

The Gendered Effect of Philippine Economic Structural Transformation on Employment Creation and Decent Work

Emily Christi A. Cabegin*
University of the Philippines

Abstract

The Philippine economy has accelerated rapidly in the past two decades with a sharper uptake in the period 2010-2017 as indicated by a GDP growth that averaged 6.1 percent annually. This was associated with a declining agriculture sector share in output and employment and a shift towards primarily the services sector, largely bypassing industrialization. Employment growth persistently lagged behind GDP growth resulting in a diminishing employment elasticity from 0.72 in the period 2000-2005 to 0.26 in 2010-2017. In the latter period, women workers were largely left behind from partaking of the fruits of a rapidly growing economy with women employment elasticity of 0.18 compared with the 0.31 for their male counterparts. The high prevalence of labor underutilization and informal employment amidst a thriving economy has also a gender dimension with women workers being persistently more likely to hold informal jobs while men workers were more likely to be underemployed even in wage employment. Philippine economic growth has also failed to optimize its demographic dividend with the youth suffering from unemployment rates

*Dr. Cabegin is Associate Professor of the School of Labor and Industrial Relations, University of the Philippines, Diliman, Quezon City. Her email address is cabegin@gmail.com.

that have been more than thrice that of the adult workforce. Female youth workers, despite increasingly becoming better educated, were more disadvantaged by higher unemployment and underemployment rates than the male youth workers.

Keywords: Economic structural transformation, inclusive growth, employment elasticity, unemployment, underemployment, informal employment

1. Introduction

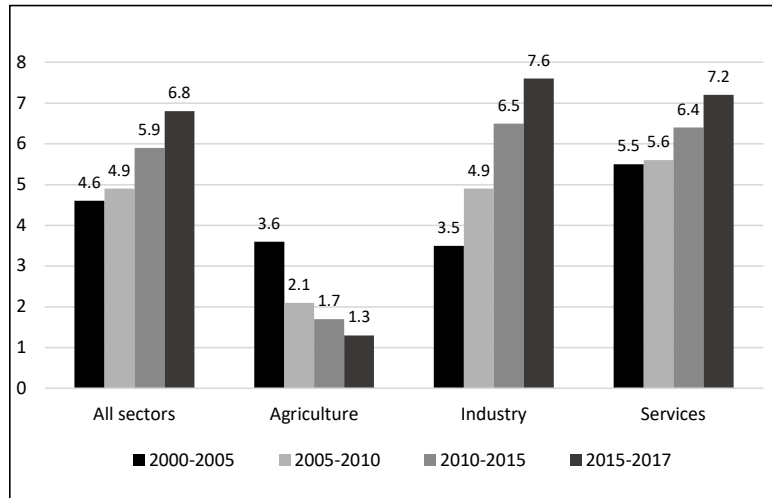
For growth to be sustainable, it has to be inclusive—which means economic growth alongside the generation of productive jobs for the majority of the workforce (Klasen, 2010), improved general living standards for the greater population (Balakrishnan, Steinberg and Syed, 2013) and equitable opportunity for members of a society to participate in and contribute to the growth process (Ali and Zhuang, 2007). This article examines the evolution of the structure of the Philippine economy that accompanied the recent rapid economic growth and its gendered impact on employment creation and informal sector employment. Four periods corresponding to three administrative regimes are covered in this paper, namely, the Arroyo administration (covering the two five year periods of 2000-2005 and 2005-2010), the Aquino administration (2010-2015) and the very early part of the Duterte administration (2015-2017).

2. Growth and structural transformation of the Philippine economy

Economic growth in the Philippines has been on a generally increasing trend after the Asian financial crisis in 1997-1998. From an average annual growth rate of 4.6 percent for the period 2000-2005, real gross domestic product (GDP) growth had accelerated only slightly to 4.9 percent for 2005-2010, as the economy was hampered by the global financial crisis in 2008-2009. Thereafter, the Philippines demonstrated a swift recovery with a rise in average annual GDP

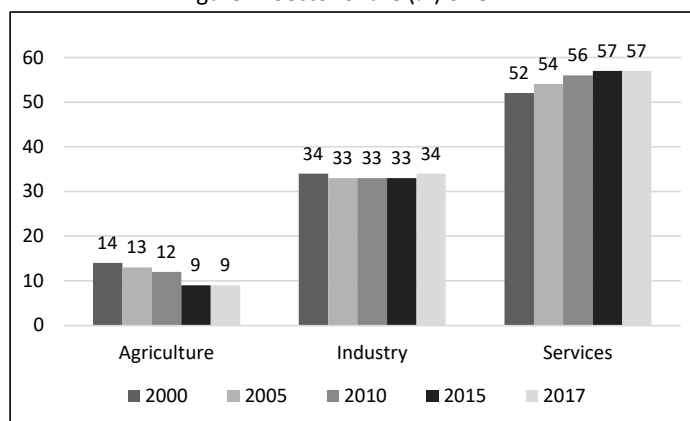
growth to 5.9 percent between 2010 and 2015 and a further upsurge of growth to 6.8 percent for the period 2015-2017 (Figure 1).

Figure 1. Real GDP Average Annual Growth Rate (%)



Economic expansion was accompanied by some sectoral shifts, with the industry and services sectors growing at the expense of the agriculture sector. The Philippines' GDP growth for the period 2000-2010 was driven largely by the services sector, and by both the industry and the services sectors for 2010-2017, as agricultural production growth decelerated from an annual average of 3.6 percent in the period 2000-2005 to 2.1 percent in 2005-2010 and 1.3 percent between 2015 and 2017. The services sector demonstrated the fastest growth among the three major sectors during the 2000-2010 period at about 5.6 percent every year compared with the industry sector which posted an annual growth of 4.2 percent for the same period. There was a convergence in growth rate between the services and the industry sectors for the period 2010-2015 at about 6.5 percent, while the period 2015-2017 reflected a stronger industry sector which grew at an annual average of 7.6 percent, which is higher than the 7.2 percent annual growth posted by the services sector. The services sector, however, remained to be the dominant source of the country's economic output, accounting for more than half of GDP at 52 percent in 2000 and increasing to 57 percent in 2017, while the industry sector's share was largely unchanged at about one-third of GDP (Figure 2).

Figure 2. Sector Share (%) of GDP



Within the industry sector, manufacturing took the lion's share (at about 70%) of the industry sector Gross Value Added (GVA) for the period 2000-2017, followed by the construction sector which accounted for almost 20 percent while the electricity, gas and water supply sector accounted for about 10 percent. The manufacturing sector posted accelerated growth from an annual average of four percent for the period 2000-2010 to 6.8 percent in 2010-2015 and 7.7 percent in 2015-2017 while the construction sector exhibited the fastest growth since 2005 averaging annually at close to nine percent between 2005 and 2017 (Table 1).

Table 1. Sub-sector Share and Growth Rate in Gross Value Added of the Industry Sector

Sector	Growth rate (%)				% Share to total industry sector	
	2000-2005	2005-2010	2010-2015	2015-2017	2000	2017
Industry Sector	3.5	4.9	6.5	7.6	100.0	100.0
a. Mining & Quarrying	14.1	8.6	4.1	3.5	1.8	2.9
b. Manufacturing	3.9	3.5	6.8	7.7	71.0	69.3
c. Construction	-0.6	10.5	7.0	8.6	16.5	18.3
d. Electricity, Gas & Water Supply	4.2	4.8	4.0	6.2	10.6	9.4

Sources: Philippine Statistics Authority, National Accounts of the Philippines; authors' calculations.

