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Labour Market Indicator Dashboard

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The unemployment rate is one of the headline economic indicators used to assess the state of an economy. Since the onset of the pandemic, there have been a number of difficulties in interpreting unemployment data and other labour market indicators given that the measurement methodologies were not designed to reflect distortions introduced by the pandemic, which remain ongoing (Byrne and Keenan, 2020). Aside from the pandemic-related distortions, a potential drawback in only using the unemployment rate to assess the labour market is that it does not capture movements of workers outside of the labour force, which has driven the recent expansion in employment levels (Boyd et al, 2022). This employment growth was not mirrored by a proportionate fall in the unemployment rate, but rather it occurred in tandem with large changes in the labour force participation rate. As the labour market is multifaceted with various measures gauging specific dimensions of activity, it is not uncommon for different indicators to exhibit conflicting signals. This *Box* presents a dashboard of 27 indicators covering several dimensions of the labour market including employment, unemployment, participation, vacancies and earnings, and their current deviation relative to an estimated long-run trend to provide a wider assessment of the current labour market.

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A Hodrick-Prescott (HP) filter[2] is applied to the log form of each seasonally-adjusted labour market indicator series from Q1 1998 to Q2 2022, where available, to extract the trend of each series.[3] A Z-score is then calculated for each variable to assess how many standard deviations the latest observation is below or above the respective estimated trend to potentially signal a tighter or looser labour market. For instance, if the unemployment rate indicator shows a negative value, then the current actual rate is below the estimated trend. If measures of labour market activity such as total hours worked or labour force participation rates (LFPR) return positive values then they are indicating values above the estimated trend. As positive and negative values within the dashboard can be suggestive of a well-functioning labour market, indicators in blue are those where the deviation from trend indicates a tighter labour market, while those in orange suggest weaker conditions.

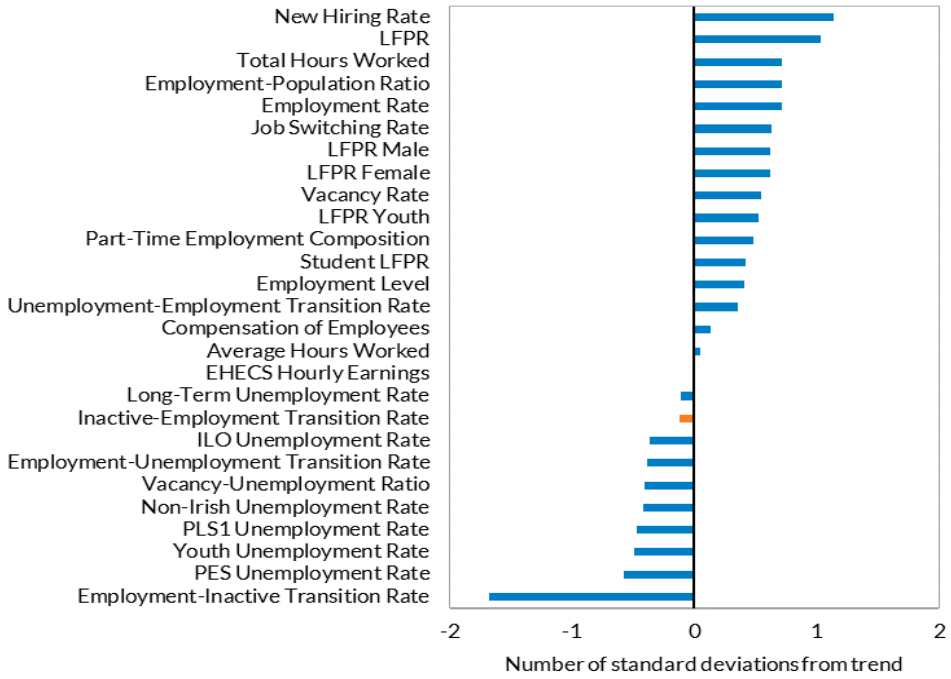
The dashboard results for Q2 2022 shows the new hiring rate and the job-switching rate above trend. Activity measures such as LFPR for each gender and demographic group all display positive values (Figure 1). A complementary narrative is evident from the negative values shown in the various measures of labour slack such as the unemployment rate and the long-term unemployment rate. The vacancy-unemployment rate, which indicates the number of unemployed persons available per current job vacancy in the economy, displays a negative value reflecting the elevated degree of labour demand as the pandemic recovery continues across sectors. Measures of income such as EHECS Hourly Earnings and Compensation of Employees appear relatively close to their trend values with little evidence yet of stronger than expected wage developments. Earnings and wages may be a lagging indicator with respect to ongoing inflationary developments and mismatches in labour supply and demand so it is imperative to continue monitoring these developments. The inactivity to employment transition ratio was the only indicator to record a value that would suggest weaker than estimated labour market conditions; however, this may reflect a normalisation of the series following several quarters of large movements into employment by inactive persons.

