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Wales Fiscal
Analysis

Covid-19 and the Welsh economy: shutdown sectors and key workers

BRIEFING PAPER

Preface

Declaration of funding

Wales Fiscal Analysis is hosted by the Wales Governance Centre and the School of Law and Politics at Cardiff University, and funded through a partnership between Cardiff University, the Welsh Government, the Welsh Local Government Association and Solace Wales. The programme continues the work of Wales Public Services 2025 hosted by Cardiff Business School, up to August 2018.

About us

Wales Fiscal Analysis (WFA) is a research body within Cardiff University's Wales Governance Centre that undertakes authoritative and independent research into the public finances, taxation and public expenditures of Wales.

The WFA programme adds public value by commenting on the implications of fiscal events such as UK and Welsh budgets, monitoring and reporting on government expenditure and tax revenues in Wales, and publishing academic research and policy papers that investigate matters of importance to Welsh public finance, including the impact of Brexit on the Welsh budget and local services, options for tax policy, and the economics and future sustainability of health and social care services in Wales.

Working with partners in Scotland, Northern Ireland, the UK and other European countries, we also contribute to the wider UK and international debate on the fiscal dimension of devolution and decentralisation of government.

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COVID-19 and the Welsh economy: shutdown sectors and key workers

Briefing Paper

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Executive summary

- The Covid-19 pandemic is having a huge effect on the Welsh economy. Given the unique nature of the crisis, the economic and social consequences will differ substantially among different sectors, industries, and groups of workers. Large sectors of the economy whose activities involve social contact have been completely shut down. Other sectors have been classified as critical to the Covid-19 response, with their activities maintained at or even above regular capacity.
- Using Labour Force Survey data, this briefing investigates the groups and economic sectors in Wales most significantly affected by the current pandemic, based on a set of economic and demographic characteristics, such as age, gender, ethnicity, and income levels.
- We estimate before the pandemic, there were approximately 228,000 workers in Wales employed in sectors shutdown by social distancing measures, amounting to 16% of the working-age population. Shutdown measures have hit the youngest workers the hardest, with employees under the age of 25 almost three times as likely to have been working in shutdown sectors. The impact also varied by gender, with 18% of female employees working in shutdown sectors compared to 14% of male employees. Our results also indicate that workers of Bangladeshi, Black Caribbean and Pakistani ethnicity were significantly more likely to be working in shutdown sectors in Wales.
- Almost half of the lowest-earning decile of Welsh workers worked in shut down sectors of the economy. This made them ten times more likely to have been affected by the shutdown compared with the highest-earning decile. This asymmetric impact makes it likely the pandemic will exacerbate existing inequalities, and a particular focus of the recovery effort should be to prevent the economic shock from having long-term effects on the incomes and employment opportunities of women, the least well-off, those from Black, Asian and minority ethnic (BAME) backgrounds, and younger workers.
- We estimate that around 446,000 of employees in Wales were designated as key workers by the UK government at the onset of the crisis. Wales had a higher share of key workers (31%) compared to the other nations and regions of the UK. 14% of Welsh workers were employed in health and care – this compares to 7% in London. Among key workers, women were again significantly over-represented. Key workers accounted for 41% of total female employment, making them twice as likely to be designated as key workers than men.
- Those of Black, Indian, and Bangladeshi ethnicity in Wales are significantly more likely to be key workers in Wales, with a much higher share employed in the health and social care sectors. This potentially greater exposure to the virus is particularly concerning in the context of the emerging evidence that minority ethnic groups are experiencing greater health harms from the virus.
- As they respond to the Covid-19 crisis, the data suggests key workers face significant childcare challenges – half have school-aged children, while they were also more likely to have younger children below the age of 4 than non-key workers.
- Men were more likely to suffer from health problems associated with a higher risk of severe illness if infected by Covid-19. These workers at higher risk were also more likely to work in shutdown sectors. Although key workers were less likely to suffer from such illnesses than non-key workers, 10% of key workers had pre-existing medical conditions. These workers may also have been at greater risk of exposure to the virus at their place of work during the pandemic.

1. Introduction

On 23 March 2020, the Welsh and UK governments simultaneously announced a nationwide lockdown to contain the spread of Covid-19 in the UK. As in other countries, this extraordinary measure has caused severe disruptions to economic activity, bringing a large part of the economy to a halt. Individuals have been furloughed or made redundant, experienced reductions in hours worked and seen significant losses in income. In this highly uncertain situation, it is expected the economic shock of the Covid-19 pandemic will be more drastic than the Great Recession that followed the 2007-08 banking crisis. Moreover, given the unique nature of the crisis, the economic and social consequences will differ substantially among different sectors, industries, and groups of workers. It is therefore crucial to have a better understanding of how the response to Covid-19 will impact sectors and individuals differently, to ensure public policy responses target those individuals who have been most affected by the crisis.

Social distancing has presented an unprecedented challenge for policymakers and businesses, who have struggled to preserve basic functioning of key areas of the economy while simultaneously mitigating the spread of the virus. Sectors whose activities involve social contact - such as non-critical retail, hospitality, and restaurants - have been completely shut down, and temporary or permanent job losses here have been concentrated among low-paid service workers. At the same time, other sectors - such as food, healthcare, education, transportation, and public safety - have been classified by the UK government as critical to the Covid-19 response, such that activities here have been maintained at or even above regular capacity.

This briefing analyses data from the Labour Force Survey (2019) to investigate which groups and economic sectors in Wales are most significantly affected by the current pandemic. Based on a set of economic and demographic characteristics, such as age, gender, ethnicity, and income levels, the aim is to identify the type of workers who were in shut down industries or who are designated as key workers.

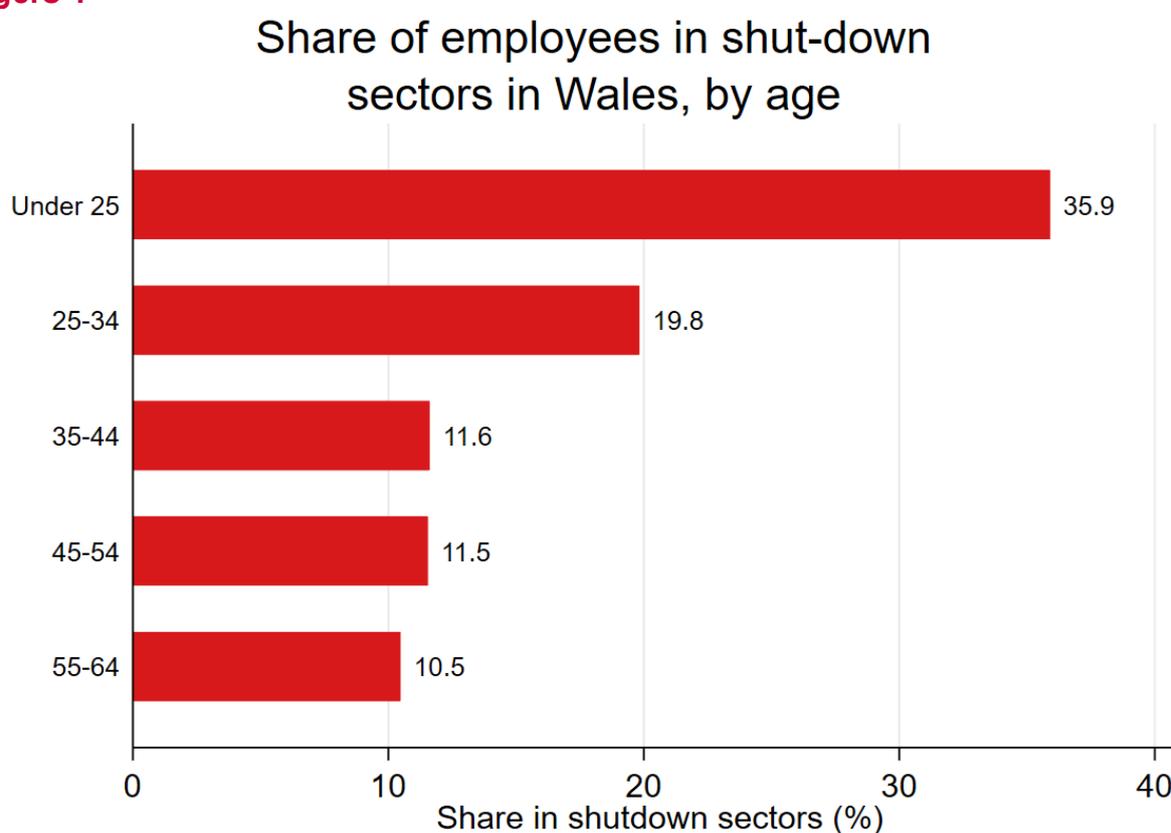
This is the first in a series of reports from the Wales Fiscal Analysis exploring the various labour market and economic implications of the current crisis.