Within the services sector, the largest subsector is the trade and repair of motor vehicles subsector which contributed about 30 percent of the services GVA for the period 2000-2017, followed by the real estate, renting and business activities subsector and the other services, which accounted for 18-20 percent each of the services GVA (Table 2). The latter includes education and other community, social and personal services activities. The financial intermediation subsector and the transportation and communication subsector have each contributed more than 10 percent. Some of the moderate shifts were observed in the reduction of the share of the public administration and defense subsector by three percentage points from 10 percent to seven percent between 2000 and 2017, and a joint increase in the share of the financial intermediation and the real estate and business activities subsectors by five percentage points from 28 percent to 33 percent.

Table 2. Sub-sector Share and Growth Rate in Gross Value Added of the Services Sector

Sector	Growth rate (%)				% Share to total service sector	
	2000-2005	2005-2010	2010-2015	2015-2017	2000	2017
Service sector	5.5	5.6	6.4	7.2	100.0	100.0
a. Transportation and Communication	10.5	3.5	6.3	4.6	11.9	12.8
b. Trade and repair of motor vehicles	5.5	5.1	6.0	7.5	30.6	29.5
c. Financial Intermediation	6.6	7.8	7.8	7.8	10.1	12.8
d. Real Estate & Business Activities	4.7	7.0	7.7	8.1	18.1	20.1
e. Public Administration & Defense	2.8	3.8	3.1	7.4	10.0	6.9
f. Other Services	3.8	6.4	6.1	7.0	19.3	18.0

Sources: Philippine Statistics Authority, National Accounts of the Philippines; authors' calculations.

The increasingly rapid growth in the services sector from 2000 to 2017 was not uniform across the subsectors. The highest growth rate in GVA was recorded for the transportation and communication

subsector for the period 2000-2005, and for the more modern financial intermediation and real estate and business activities subsectors between 2005 and 2017. The transportation and communication subsector grew at an annual rate of 11 percent for the period 2000-2005 but decelerated to 6.3 percent in 2010-2015 and 4.6 percent in 2015-2017. The real estate, renting and business activities subsector accelerated its annual GVA growth from 4.7 percent for 2000-2005 to seven percent for 2005-2010, 7.7 percent for the period 2010-2015 and 8.1 percent between 2015 and 2017. The financial intermediation subsector, which was among the strongest growth accelerators in the period 2000-2005 with annual growth rate of 6.6 percent, continued to post robust growth at 7.8 percent between 2005 and 2017. Rapid acceleration of growth was likewise observed for the public administration and defense subsector from an annual growth rate of 2.8 percent for the period 2000-2005 to 7.4 percent for 2015-2017 and the other services subsector from 3.8 percent to seven percent.

Structural shifts in employment

The structural transformation of the economy results in the labor shifts from the lower productivity agricultural sector to the higher productivity industry and services sectors (Figures 3 and 4). By the end of the 1990s, the services sector had taken over from agriculture as the dominant source of employment and since then has absorbed an increasing share from 47 percent in 2000 to 52 percent in 2010 and 56 percent in 2017 (Figure 3). The share of employment of the industry sector remained largely unchanged at 16-18 percent for the past couple of decades, while that of agriculture has contracted from 37 percent in 2000 to 34 percent in 2010 and 25 percent in 2017.

These patterns of structural change were driven by the differential growth rates in employment across the major sectors. The services sector has demonstrated a strong absorptive capacity although at a diminishing rate with employment growing at an average of 4.1 percent annually for the period 2000-2005, 3.6 percent for 2005-2010 and 2.8 percent between 2010 and 2017. The industry sector which has a dismal employment performance of 1.4 percent annual growth between 2005 and 2010, exhibited a remarkable recovery with employment growing at an average of 3.1 percent for 2010-2015 and 8.4 percent for the period 2015-2017 (Figure 5).

Figure 3. Sector Share (%) of Employment

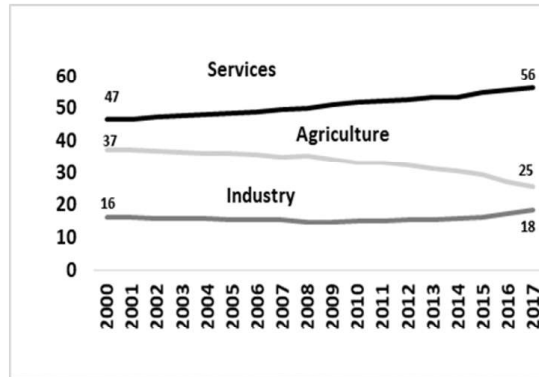
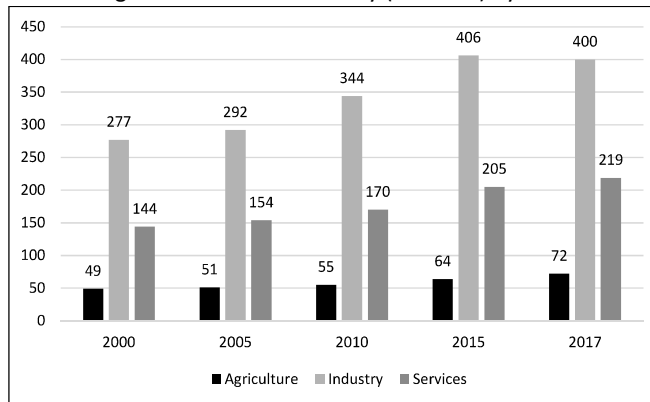
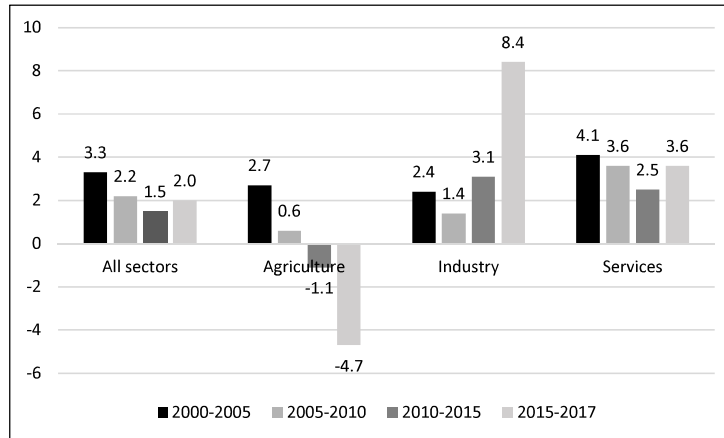


Figure 4. Labor Productivity (PHP 000) by Sector



With a declining agricultural output, surplus labor from the agriculture sector shifted largely to the services sector in the period 2000-2010 indicating an economy characterized by a faster pace of tertiarization than an increasing industrialization. In the following years covering the period 2010-2017, industry output grew more rapidly and surpassed that of the services sector. Industrial sector employment has likewise grown in the same period but lagged behind that of output. In 2017, the industry sector accounted for about one third of the GDP of the economy but only less than two-fifths of the total employment.

