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The impact of Long COVID on the UK workforce

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ABSTRACT

COVID-19 is more likely to lead to Long COVID among persons of working age. We outline the first estimates of the impact of Long Covid on employment in the UK. Using estimates of cumulative prevalence of Long COVID, activity-limiting Long COVID in the working-age population and of economic inactivity and job loss resulting from Long COVID, we provide evidence of the profound impact of Long COVID on national labour supply. Since the start of the pandemic, cumulatively 2.9 million people of working age (7% of the total) in the UK have had, or still have, Long COVID. This figure will continue to rise due to very high infection rates in the Omicron wave. Since the beginning of the pandemic, economic inactivity due to long-term sickness has risen by 120,900 among the working-age population, fuelling the UK's current labour shortage. An estimated 80,000 people have left employment due to Long COVID. We argue that governments need to tackle the twin challenges to public health and labour supply and provide employment protection and financial support for individuals and firms affected by Long COVID.

KEYWORDS

Labour supply; health; employer costs; coronavirus pandemic; COVID-19

JEL CLASSIFICATION

J21; I18

I. Introduction

Long COVID emerged as a new long-term debilitating illness in 2020 (Callard and Perego 2021; Brown and O'Brien 2021). It describes a complex illness, often associated with 'mild' initial COVID-19 symptoms, that can last for months or years. Symptoms of Long COVID are multidimensional and can include physical, cognitive or mental illness that is chronic or episodic (Aiyegbusi et al. 2021; Brown and O'Brien 2021).

Medical research on Long COVID is rapidly growing although the mid- and long-term effects of the illness are yet to be fully understood (Aiyegbusi et al. 2021). Equally poorly understood is the impact of Long COVID on employment prospects. Some Long COVID symptoms are unlikely to affect whether people can work or not (although their productivity may well be impacted) such as hot flushes or mood changes. Other symptoms will severely hinder ability to work such as post-viral chronic fatigue, cardiopulmonary symptoms, anxiety and depression (Aiyegbusi et al. 2021; Burton et al. 2021).

Poor health and disability carry large penalties for education, earnings and employment (Jones and McVicar 2020). The Coronavirus pandemic therefore represents a potentially serious threat to health and prosperity. Since the pandemic, staff absences have risen sharply (Westerlind et al. 2021), contributing to substantial labour shortages. The long-term impacts of Long COVID on both the individuals directly affected but also on employers and the economy are therefore important to better understand.

Here, we outline the first UK estimates of the impact of Long COVID on employment levels, calculated by the authors integrating novel analysis of the Office for National Statistics' COVID Infection Survey (CIS) and the Understanding Society (USoc) COVID-19 Study 2020–21. Both datasets capture self-reported Long COVID after a suspected COVID-19 infection. In the CIS, self-reported Long COVID is captured by the question, 'Would you describe yourself as having "long COVID", that is, you are still experiencing symptoms more than 4 weeks after you first had COVID-19, that are not explained by something else?' Duration of Long COVID is calculated in the CIS according to the time elapsed since first infection. CIS documentation states that the 'time of infection was the date of the earliest positive test

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for coronavirus (COVID-19) during the study period, obtained from polymerase-chain reaction tests using swabs at CIS visits, or any swab test in national testing programmes as self-reported by study participants' (Office for National Statistics (ONS) 2022a). CIS participants were also asked whether their symptoms limited their ability to undertake daily activities. The longitudinal USoc COVID-19 study used very similar wording for the capture of Long COVID.[1]

II. Prevalence of Long COVID in the working-age population

CIS figures indicate approximately 1.4 M people aged 17–69 suffered from persistent COVID symptoms for more than four weeks in the four weeks leading up to the 5 March 2022. This corresponds to 3.1% of the population in this age group. Just below an estimated 1 M people of this age group had Long COVID for an extended period of more than 12 weeks (Table 1).

The number of individuals with symptoms lasting more than 12 weeks among the working-age population increased by 62% since the first year of the pandemic (year to March 2021). The increase was substantial over the winter of 2021–22 due to high level of infections in the Omicron wave (Table 1). Although infection rates have started to fall since the beginning of April 2022, the cumulative number of infections can only continue to rise and the number of Long COVID cases, by its nature, lags COVID-19 infections.