2. Workers in shutdown sectors

After the start of the 'mitigation' phase, government policy changed to increasingly limiting social interactions to 'flatten the curve' of the pandemic. Sectors which involved some sort of social interaction and physical proximity at the workplace, as well as those not considered essential to responding to the pandemic, were forced to shut down. To calculate the direct impact of the Covid-19 lockdown on the Welsh workforce we identify those sectors by using the 4-digit SIC codes and matching them into the Labour Force Survey (LFS).¹

We estimate that over 228,000 employees in Wales worked in a sector that has been partially or entirely shut down due to Covid-19. This figure represents 15.6% of the Welsh working-age population, similar to the UK average of 15.4% (see Appendix, Figure A.1).²

Figure 1



Source: Labour Force Survey, 2019

¹ Following methodology of Joyce and XU (2020) which included a list of sectors classed as being directly affected by the lockdown. They are as follows (4-digit SIC codes in brackets): Non-food, non-pharmaceutical retail (4719, 4730-4772, 4776-4799); passenger transport (4910, 4931-4939, 5010, 5030, 5110); accommodation and food (5510-5630); travel (7911-7990); childcare (8510, 8891); arts and leisure (9001-9329 except 'artistic creation' 9003); personal care (9601-9609 except 'funeral and related activities' 9603); domestic services (9700).

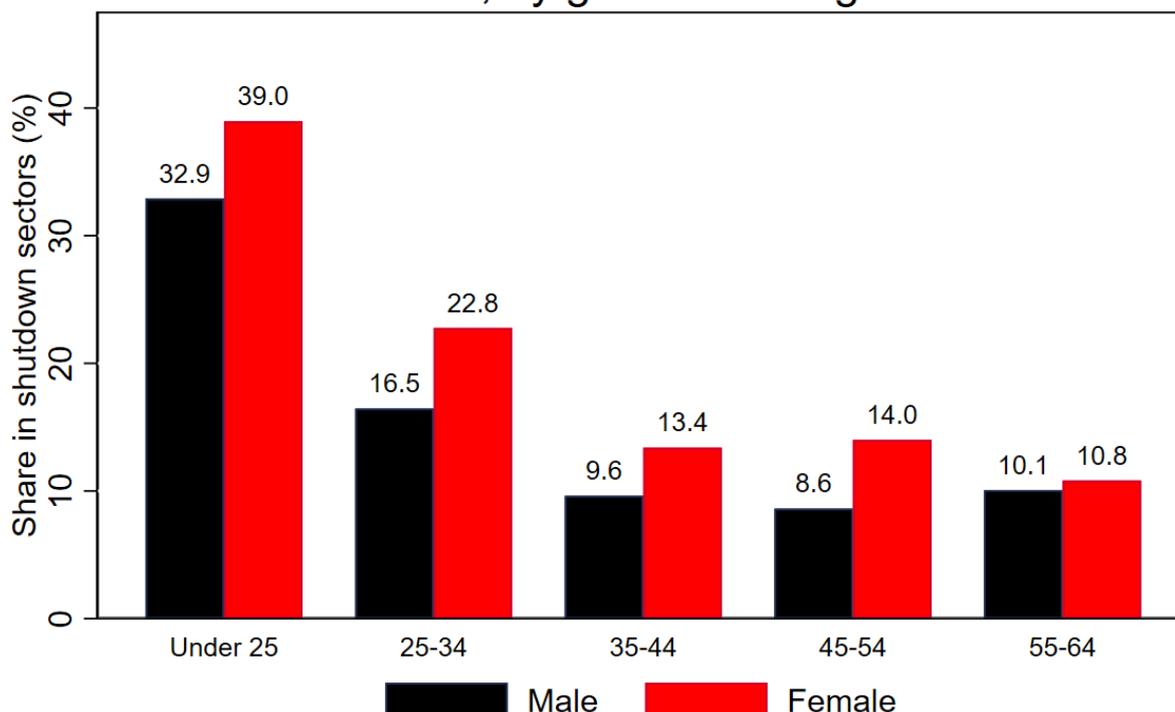
² It is worth noting that the results are based on survey information collected before the Covid-19 crisis began, so they can be used as a benchmark to evaluate the impact of an unprecedented nationwide lockdown.

Figure 1 illustrates how the impact of the economic shut-down varies by age groups. In particular, shut-down measures have hit the youngest workers the hardest. For instance, 35.9% of all the employees under the age of 25 worked in a sector that is currently in shutdown. In contrast, on average only 13.3% of all the workers aged 25 and over were employed in shutdown sectors. It follows from the above that employees aged under 25 were almost three times as likely to work in a sector that is now shut down as other employees.

The impact of the lockdown has also varied considerably by gender. **Figure 2** shows that, in general, female workers are more likely to work in shut-down sectors than men. Women under the age of 25 have been hit particularly hard, since 39% of all female employees under 25 worked in these sectors. In Wales as a whole, 17.8% of female employees will have been affected by lockdown measures, compared to 13.7% of male employees (see Appendix, Figure A.2). This further suggests that women have been more exposed to loss of employment and earnings during the Covid-19 crisis. Such a result coincides with a recent study by Adams-Prassl et al. (2020) which found evidence from real time surveys across the UK, US and Germany that women were more likely to be affected by the crisis, alongside workers with fewer educational qualifications.