Figure 5. Average Annual Growth Rate (%) of Employment by Major Sector

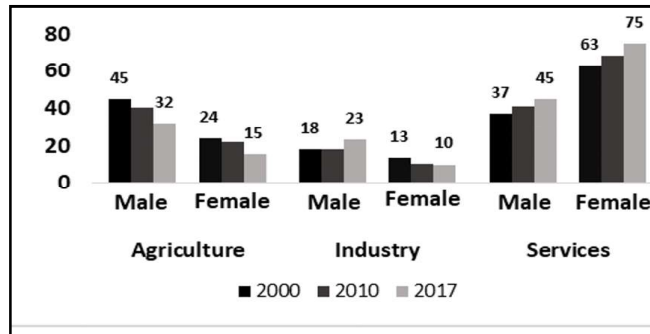


The shifts in the sectoral composition of employment vary between male and female workers. Women workers were more likely to be in service occupations than men workers and increasingly so over time. In 2000, 63 percent of working women held jobs in the services sector compared to 37 percent for men workers (Figure 6). While the percent share contributed by the services sector has increased for both men and women workers, the growth was faster for the latter. In 2017, 75 percent of women workers and 45 percent of men workers were in services sector employment. Men workers dominate in the agriculture sector which took up 45 percent of total male employment in 2000 but this share decreased to 33 percent in 2016. The share of agriculture for female employment is half that of their male counterparts.

The higher productivity industry sector has the lowest contribution to employment but accounted for a larger share of men’s employment than do women’s employment. The gender gap in industry sector employment has widened over time as the industry sector accounted for an increasing share of men’s employment and a diminishing share of women’s employment. In 2017, the industry sector accounted for 23 percent of male employment and only 10 percent of female employment. For the period 2000-2017, there was a shift from agriculture employment to largely services sector employment and to some extent industry sector employment for male workers while there was a movement of women labor away from both

the low-productivity agriculture sector and the high productivity industry sector to the services sector.

Figure 6. Sector Share (%) to Total Employment by Sex



Shifts in employment in the industry sub-sectors

In the industry sector, the largest employment growth was observed for the primary sector of mining and quarrying between 2005 and 2010, and for the less competitive non-tradable construction sector for the period 2010-2017 (Table 3.1). However, the mining and quarrying sector accounted for only less than three percent of total employment while the construction sector contributed one-third of total employment in 2000, which increased to almost half by 2017. Employment in construction grew at an average of 9.4 percent annually during the period 2010-2017 compared with employment in the higher value added manufacturing sector which grew only by 2.6 percent annually during the same period. In 2017, the construction and the manufacturing subsectors jointly comprised 95 percent of the employment (7 million workers) in the industry sector.

Women workers in the industry sector were consistently largely concentrated (more than 90%) in the manufacturing sub-sector while men were more likely to work in both the manufacturing and construction subsectors. There were as many men workers in the manufacturing sector as in the construction sector in 2000 but with the much more rapid annual growth of the construction employment (5.3%) than manufacturing employment (2.2%) for the period 2000-2017, the share of the construction sub-sector in men’s industry sector employment has surged from 47 percent in 2000 to almost 60

percent in 2017 while that of the manufacturing sector declined from 47 percent to 35 percent.

Table 3.1 Sub-sector Share and Growth Rate in Employment of the Industry Sector

Sector	Growth rate (%)				% Share to total industry sector		
	2000-2005	2005-2010	2010-2015	2015-2017	2000	2010	2017
Both sexes							
a. Mining & Quarrying	2.6	6.3	7.2	-7.1	2.4	3.3	2.7
b. Manufacturing	2.3	-1.2	2.1	4.2	61.6	56.8	47.1
c. Construction	2.9	2.1	7.4	14.5	33.2	37.1	47.8
d. Electricity, Gas & Water Supply	-1.0	4.1	-1.2	14.3	2.7	2.8	2.4
Male							
a. Mining & Quarrying	1.9	6.7	7.0	-5.4	3.2	4.0	3.2
b. Manufacturing	2.9	-0.5	2.1	7.4	46.7	43.3	35.4
c. Construction	2.9	2.1	7.6	14.1	46.9	49.5	59.3
d. Electricity, Gas & Water Supply	-0.3	3.6	-1.3	5.0	3.2	3.1	2.1
Female							
a. Mining & Quarrying	9.9	1.7	8.6	-23.4	0.6	1.1	0.9
b. Manufacturing	1.7	-2.1	2.4	-0.9	95.6	94.1	93.1
c. Construction	4.5	2.3	10.6	-2.3	2.1	2.9	4.2
d. Electricity, Gas & Water Supply	-4.2	6.1	1.3	0.9	1.7	1.9	1.8

Sources: Philippine Statistics Authority, Labor Force Surveys; authors' calculations.

Shifts in employment in the services sub-sectors

Within the services sector, job creation accelerated the fastest in the following subsectors: real estate, renting and business activities (including business process outsourcing activities), hotel and restaurants and other services activities (including work in private households) for the period 2001-2010; and the administrative and support service activities (including the activities of employment agencies, security agencies and call centers), the professional, scientific and technical activities and the public administration and defense subsectors for the period 2012-2017 (Tables 3.2 and 3.3).

Table 3.2 Sub-sector Share and Growth Rate in Employment of the Services Sector, 2001-2010

	Growth rate (%)						% Share to total service sector					
	2001-2005			2005-2010			2001			2010		
	Both sexes	Male	Fe-male	Both sexes	Male	Fe-male	Both sexes	Male	Fe-male	Both sexes	Male	Fe-male
Trade & Repair of Motor Vehicles	4.0	5.4	3.1	1.8	1.6	2.0	38.7	30.4	46.4	37.6	30.6	44.2
Transport, Storage & Communication	3.7	3.6	6.6	1.8	1.6	5.8	15.6	30.8	1.4	15.0	28.8	1.9
Hotel & Restaurant	6.5	8.2	5.2	3.2	2.9	3.5	4.9	4.4	5.4	5.6	5.2	6.0
Financial Intermediation	3.9	4.4	3.6	1.6	2.1	1.3	2.1	1.8	2.4	2.1	1.8	2.3
Real Estate, Renting & Business Activities	9.2	11.0	5.9	7.7	6.8	9.6	3.8	5.0	2.6	5.9	8.0	4.0
Public Administration & Defense	1.7	2.4	0.7	3.4	2.7	4.5	10.2	13.0	7.6	9.8	12.3	7.4
Education	1.5	-1.6	2.6	3.1	4.2	2.7	6.8	3.8	9.5	6.3	3.3	9.2
Health & Social Work	4.5	3.1	5.0	2.3	4.3	1.6	2.3	1.3	3.2	2.3	1.4	3.3
Other Community, Social & Personal Service Activities	-3.8	-2.8	-4.8	2.5	3.2	1.8	6.7	6.5	6.8	4.9	5.1	4.7
Other Service Activities	5.6	5.1	5.7	4.4	5.7	4.1	9.0	2.9	14.7	10.5	3.5	17.1

Source: Sources: Philippine Statistics Authority, Labor Force Surveys; authors' calculations.

The larger employers of these high employment growth subsectors included other service activities and public administration and defense with each accounting for more than 10 percent of service sector employment in 2017, and accommodation and food service activities and administrative and support activities with each contributing 7-8 percent of service sector employment. The wholesale and retail trade and repair of motor vehicles subsector, which is the largest employer in the services sector employing almost eight million workers (or 35% of services sector employment) in 2017, posted modest and diminishing annual growth at 2.8 percent for the period 2001-2010 and 2.3 percent for 2010-2017.

