

## Feeling the Heat? – Assessing Labor Shortages in the Euro area



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*Labor shortage in the Euro area – as measured by the Beveridge curve – has reached its highest level in the observable period. Prominently discussed sectors like accommodation and food services though are still way below pre-crisis employment. The demand shift from services to manufacturing appears to be the major driver arguably exacerbated long-run trends driven by skill-biased technological change. On the one hand, many people have left the labor force. Over-proportionally they are male, low-skilled and likely to have a foreign citizenship. Many of them are unlikely to (ever) return. On the other hand, many highly skilled employees that had been at the fringes of the labor market (young, females) could be drawn into it. Both developments might have a large element of persistence. As a result, it can be speculated, that the impact on wage pressures will be hump-shaped, i.e. increasing in the short run while alleviating in the long run.*

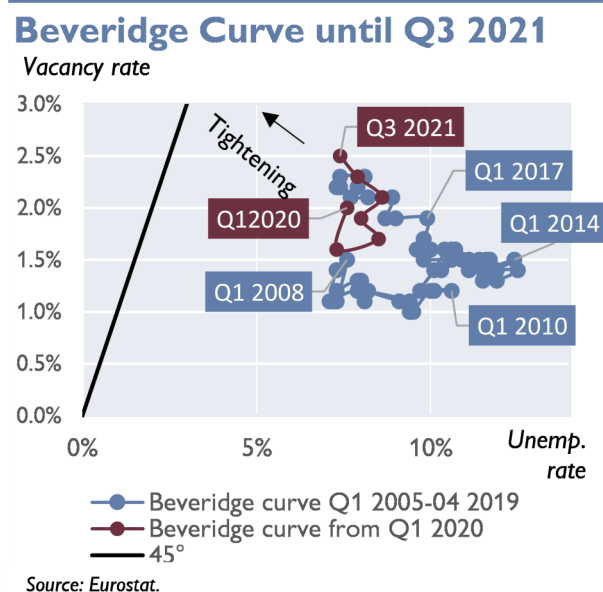
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## We're hiring! Somebody interested? Anyone? – Labor shortages in the EA

The Covid-shock took European labor markets by surprise. The impact was immediate, unpredictable and led to an unprecedented and immediate fall in employment. Now that European economies are adapting better to the new situation anecdotal evidence of labor shortages is on the swelling. But are shortages sizeable quantitatively? Are labor markets really tightening? From a central banking perspective this would pose a considerable problem because an overheating labor market inevitably leads to upward pressure on wages. In the face of unexceptionally high inflation rates this could have the potential to kickstart a price-wage spiral, irrespective of the fact that current inflation is mainly driven by base effects. If this feeds through prices again inflation persistence would be the result.

To assess the quantitative importance of shortages let me take a closer look at the well-known Beveridge curve; the usual quick fix to get a feeling about labor supply tightness. This curve – plotting the unemployment rate against the vacancy rate<sup>1</sup> – is depicted in the right-hand chart. The 45° line in the chart (depicting 1=1, 2=2, ...) represents equality of vacancies and unemployed people. (Please note that the scaling of the x and y-axis is different) Consequently, the closer the Beveridge curve gets to the line the tighter the labor market becomes. Though, it is important to note that labor shortages arise way before the black line is reached due to frictional unemployment<sup>2</sup>. Looking at the chart thus makes apparent that the Beveridge curve has (just) come closest to the 45°-line if we consider the period since Q1 2008. Further, the increase in vacancies was exceptionally steep since the third quarter 2020, implying that the tightening has occurred in a flash. The quick answer to the question raised above – are labor markets tightening – thus is, yes, they are.



However, it is crucial to understand what is driving this development to be able to get a grasp on the implications for monetary policy makers. Is this a long run phenomenon? Has the Covid-shock permanently altered the behavior of employees? In order to get some intuition of this I will take a quick look at both elements determining the Beveridge curve: the demand for labor (represented by 'the vacancy rate' in the Beveridge curve) as well as the supply of labor (represented by 'the unemployment rate').

<sup>1</sup> The vacancy rate is measured as the rate of open position in relation to all employees.

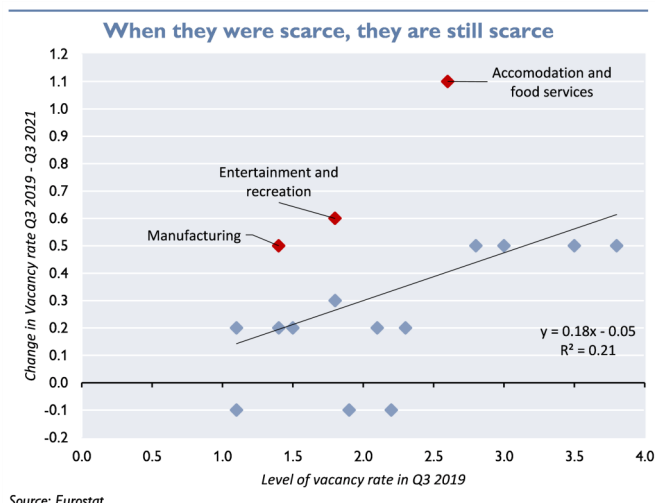
<sup>2</sup> Frictional unemployment refers to a failure of looked for skills to the skills available amongst the unemployed or spatial incompatibilities between available positions and residences of the unemployed. The distance of the Beveridge curve to the 'equality' line in the Euro area always has been substantially larger than in the US due to structural reasons and institutional factors.