Figure 2

Share of employees in shut-down sectors in Wales, by gender and age

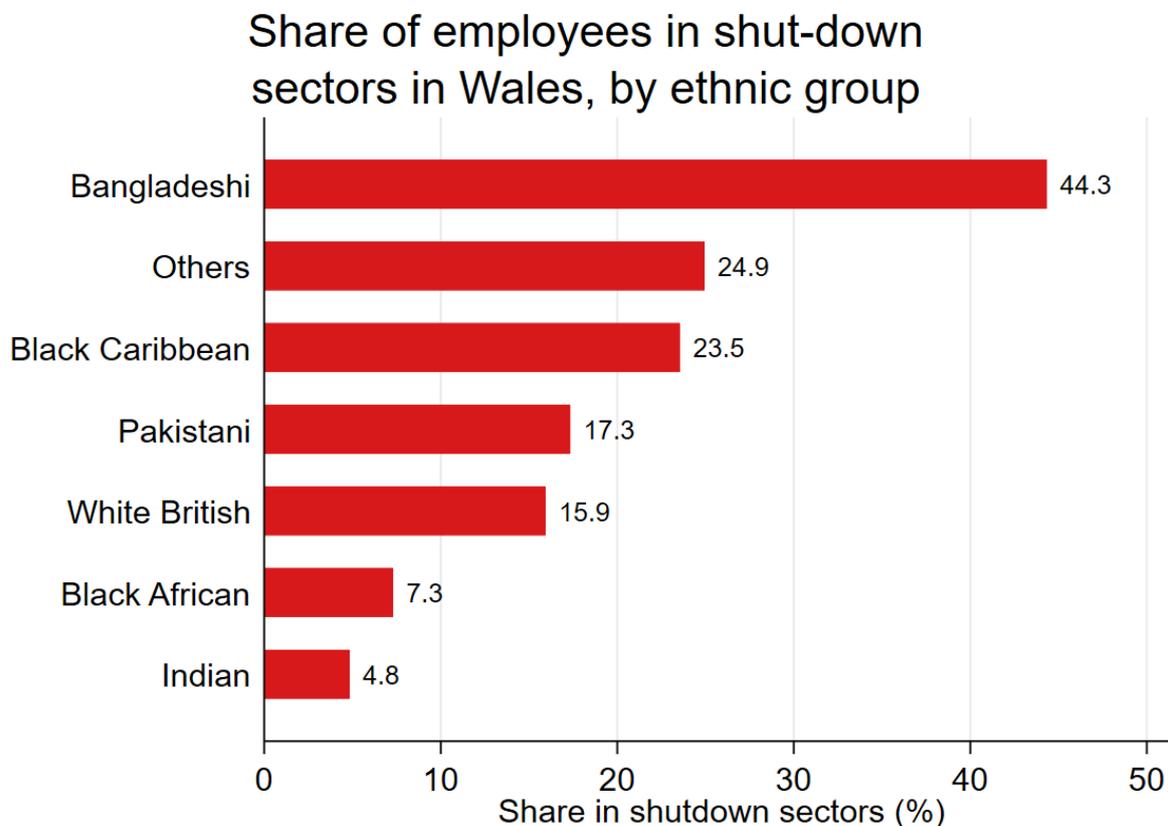


Source: Labour Force Survey, 2019

Figure 3 illustrates the shares of employees working in shut-down sectors in Wales before the crisis by ethnicity. The results indicate Black, Asian, minority or ethnic (BAME) groups are being disproportionately affected by the economic effects of the crisis. For example, over two-fifths of workers of Bangladeshi ethnicity were employed in shut-down sectors prior to the crisis, almost three times the

share of those of white British ethnicity. Those of Black Caribbean and of Pakistani ethnicity were also more likely to be working in shut-down sectors. In contrast with the population as a whole, across BAME workers, men were more likely to be employed in shut-down sectors compared to women.

Figure 3



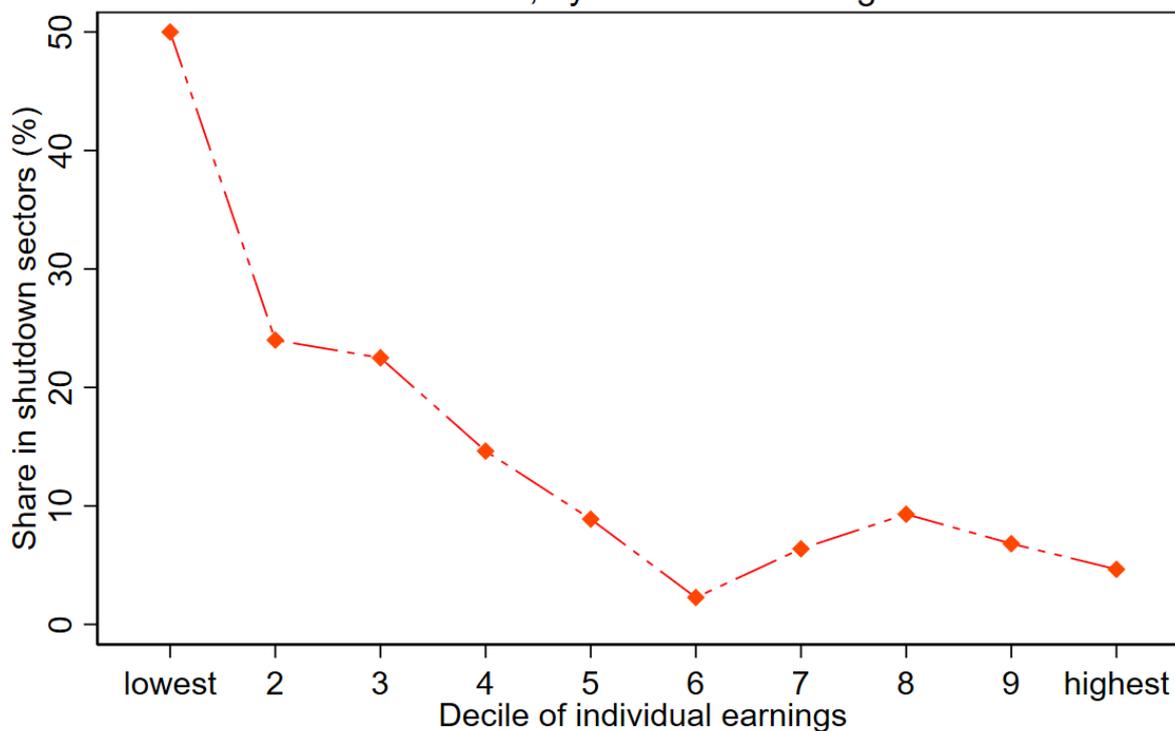
Source: Labour Force Survey, quarter 1 2014 to quarter 4 2019

We also find that the impact of the crisis varies significantly across the income distribution. **Figure 4** illustrates that only 5% of the highest-earning decile worked in shutdown sectors. In contrast, fully **half** of those in the lowest-earning decile of employees were working in shutdown sectors, making them **ten times as likely to have been affected**. This reflects the fact that higher-income earners usually work in occupations such as management, business, financial and professional services, and are therefore more likely to be able to work from home. This unequal impact means the economic damage of Covid-19 is likely to exacerbate existing inequalities.

Similar to studies in other countries (e.g. Mongey & Weinberg 2020; Adams-Prassl et al. 2020), we find that the impact of the economic disruption in Wales will not be uniformly distributed across workers of different income levels, gender, ethnicity and age groups. As such, a particular focus of the recovery effort will be to prevent this shock from having long-term effects on the incomes and employment opportunities of women, the least well-off, BAME and younger workers.