Table 3.3 Sub-sector Share and Growth Rate in Employment of the Services Sector, 2012-2017

	Growth rate (%)						% Share to total service sector					
	2012-2015			2015-2017			2012			2017		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Trade & Repair of Motor Vehicles	2.1	2.4	2.0	3.9	3.7	4.1	34.7	28.4	40.7	34.8	27.8	41.7
Transport and Storage	2.1	2.0	3.3	6.0	6.4	-3.2	13.2	26.4	0.9	13.8	26.9	0.8
Accommodation & Food Service Activities	3.0	4.5	1.9	0.6	5.0	-2.8	7.9	6.7	9.1	7.7	7.2	8.1
Information and Communication	4.1	2.9	6.1	2.1	4.4	-1.7	1.7	2.2	1.2	1.7	2.3	1.3
Financial & Insurance Activities	4.5	5.2	3.9	0.8	0.7	0.9	2.2	2.0	2.4	2.2	2.0	2.5
Real Estate Activities	2.5	4.5	0.7	0.5	-2.8	3.6	0.9	0.8	0.9	0.8	0.7	0.9
Professional, Scientific & Technical Activities	3.2	0.6	6.2	9.0	7.8	10.2	1.0	1.1	0.8	1.1	1.1	1.1
Administrative & Support Service Activities	6.7	5.0	9.9	13.8	15.8	10.4	4.7	6.5	3.1	6.5	8.6	4.4
Public Administration and Defense	2.3	0.9	4.1	7.2	4.3	10.8	9.9	12.0	8.0	10.6	11.4	9.8
Education	2.2	2.7	2.1	-3.0	-2.1	-3.4	6.1	3.3	8.7	5.3	2.9	7.7
Human Health and Social Work Activities	4.2	5.7	3.5	-0.9	1.3	-1.9	2.2	1.4	3.0	2.1	1.4	2.8
Arts, Entertainment & Recreation	1.6	-0.8	5.9	-2.5	-3.9	-0.4	1.7	2.3	1.1	1.4	1.7	1.1
Other Service Activities	0.2	0.3	0.2	-0.6	-1.0	-0.5	13.8	7.1	20.1	11.9	5.9	17.8

Differential rates in employment growth were observed for male and female workers. Between 2012 and 2017, higher growth was recorded in male than female employment in the transportation and accommodation and food services subsectors while more rapid female employment growth was observed in arts, entertainment and recreation, public administration and defense and professional, scientific and technical activities subsectors.

4. Bypassing industrialization in Philippine economic growth

The economic trajectory exhibited by the Philippines in the past two decades portrays a declining share of agriculture in both output and employment that is shifted predominantly towards the services sector and largely bypassing industrialization. The experience of the Philippines deviates from the structural transformation of the now developed economies which is characterized by a movement from agriculture to the manufacturing sector and at later stages of development, to the services sector. This historical trajectory of economic growth in high income countries lent support to the contention that manufacturing growth and industrialization are necessary conditions for economic growth (Cheng, 2014; Coe, 2007; de Vries et al. 2012; Imbs and Wacziarg, 2003; McMillan and Rodrik, 2011; Timmer and de Vries, 2009; Wade, 2016).

For the period 2000-2017, the share of the agriculture sector declined from 14 percent to nine percent in terms of output and from 37 percent to 25 percent in terms of employment, while that for the services sector increased from 52 percent to 57 percent in terms of output and from 47 percent to 56 percent in terms of employment. The industry sector share in output has remained largely unchanged at 34 percent for the same period while its share in employment has increased only mildly by two percentage points, indicating that much of the labor released from agriculture has largely been absorbed by the services sector rather than by the industry sector.

For the Philippines to successfully transition into a nearly high income country by 2040¹ (NEDA, 2017a), there is need for a strong industrial policy that sustains accelerated growth in the manufacturing sector which is largely believed to be the engine of high sustained growth (Cantore, Clara, Lavopa and Soare, 2017; Hagaruchi, Cheng and Smeets, 2016; Rodrik, 2013). Felipe, Mehta and Rhee (2014) provide empirical evidence of faster growth in economies with higher manufacturing employment share in excess of 18-20 percent. For the Philippines, the manufacturing sector's share to total employment was only 8.6 percent in 2017 and targeted to increase to 11.8 percent by 2022 (NEDA, 2017b), which is way below the 20 percent manufacturing employment share threshold that is purported to propel sustained

¹ In *Ambisyon Natin 2040*, the Philippine government aims to triple the per capita GDP from its current level, corresponding to a GDP per capita of \$9,350 or GNI per capita of \$11,000 by 2040.

growth as evidenced from the experience in the last 40 years by the now high income economies.

The Philippine economic growth has been driven primarily by the services sector, boosted by a strong information technology and business process outsourcing (IT-BPO) sector. The Department of Trade and Industry reported that the Philippines has been the top global provider of voice-based services since 2010, and the Bangko Sentral ng Pilipinas reported revenues of the BPO sector amounting to \$22.1 billion in 2017 and generating employment to 1.15 million people. However, Felipe, Mehta and Rhee (2014) noted the absence of empirical evidence to support that services-led economies can attain and sustain high levels of prosperity by eschewing industrialization.

The Philippines has not made a lot of headway in industrial diversification in the past two decades, with export products that are below the average sophistication of worldwide exports and the composition of which has remained largely constant over time (Bayudan-Dacuycuy and Serafica, 2018). The World Bank (2018) also noted the lack of trade competitiveness of the Philippines which is identified as a taker in the Global Value Chain (GVC) operating at the lower tiers and making it vulnerable to demand-based external shocks, rather than a “GVC maker” that takes the lead in the global market. The government’s strengthened policy of industrial upgrading and diversification has been manifested in significant uptakes of the manufacturing GVA growth rate at 7.7 percent for the period 2015-2017, and with highest growth rates portrayed for furniture and fixtures, chemical products, publishing and printing and basic metal products. The Philippine government’s manufacturing industry roadmap aims to intensify the development of high value adding industries in chemicals, iron and steel and basic and fabricated metal for the period 2018-2021. It also seeks to develop high tech transport equipment, chemicals and electrical machinery as well as establish the Philippines as a manufacturing hub for automotive and electronic products, garments and food in the period 2022-2025. While employment growth in the manufacturing sector has continued to lag behind output, at 4.2 percent for the period 2015-2017, the New Industrial Policy of the government, if effectively implemented, offers high potential for stronger employment generation.

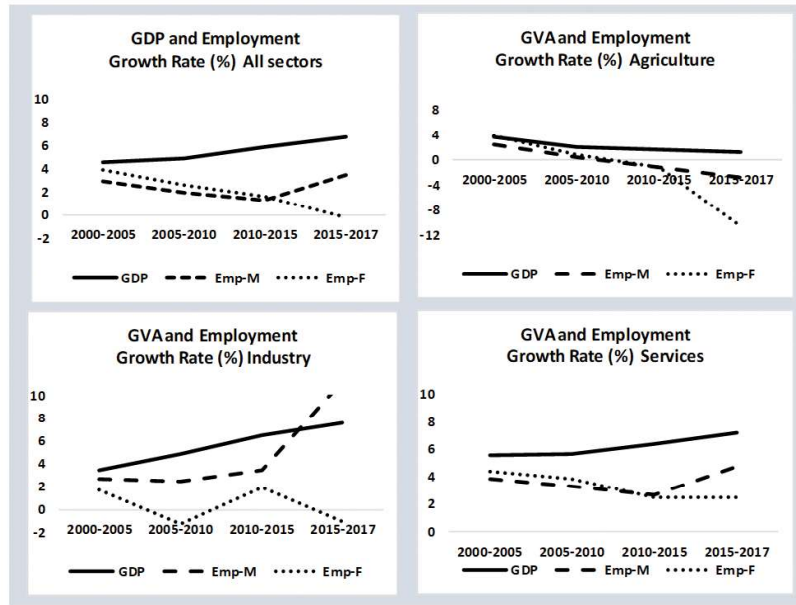
5. Increasing joblessness of economic growth

An equally important problem than the sluggish shift from low-productivity agriculture to the higher-productivity manufacturing is the wide and increasing divergence between employment growth and GDP or value added growth. Employment growth has remained sluggish for the past two decades at an annual average of 2.8 percent for the period 2001-2010 and 1.6 percent for 2010-2017 while the pace of economic growth has accelerated from an annual average of 4.8 percent for the period 2000-2010 to 6.2 percent for 2010-2017. This has widened the wedge in the growth rates between GDP and employment, with larger gaps observed for women than for men. Employment growth for women slowed down from 3.2 percent annually for the period 2000-2010 to 1.1 percent for 2010-2017, while the corresponding decline for men was from 2.5 percent to 1.9 percent.