## Want the head chef to fix your network? – Some key drivers of vacancy rates

Let me start with the demand side of the equation by means of a quick scatter plot. The right-hand chart plots the increase in vacancy rates against their own pre-crisis levels. The basic story here is, that those sectors that had high vacancy rates before the crisis have experienced the highest increase over the crisis. This is just a typical picture of a swift recovery in which new positions pop up at a faster rate than they can be filled. Matching simply takes time and it should hardly come as a surprise that during a more than exceptional crisis the problem is exceptionally large.

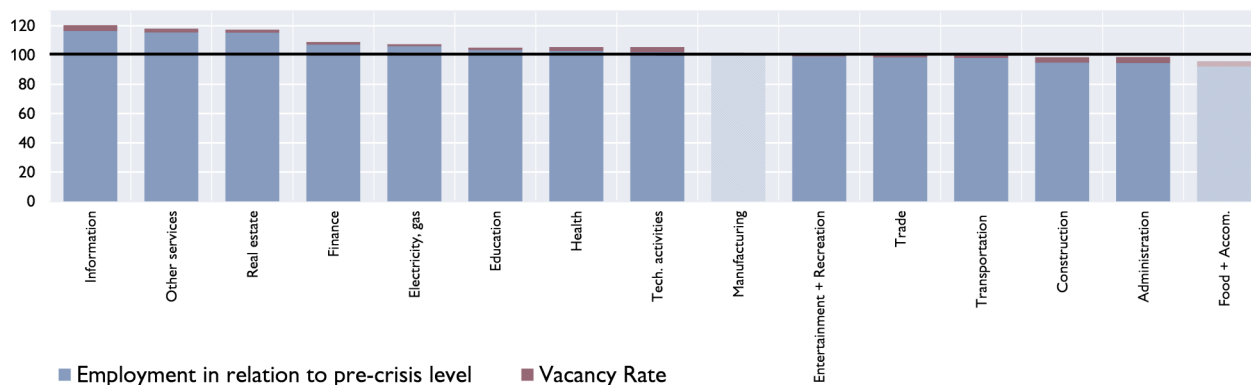
However, there is more to the story than that.

Three sectors, accounting for a total of roughly 20% of all employees clearly stand out. *Accommodation and Food Services*, *Entertainment and Recreation* and *Manufacturing*. These sectors are obvious outliers as they have experienced an over-proportional increase of vacancies.<sup>3</sup> To understand what is going on in these sectors I will take a brief look at the sectoral topography of the crisis. Most difficult, but arguably most important<sup>4</sup> is the assessment of the situation in *Manufacturing*. The most likely explanation is the secular demand-shift from service to manufacturing induced by the crisis. The sector already was about to reach pre-crisis levels of employment in Q2 2021, and it might be speculated that it is not uncertainty that is slowing recruitment but rather skill mismatches. If the shift in demand is here to stay the labor-demand overhang likely will be of a more permanent nature.



### Sectoral topography of crisis-effects

Pre-crisis level = 100



Source: Eurostat.

The situation is different for *Accommodation and Food Services* and *Entertainment*. Employment in *Accommodation and Food Services* in Q3 2021 still was way below its pre-crisis level. Yet despite all the idle