Figure 4

Share of employees in shut-down sectors in Wales, by individual earnings



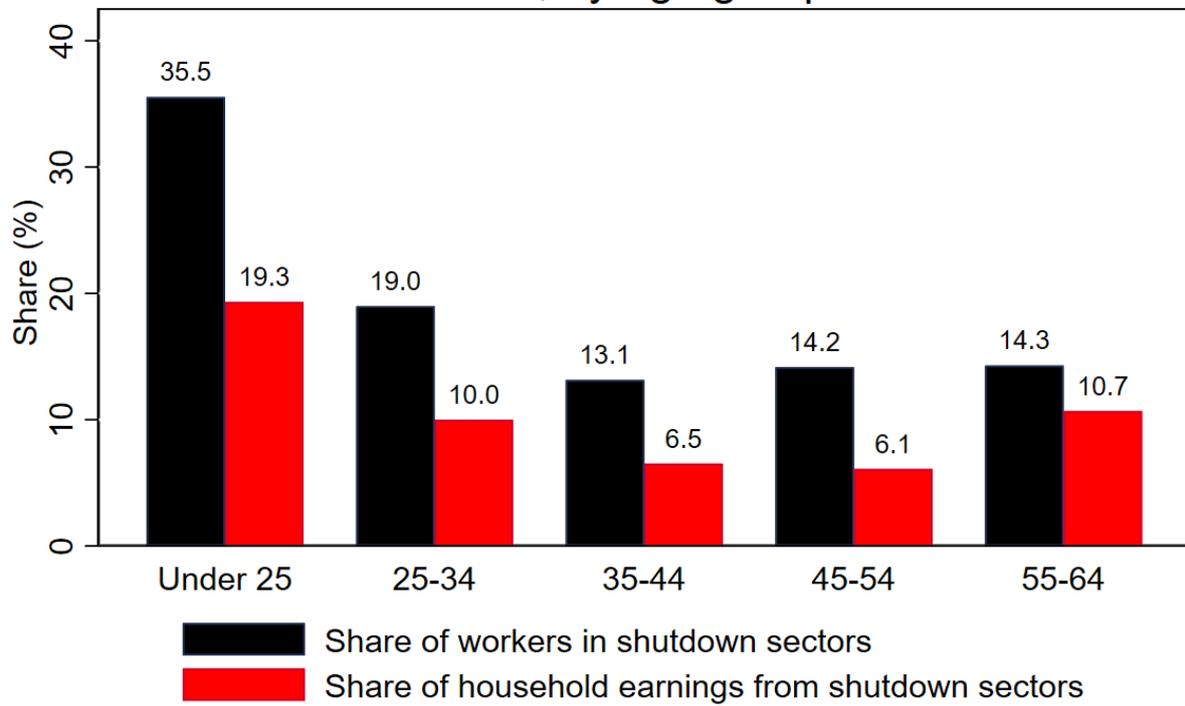
Source: Labour Force Survey, 2019

An important caveat to this finding is that the relative impact on some workers in shutdown sectors may be mitigated by the fact that some family members, such as partners, parents, or siblings, may not be directly impacted by the lockdown. For example, 71.4% of the young workers aged under 25 working in sectors affected by the shutdown live with their parents. To estimate the effect at the household-level, we therefore calculate the share of household earnings drawn from shutdown sectors across different age groups.

Figure 5 shows that taking account of overall household incomes does indeed mitigate the exposure of key groups to the effect of shutdown sectors. For instance, while 35.5% of employees under 25 work in sectors that are directly affected by the lockdown, only 19.3% of the total earnings of their household come from these sectors. However, this age group still has a larger share of household earnings from shutdown sectors than other age groups, and therefore younger workers continue to be more affected by the crisis in comparison to workers older than 25. This again reiterates that the impact of Covid-19 is not uniform across age groups. Furthermore, although the impact on individuals may be mitigated by earnings of others in the household, individual earnings are important in their own right, for example, through being a source of independence and security for some individuals.

Figure 5

Level of exposure to sector shut-downs in Wales, by age group



Source: Labour Force Survey, 2019

3. Composition of key workers in Wales

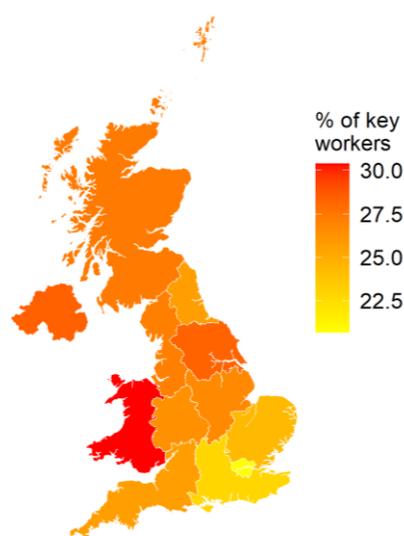
Key workers are playing a vital role in helping the country overcome the unprecedented challenges that Covid-19 has imposed on the economy and on society. Wales' success in containing the spread of the virus and simultaneously ensuring the continued provision of essential public services will heavily depend on the ability of key workers to do their jobs.

At the onset of the lockdown policy measures, the UK government defined a set of occupations considered critical to mitigate the consequences of the pandemic. The list not only includes health and social care workers treating people infected by the virus, but indirectly critical activities related to food production and distribution chains, transport, education, as well as security forces in charge of ensuring public order. These workers, particularly those whose jobs are related to frontline NHS, food retail and personal services, are putting their health at risk to keep essential services and businesses functioning.

We again use Labour Force Survey data to analyse the main demographic characteristics of key workers, to evaluate the economic context and conditions they face in dealing with the pandemic. This data source provides information at worker-level that allow us to identify the set of critical occupations established by the government to reduce the spread of Covid-19 virus.³

Figure 6

Share of key workers in working-age population by UK region



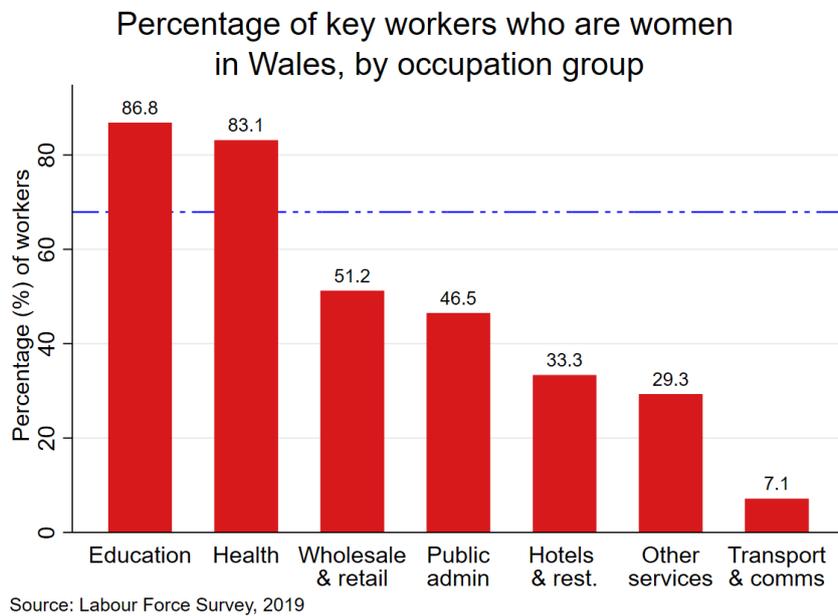
Source: Labour Force Survey 2019

We estimate that key workers in Wales account for 31% of the Welsh working-age population, which represents 446,000 key workers across Wales. This is considerably higher than the share across the UK (26%). **Figure 6** depicts the distribution of key workers across the UK by NUTS1 region, showing they are not uniformly distributed across the UK. In London, key workers account for only 21% of the working-age population, as compared with 28% in Northern Ireland. In Wales, 14% of the working-age population

³ Other studies on key workers in Wales have used different definitions. We follow the approach of Farquharson et al. (2020a) but include workers in utilities and communications sectors.

is employed as a health key worker, double the comparative percentage in London (7%). On the other hand, London has more than double the share of key workers employed in other jobs, such as transport, journalism, and justice.

Figure 7



Women are significantly overrepresented in jobs considered to be key in mitigating the impact of Covid-19. In Wales, 68% of key workers are women. These jobs therefore account for approximately 41% of total female employment compared to 20% of total male employment, meaning employed women are more than twice as likely to be key workers than employed men. **Figure 7** shows the significant variations in gender across occupations. Women who work in education and health services account for 86% and 83% of all key workers in those sectors, respectively. In addition, just one in ten females work in transportation and related services, meaning that this sector is overrepresented by men (90%).

