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Labour markets and inflation in the wake of the pandemic

Key takeaways

- *The pandemic had a significant effect on labour markets. Working hours fell sharply almost everywhere, but the drivers of these declines varied greatly across countries, depending on whether policies to protect worker-firm relationships were in place.*
- *Labour markets have bounced back faster than after recent recessions, albeit unevenly. Even in countries where unemployment rates remain high, job vacancies have risen, including in the sectors hardest hit by the pandemic. Frictions are most pronounced where policy responses did not protect worker-firm relationships.*
- *Wages are generally rising more slowly than before the pandemic. However, there is significant dispersion across sectors. Wages are rising fastest in sectors such as information & communications where the pandemic boosted demand, and also in high-contact sectors such as recreation where labour supply has receded.*
- *A generalised pickup in wage growth still seems unlikely, even though some countries and sectors have seen increases. However, a retreat in globalisation could make inflation more responsive to labour market pressures.*

Introduction

Labour market conditions deteriorated significantly during the pandemic recession. But despite the extraordinary decline in working hours at the pandemic's height, forward-looking indicators point to a faster-than-usual labour market recovery, at least in advanced economies (AEs). As a consequence, concerns about widespread scarring have receded even as the extent of needed labour force reallocation and the presence of hiring frictions become more evident. In this Bulletin, we review global labour market developments since the start of the pandemic and ask if the resulting shifts in labour demand and supply, together with other pandemic-induced changes, will put upward pressure on wages and inflation.

Labour markets during the crisis

The early stages of the Covid-19 pandemic saw an unprecedented global decline in total working hours. During the broad lockdowns of mid-2020, they dropped by between 10 and 20% in the major AEs, much more than in previous recessions (Graph 1). The decline in many emerging market economies (EMEs) was even larger.

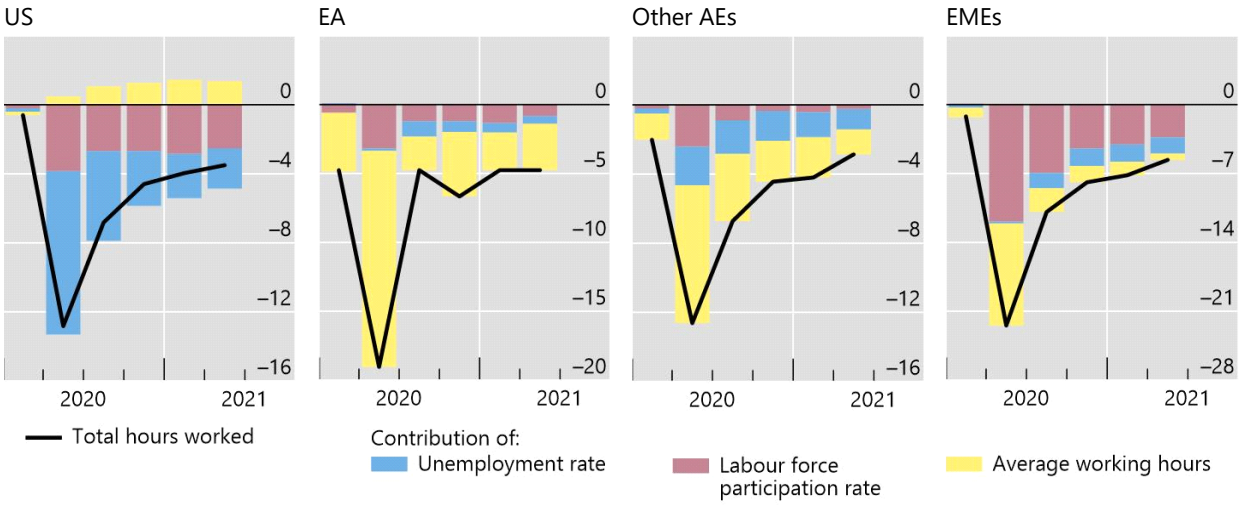
The drivers of this decline in total working hours differed across countries. In some, such as the United States and Canada, the reductions largely reflected higher unemployment. In others, such as Japan and many European countries, widespread use of furloughs and short-time work arrangements saw lower average working hours play a bigger role. Lower labour force participation (LFP) accounted for an