The gendered differential growth rate in output and employment also varied by sector. The deceleration in the growth of agricultural production from 2.9 percent in the period 2000-2010 to 1.6 percent in 2010-2017 has led to an even faster deceleration in agricultural employment, generating a negative rate of growth of 2.2 percent annually between 2010 and 2017, and with larger declines observed for female than male employment (Figure 7).

The low manpower absorption capacity of the industry sector was exemplified in the period 2005-2010 when industry value-added grew at an annual average of 4.9 percent while industry employment growth dropped from annual average of 2.4 percent for the period 2000-2005 to 1.4 percent for 2005-2010. The differential growth rates in value added and employment in the industry sector continued in the period 2010-2015 but the gap was eliminated in 2015-2017 with the brisk acceleration of industry employment growth to an annual average of 8.4 percent, surpassing the 7.6 percent annual growth of the industry value-added. However, as earlier mentioned, the recent surge in industry employment has been towards the lower productivity construction sector rather than the higher value added manufacturing sector, and was associated with a more rapid men employment growth at an annual average of 11.8 percent for the period 2015-2017 while the corresponding women's industry employment annual growth rate was negative one percent.

Figure 7. Average Annual Growth Rates (%) in GDP/GVA and Employment by Sex

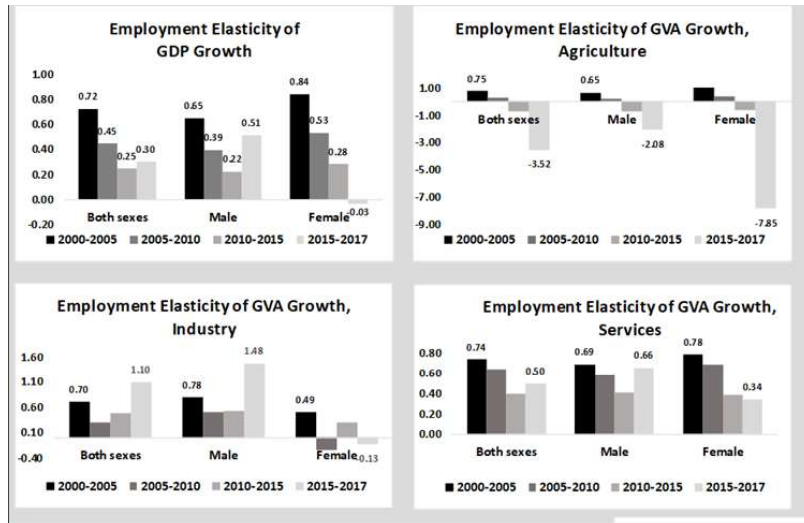


In the services sector, the gap between value added and employment growth intensified over time. The higher pace of growth in services value added from 5.6 percent in the period 2000-2010 to 6.6 percent in 2010-2017 was accompanied by the slackening of services sector employment growth from 3.8 percent to 2.8 percent. The growth gap in services value-added and employment was wider for male workers in the period 2000-2010 but this was reversed in 2010-2017.

A summary indicator for the increasing joblessness of economic growth is employment elasticity, which indicates the percentage increase in employment resulting from a one percentage point increase in GDP or value added. Figure 8 presents the employment elasticity across the sectors over the past 17 years. The employment elasticity of real GDP has declined sharply from 0.75 in the period 2000-2005 to 0.45 in 2005-2010 and 0.25 in 2010-2015. During these periods, the drop in employment elasticity was larger for females (from 0.84 in the period 2000-2005 to 0.28 in 2010-2015) than for males (from 0.65 to 0.22). Although there was

an improvement in the employment elasticity of GDP growth during the period 2015-2017, this was true only for male workers with employment elasticity that surged to 0.51 in this period compared to the virtually zero employment elasticity for the female workers. This indicates that the high GDP growth has disproportionately benefited male employment to the neglect of women.

Figure 8. Employment Elasticity of GDP/GVA by Sector and Sex



As expected, the largest declines in employment elasticity were in the agriculture sector that displaced excess labor at an accelerated speed, leading to a negative employment elasticity in the period 2010-2017. There was a higher absolute employment elasticity of agriculture growth for women than for men, so that the positive output growth led to higher employment growth for women than men such as the case in the period 2000-2010 (0.80 for women and 0.49 for men) and a negative output growth led to a faster decline in female employment growth than that of male employment as was true for 2010-2017 (with employment elasticity of -2.45 for women and -1.03 for men).

The services sector has consistently manifested strong performance in job creation although the employment elasticity of the services GVA growth diminished from 0.74 in the period 2000-2005 to 0.64 in 2005-2010 and 0.40 in 2010-2015. The employment

elasticity of output growth in the services sector improved to 0.50 for the period 2015-2017, but remains lower than that for 2000-2010. The services sector growth generated larger positive employment effects for women than men for the period 2000-2010, which was reversed in 2010-2017.

Of the three major sectors, the industry sector had the least absorptive capacity in the period 2000-2010 but the strongest employment absorption in 2010-2017, with employment elasticity of industry value added increasing from 0.43 to 0.67. However, as cited previously, the shift has been towards the construction sector as indicated by an employment elasticity of more than one for the period 2010-2017 (construction employment grew at an annual average of 9.4% versus the 7.5% annual growth rate of construction GVA), compared with the very low employment elasticity of manufacturing value added at 0.38 (manufacturing employment grew at an average of only at 2.3% a year vis-à-vis a strong manufacturing value added growth of 7.8%). The growth in the construction sector generated more positive employment effects for men than women workers during the period 2010-2015, and was associated with large positive employment growth for men as indicated by an employment elasticity of more than one but a decline in construction employment growth for women indicated by a negative employment elasticity for the period 2015-2017.

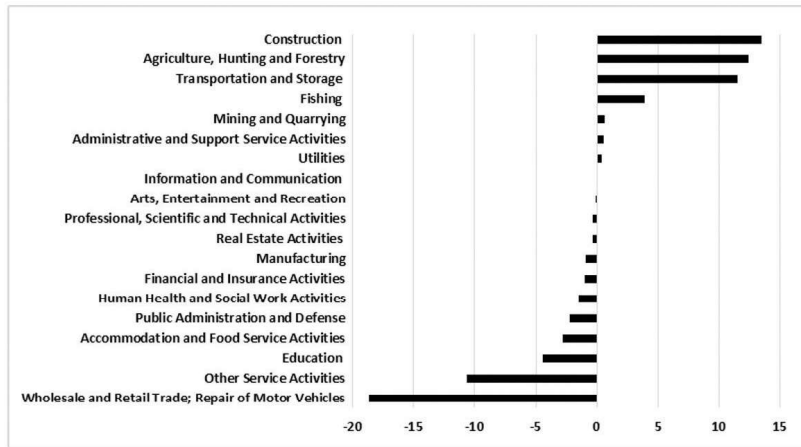
6. Gender segregation

Gender segregation is a salient feature of the Philippine labor market with women disproportionately represented in wholesale and retail trade and other services such as work in private households while men were disproportionately working in the agriculture sector, construction and transportation and storage sectors. For example, 31 percent of the women workers in 2017 were in wholesale and retail trade compared to 13 percent of male workers, whereas the construction sector accounted for only less than one percent of female workers and 14 percent of the male workers. Women workers were also over-represented in other service activities (e.g., work in private households), education, accommodation and food service activities, public administration, health and social work, and finance and insurance (Figure 9). Apart from construction, men workers were also

more highly concentrated in agriculture activities and transportation and storage subsectors.