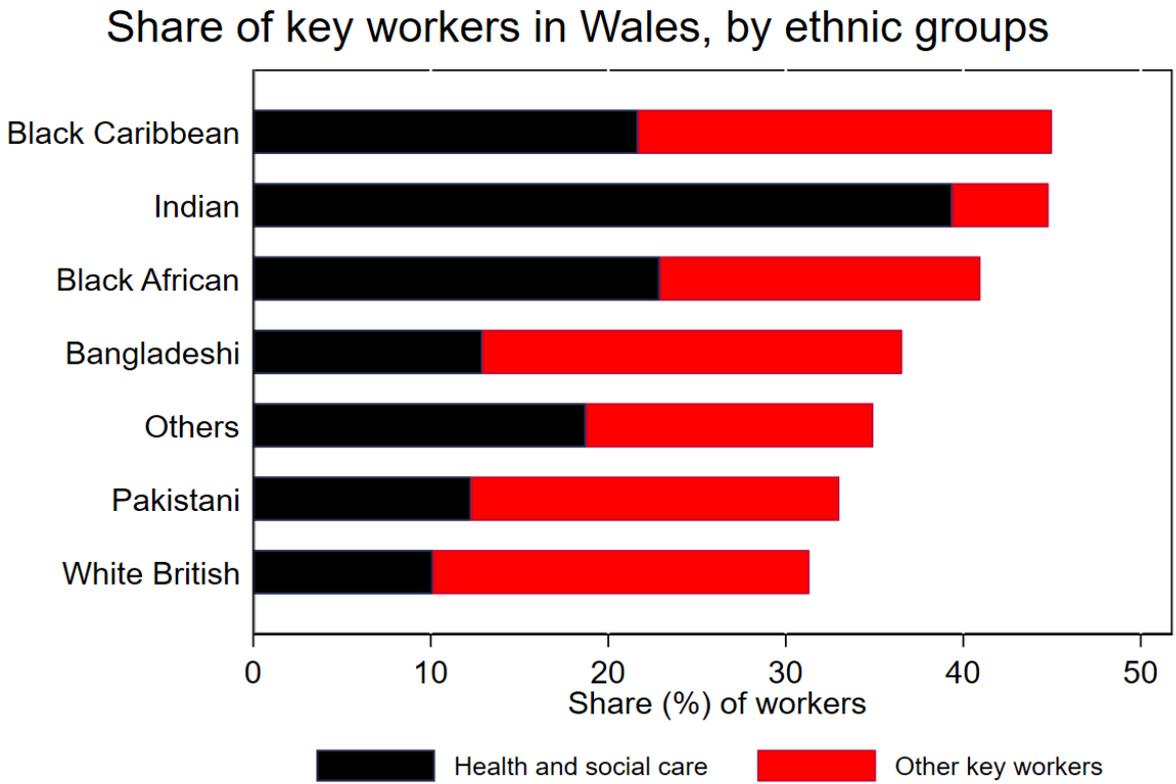
The share of key workers also varies significantly by ethnicity, as shown in **Figure 8**. Those of Black, Indian, and Bangladeshi ethnicity in Wales are significantly more likely to be key workers, with BAME workers twice as likely to be employed in the health and social care sectors than those of white British ethnicity. The TUC have also drawn attention to the fact that BAME individuals are overrepresented in frontline roles, which are low-paid, insecure and high risk.⁴ At the same time, there is emerging evidence to suggest that BAME groups are experiencing greater harm from the virus. Evidence from the UK Intensive Care National Audit and Research Centre showed a higher share of Covid-19 patients with BAME backgrounds required critical care.⁵ Meanwhile, researchers from the Institute for Fiscal Studies note that across the UK some ethnic minority groups have experienced far higher death rates than the white British population, even after controlling for age, health and socio-economic factors (Blundell et al. 2020). The disproportionate health impact on BAME individuals and their exposure to Covid-19 through their roles as key workers has prompted the Welsh Government to explore measures to better protect those in the health and social care workforce.⁶

⁴ <https://www.tuc.org.uk/blogs/coronavirus-why-structural-racism-putting-bme-lives-risk>

⁵ <https://www.icnarc.org/Our-Audit/Audits/Cmp/Reports>

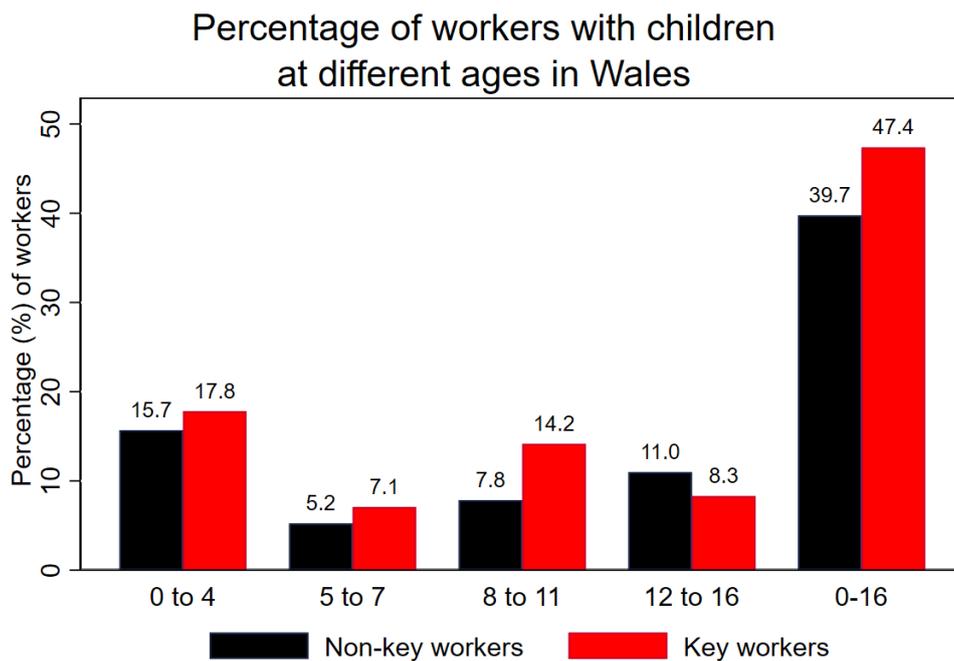
⁶ <https://gov.wales/written-statement-covid-and-bame-measures-protect-health-and-social-care-workforce>

