberalize trade and integrate economic activities through free trade agreements (FTAs) among East and Southeast Asian countries (Balboa and Medalla 2011). This has led to a more intensified regional production networks participated in by East and Southeast Asian countries, including the Philippines. Set against the backdrop of continuing economic integration in the region, it seems that the growth in the Philippines has not been as inclusive as in the other countries as manifested in the increase in the magnitude of poverty.

This paper examines how we can improve our record on poverty reduction by looking at how we can generate greater demand for the labor services of the poor. Specifically, this paper looks into the linkage between regional production networks and inclusive growth in the Philippines through employment generation for the poor. The manufacturing sector can provide employment opportunities for the poor and can offer relatively higher wages. However, expected high-productivity employment opportunities from the manufacturing sector were not fully realized due to some bottlenecks in the sector. This partly explains the persistence of poverty in the Philippines. To promote inclusive growth and reduce poverty, the manufacturing sector has to be made more competitive and, at the same time, productivity in the agriculture sector (the major employer of poor) has to be increased.

Keywords: regional economic integration, inclusive growth, poverty, employment, manufacturing, agriculture, less-educated, chronic poor, labor force survey (LFS)

[1] Senior Research Fellow, Research Associate, Research Associate, and Senior Research Specialist, respectively, at the Philippine Institute for Development Studies.

Regional Integration, Inclusive Growth and Poverty:
Enhancing Employment Opportunities for the Poor

Celia Reyes, Aubrey Tabuga, Christian Mina and Ronina Asis

1. Introduction

1.1 Regional economic integration and its impacts on the Philippines

Regional economic integration in East Asia is characterized initially as a market-driven process of increased trade and foreign direct investment (FDI) inflows, and eventually by formal arrangements to liberalize trade and integrate economic activities through free trade agreements (FTAs) among East and Southeast Asian countries (Balboa and Medalla 2011). This has led to a more intensified regional production networks participated in by multinational corporations (MNCs), largely from Japan, China and the newly industrialized economies (NIEs). The notable participation of the Philippines in the regional production networks is in automotive parts, machineries, and electronics, particularly semiconductors.

This regional integration has resulted in the growth of intra-regional trade, investment flows as well as technology transfers among Japan, China, the NIEs, and the Association of Southeast Asian Nations (ASEAN) member-countries including the Philippines (Intal et al. 2010). Unfortunately, the Philippines did not benefit as much as the other countries from the regional production networks. During the period 1990-2008, the Philippines registered the lowest mean per capita gross domestic product (GDP) growth relative to most of its neighboring countries (Table 1). The shares of the manufacturing sector to total output and employment have barely improved since 1990 and, in fact, have been dwindling in recent years (Tables 2 and 3).

The Philippine manufacturing sector has been stagnant for years due to bottlenecks such as low investment, poor infrastructure, poor logistics, among others (Intal et al. 2010; Medalla and Ledda 2012). The country's investment rate (both public and private) has been going down in recent years and has been comparatively lower than those of its neighbors (Table 4). Low investment rate can be attributed to poor infrastructure, high vulnerability to macroeconomic and political risks, weak financial system, poor logistics, high energy rates, among others (Intal et al. 2010; Austria 2006, as cited in Aldaba and Aldaba 2010; ADB 2004; Medalla and Ledda 2012). As a result, industrial upgrading and thus labor productivity growth are being hampered (Table 5). These have negative implication on labor demand thereby decelerating the creation of good-paying jobs in skilled-labor manufacturing industries. At the same time, the quality of human capital in the country can partly explain the low investment rate and low labor absorption in these manufacturing subsectors (Intal et al. 2010). Some of the low-skilled labor-intensive manufacturing industries such as garments and textiles that can potentially absorb large number of less-educated workers are not big players in the manufacturing sector. As a consequence, the manufacturing sector as a whole was not able to absorb a greater number of less-educated workers, who are generally the poor, and therefore failed to contribute much to poverty reduction.

Meanwhile, regional economic integration has affected the agriculture sector through tariff reductions on certain agricultural and fishery products, as stipulated in a number of FTAs. While these subsectors absorb the majority of the less-educated workers, they tend to offer very low wages (Figures 1a and 1b). In fact, wages of the less-educated workers in the agriculture sector are among the lowest (around PhP137 in 2009 while PhP147 in 2011, on average). Thus, high absorption of less-educated workers, who are generally the poor, in the agriculture sector provides another explanation on the non-inclusivity of economic growth and thus persistence of poverty in the country.

Table 1. Per capita GDP growth rate (annual average) in selected Southeast Asian countries, 1990-2008

Country	GDP growth rate (constant 2005 $)	Population growth rate	Per capita GDP growth
Indonesia	4.6	1.4	3.2
Malaysia	6.2	2.2	3.9
Philippines	3.8	2.1	1.8
Malaysia	4.6	1	3.6

Source: Usui (2011)

Table 2. Share of the manufacturing sector to GDP in selected Southeast Asian countries, 1990-2011

Year	Indonesia	Malaysia	Philippines	Thailand
1990	20.7	23.8	24.8	27.2
1995	24.1	26.4	23.0	26.5
2000	27.7	30.9	24.5	28.6
2001	29.1	29.3	24.7	28.1
2002	28.7	29.2	24.7	28.8
2003	28.3	29.9	24.6	29.8
2004	28.1	30.4	23.9	29.6
2005	27.4	27.5	24.1	29.9
2006	27.5	27.6	23.6	30.5
2007	27.0	26.1	22.7	30.9
2008	27.8	24.6	22.8	30.8
2009	26.4	23.8	21.3	29.8
2010	24.8	24.6	21.4	31.5
2011	24.3	24.4	21.0	-

Source: ADB Key Indicators 2012; ADB Key Indicators 2005 (for 1990 figures)

Table 3. Share of the manufacturing sector to total employment in selected Southeast Asian countries, 1995-2011

Year	Indonesia	Malaysia	Philippines	Thailand
1995	12.6	23.3	10.2	15.0
2000	13.0	23.5	10.0	14.9
2001	13.3	23.3	10.0	15.3
2002	13.2	21.7	9.5	15.3
2003	12.4	21.6	9.6	15.7
2004	11.8	20.3	9.7	15.8
2005	12.7	19.8	9.6	15.8
2006	12.5	20.3	9.4	15.4
2007	12.4	18.8	9.1	15.5
2008	12.2	18.2	8.6	14.7
2009	12.2	16.6	8.3	14.3
2010	12.8	16.7	8.4	14.1
2011	13.3	17.1	8.3	13.8

Source: ADB Key Indicators 2012

Table 4. Ratio of gross fixed capital formation to GDP in selected Southeast Asian countries, 1990-2005

Year	Indonesia	Philippines	Vietnam
1990	28.3	23.1	-
1991	27	20	-
1992	25.8	20.9	-
1993	26.3	23.8	-
1994	27.6	23.6	24.3
1995	28.4	22.2	25.4
1996	29.6	23.4	26.3
1997	28.3	24.4	26.7
1998	25.4	21.2	27
1999	20.1	18.8	25.7
2000	21.8	21.2	27.7
2001	21.4	19.6	29.2
2002	20.3	19.2	31.1
2003	19.7	18.1	33
2004	21.4	16.7	32.3
2005	22.3	15.3	33

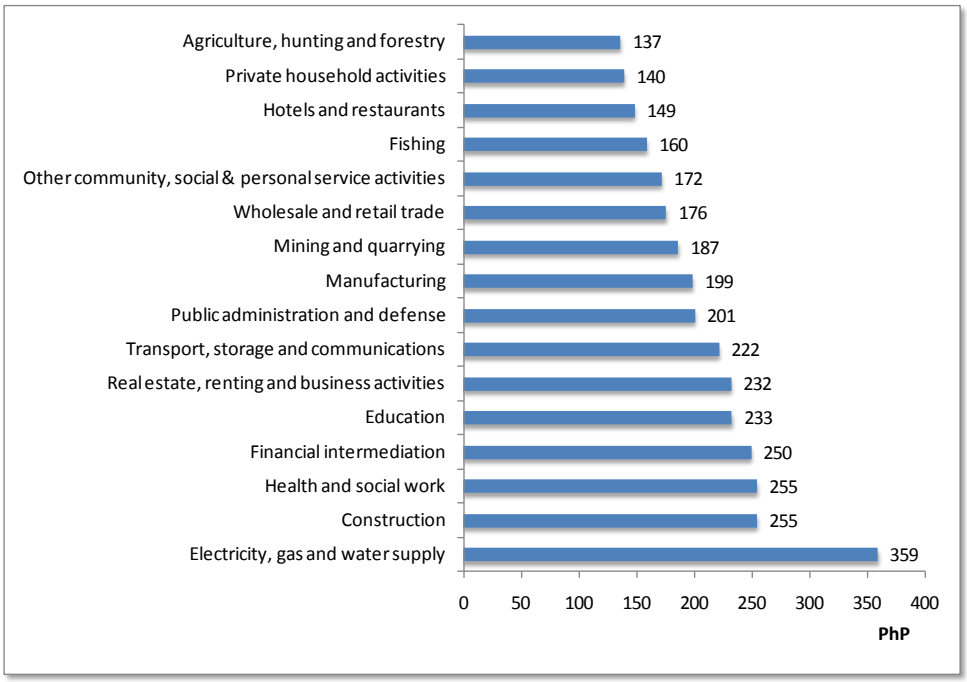
(-) Data not available
Source: Intal et al. (2010)

Table 5. Growth rate of labor productivity in manufacturing in selected Southeast Asian countries, 1990-2005

Period	Philippines	Indonesia	Malaysia
1990-1994	-0.9	2.8	2.2
1995-1999	1.9	2.8	3.1
2000-2005	3	5	6.9

