



Structural Transformation, Job Polarization and Inequality in the Philippines

A POLICY BRIEF

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Summary

Over the past three decades the Philippines has made great progress in poverty reduction and income growth, but only recently has inequality begun to fall. Driven by high growth rates and structural transformation, between 1985 and 2018 poverty fell by two-thirds. By 2018, the middle class had expanded to cover nearly 12 million people and the economically secure encompassed 44 million. However, although the decline in poverty accelerated between 2012 and 2018, income inequality remains high, with the top 1 percent of earners capturing 17 percent of national income and the bottom 50 percent collectively earning only 14 percent.

Before the COVID-19 pandemic, structural transformation had seen a shift of less-educated workers to more productive sectors and occupations, leading to more inclusive growth. In three decades, employment almost halved in agriculture while increasing considerably in services and to a lesser extent industry. The transition of less-educated workers to more productive sectors and occupations, particularly between 2012 and 2019, was accompanied by a shift to wage employment and an increase in wage earnings, which accounted for recent progress in inclusive growth and shared prosperity.

Nevertheless, large gaps between education groups persist. Workers with the least education (elementary education or less) are still overwhelmingly employed in agriculture and low-skilled occupations. In 2019, the average weekly wage of college graduates was about three times higher than that of workers with no more than elementary education.

The slow expansion of tertiary education has caused a large skill premium. Between 1988 and 2021 the share of workers with college degrees and above increased only from 10 to 18 percent. As a result, the premium for a college education remains high, contributing to the persistence of inequality. Returns to college education also vary a lot: returns are much larger among higher-income groups, perhaps due to differences in school quality and fields of study and employment.

The shock from the COVID-19 pandemic led to a significant shift in the workforce toward less productive sectors and occupations. Employment in wage work has noticeably decreased and employment in agriculture has risen. These trends have been concentrated among youth and the workers with the lowest levels of education; this suggests that recovery will be uneven and income inequality will widen as the economy recovers from the COVID-19 crisis.

Signs of wage job polarization have emerged in recent years and could heighten as the nature of work changes. Between 2016 and 2021 a pattern of job polarization among wage workers emerged: employment in middle-skilled occupations fell and employment in both low- and high-skilled occupations rose. This pattern may continue well into the coming years as the digital economy expands and jobs are transformed post-COVID-19. This could lead to an even wider gap in the labor market, worsening current disparities in wages and in the productivity of occupations.

The Philippines can leverage the crisis generated by the pandemic to promote necessary reforms to support skills development and promote inclusive recovery. Effective policies might include: 1) strengthening booster vaccination uptake; 2) developing training programs to reskill and upskill workers; 3) creating a supportive environment for entrepreneurship to drive innovation and job creation; 4) helping workers to acquire the skills they need in today's rapidly changing labor market; 5) closing the quality gap in tertiary education to narrow the disparity of skills of poor vs. rich students; and 6) raising the productivity of agriculture.

30 Years of Progress in Economic and Human Development with Persistent Inequality

Driven by rapid economic growth and structural transformation, between 1985 and 2018 the poverty rate fell by two-thirds—from 49.2 to 16.7 percent. By 2018, the middle class had expanded to nearly 12 million people and 44 million people were economically secure. Because the Philippines made large investments in improving access to services, in 2018 the Human Development Index reached 0.712, which made the Philippines a member of the High Human Development group (UNDP 2020).

In the 2010s progress in inclusive growth and inequality reduction accelerated. The economy grew on average 6.4 percent annually between 2010 and 2018—the average in the previous decade had been less than 4 percent—and growth became much higher among poorer groups than among those who were better-off. During this period the expansion of secondary education, mobility to better-paying jobs, ownership of more assets, and more Filipinos being able to access basic services were important for the reduction of inequality.

Even with these gains, however, income inequality remains very high; there is still much room for future transformation. Income inequality peaked during the 1997–98 Asian Financial Crisis before beginning a sustained decline that accelerated in 2012–18. Despite this progress, however, the top 1 percent of earners together capture 17 percent of national income while the incomes of the bottom 50 percent collectively make up only 14 percent. With an income Gini coefficient of 42.3 percent in 2018, the Philippines ranks as the 15th most unequal out of 63 countries for which income Gini coefficients are available, and is second only to Thailand in East Asia. Major inequalities in education, health, nutrition, and access to services are still common between income groups and geographic regions. As these inequalities perpetuate over the life cycle, they limit the opportunities for economic mobility of future generations.