Figure 8



Source: Labour Force Survey, quarter 1 2014 to quarter 4 2019

Figure 9



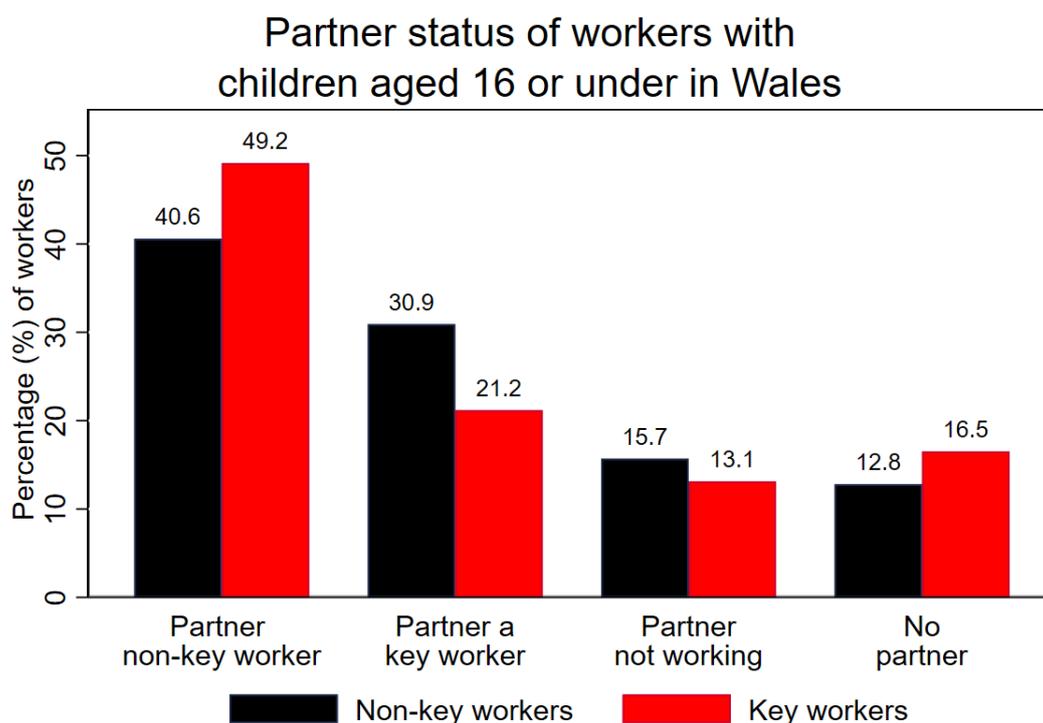
Source: Labour Force Survey, 2019

When we analyse the percentage of workers with children under 16 years old, we find that key workers are 20% more likely than other workers to have at least one child aged 16 or below. **Figure 9** shows that almost half of Welsh key workers (48%) have a school-aged child, compared with 40% of non-key workers. This reflects the additional challenge of childcare for key workers at the same time as they face risk of exposure to the virus at their place of work.

In addition, key workers are also more likely than non-key workers to have a younger child below the age of 4, implying a higher level of demand for pre-school childcare provision.

School closures have affected the ability of many parents to continue their working life as normal. While many parents will have had to reduce hours or stop working altogether to care for children, this will not have been an option for key workers during the Covid-19 crisis. In this context, we therefore also study the extent to which key workers can rely on a partner to take care of the children while they are at work.

Figure 10



Source: Labour Force Survey, 2019

Figure 10 shows that key workers in Wales with children aged 16 or under are more likely to have no partner (17%) in comparison to non-key workers (13%). In addition, 21% of key workers with dependent children have a partner who is also a key worker and about 49% of key workers with children have a partner who is a non-key worker. This means that 38% of key workers with children have either no partner or are partnered with another key worker. Their situation is even more acute when we consider that almost all key workers in Wales (87%) with children aged 16 or under have either a partner in work or are without a partner.

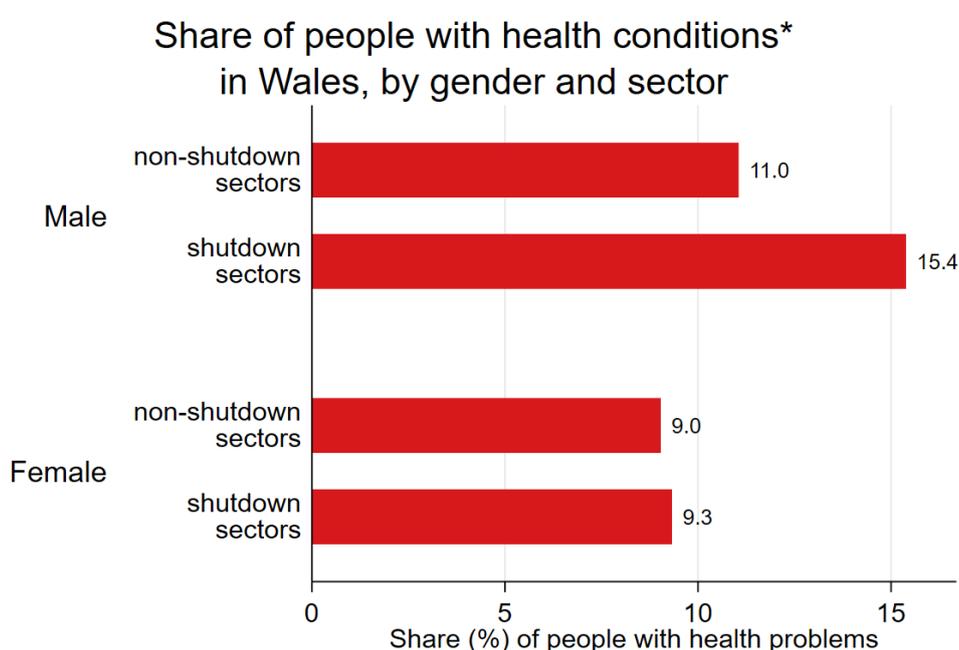
It should be noted that although a partner is in principle available for childcare duties, they may not always do so. Evidence from across the UK also suggests the additional childcare responsibilities as a result of Covid-19 have disproportionately fallen on mothers, especially among working parents (Blundell et al. 2020).

4. Health conditions in the Welsh workforce

Covid-19 is a highly infectious disease caused by severe acute respiratory syndrome coronavirus and in some patients may affect the lungs progressing to pneumonia, multi-organ failure, and death. People of any age who have serious underlying medical conditions are at higher risk for severe illness from Covid-19.⁷

Using data from the Labour Force Survey in which respondents self-report health conditions, we can estimate the percentage of individuals who are at greater risk of being severely affected by Covid-19. We consider the health conditions such as diabetes, blood pressure, heart conditions, breathing, and chest or circulation problems.

Figure 11



Source: Labour Force Survey, 2019

*Includes chest, breathing, heart, diabetes, blood pressure, and circulation problems

Figure 11 illustrates that men are more likely to suffer from such health problems than women, accounting for 11% of the total male population. In contrast, 9% of women in Wales reported having a health condition which increased the risk of serious illness if infected with Covid-19. An issue of some concern is that people with these health conditions were also more likely to work in shutdown sectors: 15% of males in these sectors self-reported such a condition.

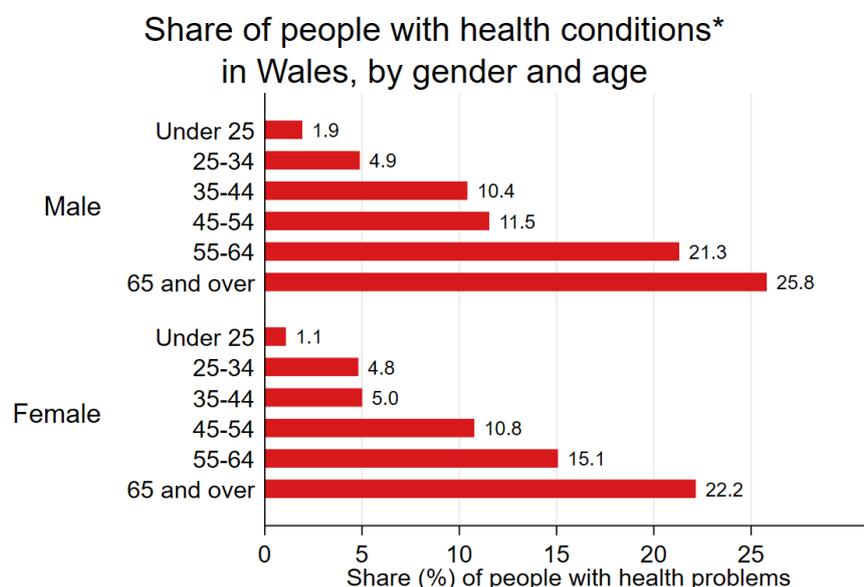
These figures reflected the fact that men are 1.23 times more likely to die from Covid-19, according to the latest data on Covid-19 deaths released by ONS for England and Wales up to the week ending 29 May⁸. The reasons for this difference in mortality rates are beyond the scope of this report, but these might include genetic or behavioural factors, such as lower prevalence of smoking in women.