especially large share of the adjustment in many EMEs. In Brazil, Mexico and South Africa, participation rates initially dropped by between 4 and 12 percentage points. More generally, employment in the informal sector fell by more than in the formal sector in many EMEs. This stands in contrast to the sector's typical role as a buffer during downturns.[1] This time the informal sector was especially vulnerable, given its concentration in contact-intensive activities.

Total working hours have rebounded sharply, but remain below pre-pandemic levels, and in most countries they lag the recovery in output.

Working hours declined everywhere, but in different ways[1]

In per cent — Graph 1



[1] Changes relative to Q4 2019; for the regions, simple averages. Other AEs = AU, CA, GB, JP and SE. EMEs = CL, KR, MX, PL and ZA. Definitions differ among economies.

Sources: ILO; Datastream; national data; BIS calculations.

Differing policy responses account for part of the differences in labour market outcomes. Among the AEs, countries fell into two categories. In the first, which included many countries in Europe, governments propped up employment through short-time work schemes, in some cases covering more than 30% of the workforce at the crisis peak. In some jurisdictions, these schemes were extended well beyond the initial phase of the pandemic. These countries saw only a modest increase in unemployment – much smaller than would have been expected based on historical relationships given the collapse in output. In the second category, notably the United States and Canada, governments relied less on such schemes, so that unemployment rates rose much more, in line with historical relationships. That said, and in stark contrast to past recoveries, unemployment rates in these countries have fallen quickly, defying the "jobless recovery" pattern familiar after recessions in recent decades. The rebound in labour markets reflects the recession's unusual nature, with artificially suppressed activities and few corporate bankruptcies.

Wage developments suggest the crisis hit labour demand and supply

Wages have grown more slowly than before the pandemic in most countries, in line with the sharp deterioration in labour market conditions (Graph 2, left-hand panel).[2] A notable exception is the United States, where some measures even pointed to strong wage growth. This, however, was driven largely by

[1] See Ahn et al (2019).

[2] Budianto et al (2021).

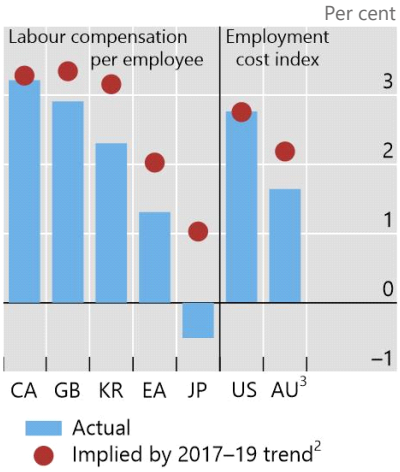
composition effects, as low wage earners were disproportionately likely to lose their jobs in the pandemic.[3] Measures that hold labour force composition fixed did not show such an acceleration.

Wage growth has shown a large dispersion across industries. Wages have grown the fastest in the expanding IT sector, but they have also increased faster than average in some hard-hit industries, most notably recreation (Graph 2, centre panel). One possibility is that the supply of labour has changed, not just demand for it, eg workers could be more reluctant to work in industries perceived as risky. Econometric evidence supports the hypothesis that developments in labour supply and demand both influenced sectoral wages growth. Among low-contact industries, faster employment growth tended to go together with faster wage growth, consistent with higher demand. However, in high-contact ones, wages increased while employment declined, which suggests a pull-back in labour supply and short-term frictions in rehiring after large layoffs (Graph 2, right-hand panel).