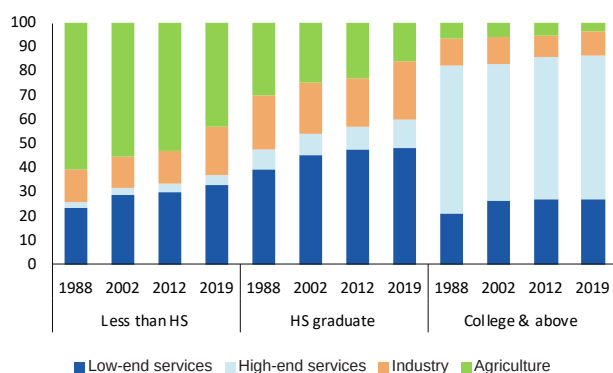
Gaps in education, employment, and wages are still the most important sources of inequality. Although education levels have risen over the past three decades, the share of inequality explained by differences in the education of household heads held at about 30 percent from 1985 through 2018. In 2018, inequality between households based on the occupation of their head was the second largest contributor to income inequality at 24 percent— though down from 32 percent in 2000. The third largest contributor was the employment sector of the head at 17 percent in 2018, though it had been 25 percent in 2000. Wage income was the primary contributor to reducing poverty, accounting for 54 percent of the reduction in 1985–2018. However, it also contributes to the persistence of inequality as it has accounted for over 40 percent of the income Gini coefficient since 2000.

Leveling out inequality and promoting inclusion are central to the national development agenda. *AmBisyon Natin 2040* outlines the country's long-term vision, aspirations for equitable development, and intent to address spatial and socioeconomic inequality and expand equitable access to economic opportunities. Reducing inequality could have double dividends by accelerating poverty reduction and enhancing social inclusion and cohesion.

Pre-COVID: Economic Transformation, Education, and Inequality

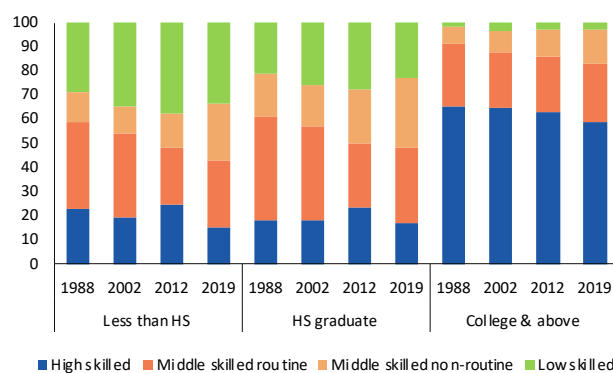
Structural transformation, along with the speeding up of the shift of less-educated workers to more productive sectors and occupations in the 2010s, has helped to make growth more inclusive. In three decades, employment almost halved in agriculture, while it rose substantially in services and to a lesser extent industry. For workers with less than a high school degree, the movement away from agriculture accelerated in the 2010s, with the decline accompanied by a rise of 6 percentage points (pp) in the share employed in industry and a 4 pp rise in the share employed in services (Figure 1). Although the shift to more productive sectors also occurred among those with higher levels of education (i.e., high school and college graduates), these shifts were not as pronounced as for less-educated workers. Outside agriculture, from 1988 to 2011 workers with less than a high school degree mainly moved to low-skilled occupations, but from 2012 to 2019 transitions to middle-skilled work increased, particularly to nonroutine occupations like service and sales (Figure 2). Together, these shifts contributed to progress in inclusive growth and shared prosperity in the 2010s.

