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Research Report

Pressure on the labour market during the pandemic

Economic Memo, No. 2

Provided in Cooperation with:

Danmarks Nationalbank, Copenhagen

Suggested Citation: Bess, Mikkel; Hviid, Simon Juul; Grenestam, Erik; Rozsypal, Filip (2022) : Pressure on the labour market during the pandemic, Economic Memo, No. 2, Danmarks Nationalbank, Copenhagen

This Version is available at:

<https://hdl.handle.net/10419/261828>

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DANMARKS NATIONALBANK

16 MARCH 2022 — NO. 2

Pressure on the labour market during the pandemic

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Pressure on the labour market during the pandemic

Abstract

While the pandemic initially halted the ongoing upswing of the Danish labour market and reduced employment substantially, the recovery has taken place at an unprecedented pace, which inevitably has led to substantial pressure on the labour market. Transitory pandemic-related labour demand can account for employment of at least 33,000 persons, which is expected to fade as the pandemic loosens its grip on society. During the pandemic, the majority of the movements on the labour market have occurred among marginal jobs such as secondary and low-time jobs, which are mostly held by younger workers and workers in service sectors, while full-time jobs, occupied by prime-age workers, have increased throughout. Over the same period, job-to-job transitions have been muted; however, job finding of the unemployed has been elevated, and cross-sectoral movements have been slightly higher than usual.

High pressure on the labour market

The outbreak of Covid-19 and several partial lockdowns of the Danish and international economy since March 2020 have affected labour markets substantially. However, two years after the first lockdown, fears of a prolonged economic recession and longer lasting effects on the Danish labour market, have not materialised. On the contrary, employment has been increasing at an unprecedented pace, reaching an all-time high, and the number of unemployed persons has moved close to the level seen prior to the Great Financial Crisis, see Chart 1.

Unemployment has reached levels last seen prior to the Great Financial Crisis

Chart 1

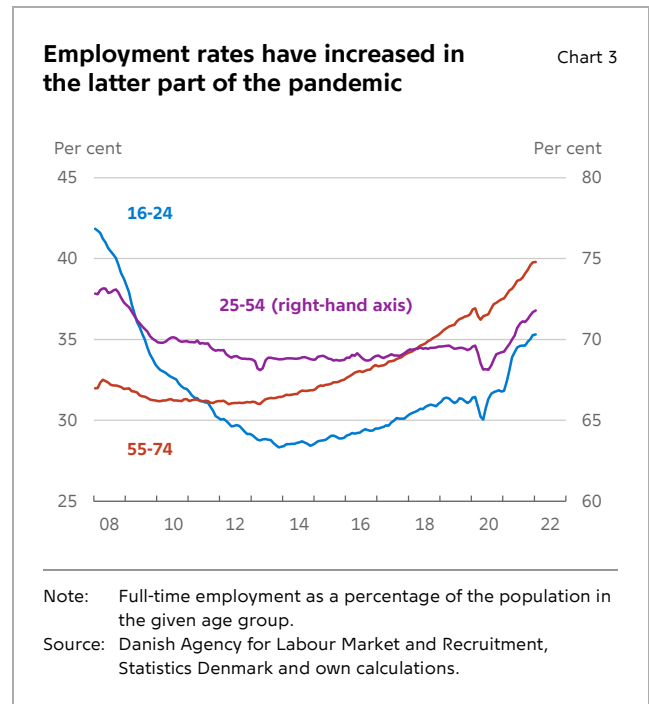
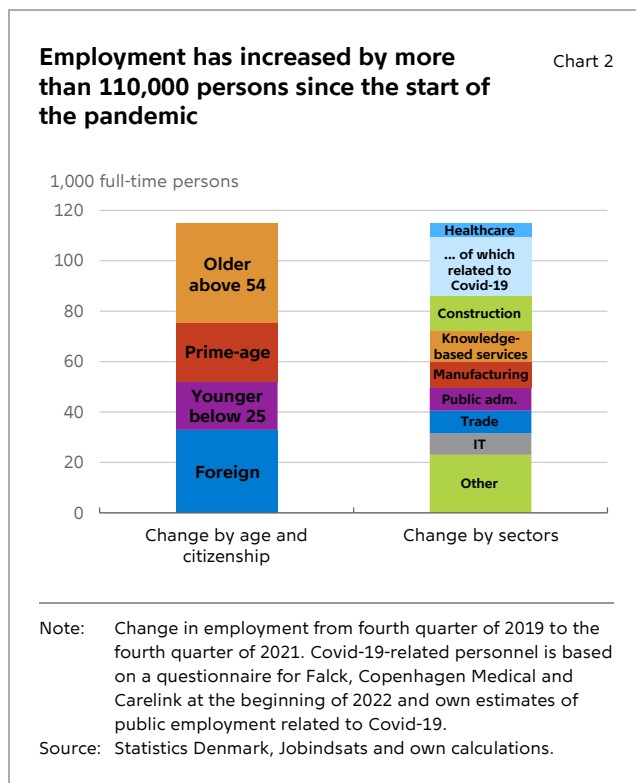