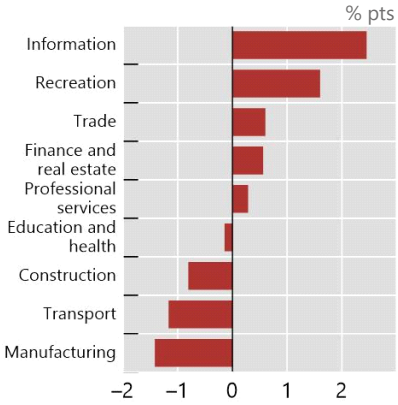
Wages during the pandemic

Graph 2

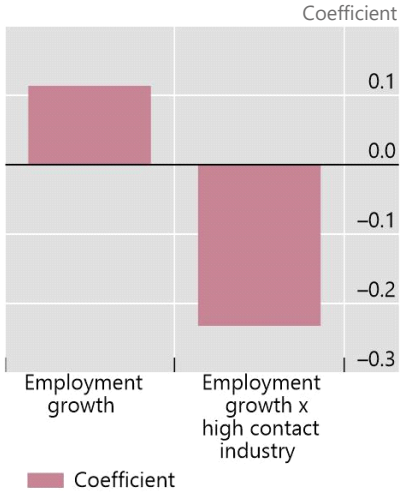
Wage growth vs pre-pandemic trends[1]



Relative wage growth since the start of the pandemic[4]



Labour demand drives wage growth in low-contact industries, but not in high-contact ones[5]



[1] Annualised growth between Q4 2019 and Q2 2021. [2] Annualised growth implied by extrapolating the linear trend of each series calculated between Q1 2017 and Q4 2019. [3] Wage price index. [4] Industry wage growth since Q4 2019 (in %) minus economy-wide average. Average across AU, CA, EA, GB, SE and US. [5] Coefficient estimates from model: $\%\Delta wages_{i,j} = \alpha_j + \beta \%\Delta employment_{i,j} + \gamma High\ contact + \eta \%\Delta employment_{i,j} * High\ contact + \epsilon$, where $\%\Delta wages_{i,j}$ is the growth in wages in industry *j* and country *i* since Q4 2019, $\%\Delta employment_{i,j}$ is the growth in employment in that country and industry since Q4 2019 and *High contact* is a dummy taking a value of 1 if an industry relies on a high proportion of high-contact occupations, ie those ranked in the top third of industry riskiness by M Samaddar, U Londhe, D Levin and D Bachman, "How risky is your industry? Industry risk when operating during the Covid-19 Pandemic", *Deloitte Insights Economic Spotlight*, June 2020. Model estimated using data from AU, EA, GB, SE and US.

Sources: ILO; OECD; national data; BIS calculations.

Labour markets are recovering, albeit unevenly

Labour markets are recovering. Hours worked have increased and, in countries where they rose, unemployment rates have fallen much more than after previous recessions. But the process has been far from uniform across indicators. Job vacancy rates have risen sharply (Graph 3, left-hand panel). In the United States, Canada and Australia, vacancies are at historical highs, especially in hard-hit sectors (centre panel). This contrasts starkly with the aftermath of the Great Financial Crisis, where vacancies in industries

[3] These composition effects, present in any business cycle, were particularly strong during the pandemic because of the unusually large and uneven changes in employment.