Figure 1. Sector of Employment by Education Level, 1988-2019, Percent



Source: Labor Force Survey 1988-2019

Figure 2. Occupation by Education Level, 1988-2019, Percent

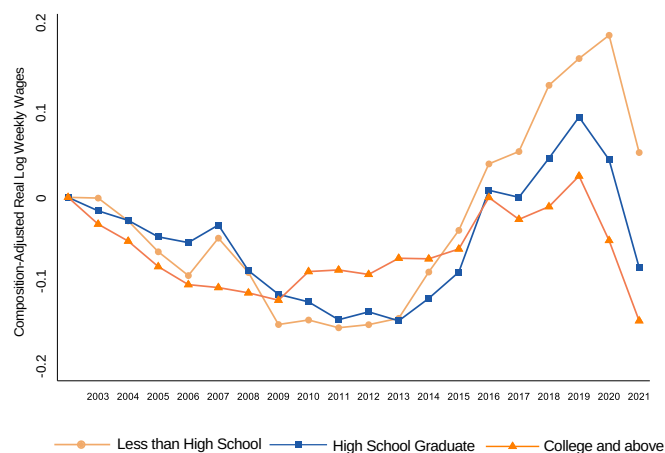


Source: Labor Force Survey 1988-2019

The rapid transition of less-educated workers to better jobs, along with a relative expansion of middle-skilled occupations in the 2010s, probably helped to narrow inequality. In 2012–19 that transition of workers with less than a high school degree to more productive sectors and occupations was accompanied by a shift to wage employment, and a disproportionate increase in their wage earnings. During the financial crisis of 2007/08 real wages plunged for all education groups before rebounding until 2019. In 2012–19, wages of less than high school graduates rose steeply, by 36 percent, compared with a more modest increase of 25 percent for high school graduates and 12 percent for college graduates (Figure 3).¹ Together with these changes, there was a gradual increase of wages as a main source of income, particularly among vulnerable households, and reduction of the wage gaps between education groups. The 2010s were also marked by the acceleration of economic transformation and a relative expansion of employment in middle-skilled occupations (Figure 4). All these changes probably helped to narrow income inequality. However, as shown in figures 3 and 4 and as will be discussed in the following section, the COVID-19 crisis risks reversing this progress.

¹ Following the approach of Acemoglu and Autor (2011), the analysis uses composition adjusted weekly real wages.

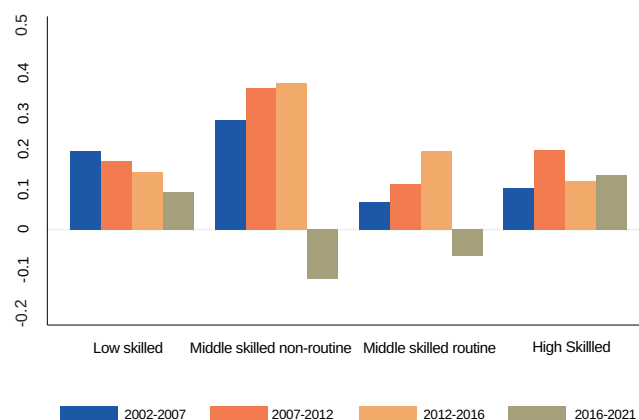
Figure 3. Log Real Weekly Wage by Education Groups, 2002–21



Source: Labor Force Survey 2002–21.

Note: Log wages are normalized at zero in 2002 with subsequent values corresponding to the log change in earnings for each group relative to its 2002 level.

Figure 4. Change in Wage Employment by Occupation, 2002–21



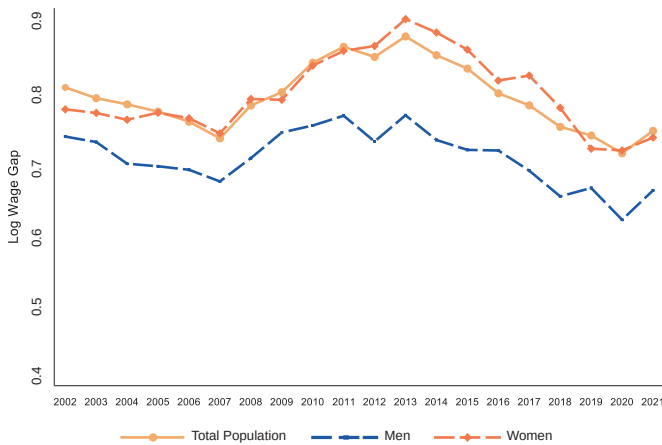
Source: Labor Force Survey 2002–21.