Gender segregation in industry employment does not seem to have improved over time with the Duncan index of dissimilarity remaining at 40 from 2000 to 2015 and even increased slightly to 43 in 2017. Between 2015 and 2017, higher employment growth of women than men continued to be observed in subsectors where women are highly concentrated such as in wholesale and retail trade and in public administration, while men demonstrated stronger growth in the male-dominated subsectors of construction and transportation storage.

Figure 9. Male-Female Difference in Industry subsector percent share in total employment, 2017



Filipino men and women workers are also divided into different occupations. There was higher share of women managers, professionals and technicians, clerks and sales workers which may have been associated by their higher engagement in wholesale and retail trade, public administration and education (Figure 10). Men workers were more clustered in skilled agricultural work, trade and machine operation and elementary occupations. The greater employment share of women in the high skilled professional and technical occupations may be attributed to their higher educational attainment compared with men. In 2017, 23 percent of women workers had completed a college education compared with only 11 percent of men, whereas 22 percent of women workers had less than secondary education compared with 32 percent of men (Figure

11). Women workers were also more likely than men workers to be managers but most of them (80%) were self-employed rather than paid employees (which accounted for 12% of total women managers) in 2017.

Table 10. Male-Female difference of occupation percent share in total employment, 2017

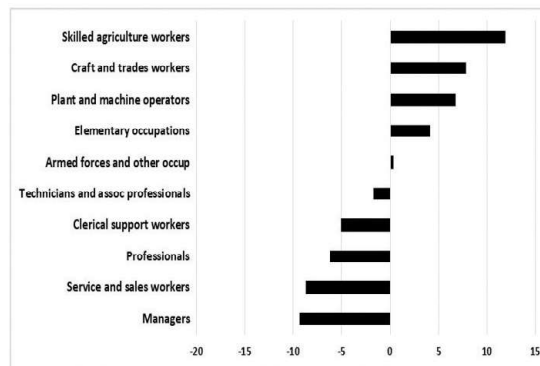
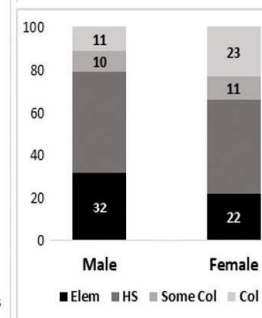


Table 11. Highest educational attainment of workers by sex, 2017



7. Declining unemployment rate but high rates of underemployment and informal sector employment.

That the robust Philippine GDP growth, particularly after 2010 has not been inclusive is indicated not only by the slack in employment growth but also by the persistently high rates of underemployment and informal sector employment. Underemployment is when a worker prefers but is unable to work additional hours or to take on an additional job. By Philippine definition, the unemployed include those who have not worked for at least an hour during the reference period of the past week but who are available for work and who are either seeking work or not seeking work due to the following reasons: (a) believe no work is available; (b) awaiting results of job application or waiting for rehire; (c) temporary illness or disability; and (d) bad weather. Although the Philippines' unemployment rate fell from 11.2 percent in 2000 to 7.8 percent in 2005 and 5.7 percent in 2017, the number of unemployed remains massive at 3.5 million in 2000, 2.9 million in 2010 and 2.4 million in 2017.

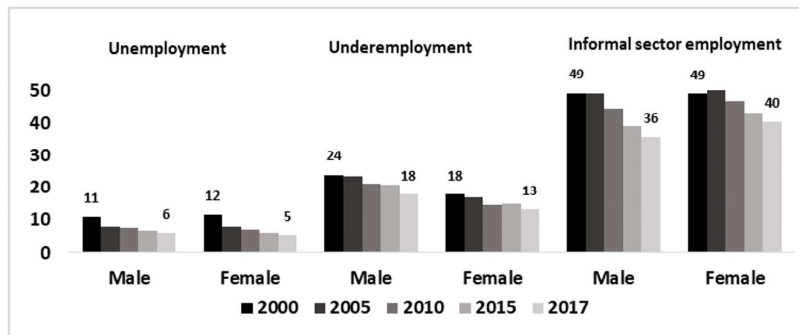
Unemployment presents only a fragment of the picture depicting the deficiencies of the labor market. In the Philippines, problems that are equally important as unemployment are the high

rates of underemployment as well as informal employment. Although the underemployment rate has declined marginally from 21.7 percent in 2000 to 18.8 percent in 2010 and 16.1 percent in 2017, this still results in an increasing number of underemployed Filipino workers from 6 million in 2000 to 7.5 million in 2016, given some growth in both the labor force and the employed population. There was a significant drop in the number of underemployed workers by almost a million workers in 2017, but the level of the underemployed at 6.5 million remains higher than that in the years before 2005.

The high level of underemployment is aggravated by the high incidence of informality of employment. The informal sector refers to household unincorporated market enterprises comprising both own-account enterprises and enterprises of informal employers (National Statistics Coordination Board, 2002). In this paper, informal sector employment includes the following classes of workers: self-employed without any paid employee, unpaid family workers and employers in own-family operated farm or business. The informal sector is characterized by low wages, poor working conditions and a lack employment security and social protection.

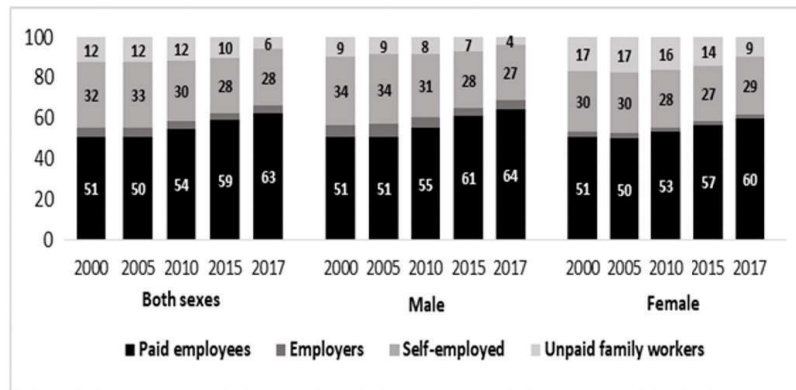
In the midst of accelerated economic growth, informal sector employment which grew at 3.4 percent annually between 2000 and 2005, began to decline at -2.1 percent annually for the period 2010-2017. However, the percent and level of workers in informal sector employment remained high at 49 percent of the total employed in 2000, 46 percent in 2010 and 37 percent in 2017 which translated to 13.1 million informal sector workers in 2000, 16.7 million in 2010 and 15.1 million in 2017.

Figure 12. Rates of unemployment, underemployment, and informal sector employment by sex, 2000-2017



The persistently high levels of unemployment, underemployment and informal sector employment reflects the failure of economic growth to result in the absorption of the majority of the Filipino workforce in decent work. The effect is not uniform between men and women workers. As the economy grew over the past decade, unemployment rates have decelerated, with faster declines observed for women workers than for men workers. Men were also more likely than women to be underemployed with underemployment rates at 18 percent for men workers and 13 percent for women in 2017 (Figure 12). The levels of unemployment and underemployment are both indicative of labor underutilization. The joint number of unemployed and underemployed workers declined from 2010 to 2017 but remained high at 6.1 million men workers and 2.9 million women in 2017.