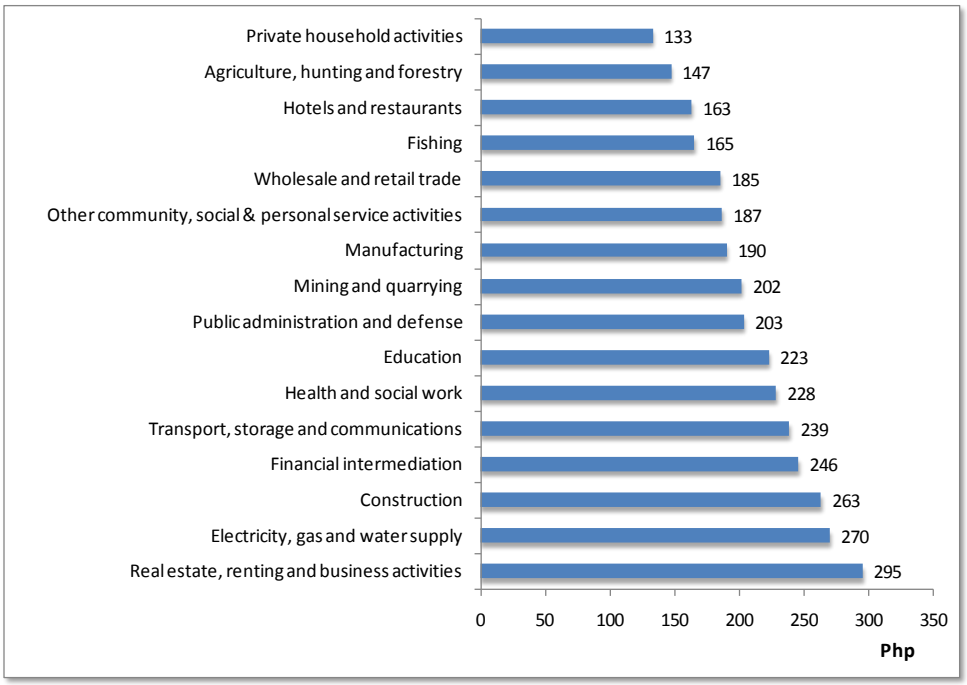
Source: Intal et al. (2010)

Figure 1a. Average daily wage of less-educated wage/salary workers by sector of employment, in PhP, 2009



Source of basic data: LFS (January 2010), NSO

Figure 1b. Average daily wage of less-educated wage/salary workers by sector of employment, in PhP, 2011



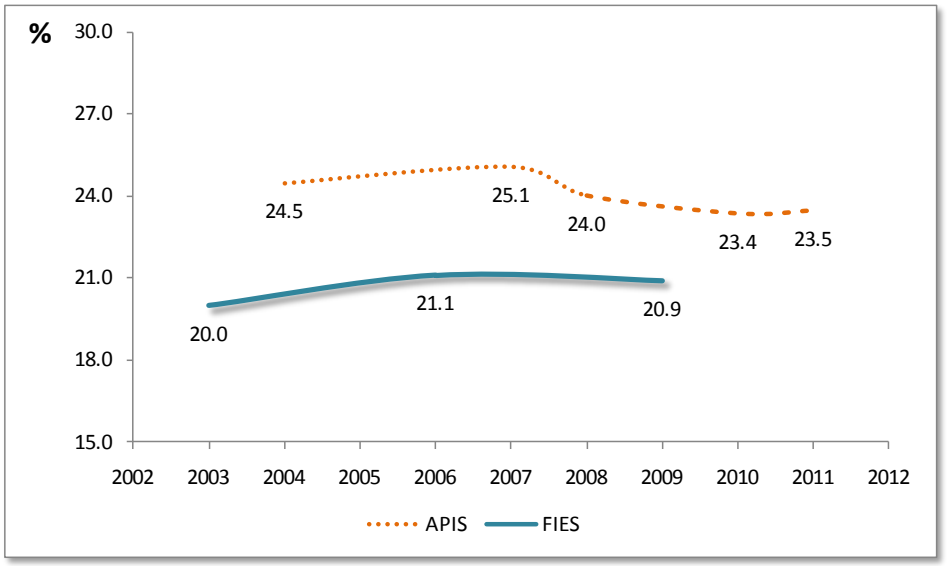
Source of basic data: LFS (July 2011), NSO

1.2 Track record in poverty reduction

During the past decade, there has been no improvement in the poverty situation in the country based on the official poverty statistics. Poverty incidence, based on the Family Income and Expenditure Surveys (FIES) of the National Statistics Office, actually increased from 20.0 in 2003 to 20.9 in 2009. Moreover, the magnitude of the poor continues to increase from 3.3 million families to 3.9 million families during the same period.

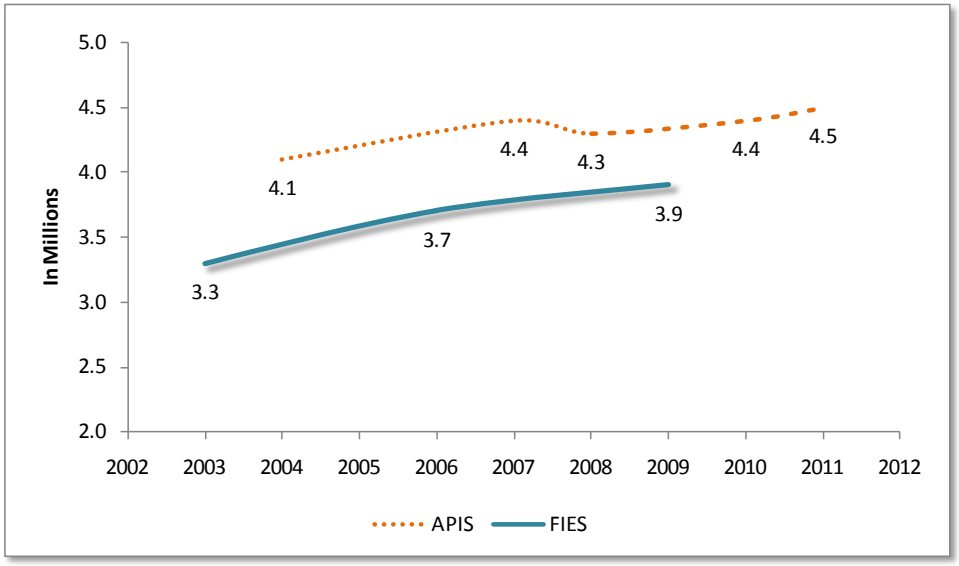
Estimates from the Annual Poverty Indicators Surveys (APIS) reveal the same pattern – that there has been no significant improvement in the poverty situation as reflected in the increasing number of poor families despite the decline in poverty incidence in more recent years. It is important to note that data collection instruments are different for FIES and APIS, with the former employing a more detailed questionnaire than the latter. In general, the estimates of poverty indicators from APIS are higher than those from FIES.

Figure 2. Poverty incidence among families, 2003-2011



Sources of basic data: FIES and APIS, NSO

Figure 3. Magnitude of poor families, 2003-2011



Sources of basic data: FIES and APIS, NSO

Reducing poverty has been more challenging due to the lack of recognition of the heterogeneous nature of poverty in the country. About half of those who are classified as poor are chronic poor (consistently poor all throughout) and the other half are transient poor (those who were previously nonpoor and moved into poverty) (Reyes et al. 2011). The significant proportion of the latter group can be attributed to the numerous shocks that we have been experiencing, ranging from food and fuel price shocks, global financial crises, typhoons and floods, among others. This lack of recognition has led to undifferentiated strategies and programs for the chronic and transient poor. For this paper, the focus will be on reducing chronic poverty.

1.3 Objectives of the paper

This paper aims to explore how we can achieve more inclusive growth, thereby reducing poverty, by examining the linkages between regional economic integration and inclusive growth in the Philippines through employment generation for the poor and recommending some strategies to make growth more inclusive.

2. Regional economic integration: Generating employment opportunities for the poor

2.1 Subsectors affected by the regional economic integration

According to Intal et al. (2010), regional production networks have been central to regional economic integration in East Asia during the past two decades. The integration process has been successful for the region as a whole even if the process has not been smooth in some countries. Consequently, there have been talks and negotiations among the countries on bilateral and regional free trade agreements. Thus, it is expected that production networks in East and Southeast Asia will further deepen and widen in the years to come.

The participation of the Philippines in regional production networks is primarily through exports of manufactured automotive and electronics parts and components. These manufactured exports, however, are considered as those belonging to the low value-added segments of the manufacturing sector, labor-intensive and highly import-dependent. In addition, the country has been operating in a narrow range in these industries' value-added chains. Thus, backward linkages to these local industries have remained limited (Aldaba and Aldaba 2010). On the other hand, other manufacturing subsectors such as textile, wood, rubber, and basic metal have stagnated or declined (Intal and See 2006). As a result, there has been low growth in the manufacturing sector as a whole in terms of output and employment due to some constraints, indicating that the country has not been able to take advantage of the regional production networks as much as the other countries.

There were significant growth in some manufacturing subsectors that are net exporters, more capital-intensive and technology-intensive such as electronics, machineries and automotive parts, chemicals, among others. Electronics, particularly the semiconductor assembly, packaging and testing, largely comprised the total exports (around 65%) in manufacturing for the past decade (Aldaba and Aldaba 2010). The automotive parts, particularly the wiring harnesses and transmissions, have also been one of the major exports of the Philippines. There had also been significant expansion in electrical machinery, appliances and supplies during the past two decades (Intal et al. 2010). However, these subsectors have higher educational requirements resulting in limited participation of the less-educated (World Bank 2010).

On the other hand, manufacturing subsectors that could potentially employ more of the labor services offered by the poor did not grow as much. A number of so-called low-skilled labor-intensive manufacturing subsectors, specifically processed food products and ready-made garments, seemed to benefit from the tariff reductions provided for in the Philippines-Japan Economic Partnership Agreement (PJEPA). From 2008 to 2009, export volumes of the following products increased by at least 20 percent: women's skirts, cotton-made (72%); coconuts, prepared (36%); women's coats, cotton (35%); mackerel, prepared (35%); bananas and mangoes, prepared with sugar (20%); among others (Medalla and Ledda 2012). However, these manufacturing subsectors are not major export players. As a result, absorption of low-skilled labor that can be drawn from a large pool of less-educated (who are essentially the poor) labor force has not significantly increased[2].

Moreover, there are also some agricultural products that have gained from tariff reductions through increased export volumes. These include coconut oil, fresh bananas, pineapple and pineapple products, tuna, seaweeds, shrimps and prawns, among others (SEPO 2012; Medalla and Ledda 2012). These subsectors absorb more less-educated workers.