Despite the gains, there are still wide gaps between education groups. Workers with only elementary education or less are still overwhelmingly employed in agriculture and low-skilled occupations. In 2019, over 50 percent of workers in this education group were in agriculture and about 36 percent were in low-skilled nonfarm occupations. In 2019, the average weekly wage of college graduates was about three times higher than that of workers with elementary education. The lack of education prevented poor households from improving their living standards. Meanwhile, the average per capita income of households whose head was a college graduate was about four times higher than that for households whose head had no more than elementary education.

The slow expansion of tertiary education and the shortage of skills kept the scarcity value of skills high. In 2019, the wage earnings of the average college graduate exceeded those of the average high school graduate by about 110 percent. While this was down from its peak in 2013 of more than 140 percent, it is still very high.² The college premium trend has the same trajectory for men and women but is much higher for women, which suggests that gaps in returns to skills are a more problematic source of inequality for women than for men (Figure 5). The college premium is affected, among other factors, by the relative supply of skills. Despite an expansion of educational enrollment and attainment, transition to tertiary education is still low. Between 1988 and 2021, the share of workers with no more than elementary education dropped from 52 to 25 percent while the share of workers with a high school degree and some college increased from 25 to 45 percent. The share of workers with a college degree and beyond, on the other hand, went up from 10 to 18 percent. While this is notable progress for a middle-income country, the relative supply of college workers appears to have picked up only in the past three years (Figure 6). The recent increase in the supply of college workers is due to young college graduates, mainly women, entering the labor market. The slow transition to tertiary education and the shortage of skills is a concern for the economy; besides depressing growth and productivity, it also helps sustain the large skill premium and inequality.

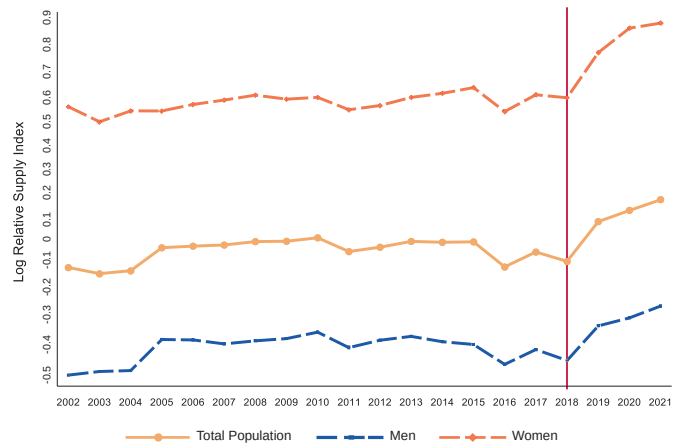
² The wage earnings of the average worker with some college education and more exceeded those of the average high school graduate by a smaller but still significant figure, estimated in 2019 at 70 percent.

Figure 5. College/High-School Log Weekly Wage Ratio, 2002–21



Source: Labor Force Survey 2002–21.

Figure 6. College/High-School Log Relative Supply, 2002–21

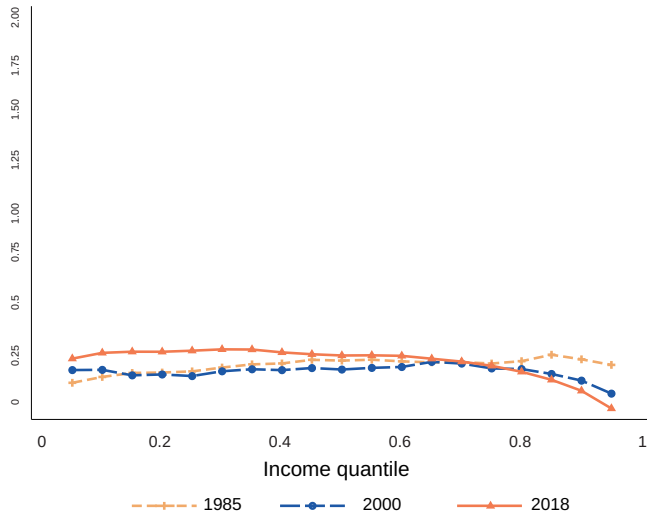


Source: Labor Force Survey 2002–21.