Note: Seasonally adjusted.
Source: Statistics Denmark.

Total employment has increased by 115,000 persons since the time prior to the pandemic, see Chart 2. The increase is relatively broadly based across sectors; however, healthcare and to some extent construction have been pulling ahead.

Out of the total increase in employment, an increase of almost 40,000 persons has occurred among older

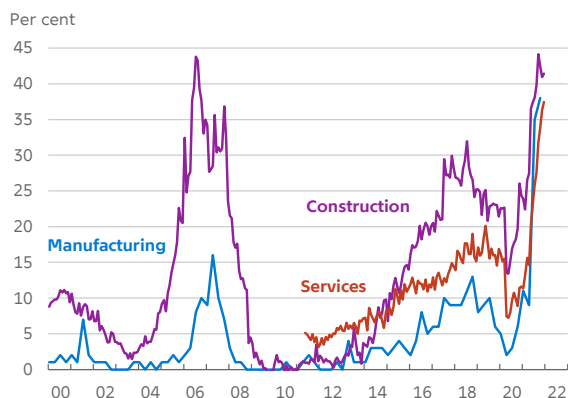
persons, i.e. above 54 years. Also, younger people aged below 25 have to some extent entered the labour market, and compared to the fourth quarter of 2019, employment has increased by 20,000 persons in that age group. That represents the largest increase in the employment rate across age groups, see Chart 3. Among the prime-age population (aged 25-54), employment has increased by roughly 23,000 persons. Additionally, employment of individuals without Danish citizenship has increased substantially over the period by more than 33,000 individuals. This increase primarily occurred among resident foreigners and in particular women who prior to the pandemic had relatively low labour market participation rates.



Since autumn 2021, more firms than prior to the pandemic have reported labour shortages as a factor limiting production, see Chart 4. While this measure has been a good indicator for labour market pressure prior to the pandemic, more caution should be applied during the pandemic. In the initial phase of the pandemic, reported labour shortages fell, but have subsequently risen rapidly. In particular during autumn 2021, reported labour shortages rose beyond the levels last seen prior to the Great Financial Crisis. As many firms have increased labour demand simultaneously since summer 2021, the speed itself could potentially have made it harder than usual to find qualified labour during a period when unemployment is plummeting. However, measures taken to contain the virus can have had adverse implications for workers and firms during the partial lockdowns. Isolation of infected persons and to a varying degree their close contacts may have affected firms' ability to produce despite the fact that remote work has become more widespread in some sectors than it was before the pandemic. However, labour shortages picked up prior to the latest wave of infections, and other factors driving labour demand are likely to be relevant explanations.

Many firms report labour shortages as a production limitation

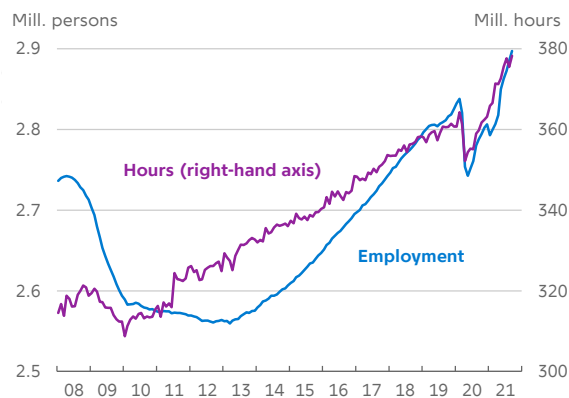
Chart 4



Note: Share of firms reporting that labour shortages are limiting production.
Source: Statistics Denmark.