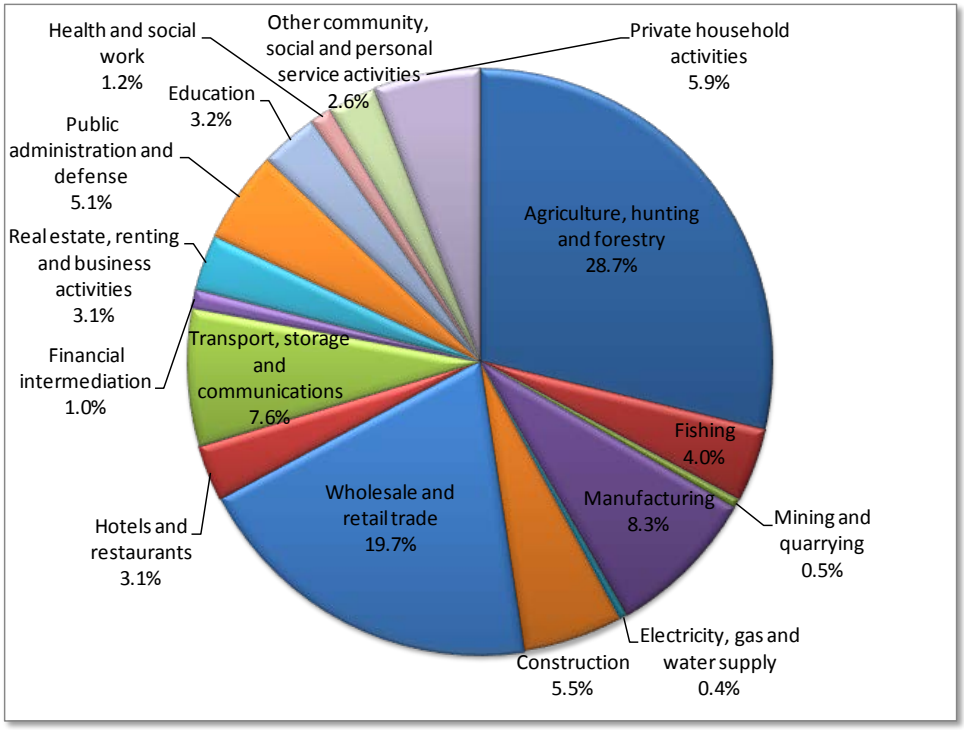
[2] Proportion of less educated workers in the following manufacturing subsectors are as follows: food products and beverages (28.4% in 2004 to 22.7% in 2010); textiles (40.1% in 2004 to 38.4% in 2010); and, wearing apparel (24% in 2004 to 22.3% in 2010).

2.2 Absorption of less-educated[3] workers in selected subsectors

During the second quarter of 2011 and last quarter of 2009, agriculture/hunting/forestry and wholesale/retail trade sectors had been the two largest sources of employment in the country, accounting for 28.7 percent and 19.7 percent, respectively, of the total employment (Figures 4a and 4b). The manufacturing sector ranked third in terms of employment share, with 8.3 percent during both periods.

Agriculture-related workers are predominantly rural dwellers. A small share of agricultural employment in urban areas might be explained by the presence of a few agricultural workers in barangays that are classified as urban. The majority of workers in the manufacturing sector, however, are found in urban areas (Figure 5). Apparently, many of the manufacturing firms are operating in urban areas. For instance, hundreds of electronics companies that are operating in the country are located in special economic zones, which are mostly in urban areas.

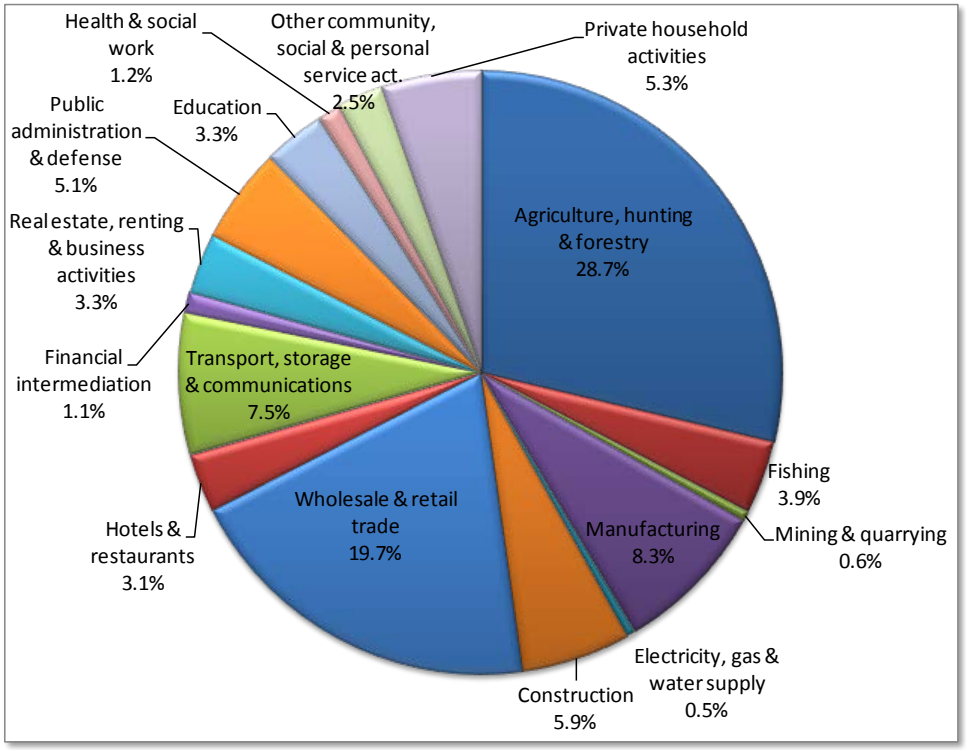
Figure 4a. Percentage share of each sector to total employment, 2009



Source of basic data: LFS (January 2010), NSO

[3] For the purpose of this study, *less educated* refers to having highest educational attainment that is equivalent to elementary graduate or below (including no formal education). This definition was also adopted in the Philippines Skills Report prepared by World Bank in 2010. Findings barely changed when those who spent 1 or 2 years in high school were included in the less educated group.

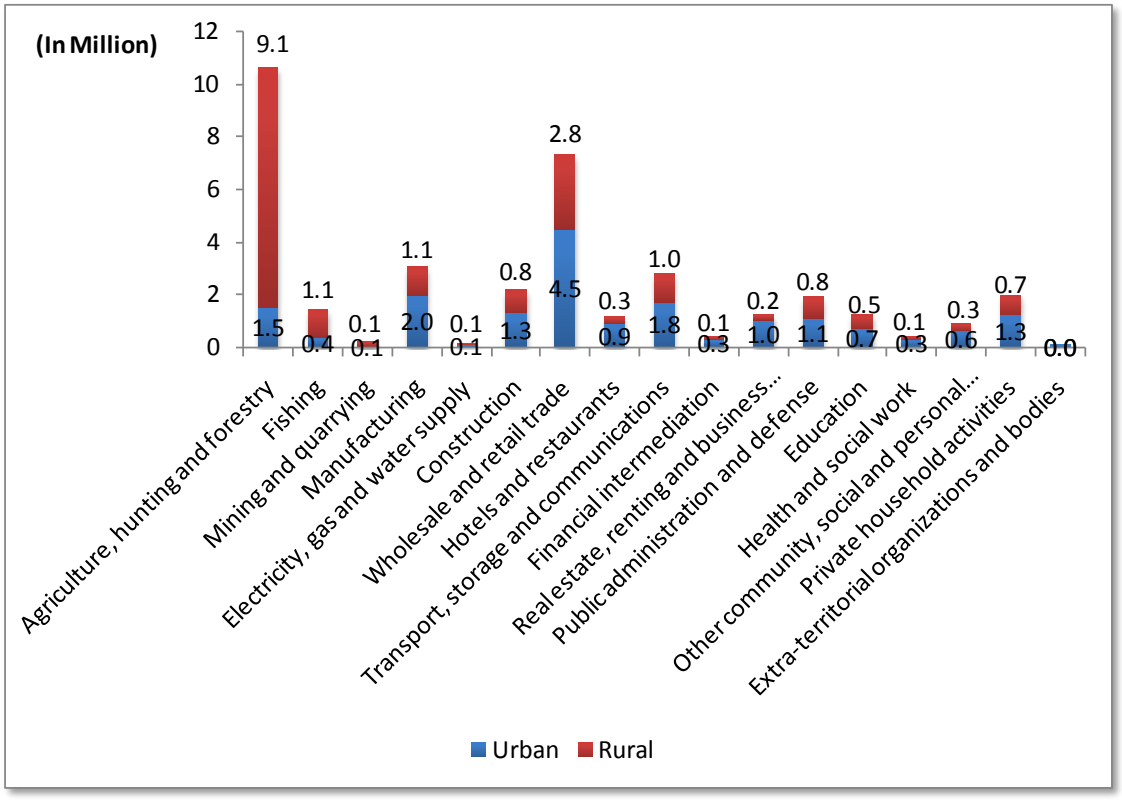
Figure 4b. Percentage share of each sector to total employment, 2011



Source of basic data: LFS (July 2011), NSO

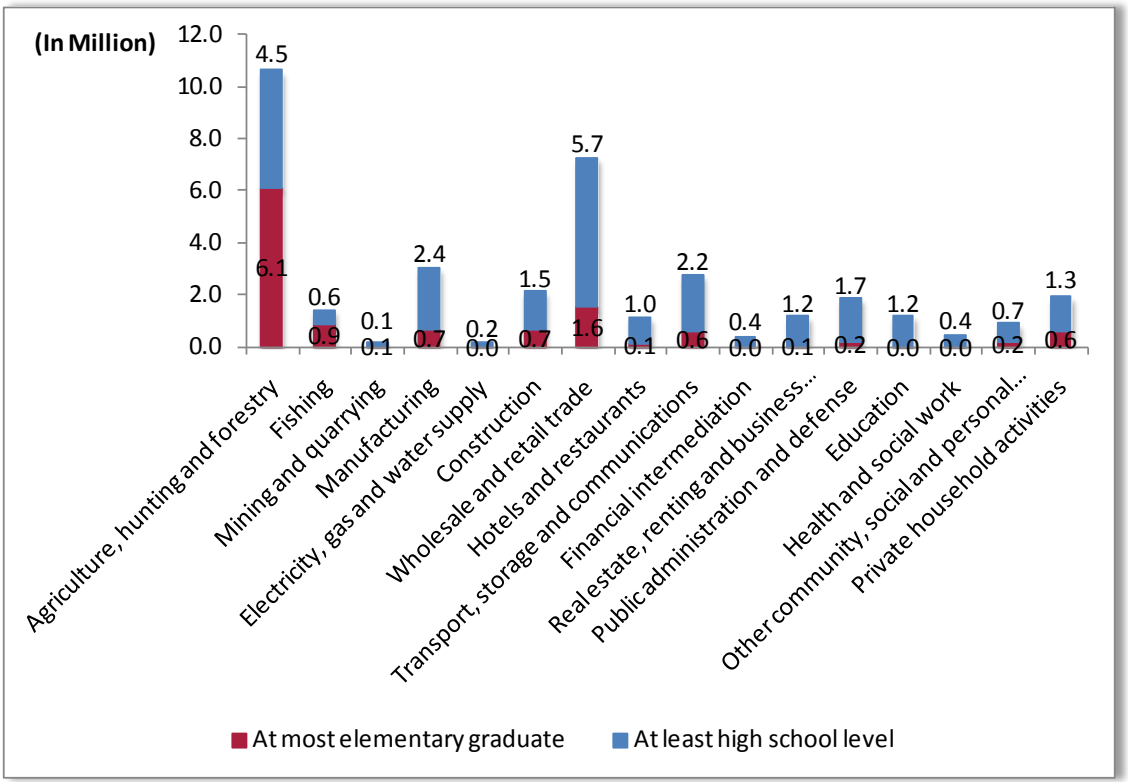
A significant number of workers are less-educated. Around 70 percent of the estimated 11.9 million less-educated workers are absorbed by the top three employers, namely: agriculture/hunting/forestry, wholesale and retail trade and manufacturing. Among these however, the agriculture/hunting/forestry sector got the highest share. In the manufacturing sector, around 0.7 million (equivalent to 22 percent of the total workforce) are less-educated (Figure 6). Figures 7a to 7d show that as level of education goes up, workers tend to shift away from the agriculture/hunting/forestry sector to sectors that require higher level of education.

