

Labour market conditions and wage developments in the aftermath of the pandemic: implications for monetary policy in the Philippines

Introduction

The Covid-19 pandemic had extensive economic ramifications across economies, and the Philippines is no exception. The domestic labour market was one of the sectors that was most affected by the combined health and economic crises that hit the country. The unemployment rate spiked to a record high in 2020 arising from business closures and government mandated lockdowns, while the underemployment rate likewise deteriorated. At the same time, the labour force participation rate (LFPR) and the number of employed individuals dropped steeply. Nominal wages were stagnant at the height of the pandemic but began to rise above historical averages two years post-pandemic. Meanwhile, real wages have declined in the same period as inflation has been rising since the 2020 pandemic year. The Bangko Sentral ng Pilipinas (BSP) is mindful that labour market conditions in the wake of the pandemic could have a domino effect on domestic demand and wage growth, and consequently impact the inflation outlook.

This paper presents the developments in labour market conditions, wages and inflation in the Philippines from the onset of the pandemic in the second quarter of 2020 until the aftermath of the pandemic in 2022.¹ The current state of domestic labour market slack based on the deviation of the unemployment rate from the non-accelerating inflation rate of unemployment (NAIRU) is also briefly presented. The subsequent sections of this paper discuss the impact of wage adjustments on the inflation outlook, as well as the link between past inflation and wage growth. This paper concludes with arguments about why the risk of a price-wage spiral remains low in the Philippines, along with the BSP's monetary policy response given the country's post-pandemic labour market and wage conditions, and inflation environment.

Labour market conditions

Two years since the onset of the pandemic, labour market conditions have recovered as most sectors of the economy reopened in 2022 amid increased vaccination and the relaxation of containment measures implemented by the government, as well as

¹ The timeline of events leading up to the pandemic suggests that April 2020, which represents the second quarter of 2020, saw the onset of the pandemic in the Philippines. The pre-pandemic period in this paper refers to data as of January 2020 which represent the first quarter of 2020. The first confirmed case of a Covid-19 patient in the Philippines was recorded on 30 January 2020. The first Covid-19 fatality case was recorded on 2 February 2020. The first case of local transmission was recorded on 7 March 2020. The former president, Rodrigo Duterte, signed Proclamation No 922 on 8 March 2020 declaring a state of public health emergency in the Philippines, after which lockdowns and community quarantine measures were implemented.

improved business sentiment which led to the reopening of business establishments and a resurgence in employee hiring. The latest labour market indicators show that the unemployment rate is now below its pre-pandemic level, while the employment and labour force participation rates have exceeded pre-pandemic levels. In addition, underemployment is broadly similar to the pre-pandemic level (Table 1). Overall employment gains have been consistently recorded in the last several months. Nevertheless, recovery in employment appears to be uneven across sectors of the economy.

Key employment indicators

Table 1

	2020	2021	2022				
Rates in %; levels in millions	Jan	Jan	Jan	Apr	Jul	Oct	Nov
Employment rate	94.7	91.2	93.6	94.3	94.8	95.5	95.8
Employed	42.54	41.25	43.27	45.63	47.39	47.11	49.71
Unemployment rate	5.3	8.8	6.4	5.7	5.2	4.5	4.2
Unemployed	2.39	3.96	2.95	2.76	2.60	2.24	2.18
Underemployment rate	14.8	16.0	14.9	14.0	13.8	14.2	14.4
Underemployed	6.3	6.59	6.43	6.40	6.54	6.67	7.16
Labour force participation rate	61.7	60.5	60.5	63.4	65.2	64.2	67.5
People in the labour force	44.93	45.21	46.22	48.39	49.99	49.35	51.88

Source: Philippine Statistics Authority.