Cumulatively, approximately 69% of the UK population had tested positive for Coronavirus at least once since the start of the pandemic by February 2022 (Office for National Statistics (ONS) 2022b). With infection rates lower among older people, this proportion could be expected to be higher among people of working age. Of those aged 17–69 who are double-vaccinated, an estimated 9.5% will go on to develop Long COVID lasting more than 12 weeks after testing positive for COVID-19 and 5.5% will develop activity-limiting Long COVID (Office for National Statistics (ONS) 2022a). For unvaccinated people, these figures are 14.6% and 8.7%, respectively. These percentages are based on 2021 CIS data, mostly pre-Omicron. Applying these proportions, we estimate that since the beginning of the pandemic, in February 2022 around 7% had previously had, or still had, Long COVID lasting more than 12 weeks, representing a cumulative total of 2.9 M Long COVID cases among persons aged 16–64 (core working-age in labour market statistics). With rising cumulative infections, this figure can only increase moving forward.

III. Limiting long-term illness and disability in the workforce

For estimating the impact of Long COVID on labour supply, we define 17–69-year-olds who report that their day-to-day activities are affected 'a lot'. The proportion of people of working age who have Long COVID and are limited in their daily activities as a consequence, has remained relatively stable at

Table 1. Number of people 17–69-years-old with Long COVID and proportionate increase.

Long COVID in weeks after first infection	Year to March 21	Month to Jan 22	Month to March 22	% increase March 21 to March 22	% increase Jan 22 to March 22
Any duration from 4+ weeks	911,400	1,049,200	1,364,900	49.8%	30.1%
12+ weeks	577,900	769,100	938,100	62.3%	22.0%

Source: *Authors' compilation of CIS data estimates of proportion of people living in private household with self-reported Long COVID and 2020 population estimates from Nomis. Estimates are rounded.*

Table 2. Proportion and estimated number of 17–69-year-olds with Long COVID whose day-to-day activities are reduced a lot.

'A lot' of limitations of day-to-day activities	Month to Sep 21	Month to Jan 22	Month to Mar 22
% of 17–69-year-olds	19.3%	19.0%	18.8%
Number of 17–69-year-olds	180,000	209,000	269,000

Source: *Authors' compilation from estimated proportion of people with Long COVID by age groups from CIS data and 2020 population estimates from Nomis. Estimates are rounded.*

[1]Survey description and data catalogue can be accessed here: https://www.understandingsociety.ac.uk/documentation/covid-19

around 19% (Table 2). However, since the number of those who are affected by Long COVID has increased with increasing infection rates, the increase of people of working age who are at risk of limiting long-term illness which is likely to prevent them from working has been substantial. We estimate that this number was in the four weeks ending on 5 March 2022 at around 269,000 individuals or 0.61% of the UK working-age population.

Not all of those of working age are in work. The USoc COVID-19 Study captured the prevalence of Long COVID in four sweeps between November 2020 and September 2021 in addition to questions on employment prior to the pandemic. Using this dataset, we estimate that 65% of those with Long COVID were employed prior to the pandemic. On this basis, we estimate that of the 269,000 people of working age who had their day-to-day activities limited by Long COVID a lot in the CIS data, an estimated 175,400 were likely to be employed prior to the pandemic. Against the total number of individuals in employment in the UK in 2022, this suggests that 0.56% of the employed workforce may currently be affected by limiting long-lasting illness and disabilities from Long COVID, which may include ongoing or intermittent absence from work or limitations on the amount or type of work they can undertake. Due to the recency of the Omicron wave, this figure is likely to increase over the coming weeks and months.

IV. Economic inactivity and job loss

The UK's Annual Population Survey reveals that economic inactivity due to long-term sickness rose by 120,900 in the UK between 2019 and 2021, well over half of the total rise in the number of inactive persons of working age over the same period (205,900), representing a health-related reduction in the size of the workforce by 0.4% in just two years. Long-term sickness represents just under one-quarter of all economic inactivity among persons of working age, and this rose from 23.8% to 24.8% of the inactive population of working age between 2020 and 2021.

This sharp rise in inactivity due to long-term sickness took place against a pre-COVID backdrop of a general downward trend of the number of economic inactive persons of working-age due to long-term sickness (Figure 1). Prior to and during the pandemic, the sharpest falls in long-term sickness are clearly linked with the sharpest rises in the overall economic activity rate (Figure 1), reflecting the impact of long-term sickness on the economic activity rate.