Employment and hours fell immediately with the pandemic

Chart 5



Note: Employment is based on positive reported hours in the *beskæftigelse for lønmodtagere* (BLF) register.
Source: Own calculations based on register data from Statistics Denmark.

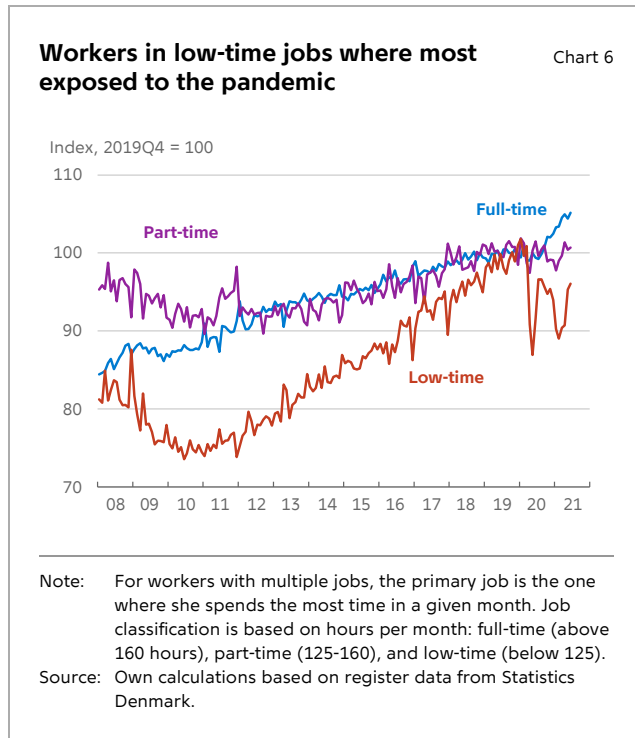
Hence, assessments of the current pressure on the labour market hinges on a solid understanding of the dynamics during the pandemic at a disaggregated level, thereby disentangling transitory and more persistent components of labour demand.

Marginal jobs were most affected by the pandemic

Both aggregate employment and hours worked initially declined at the onset of the pandemic, but hours worked fell less than employment. After the initial fall, both started to increase, bypassing historical highs during spring 2021, see Chart 5.

Utilising the detailed administrative registers at the job level reveals that the impact of the pandemic was not uniform across all groups of workers. Taking only primary jobs into account, full-time and part-time jobs, primarily occupied by prime-age workers in the public, manufacturing, and retail sectors, were much less affected than low-time jobs, mainly occupied by younger workers in the retail, public, and service sectors. The number of low-time jobs, constituting 27 per cent of primary jobs, contracted by over 15 per cent by May 2020 relative to the level in January 2020, see Chart 6. The contraction was primarily driven by younger workers in hospitality and retail. Subsequently, going forward to the summer of 2021, the number of low-time workers has not fully recovered. The number of part-time primary jobs has experienced only a temporary and modest decline of less than 2 per cent during the pandemic and exceeded its pre-pandemic level by April 2021. The number of full-time primary jobs actually increased throughout the pandemic and was 5 per cent higher than pre-pandemic by June 2021. These jobs were mostly taken up by workers below age 40 or close to retirement primarily employed in the public sector, but also in the manufacturing and construction sectors. Evidence from other countries also suggests

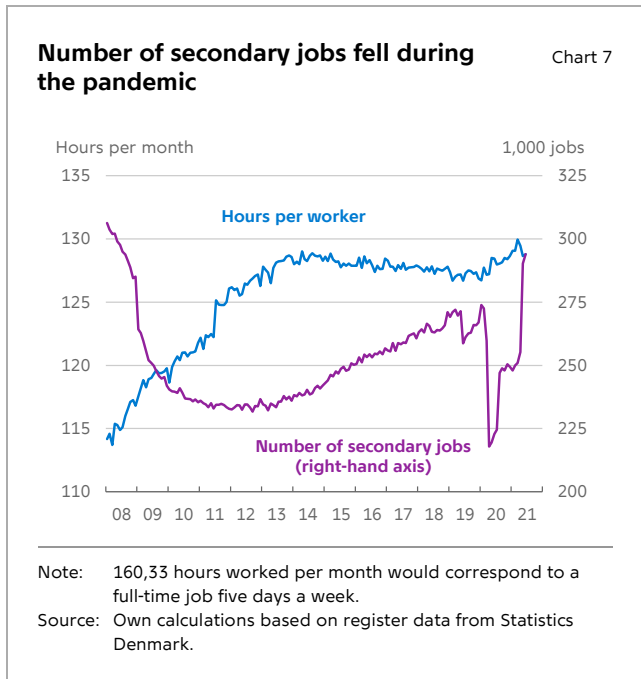
that the workers with the weakest attachment to the labour market are affected the most during the pandemic.¹