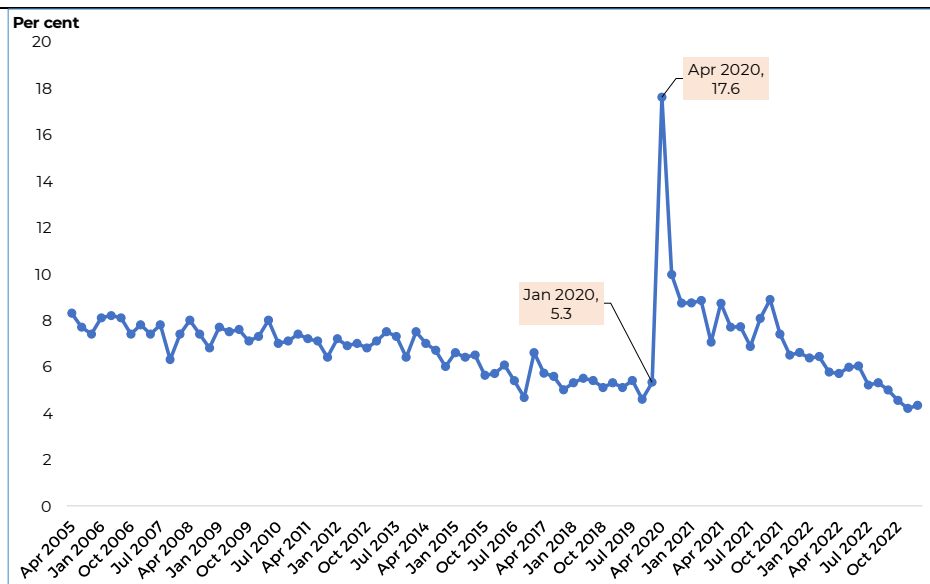
Unemployment

Business establishment closures and government mandated lockdowns resulted in a double-digit unemployment rate in the second quarter of 2020. From 5.3% in January 2020, the unemployment rate rose sharply to 17.6% in April 2020 (Graph 1). In terms of levels, the number of unemployed people nearly tripled in April 2020 to approximately 7.2 million, from approximately 2.4 million in the January 2020 pre-pandemic period. Unemployment remained high for the remainder of 2020, with the unemployment rate recorded at 10.0% and 8.7% in July 2020 and October 2020, respectively. With the recovery underway, unemployment has dropped to its lowest level in November 2022 at 4.2%, largely attributed to the reopening of the economy.

Unemployment rate

April 2005–November 2022

Graph 1



Source: Philippine Statistics Authority.

Labour force participation

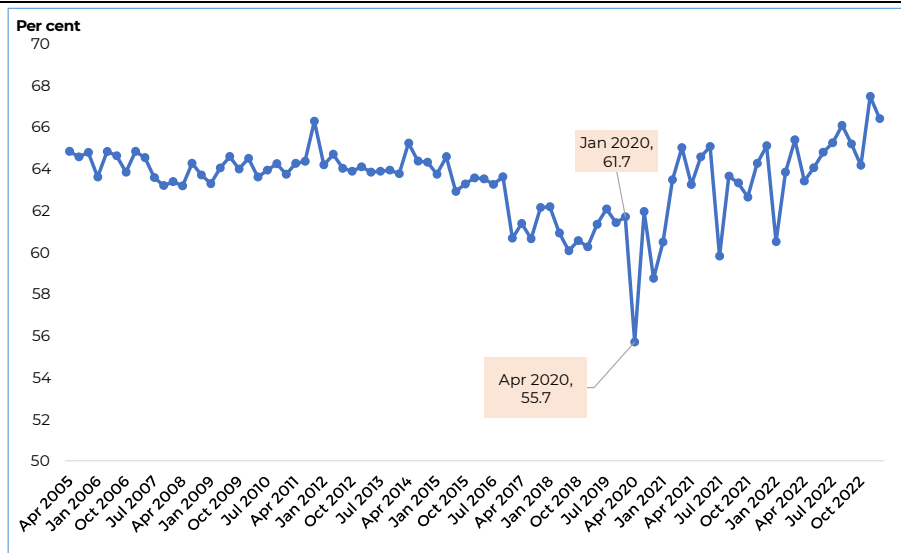
The country's labour force participation rate² registered a sharp decline during the pandemic at 55.7% in April 2020 from 61.7% before the pandemic (Graph 2). The decline in LFPR shows that a large proportion of the workforce were not actively seeking work during the pandemic as lockdowns and community quarantine measures imposed by the government restricted workers' mobility and therefore their ability to report for work. Nonetheless, the labour force participation rate has fully recovered in 2022, surpassing its pre-pandemic level at 67.5% in November 2022.

² Labour force participation rate is the ratio of the number of people that are either employed and unemployed over the number of the population aged 15 years and older, excluding overseas Filipino workers.

Labour force participation rate

April 2005–November 2022

Graph 2



Source: Philippine Statistics Authority.