Returns to college education show large variations by income group, further contributing to inequality. For all income groups, the returns to college education are much larger than to high school education. However, returns to high school education seem to be larger for lower-income groups, indicating that workers with lower initial educational endowments tend to benefit more from secondary education than those with higher endowments, which helps to reduce inequality (Figure 7). In contrast, returns to college education are much larger among richer groups—about 20 percent for the lowest-income decile but over 170 percent for the richest (Figure 8). The pattern of increasing returns to college education for higher-income groups has not varied since 1985. While the persistence of high returns to college education is a positive sign of how much skills are valued, the fact that higher education delivers different returns to rich and to poor households is a concern. A possible explanation is related to differences in school quality and fields of study: individuals in poorer households tend to have lower quality education and/or engage on fields of study that attract low interest in the labor market and thus their returns for a given education level are lower than those in better-off households (Martins and Pereira 2004, Patrinos et al. 2006).

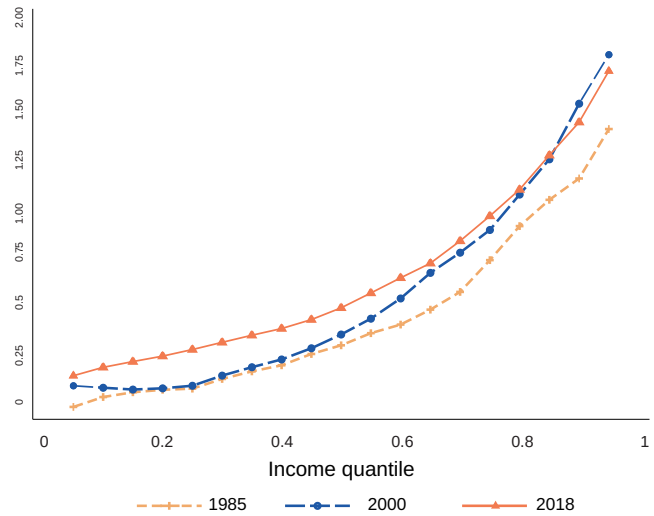


Figure 7. Returns to High School Education, 1985–2018



Source: FIES 1985–2018.

Figure 8. Returns to College Education, 1985–2018

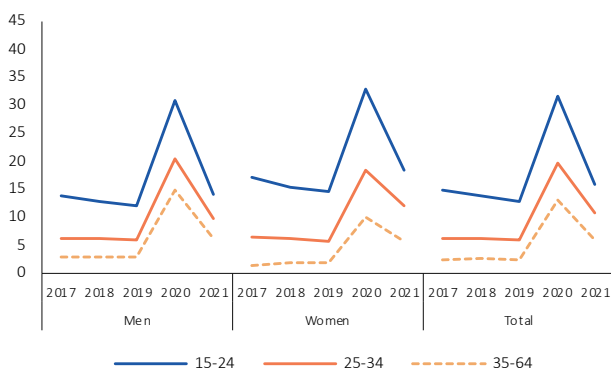


Source: FIES 1985–2018.

Post-COVID: Emerging Signs of Job Polarization and Aggravation of Inequality

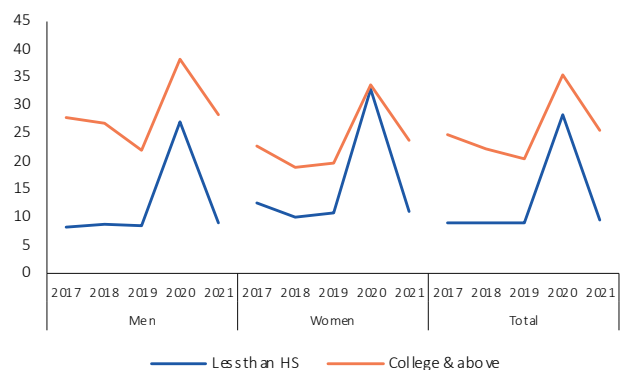
Before the pandemic, unemployment rates for women and youth were already disproportionately high. Before the pandemic, unemployment of youth was more than double the unemployment rates of older workers, ranging from 13 to 15 percent from 2017 to 2019. While all age groups felt the effects of the pandemic, unemployment increased much more among youth, rising to 31 percent in 2020. Women aged 15–24, in particular, had higher rates of unemployment even before the pandemic, and this has continued through the shock of the pandemic and into the economic recovery (Figure 9). Despite having made remarkable progress in gender equality, the Philippines continues to suffer from the low participation of women in the labor market, which has remained at less than 49 percent until 2020.