Figure 5. Distribution of workers by sector of employment and by location, 2011



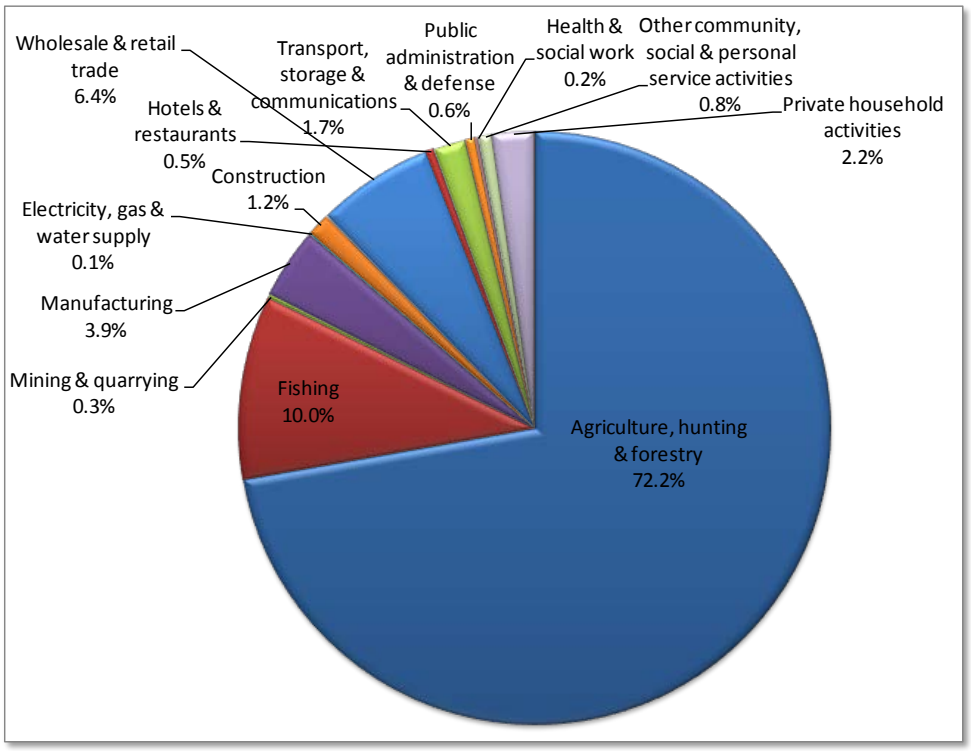
Source of basic data: LFS (July 2011), NSO

Figure 6. Distribution of workers by sector of employment and by highest educational attainment, 2011



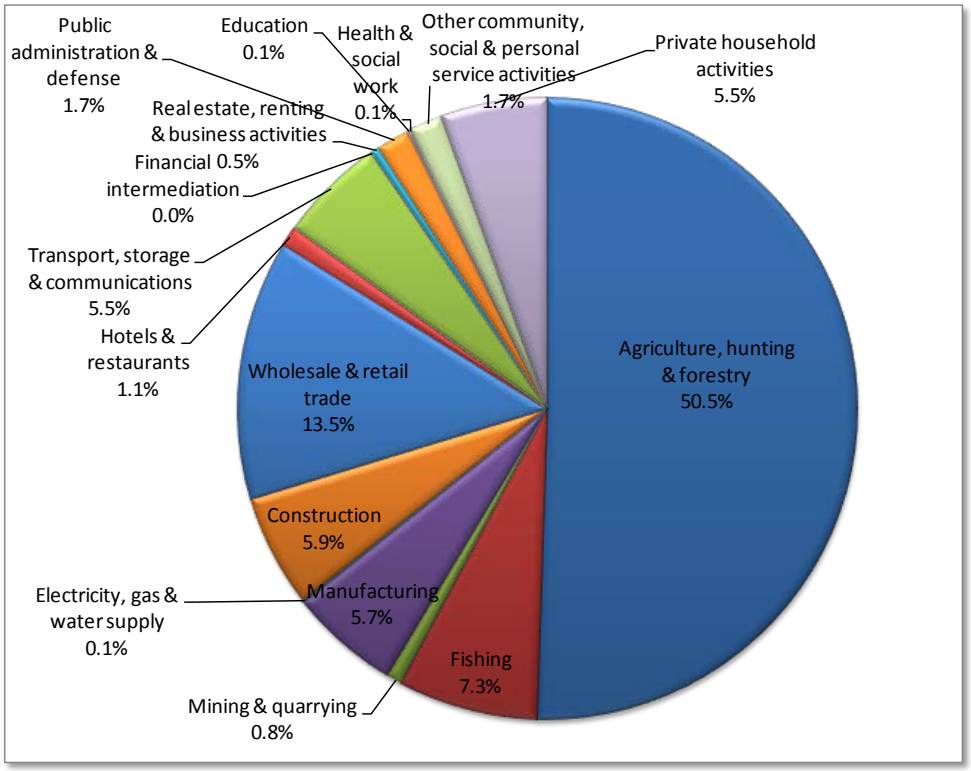
Source of basic data: LFS (July 2011), NSO

Figure 7a. Distribution of workers who have no formal education by sector of employment, 2011



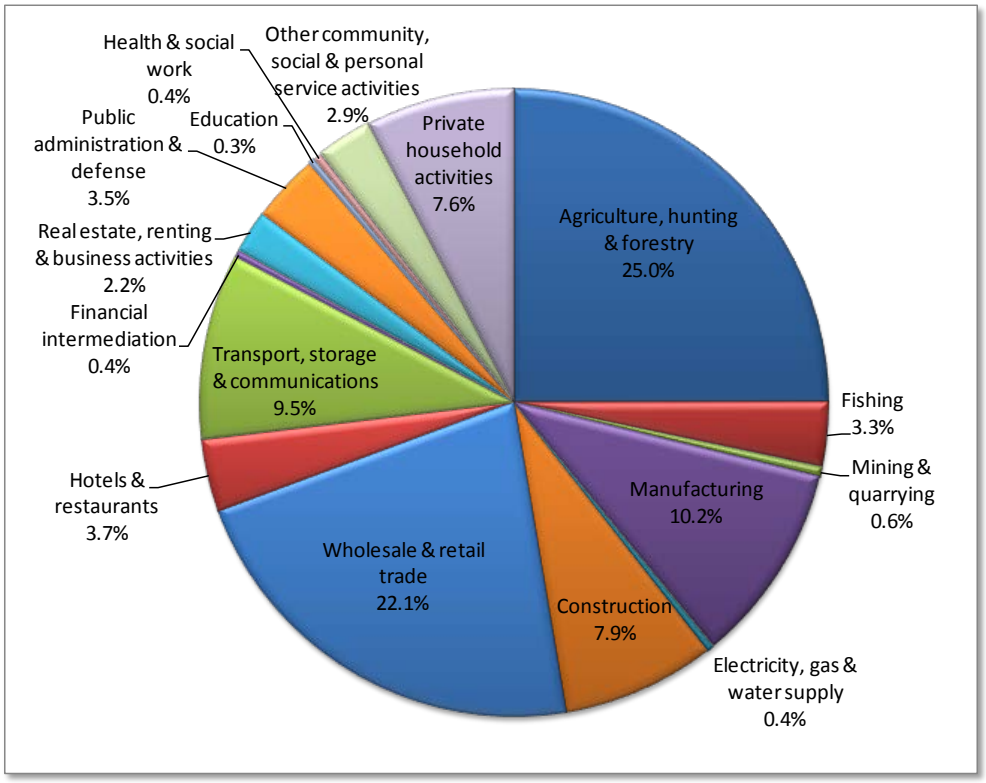
Source of basic data: LFS (July 2011), NSO

Figure 7b. Distribution of workers who have elementary education by sector of employment, 2011



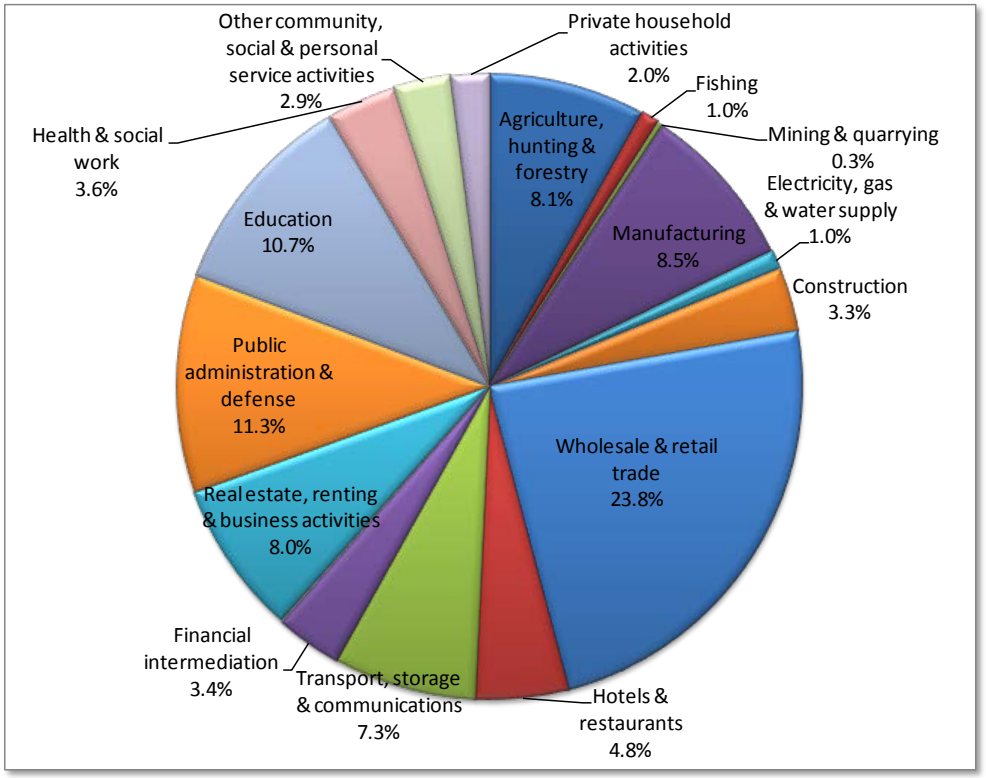
Source of basic data: LFS (July 2011), NSO