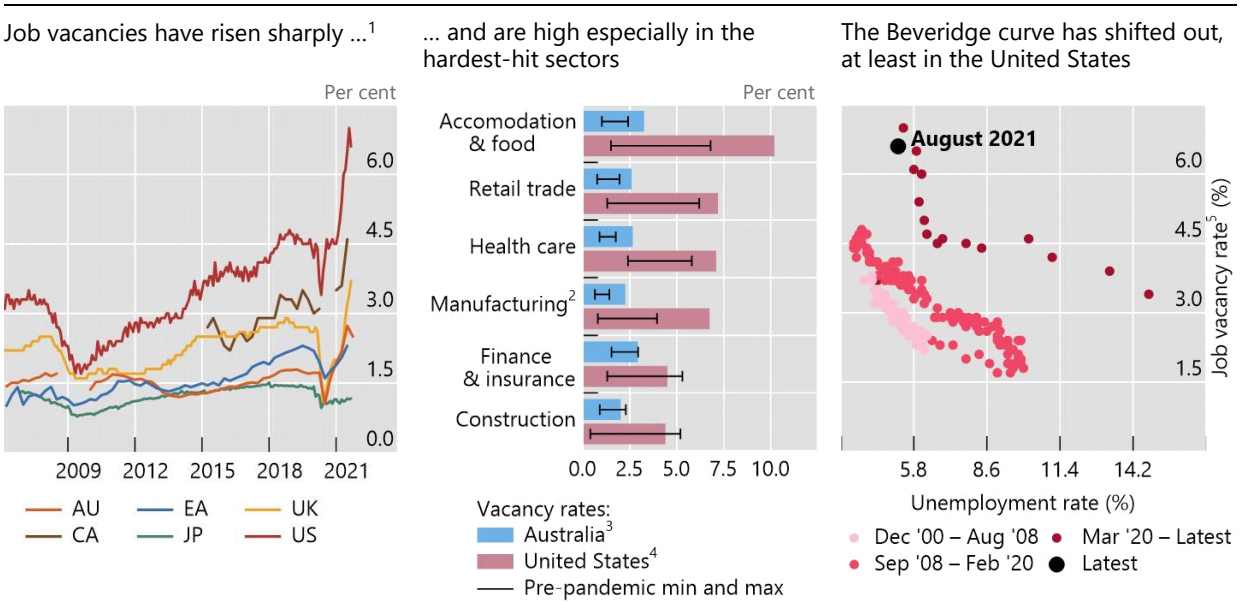
that had experienced the largest job losses, such as construction, remained depressed for several years until excess capacity was reabsorbed.

High vacancy rates may convey different signals. On the one hand, they can be a sign of healthy labour demand. On the other hand, they also suggest that labour supply is lagging or poorly matched with the industries where demand is highest. Frictions appear most pronounced in countries that did not maintain firm-employee relationships as strongly and where firms in sectors that shed large numbers of workers during the recession are competing to expand their workforces simultaneously.

One way to gauge the role of demand- and supply-side factors in explaining changes in job vacancies is to plot the relationship between job vacancies and unemployment rates – ie the Beveridge curve. Changes in labour demand tend to cause shifts *along* the Beveridge curve, with stronger labour demand leading to lower unemployment rates and higher job vacancies. However, in countries such as the United States, the Beveridge curve looks to have shifted out since the start of the pandemic (Graph 3, right-hand panel and Appendix Graph A2). This means that many more job openings are on offer than there were in the past for the same level of unemployment, suggesting that the labour market is matching workers to jobs less efficiently than it was before the pandemic. Such a shift is not yet evident in most jurisdictions where worker-firm relationships remained in place.

Forward-looking labour market indicators are positive

Graph 3



[1] Quarterly data for AU, CA and EA; monthly otherwise. For US, total non-farm; for EA, industry, construction and services (except activities of households as employers and extra-territorial organisations and bodies). Overall, job vacancy rate computed as ((number of job vacancies) / (number of occupied posts + number of job vacancies))*100. For UK, job vacancy ratio computed as three-month rolling average ratio of vacancies per 100 employee jobs. [2] For the US, simple average between "Durable goods manufacturing" and "Non-durable goods manufacturing". [3] Q3 2021. [4] August 2021. [5] Total non-farm job vacancy rate computed as ((number of job vacancies) / (number of occupied posts + number of job vacancies))*100.

Sources: Datastream; IHS Markit; Our World in Data; national data; BIS calculations.

Implications of the recovery for wage growth and inflation

A key question is whether the speed of the recovery and the degree of needed reallocation across firms and sectors will lead to significant and generalised upward pressure on wages and inflation.