⁷ <https://www.nhs.uk/conditions/coronavirus-covid-19/people-at-higher-risk/whos-at-higher-risk-from-coronavirus/>

⁸ <https://www.ons.gov.uk/file?uri=%2fpeoplepopulationandcommunity%2fbirthsdeathsandmarriages%2fdeaths%2fdatasets%2fweeklyprovisionalfiguresondeathsregisteredinenglandandwales%2f2020/publishedweek222020.xlsx>

Figure 12 describes the share of respondents in Wales with these reported health conditions by age group and gender. As might be anticipated, people tend to develop such health conditions as they get older. 22% of women and 26% of men aged 65 and over reported one or more conditions.

Figure 12

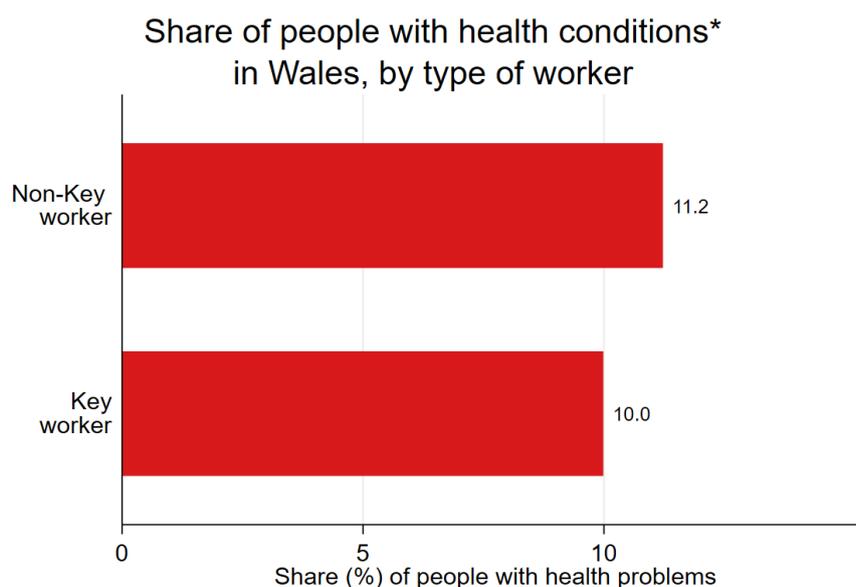


Source: Labour Force Survey

*Includes chest, breathing, heart, diabetes, blood pressure, and circulation problems

Figure 13 shows that key workers in Wales were generally less likely to report a pre-existing health condition compared with workers in other sectors. However, 10% of key workers reported a health condition which placed them at increased risk of severe illness if infected by Covid-19. As outlined earlier, these workers may also have been at greater risk of exposure to the virus at their place of work during the pandemic.

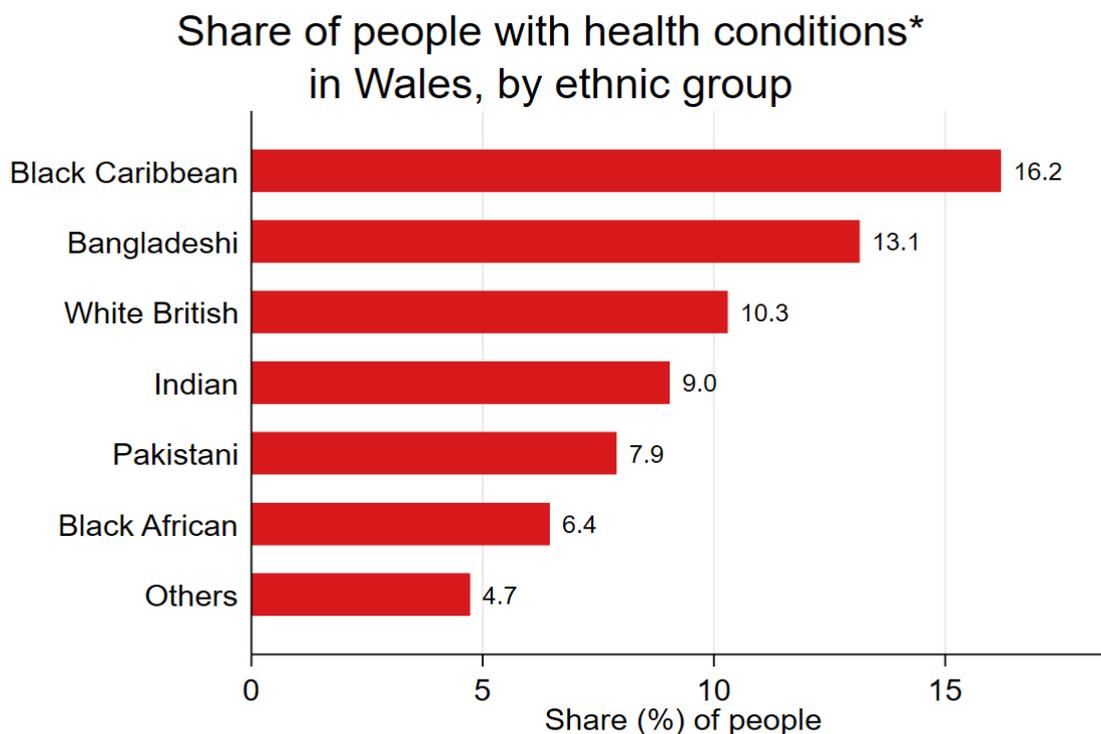
Figure 13



Source: Labour Force Survey, 2019

*Includes chest, breathing, heart, diabetes, blood pressure, and circulation problems

Figure 14



Source: Labour Force Survey, quarter 1 2014 to quarter 4 2019

*Includes chest, breathing, heart, diabetes, blood pressure, and circulation problems

Our data also suggests that individuals of Black Caribbean and Bangladeshi ethnicity are more likely to report health conditions which put them at greater health risk from the virus. Such health conditions are likely to be correlated with the socio-economic characteristics of these groups, and a result of poverty and inequality. For example, data from the Labour Force Survey 2014-2019 for England and Wales suggests workers of Black Caribbean, Bangladeshi and Black African ethnicity have significantly lower average weekly pay relative to workers of white British ethnicity (see figure A.3). Finally, evidence also shows substantial salary gaps by gender within ethnic groups (see figure A.4)

5. Conclusion

The disruption caused by Covid-19 on the Welsh economy prompted huge and immediate economic responses from the UK and Welsh governments. Some £1.7 billion of support for Welsh businesses has been announced through the Welsh budget for this year, with £680 million reaching businesses through Welsh local authorities to date. In May, 316,500 employees in Wales had been furloughed through the Coronavirus Job Retention Scheme, while 102,000 self-employed individuals had applied for support through the Self-Employment Income Support scheme. Despite unprecedented levels of state support for the economy, early data suggests there has been a large increase in unemployment in Wales. From 1 March to 12 May, there were 122,160 new Universal Credit claimants in Wales, with daily claimants peaking at 6,860 new claimants on 27 March.⁹

As well as mitigating the overall impact on the Welsh economy, our findings suggest policymakers should focus on the disproportionate impact the crisis may be having on particular groups and individuals. The impact of the economic disruption in Wales is likely to exacerbate existing inequalities, with the effects being particularly felt by women, the least well-off, BAME and younger workers. While the social distancing measures have been critical in controlling the spread of the virus, a particular focus of the recovery effort should be preventing this economic shock from having long-term effects on the incomes and employment opportunities of these groups and individuals.