Figure 7c. Distribution of workers who have secondary education by sector of employment, 2011



Source of basic data: LFS (July 2011), NSO

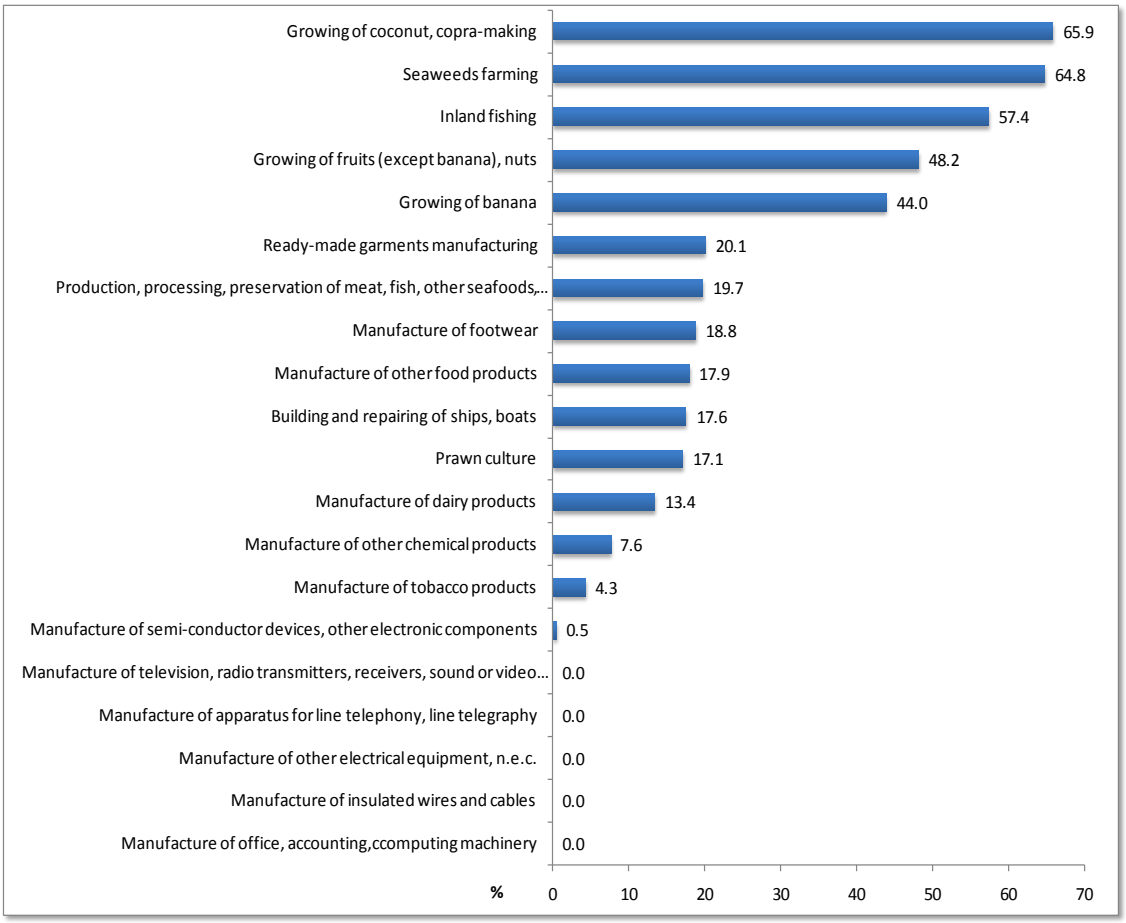
Figure 7d. Distribution of workers who have college education by sector of employment, 2011



Source of basic data: LFS (July 2011), NSO

Among the subsectors[4] that have benefited from the regional economic integration and have posted high exports in recent years, agriculture- and fishery-related ones absorbed the most number of less-educated workers (i.e., 45-65% of their total workforce) (Figure 8). Low-skilled labor-intensive manufacturing subsectors such as processed food, garments and footwear also employed more less-educated workers, comprising around one-fifth of their total workforce. Except for tobacco products, some skilled-labor-intensive and more capital-/technology-intensive manufacturing subsectors like semiconductors and chemical products, however, absorbed only a few less-educated workers (less than 10% of their workforce).

Figure 8. Proportion of workers who are at most elementary graduate in selected subsectors, 2009



Source of basic data: LFS (January 2010), NSO

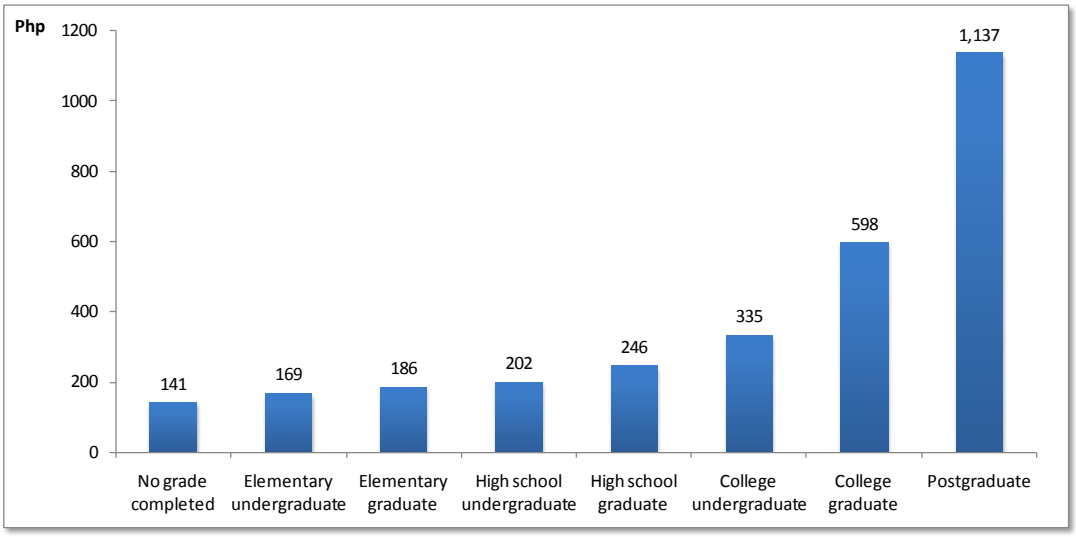
In general, less-educated workers receive relatively lower wage than those with higher educational attainment (Figure 9). Wage/salary workers with elementary level education or less receive an average wage of less than PhP200 per day. The average daily wage of those who finished high school is around 32 percent higher than that of elementary graduates. Apparently, an additional increase in the daily wage of workers rises with the level of education. The 2010 Philippines Skills Report and other studies on human capital noted that additional investment on formal education increases potential earnings. In particular, the estimated returns to schooling are significantly

[4] The LFS January 2010 data set was utilized since it has more disaggregated subsectors (4-digit Philippine Standard Industrial Classification (PSIC) codes or classes), compared to the LFS July 2011 data set (with only 2-digit PSIC codes or divisions).

higher for higher levels of education, i.e., high school graduate and higher. Using Mincerian wage analysis, World Bank (2010) estimated the annual wage returns to completion of different levels of formal education as follows: 6-8 percent for elementary; 5-10 percent for high school; 9-12 percent for some college; and, 16-18 percent for college degree or postgraduate studies.

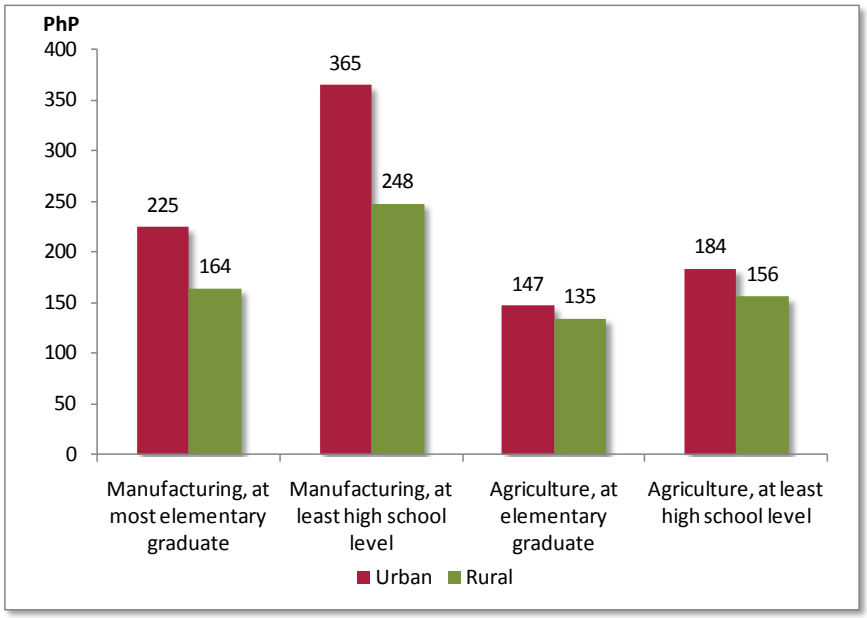
Wages received by less-educated workers in rural areas are even lower. Urban-rural wage gap is more evident in the manufacturing sector than in agriculture sector (Figure 10). Less-educated urban workers in many manufacturing subsectors receive relatively higher wages than their rural counterparts, especially in dairy products, tobacco products, television/radio transmitters/etc, semiconductors, and other electrical equipment (Figure 11).