Pre-pandemic measures of slack may offer a poor guide for assessing labour market conditions. On the one hand, more generous unemployment benefits could have raised workers' reservation wages,

forcing firms to pay a premium to hire new employees. On the other hand, the widespread use of furlough schemes and other support measures means that current unemployment rates likely understate the degree of labour market slack in some countries.

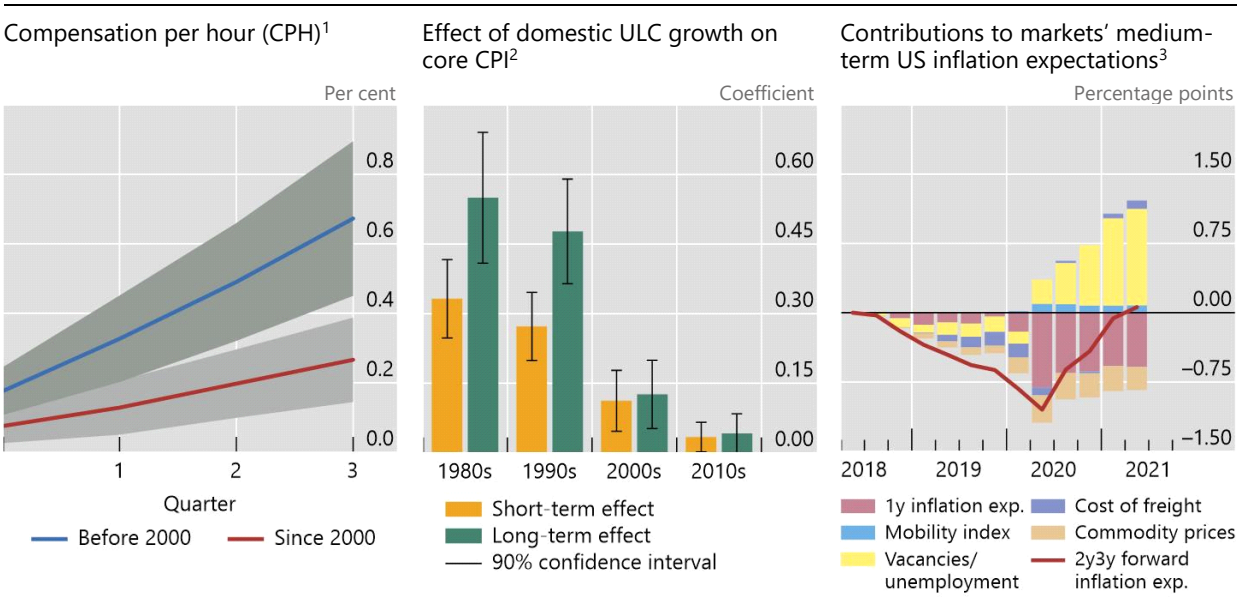
On balance, a strong pickup in aggregate wage growth seems unlikely in the short term, although there have been increases in some countries and sectors.[4] This said, pandemic-induced changes of a more structural nature could affect wage growth in the longer term. Sectoral reallocation means that aggregate labour market indicators could overstate the degree of slack, particularly if the skills of workers do not match those required by firms in expanding industries.

In some countries, restrictions on global migration could put upward pressure on wages in specific industries. Meanwhile, disruptions to global value chains could strengthen the relationship between domestic labour market conditions and inflation. Recent events have revealed the fragility of these chains and could prompt some firms to re-shore part of their production. If substantial, such re-shoring could increase the bargaining power of local workers and make wages more sensitive to domestic slack again, as was the case before global economic integration gathered momentum from the 1990s (Graph 4, left-hand panel).