The sharp increase in economic inactivity due to long-term sickness in 2020–21 is thus against the long-term downward trend and is accompanied by the sharpest fall in economic activity rate since the 2008–09 recession. Together, these pieces of evidence

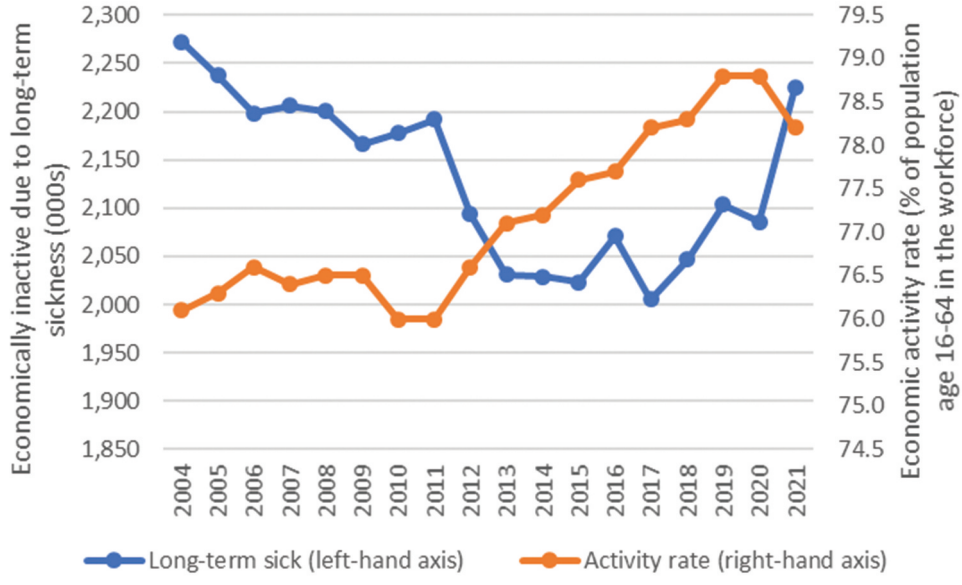

Figure 1. Long-term sickness and economic activity, 2004–21. *Source: Authors' compilation using the Office for National Statistic's Annual Population Survey.*

suggest that the pandemic has precipitated a reduction in labour supply. Employment was somewhat protected in 2020 and first part of 2021 by the UK's Coronavirus Job Retention Scheme, which most likely explains why economic inactivity due to long-term sickness did not rise in the first year of the pandemic (2020). This rise in economic inactivity due to long-term sickness may be due to both Long COVID and additional second-round health consequences of the pandemic, including pandemic-related anxiety/depression and reduced access to health care for non-COVID health conditions.

Based on data of the USoc COVID-19 Study, an estimated 11.4% of those 17–69-years-old who were in work prior to the pandemic and reported to have Long COVID between November 2020 and September 2021 had left employment. This compares to 7.7% in a comparison group who did not have Long COVID. Hence, the estimated 'excess' employment withdrawal due to Long COVID is at around 3.7%. Analysis of cumulative infection rates of Long COVID and the proportion leaving employment due to Long COVID above suggest some 80,000 withdrawals from employment directly attributable to Long COVID in the UK since the start of the pandemic, representing 0.3% of the employed workforce.

A large proportion of those with Long COVID who exited employment worked in elementary occupations (43%) which is a substantially higher proportion than among those who did not have Long COVID and had exited employment (17%). Elementary occupations such as in farming, construction, cleaning and security do not require formal qualifications and are at high risk of job insecurity (Maurin and Postel-Vinay 2005).

Economic inactivity is strongly associated with poor health, therefore there may be subsequent further 'third round' impacts on public health from involuntary economic inactivity due to Long COVID. We do not currently know what proportion of those leaving employment due to Long COVID will later re-enter employment, and this is an important question for future research.

V. Policy conclusions

COVID-19 is more likely to lead to Long COVID among persons of working age. Double-vaccination only reduces the chances of Long COVID following COVID-19 by less than half and still puts a considerable proportion of the population at health risk, but also at financial risk due to the inability to work while ill and the risk of termination of employment.

Governments face twin challenges to public health and labour supply arising from activity-limiting Long COVID, the incidence of which is likely to continue rising for some time to come. Given current national labour shortages in the UK, and the devastating financial, personal and family consequences for some individuals suffering from Long COVID, we urge the Government to extend employment protection and financial support offered to those suffering from Long COVID and their employers. At a minimum, this might include extending payment periods and rates of Statutory Sick Pay in order to cushion the blow and bridge the gap between COVID infection and recovery from Long COVID for those who are self-employed or without occupational sick pay offered by their employer. More radically, this could cover a proportion of employment costs for employees and loss of earnings for the self-employed to mirror the 'Furlough' scheme that operated during 'lockdowns'.

Data acknowledgement

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Office for National Statistic's Coronavirus (COVID-19) Infection Survey (CIS) data from the ONS at: https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/datasets/alldatarelatingtoprevalenceofongoingsymptomsfollowingcoronavirusCOVID19infectionintheuk

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Disclosure statement

No potential conflict of interest was reported by the author(s).

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