Figure 9. Average daily wage of wage/salary workers, by educational attainment, 2011



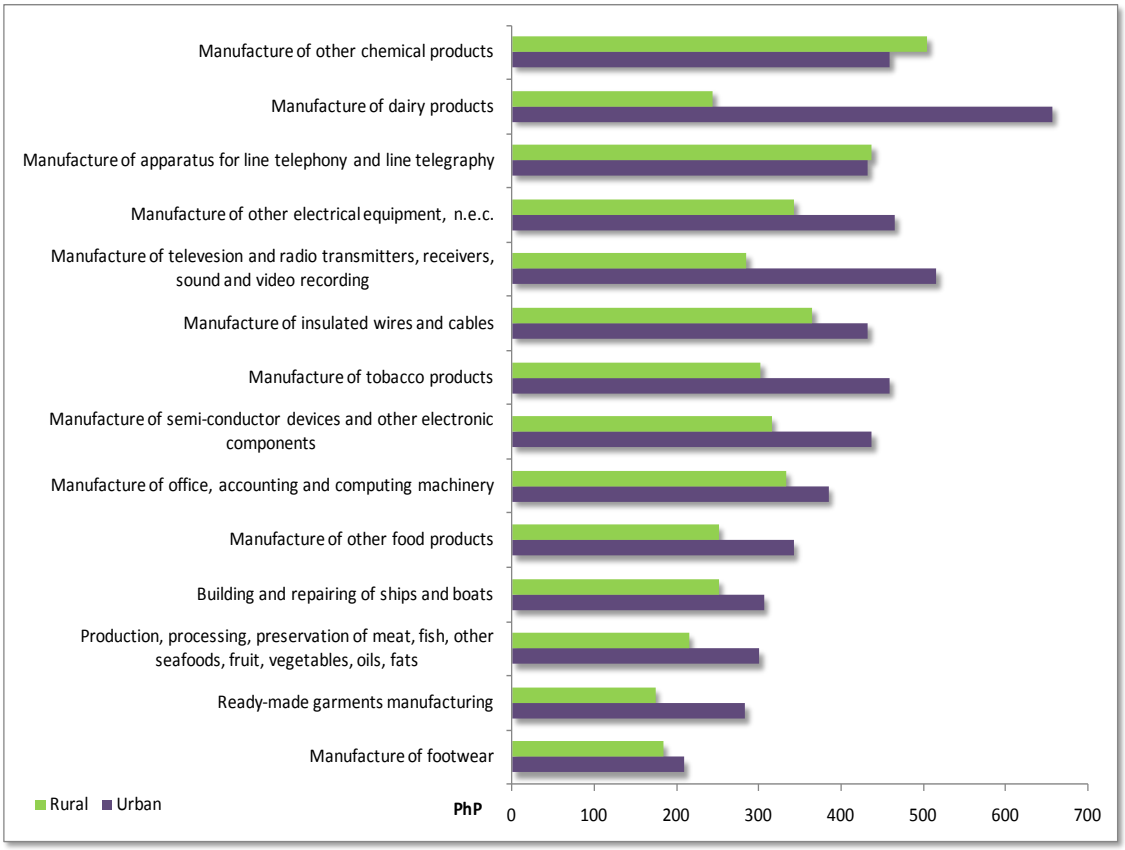
Source of basic data: LFS (July 2011), NSO

Figure 10. Average daily wage of wage/salary workers in agriculture and manufacturing sectors, in PhP, by highest educational attainment and by location, 2009



Source of basic data: LFS (January 2010), NSO

Figure 11. Average daily wage of less-educated wage/salary workers in manufacturing subsectors, in PhP, by location, 2009

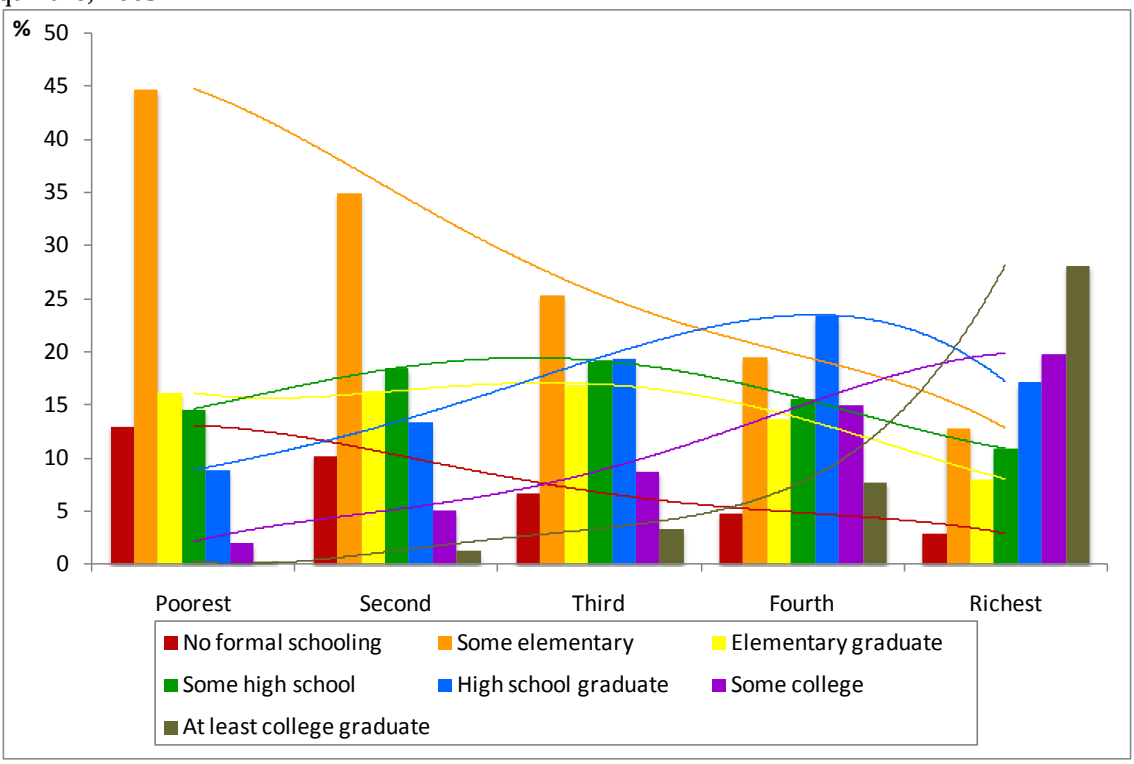


Source of basic data: LFS (January 2010), NSO

2.3 Labor supply from the poor

The educational attainment tends to increase with income. It is evident that the educational attainment of the poorest quintile is lowest among the five income groups (Figure 12). The poorest quintile has the highest proportion of no grade completed and some years of elementary. It also has the lowest proportion of workers who are at least high school graduates. On the other hand, the richest quintile has the lowest proportion of no grade completed, some years of elementary, elementary graduate, and some years of high school. It also has the highest proportion of college undergraduates and at least college graduates. This pattern is evident in the shifting of the distribution of educational attainment towards the right as income increases. Table 6 shows that this positive relationship between the educational attainment and per capita income is observed over time, from 2003 to 2009.

Figure 12. Percentage distribution of workers by highest educational attainment and by income quintile, 2009



Source of basic data: Matched files of FIES (2003, 2006 & 2009) and LFS (January 2004, 2007 & 2010), NSO

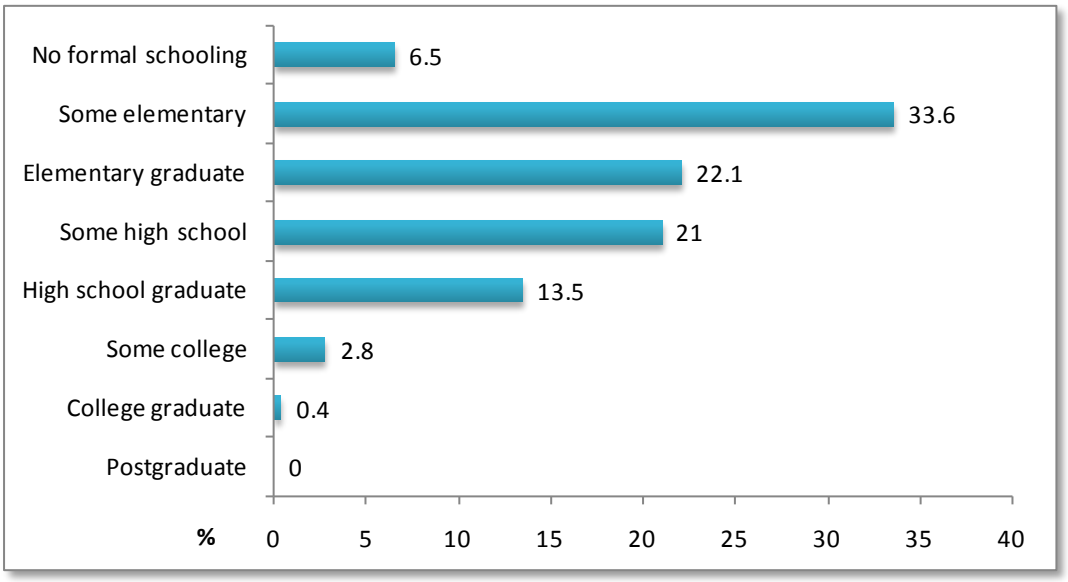
Table 6. Percentage distribution of workers by highest educational attainment and by income quintile (2003, 2006, 2009)

Income quintile	No formal schooling	Some elementary	Elementary graduate	Some high school	High school graduate	Some college	At least college graduate	All
2003								
Poorest	15.4	45.7	15.9	13.9	6.9	1.9	0.3	100.0
Second	11.5	36.3	16.8	17.6	12.0	4.7	1.0	100.0
Third	9.1	28.2	16.1	19.3	17.0	7.7	2.6	100.0
Fourth	6.3	20.9	14.4	18.5	20.3	13.4	6.2	100.0
Richest	4.5	14.4	8.4	13.3	16.7	19.7	23.1	100.0
All	9.2	28.7	14.2	16.5	14.7	9.7	6.9	100.0
2006								
Poorest	15.3	45.2	15.8	14.2	6.9	2.1	0.4	100.0
Second	10.4	34.7	18.1	18.1	13.2	4.6	1.0	100.0
Third	7.8	28.1	16.3	18.4	18.8	7.9	2.8	100.0
Fourth	5.8	20.5	13.5	16.3	21.4	15.6	6.8	100.0
Richest	3.9	13.9	7.5	11.3	18.9	18.8	25.7	100.0
All	8.5	28.2	14.2	15.7	16.0	10.0	7.5	100.0
2009								
Poorest	13.1	44.8	16.2	14.6	8.9	2.1	0.3	100.0
Second	10.3	35.0	16.3	18.5	13.4	5.2	1.3	100.0
Third	6.8	25.4	17.0	19.2	19.5	8.8	3.4	100.0
Fourth	4.9	19.6	13.7	15.6	23.5	15.0	7.8	100.0
Richest	2.9	12.8	8.0	10.9	17.2	19.9	28.2	100.0
All	7.5	27.3	14.2	15.7	16.6	10.3	8.4	100.0

Source of basic data: Matched files of FIES (2003, 2006 & 2009) and LFS (January 2004, 2007 & 2010), NSO

Because the majority of the poor, particularly the chronic poor (Figure 13), are less educated, it can then be argued that employment opportunities for this segment of the population are greater in a number of subsectors such as crop growing, fishing as well as manufacturing of garments, footwear and food products.