Employment

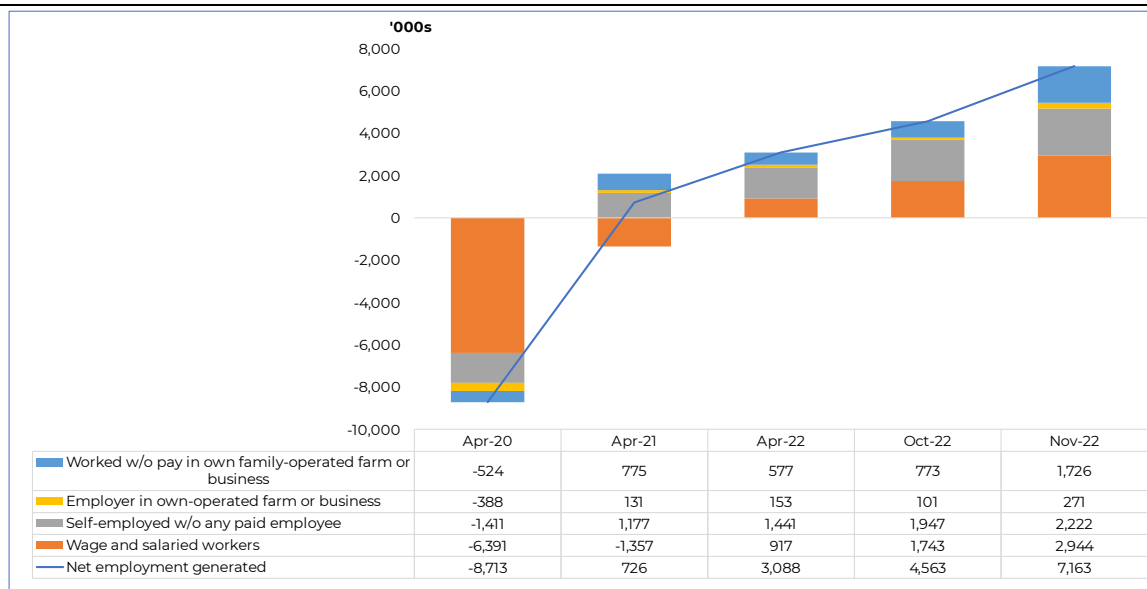
Employment levels have generally rebounded from the pandemic. Two years after the pandemic, employment gains have been registered across worker classifications (Graph 3). The quality of jobs has improved, as reflected in the increased employment of wage and salary workers, although most of the employment gains are from self-employed workers without any paid employees; and workers without pay in family-operated farms or businesses. A modest gain in employment has also been recorded for employers in own-operated farms or businesses. However, there is some heterogeneity in the pace of recovery of employment across industries and occupation types. Employment gains were registered in the majority of industries but were most notable for wholesale and retail trade, and the repair of motor vehicles (Graph 4). However, industries that are highly reliant on face-to-face interactions such as transportation and storage have continued to post employment losses to date. By occupation, employment gains primarily came from services and sales workers, and elementary occupations (Graph 5).³ All other types of occupations registered employment gains except for managerial jobs and armed forces occupations.

³ Elementary occupations involve the performance of simple and routine tasks which may require the use of hand-held tools and considerable physical effort.

Contribution to employment gains vis-a-vis Jan 2020 pre-pandemic period by class of worker

April 2020, April 2021, April 2022, October 2022 and November 2022

Graph 3



Sources: Philippine Statistics Authority; BSP staff calculations.

Contribution to employment gains vis-a-vis January 2020 pre-pandemic period by sub-sector

November 2022; in thousands

Graph 4

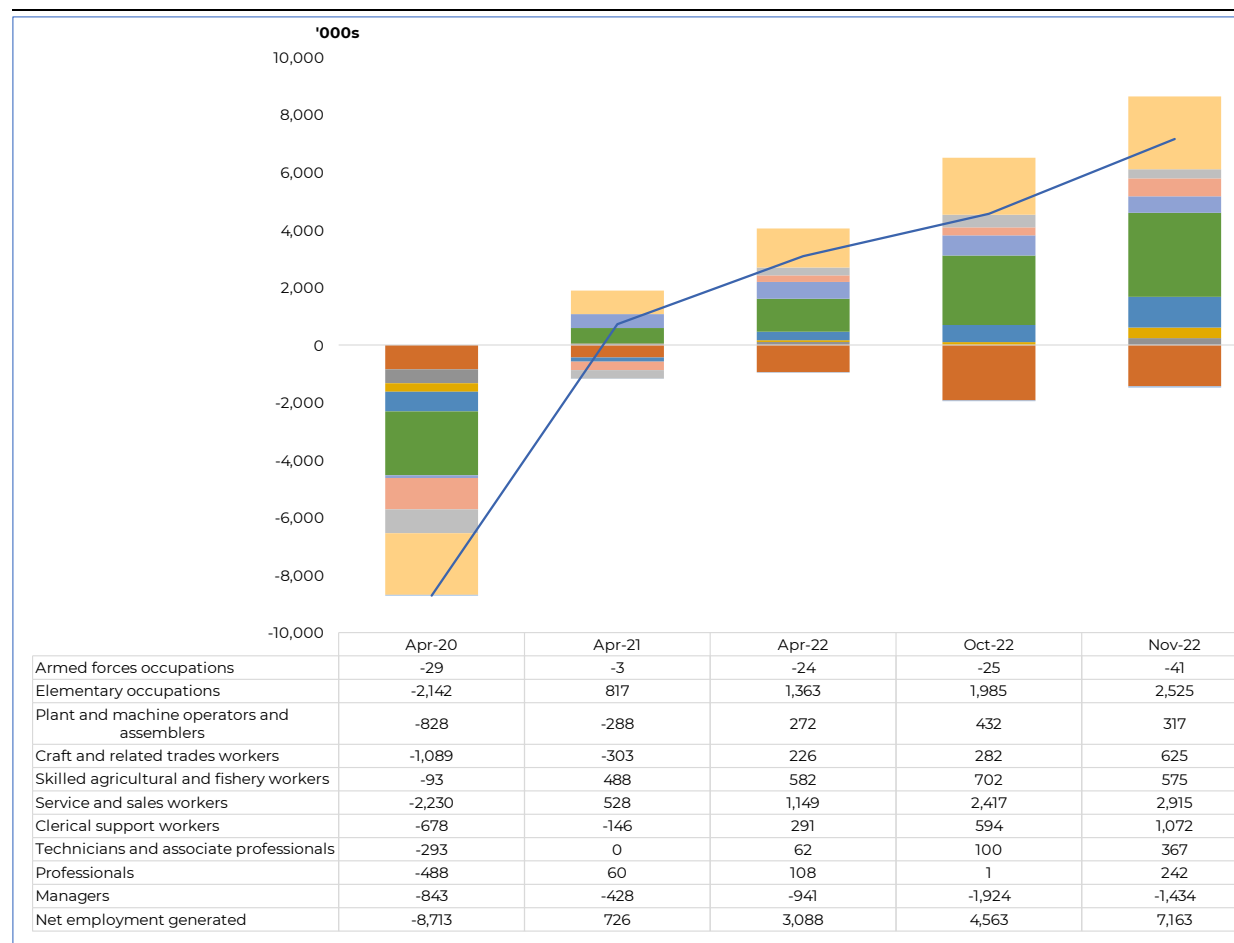
Net employment gains/(losses) in agriculture sector		
Agriculture and forestry	1,007	
Fishing and aquaculture	9	
Net employment gains/(losses) in industry sector		
Mining and quarrying	50	
Manufacturing	701	
Electricity, gas, steam and air conditioning supply	44	
Water supply; sewerage, waste management	27	
Construction	167	
Net employment gains/(losses) in services sector		
Wholesale and retail trade; repair of motor vehicles ;	2,727	
Transportation and storage	(48)	
Accommodation and food service activities	247	
Information and communications	256	
Financial and insurance activities	80	
Real estate activities	168	
Professional, scientific and technical activities	129	
Administrative and support service activities	643	
Public administration and defence	180	
Education	164	
Human health and social work activities	175	
Arts, entertainment and recreation	145	
Other service activities	294	