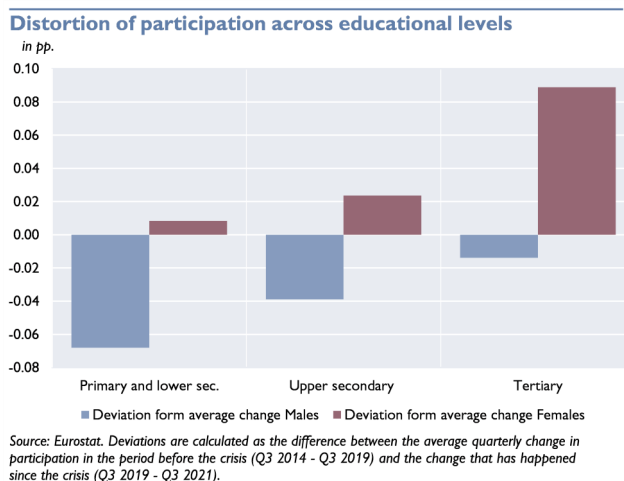
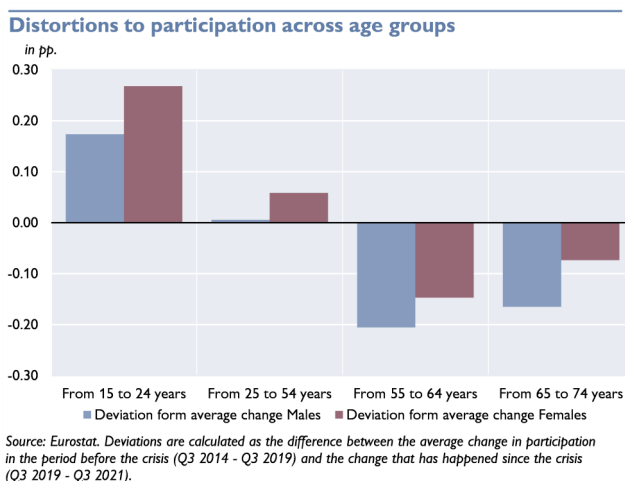
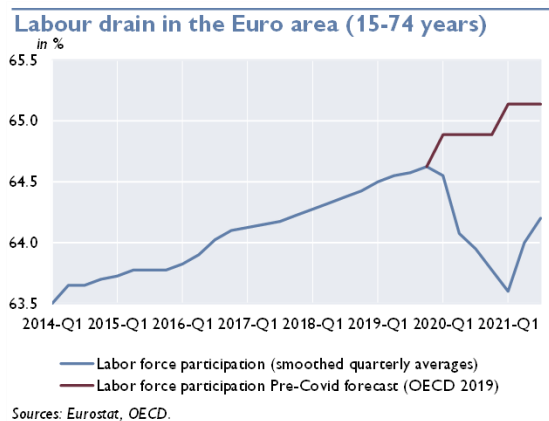
<sup>3</sup> Note the regression line in the scatter clearly falls short of establishing any hard boiled prove and is based on a very small set of data points. Nonetheless it is noteworthy that  $R^2$  more than doubles when excluding the outlier sectors implying that almost half of the change in vacancies can simply be 'explained' by their pre-crisis level.

<sup>4</sup> While *Entertainment and Recreation* and *Accommodation and Food Services* account for roughly 6% of all employees *Manufacturing* accounts for 15% followed by *Wholesale and Retail* (13%) and *Health Services* (11%).

people in the labor force that have experience in this sector, only few are willing to return.<sup>5</sup> This is almost certainly driven by pandemic-related uncertainty and looming lock-down scenarios across Europe. This business environment greatly discounts job security. This situation likely also is responsible for *Entertainment* in which employment only recovered somewhat in Q3 and that together with *Accommodation and Food Services* had the way highest standard deviation in its employment levels since the start of the pandemic.

### Service (temporarily?) unavailable – Will the workers return?

This takes me to the supply side. Aggregate employment as well as participation is still significantly below pre-crisis levels. The latest readings of Euro area participation rates are down to levels that already had been surpassed in mid-2016 and still more than 1pp. below the pre-Covid forecast scenario (see chart at the right-hand side). Still the vacancy rate came in at a record level in Q3 2021. Where did all the workers go? Will they eventually return?



There are several driving factors that will be helpful in finding an answer to this question. First, let me investigate age (left hand chart above). Many older employees left the labor force, and there is evidence that job finding probabilities decrease with age. Many of those who have left are thus unlikely to return, countering the long run trend of increasing old-age participation. This likely will exacerbate labor market shortages. Though, there are countering factors. The permeability for younger people apparently has increased, countering the fact that youth unemployment rates usually are substantially elevated in the aftermaths of labor market shocks.

This takes me to the second key take-away. Activity of highly educated young persons of both sexes as well as that of highly educated females in their prime working age (25-54 years) has significantly increased. In this regard the crisis worked as catalyst of a long-run trend driven by ‘skill-biased technological change’. At the same time the number of low-skill male workers (with a high likelihood of holding a foreign citizenship) exiting the

<sup>5</sup> In principle it would be possible that many people that have left the industry are not idle but changed sectors. This, however, is unlikely to have happened at an aggregate level as overall employment is still significantly below pre-crisis levels and as the sectors that have expanded during the crisis are medium to high-skill sectors.

labor market is numerous. Given that this development has been going on for a while (albeit at a slower pace than in the aftermath of the Covid-shock) it is unlikely that it will be completely reversed after the crisis.

## Conclusion

Above I have argued that it is key for monetary policy to understand whether labor shortages are transitory or permanent. The answer is two-fold. Many of the exits of low-skilled males as well as some shifts in sectoral composition of demand are likely to turn permanent. However, a thus far untold story of the Covid-crises is that many highly skilled employees that had been at the fringes of the labor market (young, females) could be drawn into it. Both developments might have a large element of persistence. As a result, it can be speculated, that the impact on wage pressures will be hump-shaped, i.e. increasing in the short run while alleviating in the long run.

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