Figure 13. Highest educational attainment of the chronic poor, 2009

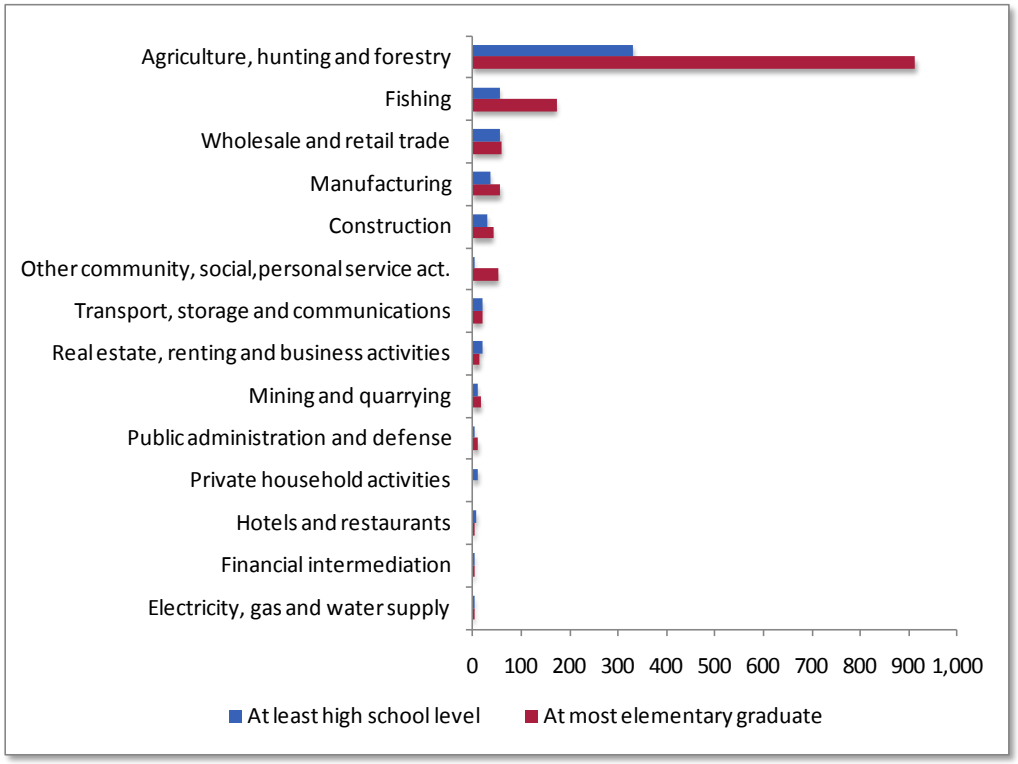


Source of basic data: Matched files of FIES (2003, 2006 & 2009) and LFS (January 2004, 2007 & 2010), NSO

In fact, the majority of the chronic poor workers who are less-educated are found in agriculture/hunting/forestry and fishery sectors (Figure 14). There are also some who are absorbed in sectors such as wholesale/retail trade, manufacturing, construction, and private household activities. Similar pattern is observed in rural areas since the chronic poor workers are predominantly rural dwellers (Figure 15).

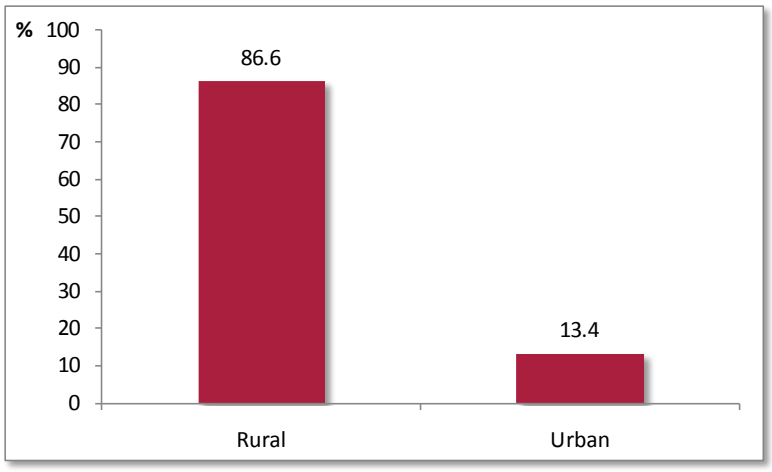
Meanwhile, only a few subsectors that grew or have potential to grow as a result of increasing regional economic integration─coconut growing, banana growing, seaweeds farming, and inland fishing sectors in particular, were able to absorb chronic poor workers, majority of whom are less-educated (Figure 16). Unfortunately, wages in these subsectors are among the lowest, ranging from PhP105 to PhP228 per day (Figure 17).

Figure 14. Chronic poor workers absorbed in selected sectors, by highest educational attainment, 2009



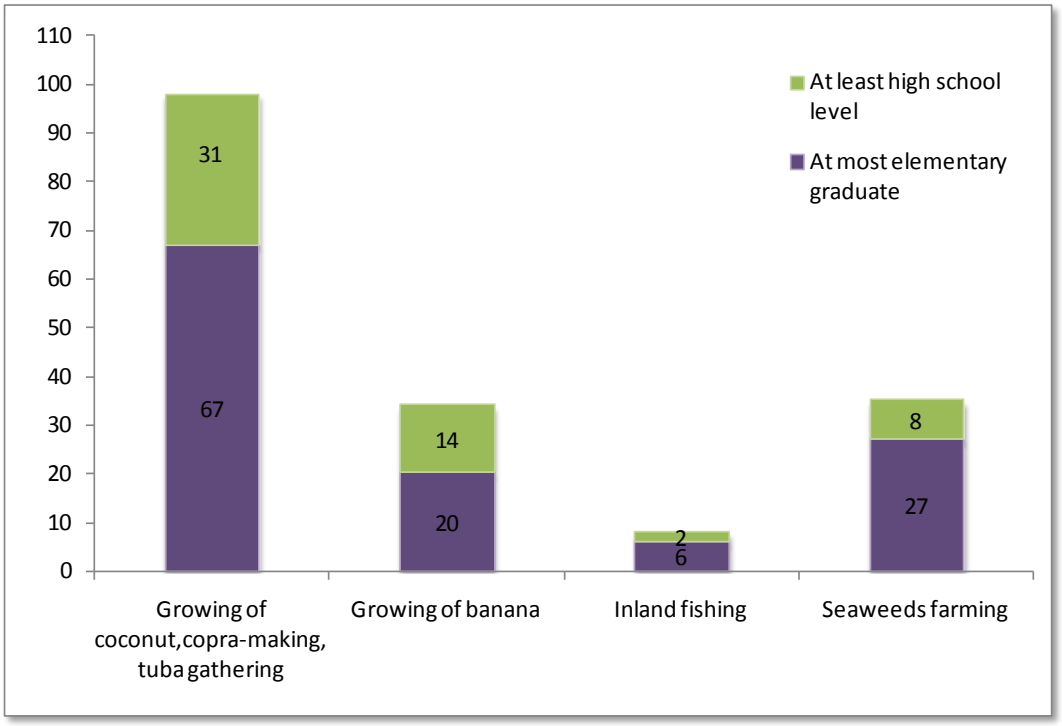
Source of basic data: Matched files of FIES (2003, 2006 & 2009) and LFS (January 2004, 2007 & 2010), NSO

Figure 15. Location of the chronic poor workers, 2009



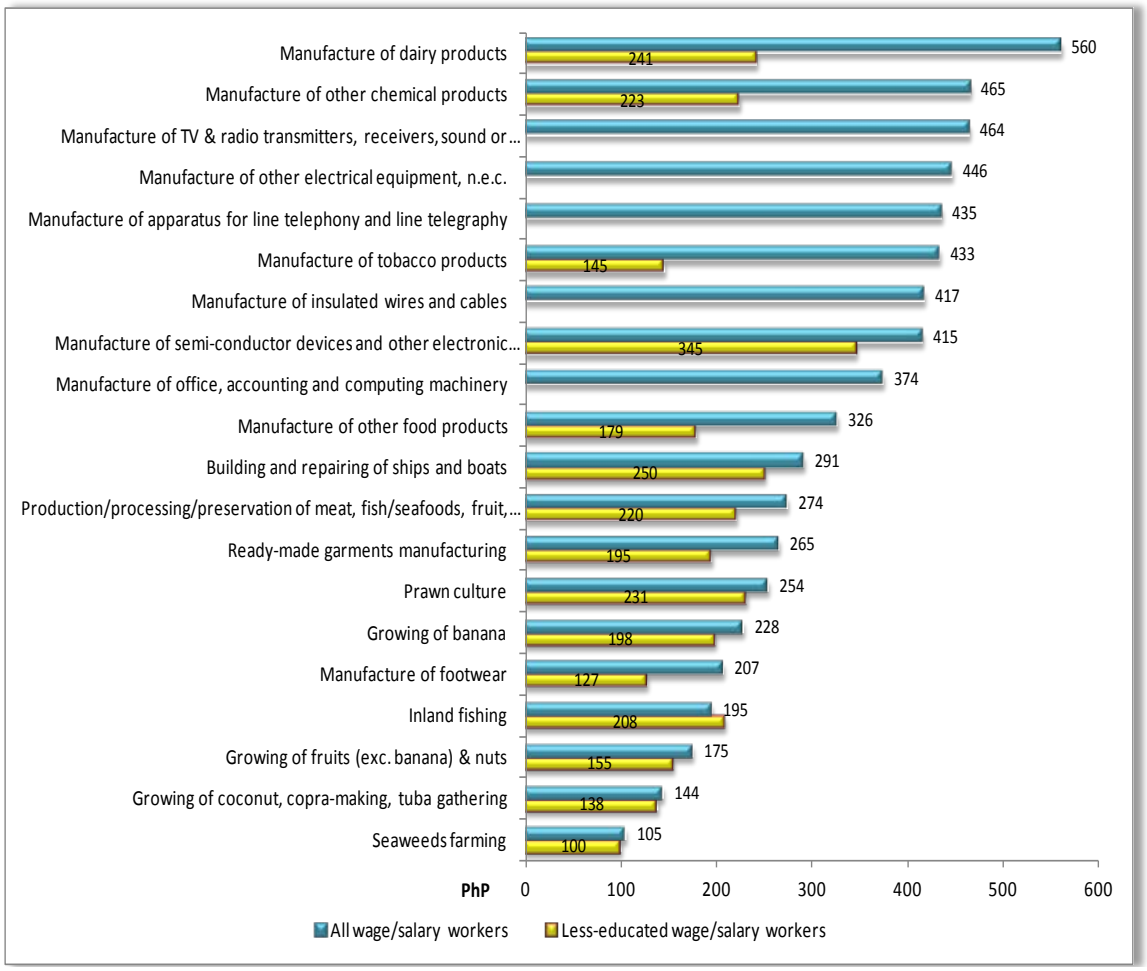
Source of basic data: Matched files of FIES (2003, 2006 & 2009) and LFS (January 2004, 2007 & 2010), NSO

Figure 16. Chronic poor workers absorbed in selected subsectors, by highest educational attainment, 2009



Source of basic data: Matched files of FIES (2003, 2006 & 2009) and LFS (January 2004, 2007 & 2010), NSO

Figure 17. Average daily wage of less-educated wage/salary workers in selected subsectors, 2009



Source of basic data: LFS (January 2010), NSO

It is thus important that these less-educated chronic poor workers get the highest possible pay for their level of education in order to help reduce poverty. Some of the manufacturing subsectors, particularly those that are linked to regional production networks, offer relatively higher wages to their less-educated workforce. For instance, a few ones who are employed in the skilled-labor-intensive and more capital-intensive manufacturing of semi-conductor devices receive a very high wage of PhP345 per day (Figure 17). There are also less-educated workers in other manufacturing subsectors such as dairy products, chemicals/chemical products, and meat/fish production/processing/preservation, who receive above PhP200 per day as their basic pay. However, workers with similar educational attainment in some low-skilled labor-intensive manufacturing subsectors such as garments, apparel and other food products have average daily wage ranging from PhP100 to PhP200, which are comparable with wages in agriculture-related subsectors, particularly crop growing.