[2] This is a two-sided test using standard lambda value of 1,600. There has been marked criticism of the HP filter by Hamilton (2017) related to fitting of trends despite the existence of possible structural breaks that may occur in long-run data. An alternative Hamilton filter technique uses linear projections to derive deviations from trends. A number of studies compare the two techniques with the endpoint stability favouring the HP process (Astofli et al, 2019).[2] Both techniques were originally estimated for this analysis with the HP filter selected as the optimal.

[3] Where data are available, Q1 1998 is the starting point. Vacancy rate series derived from EHECS data begin in Q1 2008.

Majority of indicators point to the labour market performing above trend

Figure 1: Labour Market Indicator Dashboard (Q2 2022)



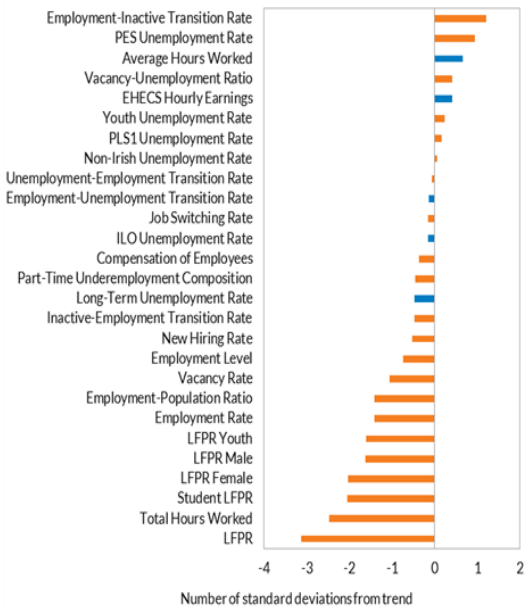
Source: CSO and author's calculations
Note: Blue bars indicate tight labour market conditions while orange bars signal weakness in an indicator

The HP filter approach is repeated for two contrasting recent periods, one just prior to the pandemic and the other at the height of the health restrictions, in order to highlight how the dashboard can change depending on the state of the labour market at different points in time. During the pandemic period, the majority of the variables indicated weakening conditions (Figure 2). Labour activity measures such as total hours worked and youth LFPR were notably below the calculated trend. This is expected due to the impact of health restrictions on various sectors of the economy while younger workers experienced a disproportionately greater separation from employment than other age groups (Coates et al, 2020). Average hours worked appears above trend due to the large compositional effects that occurred during this period where many part-time workers transitioned out of employment altering the breakdown of the sample. Measures of labour slack and transition rates from employment towards both unemployment and inactivity appear expectedly above the calculated trend. The period prior to the pandemic was consistent with an economy approaching levels of full employment as the unemployment rate had then declined to below 4.5 per cent. The labour market was on a steady recovery from the aftermath of the global financial crisis and, as such, the standard

deviation measures are notably lower than the pandemic period. (Figure 3). The job-switching rate was notably above trend, while the transition rate of workers towards unemployment was below estimated values.

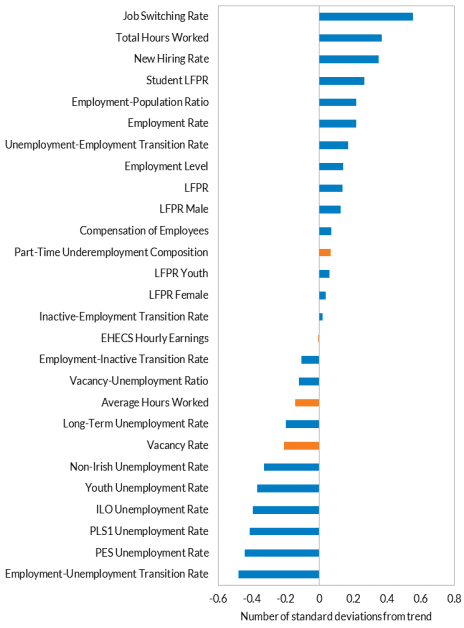
Initial pandemic shock reduced labour activity substantially

Figure 2: Labour Market Indicator Dashboard (Q2 2020)



Source: CSO and author's calculations

Figure 3: Labour Market Indicator Dashboard (Q4 2019)



Source: CSO and author's calculations

Note: Blue bars indicate tight labour market conditions while orange bars signal weakness in an indicator

As many labour market variables begin to normalise in the coming quarters following pandemic-related distortions and the effect of support schemes, the magnitude of the deviations from trend would be expected to reduce with the overall dashboard returning closer to the position in Q4 2019. A number of labour market indicators such as the female LFPR have exceeded their long-term trend following the disruption during the pandemic period (Boyd et al, 2022), though it may be too early to state the existence of structural breaks in labour market indicators caused by changing working practices post-pandemic. While headline or individual indicators may be limiting in the level of detail provided, observing a wider set of variables on labour activity and measures of slack can be important for many purposes. These include potentially recognising the need for targeted labour market programmes for particular cohorts if they consistently show a divergent trend from other groups and identifying the potential for upward wage pressures arising from a disequilibrium between labour demand and supply indicators.