The different evolution of low-time versus part-time and full-time jobs also manifests itself in the average monthly hours worked, see Chart 7. As the pandemic hit the labour market, it started to increase after a prolonged stable period. Interestingly, the hours worked in primary jobs are substantially higher during the pandemic than they were at the onset of the Great Financial Crisis. As such the resource utilisation of workers today is higher than seen previously, suggesting that there is lesser scope for adjustments of the intensive margin to cope with tightness of the labour market.

Furthermore, beyond the evolution of primary jobs, the number of secondary jobs, i.e. the jobs people have beyond their primary job, also dropped significantly when the pandemic hit Denmark. While the number of secondary jobs has been subdued

during most of the pandemic, it increased sharply in spring 2021 to the highest level in more than a decade.



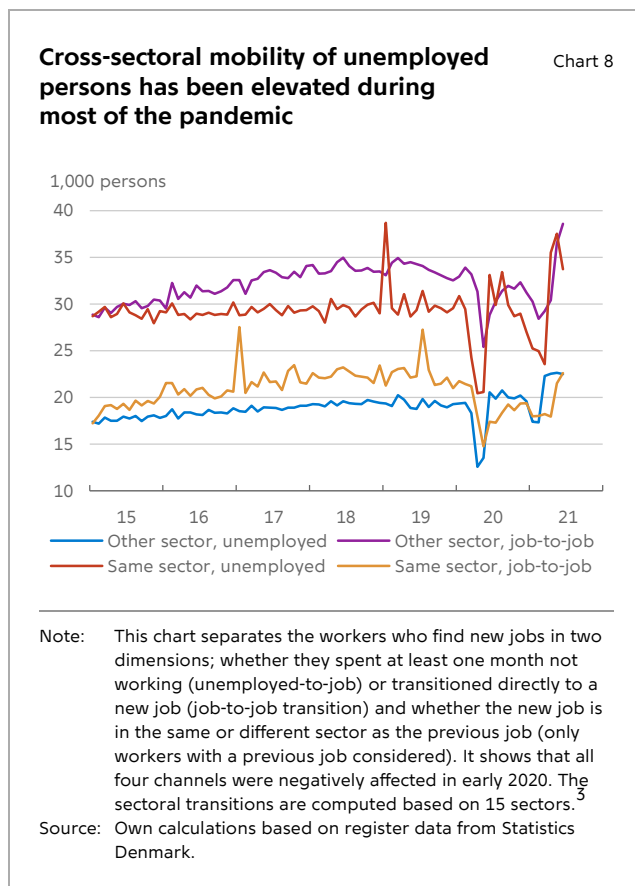
The evolution of employment, hours and jobs during the pandemic has been affected by the large public pandemic-related schemes and should be interpreted with caution. The wage-compensation scheme in particular is directly aimed at sustaining worker-firm relationships during temporary restrictions-related hardship for Danish firms, which has prevented at least 10,000 job separations during the lock-downs.²

The Danish labour market is relatively flexible in an international comparison, and the gross movements in terms of job finding on the Danish labour market are significantly larger than the net changes. This is evident from the job finding levels, see Chart 8. A large share of new matches occurs in job-to-job transitions and there is a relatively large propensity of workers to change sector. During the pandemic, job finding among unemployed workers fluctuated more than job-to-job finding. This is the case

¹ The evidence from Portugal (Carvalho et al. (2021)), the US, the UK or Germany (Adams-Prassl et al. (2020), Carrillo-Tudela et al. (2021)) or Canada (Lemieux et al. (2020)) show that young, part-time workers and workers on temporary contracts were hit much harder than other groups of workers.

² See Borgensgaard (2021) and Bess and Darougheh (2021) for evaluations of the wage-compensation scheme in particular, and Bennedsen et al. (2020) for a broader assessment of Danish government aid schemes during the initial phase of the pandemic.