3. Conclusions and Recommendations

This paper examined how we can improve our record on poverty reduction by looking at how we can generate greater demand for the labor services of the poor. Specifically, this paper looked into the linkage between regional production networks and inclusive growth in the Philippines through employment generation for the poor. The study showed that the manufacturing sector provides employment opportunities for the poor and also offers relatively higher wages compared to agriculture, which is currently the major employer of poor. However, expected high-productivity employment opportunities from the manufacturing sector were not fully realized due to some bottlenecks in the sector. This partly explains the persistence of poverty in the Philippines. To promote inclusive growth and reduce poverty, the manufacturing sector has to be made more competitive and, at the same time, productivity in the agriculture sector (the major employer of poor) has to be increased.

3.1 Summary and Conclusions

1. The manufacturing sector can provide opportunities for productive employment for the poor.
    a. Agriculture, hunting and forestry (28.7%) and wholesale/retail trade (19.7%) sectors and manufacturing (8.3%) were the three largest sources of employment in the country.
    b. Thirty percent of the workforce in the manufacturing sector is less-educated (at most elementary graduate).
    c. Manufacturing provides higher pay for the less-educated workers than the agriculture sector.

2. Subsectors that grew as a result of regional economic integration absorb only a few less-educated workers while subsectors that did not grow as much have more less-educated workers.
    a. Less-educated workers in manufacturing subsectors that have greater participation in the regional production networks, i.e., automotive and electronics parts and components, comprised less than 10 percent of the total workforce.
    b. Selected agriculture subsectors and low-skilled labor-intensive manufacturing subsectors, i.e., processed food, garments and footwear, that are not major export players have less-educated workers, comprising around 45-65 percent and 20 percent, respectively, of their total workforce.

3. Average daily wage of wage/salary workers is positively correlated with educational attainment.
    a. Less-educated workers receive only less than PhP200 per day.
    b. The average daily wage of those who finished high school is around 32 percent higher than that of elementary graduates.

4. Wages of less-educated workers in the growing subsectors are higher.
    a. Less-educated workers in manufacturing subsectors that are linked to regional production networks receive higher wages. For example, workers in electronics parts and components manufacturing (i.e., semiconductor devices) receive an average daily wage of PhP345.
    b. Average daily wage of less-educated workers in other manufacturing subsectors, i.e., dairy products, chemicals/chemical products, and meat/fish production/processing/preservation, is above PhP200.
    c. Less-educated workers in some low-skilled labor-intensive manufacturing subsectors, i.e., garments, apparel and other food products, have average daily wage ranging from PhP100 to PhP200, comparable with wages in agriculture-related subsectors, particularly crop growing.

3.2 Recommendations

Inclusive growth, as defined in the literature, means broad-based growth with encompassing benefits that can reach the marginalized and the disadvantaged such as the poor in developing countries who are mainly engaged in agriculture and are rural dwellers. It can thus be equated to growth that is pro-poor, pro-employment, pro-agriculture, and pro-rural development. In addition, the World Bank noted that productive employment is assumed to be the main instrument for a sustainable and inclusive growth.

To achieve more inclusive growth and reduced poverty, it is important to attack the problem from both the demand and supply sides. Demand for less-educated workers needs to be increased to absorb the significant number of less-educated poor workers. Regional economic integration that leads to regional production networks resulting in a more dynamic manufacturing sector can be one source of that increased demand. At the same time, investments have to be made to increase the access of the poor to quality education so that they can take advantage of employment opportunities which are not available to most of the poor right now.

The study has shown that the manufacturing sector absorbs “less-educated workers” and pays them higher wages than in other sectors. If the manufacturing sector can grow faster, this can provide the employment opportunities for the less-educated poor workers. It is imperative to address constraints in the manufacturing sector so that it can absorb a greater number of the poor and lift them out of poverty. Aldaba and Aldaba (2012) highlighted some concrete measures on how the manufacturing sector can be revived and become more competitive. Alongside the industrial policy that aims to develop local firms, the aforementioned study also suggests that the government must also carry out some measures that would improve the investment climate in the country and increase the participation of local firms in higher segments of the industry value chain. Some of the recommended policies in the aforementioned paper are as follows: (i) human resource development and training; (ii) industrial and technology upgrading, or development of technological capabilities and specialized skills of firms; (iii) finance support programs for small and medium enterprises (SMEs); (iv) improve linkages between local firms (including SMEs) and MNCs through information exchange; (v) promotion of subcontracting and outsourcing activities; (vi) improvement of

infrastructure and logistics through policies aimed at lowering power and communication costs, provision of sufficient port systems, travel time reduction, and offering of travel and shipment options; (vii) improvement of overall investment climate by addressing low institutional quality, corruption and inefficient bureaucracy; and, (viii) capacity building and adequate funding for the Department of Trade and Industry and Board of Investments' Competitiveness and Linkages Program.

However, it should also be recognized that the manufacturing sector employs only 8.3 percent of the total number of workers, of which 23 percent are less-educated. This translates to around 1 million less-educated workers in the manufacturing sector. Assuming an annual growth rate of 5 percent or higher, the manufacturing sector can only absorb a small proportion of the less-educated workers. It is thus not likely that manufacturing sector can quickly absorb all the excess labor in the agriculture sector, where 74 percent of the chronic poor workers are currently employed. If the government aims to reduce poverty more quickly, it is equally important to increase productivity also in the agriculture sector.

Moreover, it is also important that the quality of labor being supplied by the poor be enhanced so that more employment opportunities would be opened to them. At the same time, improving labor quality would have long-term positive impact on technical, skill-intensive manufacturing firms that participate in regional production networks, such as electronics, machineries, chemicals, and high-technology agro-industry (World Bank 2010). In fact, the 2010 Philippines Skills Report noted that manufacturing firms with higher proportion of skilled workers, or those with at least some high school[5], tend to be more competitive. Hence, programs aimed at improving human capital such as the 4Ps is very timely and relevant.

[5] World Bank (2010) considered education as an indirect measure of intermediate and advanced skills, i.e., academic, generic and technical, and defined skilled workers as those with at least some high school.

References

Agarwalla, G. 2005. Philippines electronics equipment production and manufacturing. Paper presented at the *2005 WB-PIDS Workshop on Policies to Strengthen Productivity in the Philippines* and at the *2004 ASEM Trust Fund: Philippines Closing the Productivity Gap World Bank-FIAS-PIDS Workshop*.

Alba, M.M. and L.B. Dacuycuy. 2009. Do good things come out after recessions?: the productivity-business cycle interaction. *Policy Brief (Globalization, adjustment and the challenge of inclusive growth)* No. 1. Taft Avenue, Manila, Philippines: De La Salle University – Angelo King Institute.

Aldaba, R.M. and F.T. Aldaba. 2012. Do FDI inflows have positive spillover effects? The case of the Philippine manufacturing industry. *PIDS Policy Notes* No. 2012-01 (March). Makati City, Philippines: Philippine Institute for Development Studies.

Aldaba, R.M. and F.T. Aldaba. 2010. Assessing the spillover effects of FDI to the Philippines. *PIDS Discussion Paper Series* No. 2010-27. Makati City, Philippines: Philippine Institute for Development Studies.

Asian Development Bank. 2004. Improving the investment climate in the Philippines. A report by the Development Indicators and Policy Research Division of ADB. Mandaluyong City, Philippines: Asian Development Bank.

Austria, M. 2006. Foreign direct investment and economic development: the case of the Philippines. In *Multinationals and economic growth in East Asia*, edited by S. Urata, C. Siow Yue and F. Kimura. London: Routledge.

Balboa, J.D. and Medalla, E.M. 2011. Regional economic integration in East Asia: progress and pathways. *PIDS Discussion Paper Series* No. 2011-23. Makati City, Philippines: Philippine Institute for Development Studies.

Intal, P.S. Jr. and E. See. 2006. Whither the Philippine manufacturing sector: looking back, way forward. Paper presented at the *Production Networks, Industrial Adjustments, Institutions, Policies and Regional Cooperation Conference* of the DLSU-Angelo King Institute, Manila, Philippines.

Intal, P.S. Jr., M.R.V. Borromeo and G.L. Largoza. 2010. *Globalization, adjustment and the challenge of inclusive growth: boosting inclusive growth and indusrial upgrading in Indonesia, the Philippines and Vietnam*. Taft Avenue, Manila, Philippines: De La Salle University – Angelo King Institute.

Medalla, E.M. and V.M. Ledda. 2012 *(forthcoming)*. Philippines-Japan Economic Partnership Agreement (PJEPA): an initial ex-post review. *PIDS Discussion Paper Series*. Makati City, Philippines: Philippine Institute for Development Studies.

Reyes, C., A. Tabuga, C. Mina, R. Asis, and M. Datu. 2011. Dynamics of Poverty in the Philippines: Distinguishing the Chronic from the Transient Poor. PIDS Discussion Paper Series No. 2011-31. Makati City, Philippines: Philippine Institute for Development Studies.

Senate Economic Planning Office (SEPO). 2012. "Philippine Agricultural Exports at a glance (February)". Manila, Philippines: Senate Economic Planning Office.

Usui, N. 2011. Transforming the Philippine Economy: "Walking on Two Legs". ADB Economics Working Paper Series No. 252 (March). Mandaluyong City, Philippines: Asian Development Bank.

World Bank. 2010. Philippines Skills Report: skills for the labor market in the Philippines. Report No. 50096-PH (March). Washington, D.C.: Human Development Department, East Asia and Pacific Region, The World Bank.