Figure 13. Class of worker by sex, 2000-2017



Accelerated economic growth particularly in the period 2010-2017 was associated with reduced informal employment rates but more so for men than for women. In 2017, about 36 percent of men workers were in informal sector employment compared with 40 percent for women. Although the percentage of unpaid workers has declined over time, women workers remained twice more likely than men to be in unpaid family work. Self-employed men constituted 34 percent of men’s employment in 2000, which is higher than the corresponding figure of 30 percent for women workers (Figure 13). This pattern was reversed in 2017 when the percentage of self-employment for men workers dropped to 27 as they likely moved

into wage employment in the booming construction industry (Figure 13). In the relative absence of opportunities for women's wage work in the rapid growing male-dominated industries, their share of self-employment remained largely at 30 percent of total women employment from 2000 to 2017.

8. The youth employment crisis

The Philippines is experiencing an expanding youth population that, if harnessed and developed, can be an important source of demographic dividend which is critical for sustainable economic growth. A crucial ingredient to realizing the demographic dividend is a smooth transition from youth education to productive employment and decent work. The 2030 Agenda for Sustainable Development agreed upon by 193 member states of the United Nations including the Philippines has distinguished the youth as the "torchbearers" in the successful implementation of the Agenda (United Nations, 2015). The youth are likewise provided distinct attention in the Philippine Development Plan 2017-2022 which aims for a reduction in youth unemployment rate to eight percent and in the percentage of youth that are neither in education nor in employment to 15-18 percent by 2022 (National Economic and Development Authority, 2017).

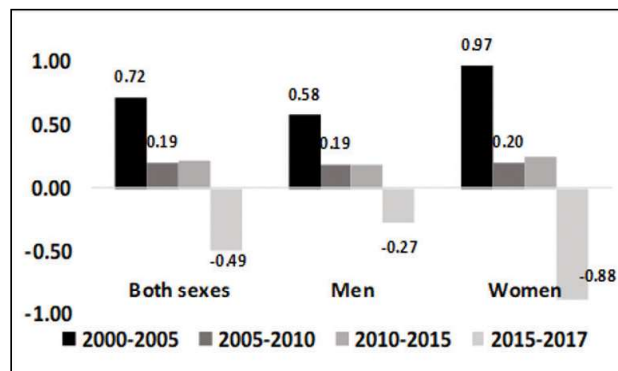
In the Philippines, the rapid economic growth in the decade beginning 2005 has largely neglected the youth segment of the population. While adult employment elasticity was 0.51 for the period 2005-2010 (i.e., for every 1 percentage point growth in GDP, adult employment increases by 0.51 percentage point or 51 basis points) compared with an increase of only 19 basis points for youth employment. The failure of economic growth to benefit youth employment worsened for the period 2015-2017 where a one percentage point increase in GDP resulted in an increase by 48 basis points in adult employment and a decline by 49 basis points in youth employment (Figures 14 and 15).

The modest positive gains of GDP growth on youth employment for the period 2005-2015 was about equally shared between the male and female youth. However, the decline in youth employment elasticity for the period 2015-2017 resulted in significantly larger declines in the female youth employment elasticity than their male counterparts.

Figure 14. Adult Employment Elasticity of GDP Growth

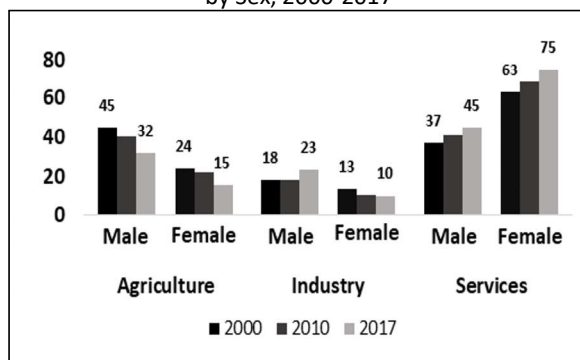


Figure 15. Youth Employment Elasticity of GDP Growth



That the young Filipino manpower has been largely left out from partaking of the fruits of rapid economic growth is indicated by the volume of unemployed young people. Unemployment rates of the youth between the ages of 15 to 24 have been more than three times as high as that of the adults aged 25 years and above (Figure 16). In 2000, the youth unemployment rate was about 24.2 percent compared with the 7.2 percent unemployment rate for adults. There was a significant drop in youth unemployment rate between 2000 and 2005, but the wedge between the youth and adult unemployment rates remained wide. In 2017, the unemployment rate was 3.7 percent for adult workers and 14.4 percent for youth workers which translated to 1.1 million unemployed youth and representing almost half (47%) of the total unemployed workforce.

Figure 16. Youth and Adult Unemployment Rates, by Sex, 2000-2017



The higher likelihood of the youth workers to be unemployed relative to adult workers was more pronounced for women than men workers. For youth workers, women were more likely than men to be unemployed while the rate of unemployment for adult workers were largely the same for women and men. In 2000, for example, the unemployment rate was 28 percent for the female youth, 22 percent for male youth and seven percent for adult workers, creating a wider wedge between youth and adult unemployment rates for the women workforce than the men. In 2017, the gender differences had narrowed down but the youth-adult gap in unemployment rates remained significant, particularly among women (i.e., unemployment rate of the female youth was more than five times that of the female adult – 15.6% vs. 3%).

A significant number of young people who find employment also suffer from underemployment or informal sector employment. Like the unemployed youth, the underemployed young workers also prefer to work more hours but are unable to and they numbered close to one million workers in 2017, bringing the underutilized youth labor to a total of 2.1 million. The youth underemployment rate declined only slightly from 16 percent in 2012 to 14 percent in 2017. More prevalent than underemployment is informal sector employment among the youth. Young workers in the informal sector worked primarily as self-employed workers or unpaid family workers, comprising 32 percent of the young workforce in 2012 and 25 percent in 2017. About 1.7 million young workers were in informal sector employment as of 2017.

The pattern of the gender gap in underemployment and informal sector employment among the youth is the reverse of the adults. Compared with their male counterparts, young women workers 15 to 24 years old were more likely to be underemployed (16% vs. 14% in 2017) and less likely to be in informal sector employment (21% vs. 26% in 2017). This is lamentable given the improved levels of education of the youth manpower, particularly the young women workers who are becoming increasingly better educated than the young men workers. The share of youth workers who have completed at least secondary education increased from 55 percent in 2010 to 60 percent in 2017 (Table 4). The larger improvements were in the completion of high school education for the male youth and the attainment of college degrees for the female young workers. In 2017, female youth workers were more than twice likely to have at least some college education than male youth workers.

Table 4. Percentage Distribution of Male and Female Youth Workers by Level of Education

Highest grade completed	2010			2017		
	Both sexes	Male	Female	Both sexes	Male	Female
Less than elementary	13.7	18.0	6.5	12.6	16.9	4.7
Elementary graduate	11.3	13.8	7.1	8.6	10.9	4.2
High school undergraduate	19.6	22.1	15.4	19.1	22.0	13.9
High school graduate	31.5	28.7	36.3	34.6	32.9	37.9
College undergraduate	14.2	11.8	18.2	11.6	9.4	15.6
College graduate	9.7	5.6	16.5	13.5	7.9	23.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
N of cases (000)	6816	4285	2531	6780	4376	2404

Sources: Philippine Statistics Authority, Labor Force Surveys; authors' calculations

Despite the increased education of women, they remain the more vulnerable workforce, facing very high rates of unemployment and underemployment when young and very high rates of informal sector employment in their adult working life, a pattern that persisted amidst rapid economic growth.