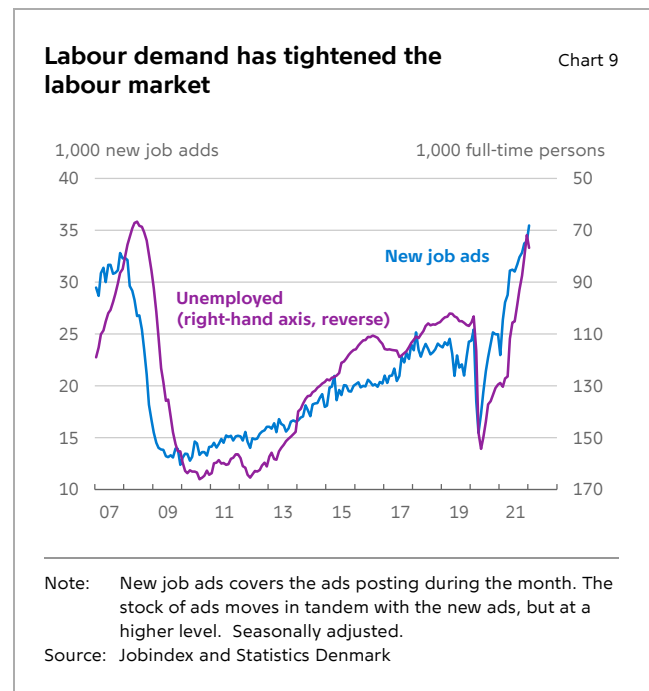
independently of whether the new job is in another sector or the same sector as the previous job. At the same time, the cross-sectoral job mobility via unemployment seems to have been elevated during most of the pandemic. This suggests that available labour has moved to those sectors where demand has been higher. On the other hand, job-to-job changes within sector have been muted until spring 2021, when it first reached the pre-pandemic level.



Substantial tightening of the labour market during the latter part of the pandemic

Since the second quarter of 2021, labour demand has picked up significantly, reflected in the number of job ads, which is currently at a historically high level, see Chart 9. The abrupt increase in demand for labour

has gone hand in hand with a fall in unemployment. Looking at job ads and unemployment, it is obvious that there is a strong co-movement, and that developments in job ads precede the subsequent development in unemployment. This is particularly evident during the current upswing.



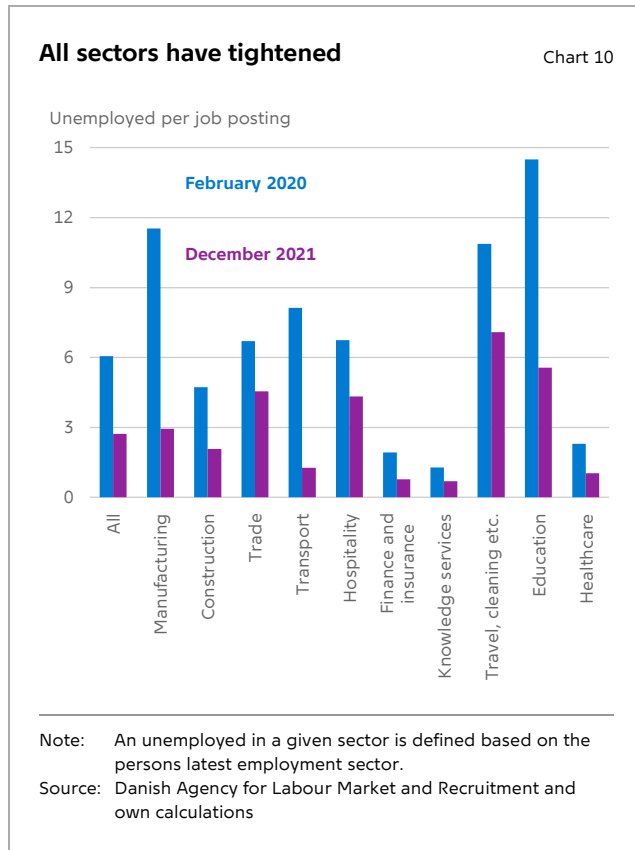
The abrupt increase in job ads and corresponding fall in unemployment has led to substantial tightening of the labour market surpassing the tightness seen prior to the pandemic.⁴ Based on the latest sectoral unemployment numbers and job ads at the sectoral level, it is clear that the market for labour has become more tight in all sectors, but some sectors stand out.⁵ In particular manufacturing, transport, and teaching have tightened substantially during the latter part of the pandemic, cf. Chart 10. The differences in tightness across sectors should be interpreted with caution during the pandemic, as the pandemic has led to larger than usual cross-sectoral flows of workers. Hence, some workers might temporarily have been employed in sectors that they would not have been employed in during normal

³ The sectoral classification is based on 1-digit DB07 classification. Some sectors are further disaggregated such that sectors that were particularly affected during the Covid-19 pandemic (most notably travel, hospitality, and healthcare) are measured separately.