Sources: Philippine Statistics Authority; with BSP staff calculations.

Contribution to employment gains vis-a-vis Jan 2020 pre-pandemic period by type of occupation

April 2020, April 2021, April 2022, October 2022 and November 2022

Graph 5



Sources: Philippine Statistics Authority; with BSP staff calculations.

Underemployment

The quality of labour of the employed deteriorated during the pandemic as the underemployment rate⁴ rose to 18.9% in April 2020 from 14.8% in the pre-pandemic period (Graph 6). Of the total underemployed, approximately 86% are visibly underemployed – those who worked for less than 40 hours and wanted additional hours of work. The underemployment rate validates the decline in mean weekly hours worked during the same period. The average hours worked by employed individuals dropped to 35 hours a week in 2020 from a range of 40 to 42 hours prior to the pandemic (Graph 7). In 2022, the average weekly hours worked bounced back to

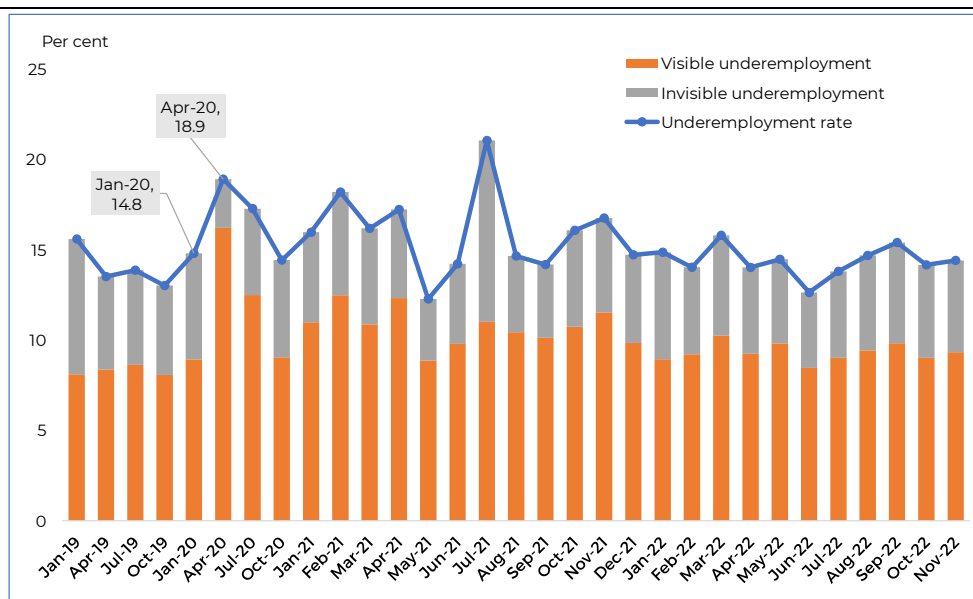
⁴ The underemployment rate is the ratio of the number of employed people who express a desire for additional hours of work in their current job or an additional job, or to have a new job with longer working hours.

approximately 40 hours and the underemployment rate declined considerably to 14.4%. Correspondingly, the share of visible underemployment to total underemployment decreased to approximately 65% in November 2022 – higher than approximately 60% in the pre-pandemic period.