9. Conclusion and Implications

The Philippines is among the world's fastest growing economies, particularly in the current decade with real GDP growth averaging annually at 5.9 percent for the period 2010-2015 and 6.8 percent for 2015-2017. Along with this growth was an economic restructuring away from the low productive agriculture sector towards primarily the services sector, largely bypassing industrialization. For the period 2000-2017, the declining share of the agriculture sector in both output and employment was associated with a shift largely to the services sector as the share of the industry sector had remained largely unchanged.

The surge in economic growth has not been inclusive with employment growth increasingly lagging behind output growth, as reflected in a diminishing employment elasticity from 0.75 in the period 2000-2005 to 0.45 in 2005-2010 and 0.26 in 2010-2017. The drop in employment elasticity was more significantly pronounced for female workers, from 0.84 in the period 2000-2005 to 0.53 between 2005 and 2010 and 0.18 in 2010-2017. In the latter period, the corresponding male employment elasticity was 0.31. The neglect of female employment was particularly striking in the period 2015-2017 when economic growth surged to almost seven percent while female employment posted a negative annual growth of -0.2 percent even as male employment increased annually by 3.5 percent. This uptake in output growth in 2015-2017 was driven by the boom in the male-dominated construction sector which grew at an annual average of almost four times that of the manufacturing sector and more than twice faster than that of the services sector where women workers congregated.

In general, the rapid economic growth failed to generate decent work that is crucial in improving the well-being of the majority of the population and in lifting the large Filipino masses out of poverty. The Philippine economy continues to be saddled by very high levels of unemployment, underemployment and informal sector employment. In 2017, unemployed and underemployed workers jointly comprised close to 9 million of the Filipino workforce and those in the precarious informal sector employment numbered more than 15 million workers. These aspects of labor underutilization had a gender dimension with women workers more likely to be in informal sector employment and the men workers more likely to be underemployed even in wage employment.

Apart from the women, the youth workers were also largely overlooked in economic growth, indicating a failure of the economy from efficiently harnessing its demographic dividend. Youth workers persistently suffered from unemployment rates that were more than three times as much as that of the adult workers. Women youth workers suffered a higher disadvantage in that they were more likely to be both unemployed and underemployed, in spite of their becoming increasingly better educated than their male counterparts.

The sluggish creation of decent jobs by a thriving Philippine economy resulted in a persistently high level of poverty incidence. In 2015, the estimated poverty incidence rate of the population ranged from 20.3 percent to 22.8 percent which translated to between 20.7 million and 23.2 million Filipinos living below the poverty line.

There is a need for the Philippines to embark more vigorously on a strategy that pursues inclusive economic growth that is more equitably shared by the population, particularly through the creation of decent work that does not discriminate gender or age, and which is crucial to lifting the Filipino masses out of poverty.

While the Philippine economy continues to be services-led, empirical evidence of historical economic trajectories supports the development of a mature manufacturing sector to attain and sustain high levels of economic prosperity. The manufacturing employment share of 8.6 percent in 2017 falls way below the 20 percent manufacturing employment share threshold that is purported to drive and sustain high economic growth. Hence, there is need to pursue stronger policies and more effective programs for industrial upgrading and diversification that will develop the country's observed and latent comparative advantages and to empower these industries to create more decent jobs for both men and women and for the youth and adult workforce.

References

- Ali, I. & Zhuang, J. (2007). Inclusive growth toward a prosperous Asia: Policy implications. Economics and Research RD Working Paper No. 97. Economics and Research Department, Asian Development Bank, Manila.
- Balakrishnan, R.C. Steinberg, R. & Syed, M. (2013). The elusive quest for inclusive growth: Growth, poverty and inequality in Asia. IMF Working Papers 13/152. International Monetary Fund.

- Bayudan-Dacuycuy, C. & Serafica, R. (2018). Discovering the Philippines' potential export portfolio through the product space: Some products and ways forward. *Discussion Paper Series No. 2018-17*. Quezon City: Philippine Institute for Development Studies.
- Cantore, N., Clara, M., Lavopa, M. & Soare, C. (2017). Manufacturing as an engine of growth: Which is the best fuel?. *Structural Change and Economic Dynamics*, 42: 55-66.
- Cheng, C. (2014). Structural change in the world economy: Trends, origins and determinants. PhD Thesis. Tohoku University, Japan, <http://ir.library.tohoku.ac.jp/re/bitstream/10097/57665/1/140924-Cheng-159-1.pdf>.
- Coe, D. (2007). Globalisation and labour markets: Policy issues arising from the emergence of China and India. Organisation for Economic Co-operation and Development Social, Employment and Migration Working Paper 63. Paris: OECD.
- deVries, G., Erumban, A., Timmer, A., Voskoboynikov, M. & Wua, H. (2012). Deconstructing the BRICs: Structural transformation and aggregate productivity growth. *Journal of Comparative Economics*, 40: 211-227.
- ERD Working Paper No. 97, Economics and Research Department, Asian Development Bank, Manila.
- Felipe, J., Mehta, A., & Rhee, C. (2014). Manufacturing matters... but it's the jobs that count. Asian Development Bank Working Paper No. 420. Manila: ADB.
- Hagaruchi, N., Cheng, C. & Smeets, E. (2016). The importance of manufacturing in economic development: Has this changed? Department of Policy Research and Statistics Working Paper 1/2016. Vienna: United Nations Industrial Development Organization.
- Imbs, J., & Wacziarg, R. (2003). Stages of diversification. *American Economic Review*, 93 (1), 63-86.
- Klasen, S. (2010). Measuring and Monitoring Inclusive Growth: Multiple Definitions, Open Questions, and Some Constructive Proposals. ADB Sustainable Development Working Paper Series No.12. Asian Development Bank, Manila.

- McMillan, M. & Rodrik, D. (2011). Globalization, structural change, and productivity growth. National Bureau of Economic Research Working Paper 17143, Cambridge, MA: National Bureau of Economic Research.
- National Economic and Development Authority. (2017a). *Ambisyon Natin 2040: A long term vision for the Philippines*. Manila: NEDA. Retrieved from: <http://2040.neda.gov.ph/wp-content/uploads/2016/04/A-Long-Term-Vision-for-the-Philippines.pdf>
- National Economic and Development Authority. (2017b). *The Philippine Development Plan 2017-2022*. National Economic and Development Authority. Pasig City, Philippines. Retrieved from <https://www.neda.gov.ph/wp-content/uploads/2018/01/Abridged-PDP-2017-2012-Updated-as-of-01052018.pdf>.
- National Statistical Coordination Board (2002). NSCB Resolution No. 15 Series of 2002: Adoption of an official definition on the informal sector. Retrieved from: <http://www.nap.psa.gov.ph/resolutions/2002/15.asp>.
- Rodrik, D. (2013). Unconditional convergence in manufacturing. *The Quarterly Journal of Economics*, 128(1): 165-204.
- Timmer, M. & de Vries, G. (2009). Structural change and growth accelerations in Asia and Latin America: A new sectoral data set". *Cliometrica* 3(2): 165-90.
- United Nations. (2015). *Transforming our World: the 2030 Sustainable Development Goals*. New York, UN Department of Economic and Social Affairs.
- Wade, Robert H. (2016). Industrial policy in response to the middle-income trap and the third wave of the digital revolution. *Global Policy* 7 (4): 469-480.
- World Bank. 2018. *Philippine economic update: Staying the course amid global uncertainty*. Washington, D.C., World Bank Group.