Changes in Phillips curves, pass-through of domestic labour costs to inflation and inflation expectations

Responses to 1 percentage point increase in the output gap or unit labour cost (ULC) and inflation expectations

Graph 4



[1] Coefficients on output gap from the equation $lcph_{it+h} - lcph_{it-1} = \alpha_i + \beta_t + \phi\, outputgap_{it} + \delta\, d(lcph_{it-1}) + \rho\, \pi_t^e + \varepsilon_{it}$, where $lcph_{it} = 100 * \ln(cph_{it})$, 16 OECD economies; output gap: OECD estimate; π_t^e: next-year Consensus inflation expectations; NEER: nominal effective exchange rate; sample period: Q1 1985–Q1 2021, depending on data availability; cumulative impulse responses for h=0 to 3. [2] Based on 21 advanced economies. Estimated for coefficients of the equation $[\ln(\text{coreCPI}_{i,t}) - \ln(\text{coreCPI}_{i,t-4})] = \rho.\ [\ln(\text{coreCPI}_{i,t-4}) - \ln(\text{coreCPI}_{i,t-8})] + \beta[\ln(\text{ULC}_{i,t}) - \ln(\text{ULC}_{i,t-4})] + \varepsilon_{i,t}$ with country fixed effects. [3] Cumulated contributions to the change in markets' inflation expectations at two- to five-year horizons (2y3y forward) since Q2 2018. Calculations using estimates from rolling-window regressions for a sample of seven advanced economies: $F2y3y_{it-1} = \alpha_{iT} + \beta_{1T}\,\text{InflationSwap1y}_{it} + \beta_{2T}\text{Mobility}_{it} + \beta_{3T}\text{CostFreight}_t + \beta_{4T}\text{CommodityPriceInflation}_t + \beta_{5T}\text{Vacancies/Unemployment}_{it} + \varepsilon_{it}$ for t= T − 60 days, …, T with T = 15jun2018, …,15jun2021.

Sources: Consensus Economics; Datastream; OECD; BIS; Bloomberg; Google Community Mobility Reports; BIS calculations.

[4] Even the buoyant labour market conditions before the pandemic did not generate very strong wage growth in major economies.

Even if aggregate wage growth does accelerate, the implications for inflation are unclear. On the one hand, domestic labour costs had little influence on inflation before the pandemic. Indeed, this influence has declined steadily since the 1980s in AEs (Graph 4, centre panel), due notably to global integration and the role of greater competition in the form of imports from manufacturing-based EMEs – which led to much greater market contestability.[5] On the other hand, one cannot rule out the possibility that the pass-through between labour costs and inflation could strengthen, particularly if global integration goes into reverse as firms revamp their supply chains.

There are signs that recent labour market developments may have influenced medium-term inflation expectations in financial markets (Graph 4, right-hand panel). In the United States, for example, the increase in option-implied inflation expectations has been positively correlated with the rise in job vacancies, in contrast to other potential supply side cost-push factors such as freight, commodity prices and pandemic-related mobility restrictions. Even though confounding technical factors may have been at work and blur the picture, notably in Q2 2021,[6] such a positive correlation highlights the risk that longer-term inflation expectations will become less anchored and lead to second-round effects on actual inflation. Such effects could occur if labour market frictions turn out to be larger and more persistent than anticipated.

Conclusion

The pandemic has strongly affected labour markets. Although in many countries the labour market has recovered much more quickly than after previous recessions, aggregate conditions remain weaker than they were before the pandemic. At the same time, labour market outcomes vary significantly across countries and sectors, reflecting differences in policy settings as well as shifts in both labour supply and labour demand. In countries where policy settings did not protect employer-firm relationships early in the pandemic, labour market frictions have emerged, as large numbers of firms in hard-hit industries seek to rebuild their workforces simultaneously.

Ongoing sectoral reallocation could be a source of wage pressures. Furthermore, disruptions to global value chains could strengthen the relationship between domestic labour market conditions and wages, and between wage growth and inflation. There is also a risk that long-term inflation expectations become less well anchored, leading to second-round effects on inflation.

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[5] See Kohlscheen and Moessner (2021).

[6] These technical factors include money market funds' increased usage of the Federal Reserve's overnight reverse repo facility in Q2 2021 (see BIS (2021)), which by propping up treasury yields may also explain part of the dynamics of option-implied measures of inflation expectations.

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