Underemployment rate, visible underemployment and invisible underemployment

January 2019–November 2022

Graph 6

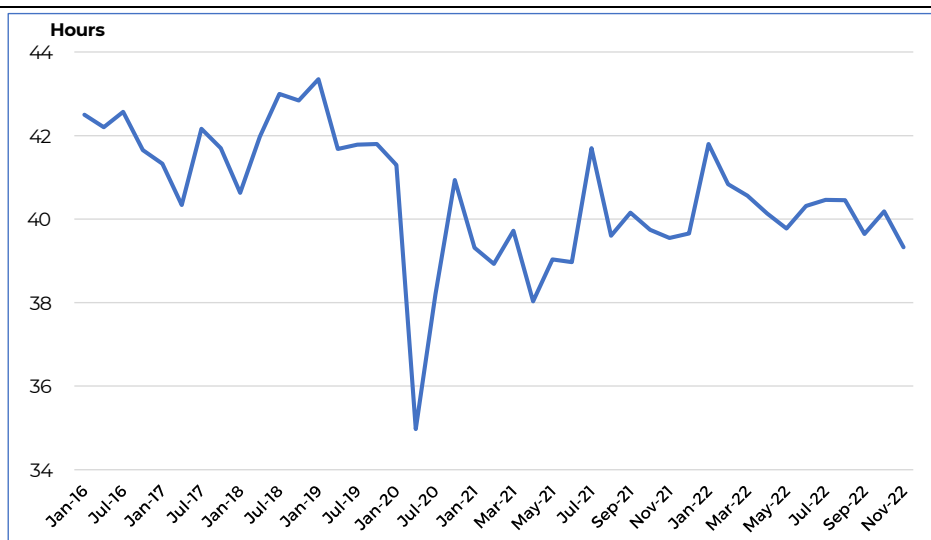


Source: Philippine Statistics Authority.

Average weekly hours of work of employed people

January 2016–November 2022

Graph 7



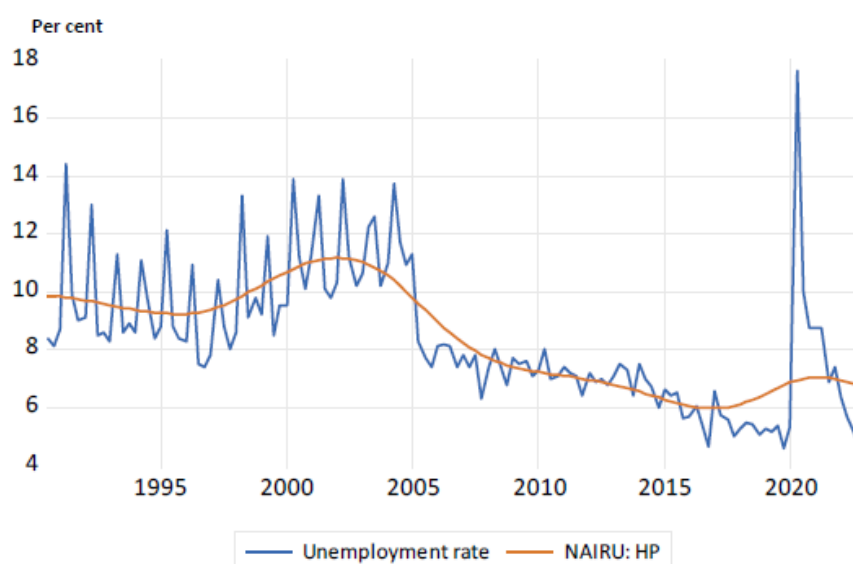
Source: Philippine Statistics Authority.

Labour market slack

There has been a tightening in the labour market as employment conditions have improved two years after the pandemic. Preliminary estimates on the unemployment gap, which is the difference between the observed unemployment rate and the NAIRU,^{5,6} yielded less labour market slack, which could fuel excessive growth in wages. Compared with the actual unemployment rate in recent periods, NAIRU estimates using the Hodrick-Prescott filter and the Kalman filter indicate a negative unemployment gap in the last five quarters (ie from the third quarter of 2021 to the third quarter of 2022).⁷ This suggests that the unemployment rate in the Philippines has fallen below the NAIRU in recent quarters and thus could exert upward pressure on inflation (Graphs 8 and 9).