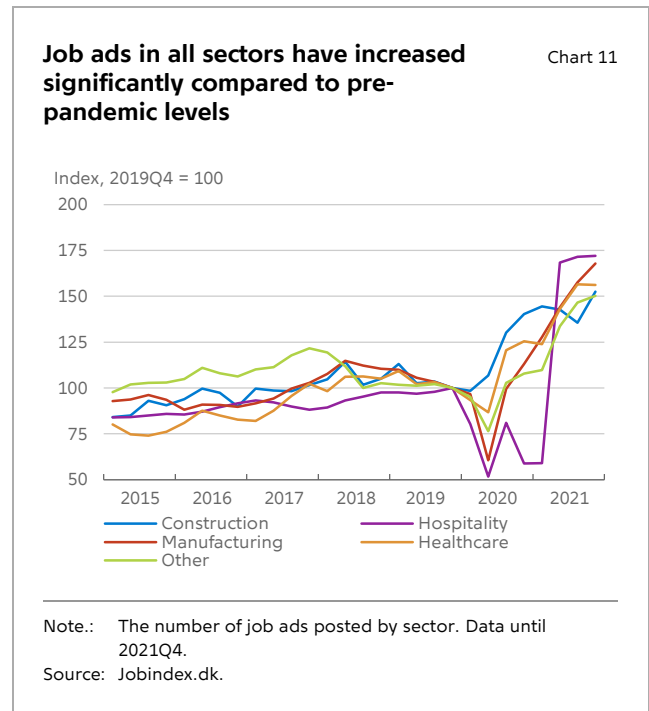
⁴ See Danmarks Nationalbank (2019).

⁵ By default one is not unemployed within a sector. To shed light on the number of unemployed in a given sector, we count the number of unemployed based on the sector the person was last employed in.

times; however, it does provide an indication of where the pressure is pronounced.



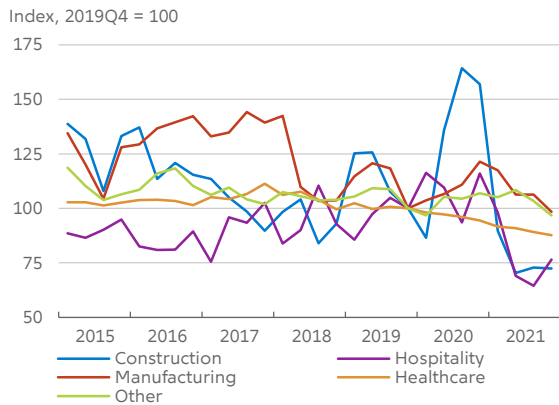
The number of job ads has increased substantially in all sectors of the economy compared to pre-pandemic levels, see Chart 11. This is most likely due to increased labour demand, but could to some degree also reflect hiring difficulties and an increased effort put into reaching potential applicants. Among the job ads, certain occupational descriptions have been more prevalent. Out of these occupational descriptions the largest increase during the pandemic is found for warehouse employee (265 per cent), industrial worker (242 per cent), academic employee (180 per cent), and production technician (112 per cent). These descriptions indicate that labour demand increased substantially for both specialised and less-specialised skills.



The content of the text in the job ads can be informative of the specificities of labour demand. Looking at content relating to temporary work, the ads indicate that demand for temporary workers in the construction sector spiked at the start of the pandemic, but has since subsided. The same fall occurred in hospitality, see Chart 12. This indicates that the demand has been focused on core workers and that firms to some degree has expected labour needs to be longer lasting; hence, that tightness was unlikely to ease in the near future.

Demand for temporary workers has levelled off

Chart 12



Note: See box 1.
Source: Jobindex.dk

Measuring the demand for temporary workers

Box 1

To measure the demand for temporary workers, we analyse the text in the job ads posted on jobindex.dk. Specifically, we search for words that suggest that the employer is trying to fill a position temporarily. The words are *tidsbegrænset, vikar, studiejob, midlertidig, timeløn* (short-term, substitute, student job, temporary and hourly wage). We calculate the fraction of job ads mentioning any of the words in a given quarter to produce Chart 12.