Figure 9. Unemployment by Age and Gender, 2017–21, Percent



Source: Labor Force Survey 2017–21.

Figure 10. Youth Unemployment by Education and Gender, 2017–21, Percent



Source: Labor Force Survey 2017–21.

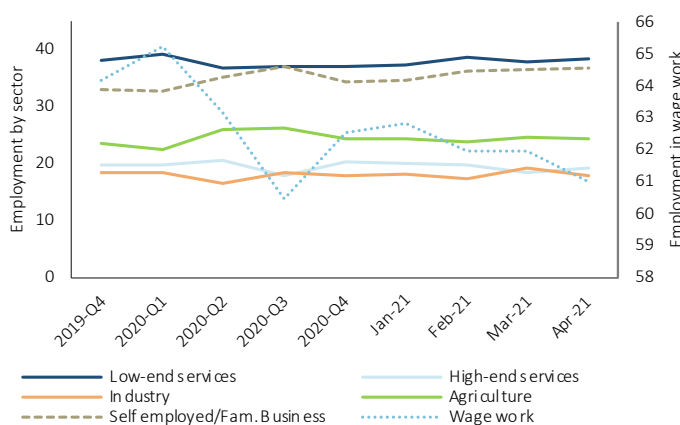
Despite large college wage premiums, completing tertiary education does not automatically equate to better labor market outcomes, particularly for youth. Among youth, those who completed college had the highest unemployment rates (Figure 10). However, there are clear differences in the pattern of unemployment between genders—among college-educated youth, unemployment is much higher for men than for women. In sharp contrast, unemployment of women is much higher for youth who have less than high school education. Unemployment of college graduate youth also varies by field of study; it appears to be highest among graduates in *education, social sciences, journalism & information, engineering, manufacturing & construction, and services*³ and lowest among those in *business administration & law, information communication & technology (ICT), and health & welfare*.

In recent years signs of wage job polarization have been emerging. This began in 2016–21 as employment shares in middle-skilled routine occupations declined but those in both low-skilled and high-skilled occupations increased (Figure 4). If this pattern persists, the result may be a hollowing-out of the middle-skilled occupations, which may not only heighten disparities in wage earnings and incomes but also affect prospects for increasing productivity and upward mobility.

The COVID-19 crisis probably exacerbated jobs polarization trends

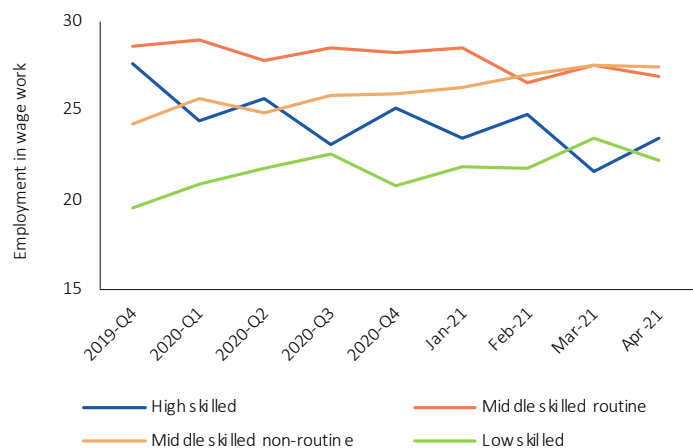
The shock of the pandemic caused a considerable shift of workers to less productive sectors and occupations. As economic activity slowed drastically when the first Enhanced Community Quarantine (ECQ) was imposed, employment in agriculture abruptly increased while employment fell in low-end services (food and accommodation, transportation, and trade) and industry, reversing the trend generated from years of structural changes (Figure 11). Although employment in low-end services and industry began to rebound in April 2021, the share of wage work continued to decline. The shift to less productive work is also reflected in the increase of nonfarm employment in low-skilled occupations (Figure 12).