NAIRU estimate using HP filter vs unemployment rate

Graph 8

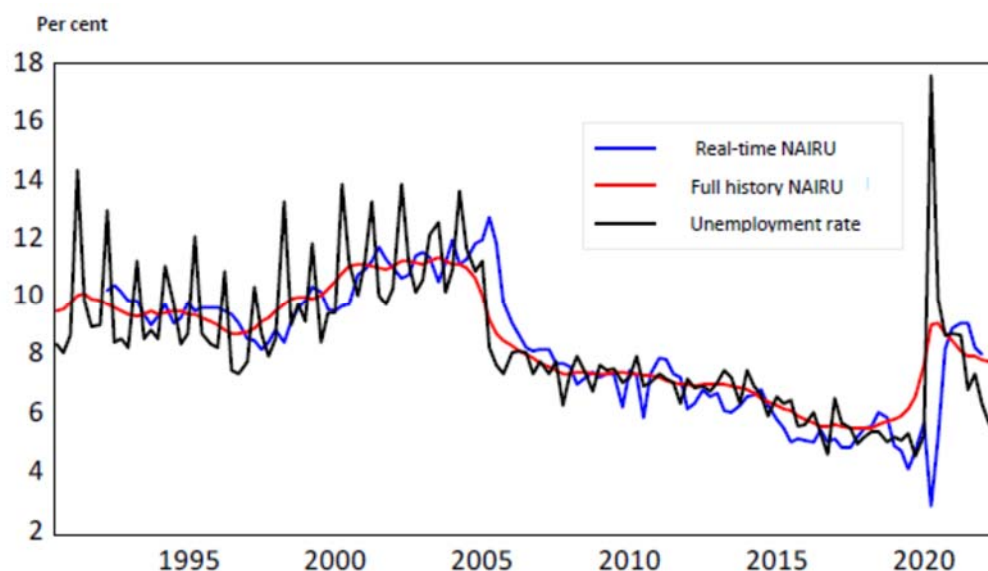


Source: BSP staff calculations.

⁵ The NAIRU is the rate of unemployment that is consistent with a stable rate of inflation. When the actual unemployment rate is above the NAIRU, excess capacity exists in the labour market, which tends to lower wage inflation and consequently inflation. Conversely, when the unemployment rate is below the NAIRU, there is tightness in the labour market, which causes wages to go up, leading to higher inflation.

⁶ V España, R Lemence, J Armas and J Tabin, "Estimating a time-varying NAIRU and unemployment gap: evidence from the Philippines", forthcoming.

⁷ Two ways of estimating the NAIRU are used in the study. The first method is the Hodrick-Prescott (HP) filter, a purely statistical univariate approach which decomposes the unemployment rate into its trend and cyclical components, with the trend serving as the NAIRU estimates. The second approach is via the Kalman filter whereby an unobservable state of the system, eg NAIRU, is estimated using known or observable data, eg the unemployment rate. The advantage of the Kalman filter over the HP filter is that the former utilises more economic variables such as inflation, supply-side factors and inflation expectations in the estimation.



Source: BSP staff calculations.

Inflation dynamics

The Philippine inflation environment since the pandemic year of 2020 has turned out to be challenging as global and domestic factors have pushed the average inflation rate above the 2–4% target band for 2021 and 2022.⁸ Inflation rose in 2021 as global demand gradually recovered, pushing international oil prices higher while domestic prices of agrifood products also increased amid the onset of African swine fever (ASF). This was magnified by adverse weather conditions and by the rise in global commodity prices. In 2022, domestic inflation further intensified as the geopolitical conflict in Ukraine led to higher global commodity prices, while domestic production shocks (eg avian influenza and typhoons) also contributed to the increase. The sustained increase in prices led to broadening price pressures with core inflation averaging near the upper end of the target in 2022 as a result of the spillover of higher food and energy prices to the services sector. Consequently, wage and transport fares were adjusted upwards while survey-based inflation expectations also rose. Looking ahead, staff estimates indicate that the output gap is projected to turn positive in 2023, largely reflecting the sustained expansion in 2022. This, in turn, could further support rising inflationary pressures in the near term.

⁸ Average headline inflation was at 4.5% year on year in 2021 using the 2012-based CPI series. Using the 2018-based series, headline inflation was 3.9% and 5.8% for 2021 and 2022, respectively.

Wage developments

Developments in minimum wages are monitored closely by the BSP and form part of the information incorporated in baseline inflation forecasts. Minimum wage determination in the Philippines is the primary responsibility of the National Wages and Productivity Commission (NWPC) and the Regional Tripartite Wages and Productivity Boards (RTWPBs). Minimum wages per region⁹ are reviewed periodically given petitions for wage increases and the presence of supervening conditions, such as extraordinary increases in the prices of petroleum products and basic goods and services.