As more job ads are being posted for fewer unemployed workers, the risk that firms are not able to fill positions, conditional on the offered wage, increases. Looking at recruitment attempts, the share of failed attempts has increased substantially during the second half of 2021. In December 2021, around one third of firms experienced recruitment attempts that were in vain. However, there are large differences across sectors. Half the firms in hospitality and construction report inability to fill positions, whereas only 10 per cent in culture and leisure have the same challenges, see Chart 13. Interestingly, failed recruitment attempts illustrate a slightly different picture than the measure of market tightness. Most notably, the hospitality sector seems

to face pronounced recruitment difficulties. Potentially, the explanation could be found in a strong mobility of labour between this sector and the part of the healthcare sector engaged in testing and vaccinations, where wages have been relatively higher.

Large differences in the share of failed recruitment attempts across sectors

Chart 13



Note: Latest observation: December 2021. Based on failed recruitment attempts over the last six months.
Source: Danish Agency for Labour Market and Recruitment.

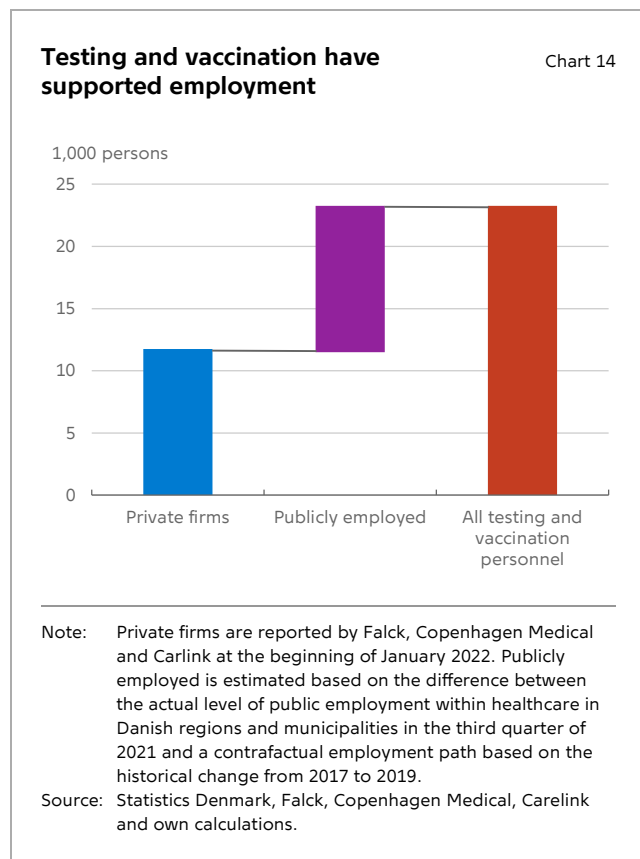
Continued high levels of labour demand, measured by the number of new job ads, and limited amount of free labour resources would suggest continued elevation of failed recruitment attempts conditional on the latest wage offers, adding to the pressure on the labour market. However, some pandemic-related labour demand might be eased and mitigate some pressure.

Pandemic-related labour demand has contributed to the pressure...

In particular the increase in employment among the younger part of the population could be a consequence of high demand for workers related to testing during the pandemic. The majority of testers were people younger than 25.⁶ Employment within healthcare has increased by 28,000 persons, and most of the increase can be ascribed to Covid-19. Among the 23,000 engaged in testing and

⁶Reported by Falck, Copenhagen Medical and Carelink

vaccination at the beginning of 2022, roughly half are employed in private firms and the other half in the public sector, cf. Chart 14.



In addition to workers engaged in testing and vaccination, public employment has increased during the pandemic as for example large public support schemes have required administrative personnel.⁷ By the end of 2021, overall public employment had risen by 30,000 persons.