Figure 11. Employment by Sector and Type, 2019–21, Percent



Source: Labor Force Survey 2019–21.

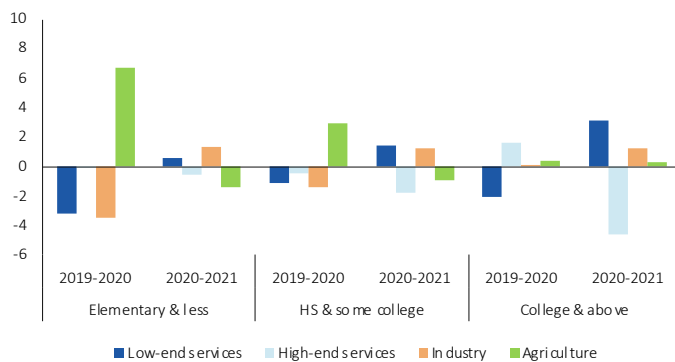
Figure 12. Employment by Occupation, 2019–21, Percent



Source: Labor Force Survey 2019–21.

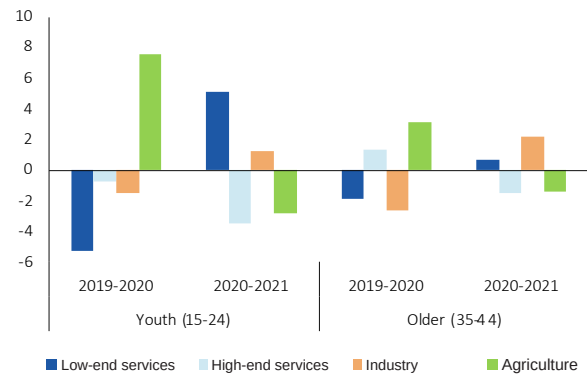
³ Mainly those with a bachelor degree in personal services (i.e., hotels & restaurants and tourism) and transport services. This pattern was consistent pre- and post-pandemic.

Figure 13. Change in Employment by Sector and Education, 2019–21, Percentage Points



Source: Labor Force Survey 2019–21.

Figure 14. Change in Employment by Sector and Age, 2019–21, Percentage Points



Source: Labor Force Survey 2019–21.

The transition to less productive sectors was more pronounced among workers with lower levels of education. When the pandemic began, employment in agriculture increased among workers with lower levels of education, and employment in low-end services and industry declined (Figure 13). As the economy began to recover, employment in agriculture went down slightly but as of April 2021 more than half of workers with no more than elementary education continued to work in agriculture. Although the shift to less productive sectors also occurred among workers with higher education (high school and some college), these transitions were far fewer.

The shift to less productive sectors was also disproportionately high among youth. Between 2019 and 2021, their employment in high-end services went down, but their employment in agriculture rose 5 pp (Figure 14). As of April 2021, more than 25 percent of youth were still employed in agriculture. These transitions, to sectors that offer narrower avenues for career growth and skills development, could have long-term implications for the career trajectories of young people—and for the productivity and competitiveness of the country’s workforce.

Uneven declines and recovery in wage income point to widening income inequality. Wage income fell in all sectors when the COVID-19 crisis began, and the decline was most severe for those working in industry and low-end services. With this shock, the wage Gini coefficient spiked at over 45 percent, reaching levels not seen even after the 2008 financial crisis. While wage income has since slowly recovered, it has not yet reached pre-pandemic levels and recovery has been slower in sectors that employ a larger share of less-educated workers: as of April 2021, wage income for low-end services was just 84 percent of pre-pandemic levels and for industry 87 percent, but wages in high-end services had reached 91 percent. It appears that income inequality may be widening as the economy recovers from the pandemic.

The polarization in wage employment that began to emerge in the mid-2010s could rise in the next few years as the digital economy expands and the post-COVID-19 transformation of jobs picks up. With the transformation, workers in middle-skilled occupations, especially in routine occupations, could see employment opportunities thin out. Given the wide differences in wages by occupation, this could considerably widen the gap in the labor market, increasing existing disparities in both wages and the productivity of occupations.