Nominal wages

Nominal minimum wages¹⁰ grew in 2022 after being stagnant in 2020 and 2021 at the height of the pandemic. During the pandemic, regional wage boards¹¹ were not able to start the minimum wage determination process and deferred the approval of new wage petitions in 2021 as the pandemic disrupted business activities, rendering firms unable to afford to increase the pay of their workers. Prior to the pandemic, nominal wage growth was 3.1% on a yearly basis¹² but the start of the pandemic arrested the subsequent approval of new wage orders. In 2022, nominal wage growth returned to its pre-pandemic trend (Graph 10.A). However, the sharp rise in inflation in 2022 caused second-round effects, in particular wage hike petitions. By March 2022, the Secretary of the Department of Labor and Employment instructed the different wage boards to review minimum wages amid elevated prices of oil and other prime commodities due to rising global oil prices and the ongoing conflict in Ukraine,¹³ as well as due to the long lag since the last wage adjustment. By July 2022, all 17 wage boards had approved new wage increase orders. The average increase in minimum wages for the 17 regions is 13.1%, higher than the five-year national average of 5.6%. The higher average increase in 2022 was partly to compensate for the wage freeze during the pandemic. Minimum wages remain highest in the National Capital Region and lowest in MIMAROPA¹⁴ region (for non-agriculture workers) and Region VII (for agriculture works and retail/service establishments).¹⁵

⁹ The Philippines is politically divided into 17 regions. Minimum wages in the Philippines are set by each region's respective wage boards.

¹⁰ The BSP closely monitors minimum wage hikes in wage per day terms. Based on the Philippine Statistics Authority's integrated survey on labour and employment, 23.6% of total employment in establishments employing 20 or more workers are minimum wage workers.

¹¹ Minimum wages in the Philippines are set by each region's respective wage boards.

¹² For the years 2011–19, the compounded annual growth rate (CAGR) of nominal wages for the Philippines was 3.1%, while the CAGR for the National Capital Region was 3.2%.

¹³ See "Bello orders minimum wage review", *Republic of the Philippines Department of Labor and Employment*, 9 March 2023, www.dole.gov.ph/news/bello-orders-minimum-wage-review/.

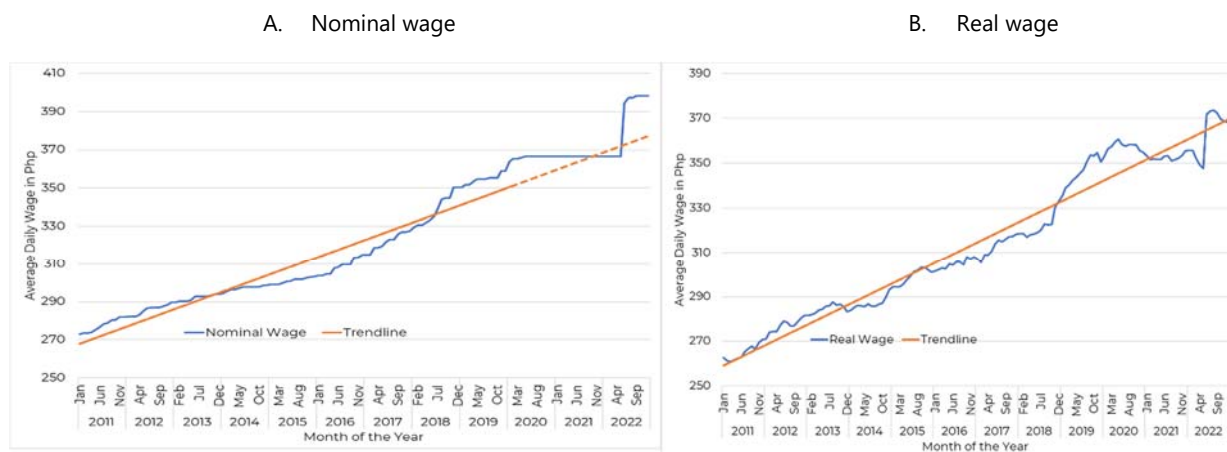
¹⁴ MIMAROPA is an acronym combination of the region's constituent provinces: Mindoro, Marinduque, Romblon and Palawan.

¹⁵ The difference in minimum wage and rate of increase across regions may be attributed to changes in the cost of living in these areas as well as factors such as employment generation and investment growth.

Comparison of average nominal and real wage against pre-pandemic trendlines

January 2011 to December 2022

Graph 10



Source: BSP staff calculations.

Real wages

Despite the increase in nominal wages, real wages have declined relative to pre-pandemic levels. Real wages largely followed their pre-pandemic trend before deteriorating from the third quarter of 2020 (Graph 10B) amid the impact of Covid-19 on businesses and households, a pause in wage petition approvals and, more recently, rising inflation pressures. Inflation was elevated during the pandemic year and accelerated towards 2022 amid supply shocks following the Russia-Ukraine conflict and higher global crude oil prices.

Wage growth and inflation

Wage adjustments and inflation outlook

The approved minimum wage adjustments in 2022 have led to an increase in the short-term inflation outlook of the BSP. Most regional wage boards announced the approved wage orders in May 2022 with effective dates ranging from June to July 2022. Incorporating the adjustment in minimum wages, the BSP's baseline inflation forecast in May 2022 for 2023 was revised upwards by 0.2 percentage points to 3.9%. The inflation forecast for 2023, however, also accounted for the higher GDP growth forecast, as well as a slight increase in international oil prices for the period.