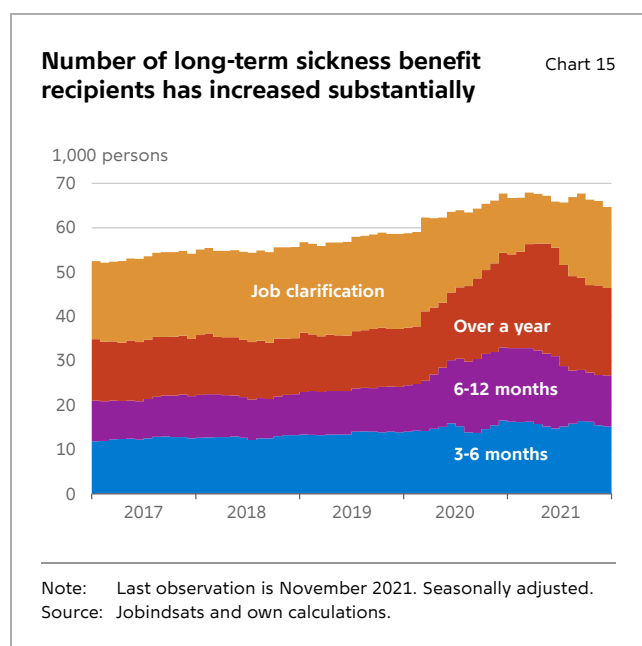
During the pandemic, a wide range of restrictions have been in place in order to contain the Covid-19 virus. One of the central restrictions has been isolation of infected individuals, and to a varying degree their close contacts. While some jobs can be carried out from home during isolation, other occupations require physical presence at the workplace. Therefore, isolation of workers may have

reduced hours worked significantly for some sectors, and some firms might have employed workers temporarily in order to fill shifts in times of high infection rates coupled with isolation requirements. An assessment of the scale of such temporary labour demand depends on for example the share of workers that requires physical presence, infection and isolation rates in those occupations, and the specialisation of the affected workers, as substitutes to specialised labour could be harder to find for a limited period of time.

Beyond the virus itself, which can cause long-term sickness, other health issues can arise as a derived consequence of Covid-19. In particular, mental health issues might emerge in times of isolation or lockdowns and uncertainty such as stress, depression, or anxiety. There has been a rise in the number of people receiving longer-term sickness benefits during the pandemic, rising from a relatively stable level. Around 12,000 additional individuals have been on such schemes for more than three months. This number solely comprise individuals in the labour force. Part of the increase is mirrored by a reduction in persons in job clarification processes, but overall, the increase is almost 10,000 individuals, see Chart 15.⁸

⁷ The number of employees, measured as full-time equivalents, in, say, the Danish Business Authority increased by 40 per cent during the pandemic.

⁸ Note that the rules for sickness benefits have been eased during the pandemic, as firms are eligible from the first day an employee is away from work due to Covid-19. However, one would not expect such absence to have longer durations such as depicted here.



Overall, it is assessed that employment of at least 33,000 persons can be attributed to pandemic-related labour demand in the healthcare sector and long-term sickness. As the test capacity is downscaled substantially during spring, the contribution from healthcare to aggregate employment – and thereby the pressure on the labour market – should fade along with the pandemic itself. To the extent firms have hired workers with the purpose of filling the shifts of isolated workers temporarily, the number could be slightly higher.

... however, other sources of labour demand are likely the fundamental drivers

Other parts of the increase in employment could be more persistent as they relate to high non-pandemic-related economic activity. Generally, the pandemic has had modest implications for the Danish gross domestic product, and the gross value added of Danish firms despite large swings. Part of the explanation is that Danish pandemic-related measures have been aimed at safe guarding economic activity by ensuring production in less contact-intensive sectors. In particular the manufacturing and construction sectors have

performed well during the pandemic.⁹ High activity in the construction sector can to some extent be explained by the developments on the housing market, as housing demand has increased substantially during the pandemic.¹⁰ Likewise, the manufacturing sector benefited from an industrial boom abroad, which kept demand high despite the pandemic. Additionally, suppressed consumption during the pandemic along with the payout of frozen holiday savings and substantial increases in home-equity have supported household demand as restrictions have been eased, see Danmarks Nationalbank (2022).

As the pandemic approaches an end, employment tied to pandemic-related activity will be released and temporary effects on the labour supply will be eased. As of March, private testing has been closed down and demand indicators such as new job ads remain elevated. The workers released from temporary jobs in for example test centres should be able to move to some of the open positions and remedy some of the high demand for labour.¹¹

⁹ See Danmarks Nationalbank (2022).

¹⁰ See Hetland et al. (2021).

¹¹ E.g. Falck has created career forums for persons employed in temporary test jobs to facilitate contact between their employees and other firms demanding labour.

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