What Can Policy Do?

Policies should aim to support skills development, promote inclusive recovery, foster an environment that encourages entrepreneurship, promote inclusive structural transformation, and encourage the growth of high-productivity sectors. Effective policies might include the following:

Strengthen booster vaccination uptake. The decline in COVID-19 cases in the Philippines, in large part due to the massive government vaccination effort, has made it possible to loosen mobility restrictions, allowing the economy to reopen and thus spur the recovery of jobs. This illuminates the critical role of vaccinations in aiding economic recovery. That is why it is crucial to address vaccine hesitancy and to continue to strengthen population immunity through booster vaccinations.

Provide additional support to workers, particularly those who have been most impacted by the pandemic. The pandemic has caused both job loss and the transition of a notable share of workers to less-productive sectors and occupations in order to earn at least some income. With youth and workers with less education more severely affected, expanding skills development programs like the Technical Education and Skills Development Authority (TESDA) online training programs to reskill and upskill workers could help workers transition to more productive jobs, hastening recovery from the pandemic for the economy.

To drive innovation and job creation, make the environment for entrepreneurship more supportive. The pandemic accelerated the pace of digitalization, expanding both the volume and the reach of e-commerce and digital services. This opens up a valuable opportunity for the growth of new enterprises and could be useful in helping raise women's participation in the labor force. Hence, policies that encourage female entrepreneurship, such as facilitating credit access and business development programs can also help close the gender gap for poor women (Lanzafame et al. 2021). Leveraging technology to streamline the process of opening and operating new enterprises could also have considerable impact in supporting entrepreneurship, which has the potential to create employment in highly productive sectors (World Bank 2021).

Help workers to acquire the skills they need in today's rapidly changing labor market. To help workers find productive employment, courses offered in both tertiary and post-secondary education need to respond to the demands of the 4th Industrial Revolution. That is why links should be tightened between educational institutions, particularly those teaching technical and vocational courses, and emerging digital technology. Ideally, the private sector should be invited to help shape curriculums (co-development); teach and train students (co-delivery); and evaluate student competencies (co-assessment). Although TESDA already offers enterprise-based programs, many of which integrate these components, there is much room to expand these offerings. Because the demand for skills changes so rapidly, it is also critical for the future workforce to strengthen not only foundational skills but also such noncognitive skills as creativity, persistence, and flexibility so students are better prepared as the nature of work changes and to take advantage of inclusive digitalization. These policies could also help mitigate the emerging polarization of jobs.

Close the quality gap in tertiary education to narrow the disparity of skills of poor vs. rich students. In the short run, this should involve a thorough review of curriculum as well as developing quality textbooks and learning packages in all higher education institutions. Investments to accelerate the shift towards digitalization of learning should be encouraged, as well as the necessary teacher training to maximize the potential of this mode. In the long run, developing world class research and teaching universities should gain priority as this will produce high quality faculty to feed into the whole tertiary education ecosystem. This will include strategic reorientation of education budgets, deployment of scholarship funding as well as close coordination with industry and the private sector to mobilize resources for research (Tan 2021).

Raise the productivity of agriculture. Although the sector employs a sizable share of the country's workforce, its productivity is low. Increasing productivity involves ramping up and reorienting investments in agriculture towards “public goods” that provides higher social returns—research and development, infrastructure, innovation systems, market information systems, and biosecurity systems—rather than traditional commodity price support and input subsidies (World Bank 2020). Moreover, policies should also focus on shifting production away from subsistence farming to producing cash crops (Beja et al. 2020). To aid in the transition, ways to improve farm-to-market links should be explored, as should expanding access to finance. In addition, agriculture must be ready to deal with the challenges rising from climate change. To ensure that the sector is sustainable and resilient, policymakers, agricultural and climate specialists, scientists, and researchers need to identify how best to promote and support climate-smart agricultural practices and techniques, such as promoting innovations that sustainably increase productivity and using digital platforms such as early warning systems to monitor weather conditions (ADB 2021).

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