Wages respond to past inflation

Evidence from the Philippines suggests that while minimum wage hikes, on average, increase the regional CPI, the impact is relatively small and may not result in wage-push inflation.¹⁶ Moreover, using Granger causality between wages and prices, updated estimations from a 2011 study¹⁷ on the Philippines using monthly data from 2011 to 2022 shows that it takes a month for wage changes to impact inflation before dissipating (Table 2). This confirms that minimum wage hikes in the country would most likely have a one-off impact on inflation. On the other hand, inflation was found to Granger cause wage growth. The updated results of the Granger causality test in Table 3 show that the impact of inflation on wage growth appears to persist for several months. The result that inflation causes wage growth with a lag of one month is consistent with observations in the domestic labour market wherein workers immediately start to lobby for higher wages when faced with increasing prices. It is also interesting to note that even on longer time periods, inflation still has an effect on wage growth which may be partially explained by the wage determination process in the country. Based on the omnibus rules on minimum wage determination in the Philippines, no new wage order may be issued within a period of 12 months from the current wage order taking effect. Hence, inflation one year ago effectively influences minimum wage settings for the current period.

Granger causality test – wages on inflation

Table 2

Number of lags in months	p-value
1	0.091
6	0.849
12	0.932
18	0.832

Null hypothesis: wage growth does not Granger cause price inflation.

¹⁶ See F Cacnio, "The price effect of minimum wage: evidence from the Philippines", *Bangko Sentral Review 2017*, www.bsp.gov.ph/Media_And_Research/Publications/BS2017_03.pdf

¹⁷ See F Cacnio, "Do higher wages cause inflation?", *Bangko Sentral ng Pilipinas Economic Newsletter*, no 11-01, January–February 2011, www.bsp.gov.ph/Media_And_Research/Publications/EN11-01.pdf

Number of lags in months	p-value
1	0.001
6	0.008
12	0.065
18	0.008

Null hypothesis: Price inflation does not Granger cause wage growth.

Source: BSP staff calculations.

Conclusion

With the improvement of domestic labour market conditions post-pandemic, there are concerns about the tightening in the labour market which could induce rapid wage growth and fuel inflation, thus causing wage-price spirals. While the domestic labour market appears to have little slack, the BSP expects that this would not induce rapid growth in wages as there is still ample room for employment levels to rise without significantly contributing to inflationary pressures in the near term. This is supported by the results of a study by España et al which indicates reduced sensitivity of inflation to the unemployment gap, and increased importance of other factors – inflation persistence and expected inflation – in explaining movements in inflation in recent times.¹⁸ Given this, the risk of a wage-price spiral is limited for the Philippines as inflation expectations remain within target in the medium term.

At the same time, the wage determination process in the Philippines partly limits the emergence of wage-price spirals. Minimum wages in the Philippines are set by each region's respective wage boards on a 12-month cycle, thus abating the risk of rapid wage growth. The steep wage growth in 2022 was, however, an exception, as minimum wage adjustments have been stalled for almost two years due to the pandemic. Average regional wage increases in 2022 were higher than expected – the last wage adjustments had taken place in January 2020 for most regions.

¹⁸ See V España, R Lemence, J Armas and J Tabin, "Estimating a time-varying NAIRU and unemployment gap: evidence from the Philippines", forthcoming.

Other factors that could avert the risk of a wage-price spiral in the Philippines include declining real wages and aggressive monetary policy tightening.¹⁹ As previously cited, real minimum wages in the country have been declining despite the post-pandemic rise in nominal minimum wages. This is due to inflation continuing to outpace nominal wage growth. In terms of monetary policy tightening, the BSP raised its policy rate by a total of 350 basis points in 2022 to contain persistent inflation pressures and manage inflation expectations.

Nevertheless, monetary authorities remain mindful of the risk of elevated price pressures feeding into inflation expectations and price- and wage-setting behaviour. At the same time, the strong commitment and credibility of the central bank would feed into this decision-making process and reduce the risk of medium-term inflation expectations from becoming disanchored. The current monetary policy framework of the BSP (ie inflation targeting) helps mitigate the risk of a wage-price spiral emerging. The BSP has successfully maintained a stable inflation environment over many years and has responded decisively to bring inflation within the inflation target.²⁰

¹⁹ See J Bluedron, "Wage price spiral risks appear contained despite high inflation", *IMF Blog*, 5 October 2022, www.imf.org/en/Blogs/Articles/2022/10/05/wage-price-spiral-risks-appear-contained-despite-high-inflation.

²⁰ Since the BSP's adoption of inflation targeting as its monetary policy framework in 2002, the BSP achieved its inflation target in the period 2009–2014, and in 2017, 2019 and 2020.