⁹ <https://committees.parliament.uk/work/279/the-welsh-economy-and-covid19/publications/3/correspondence/>

Appendix

Figure A.1

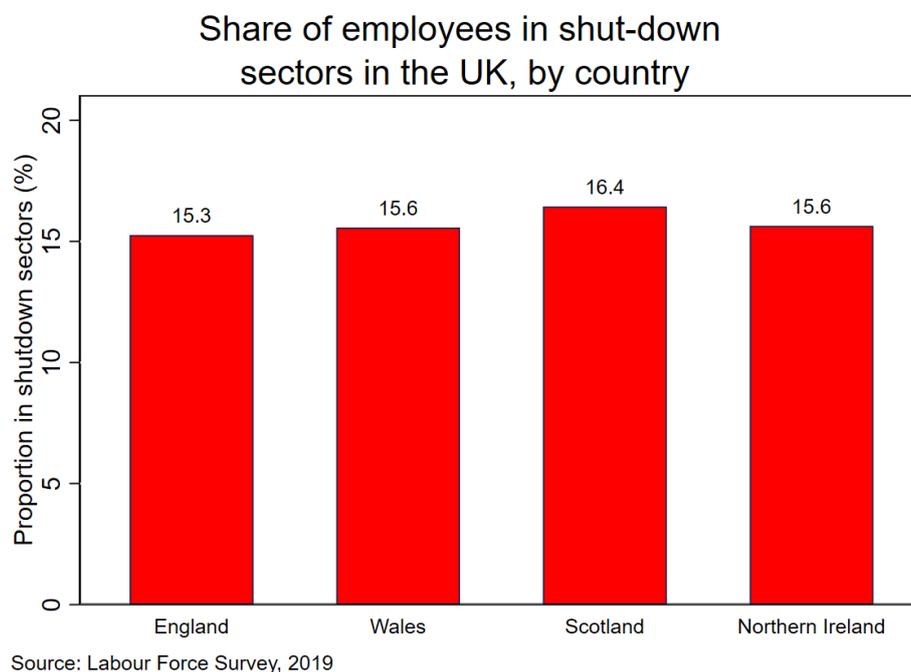


Figure A.2

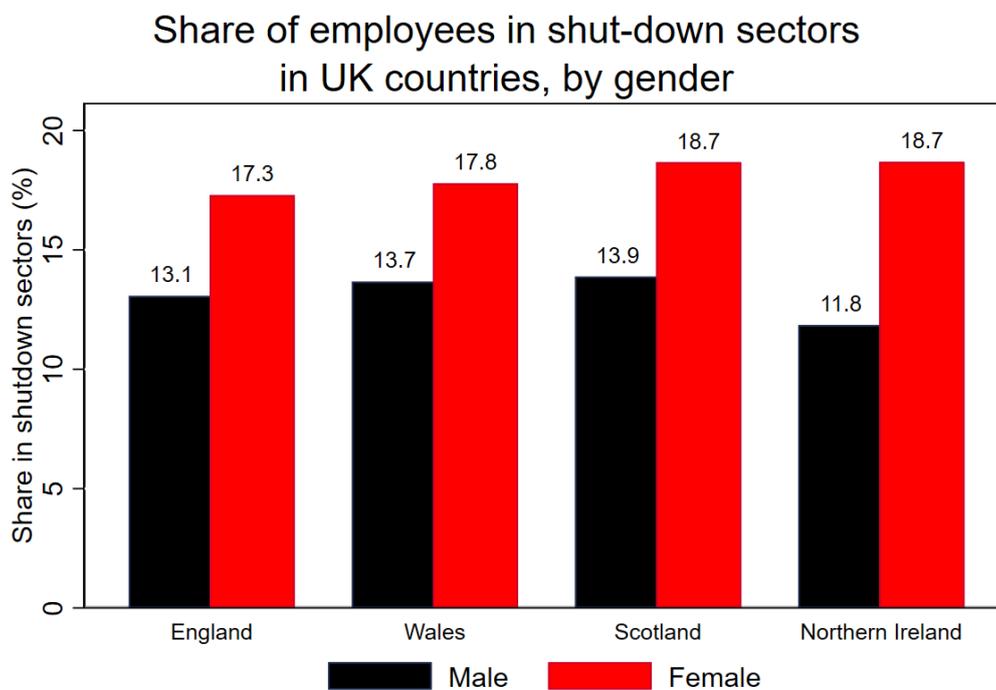
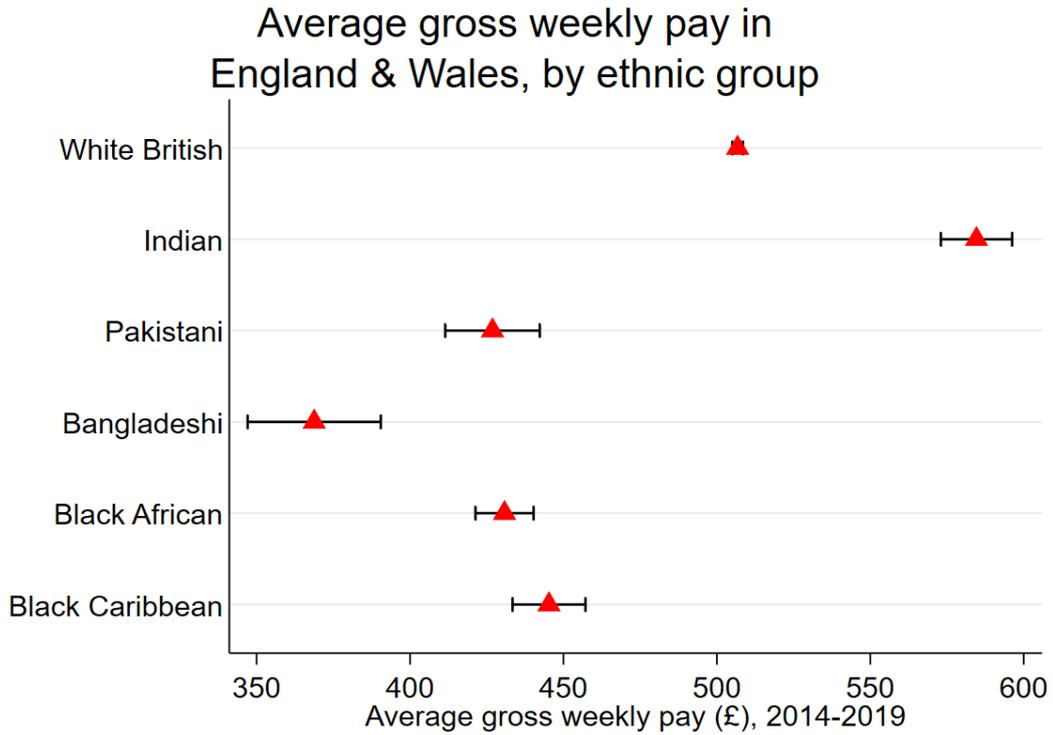
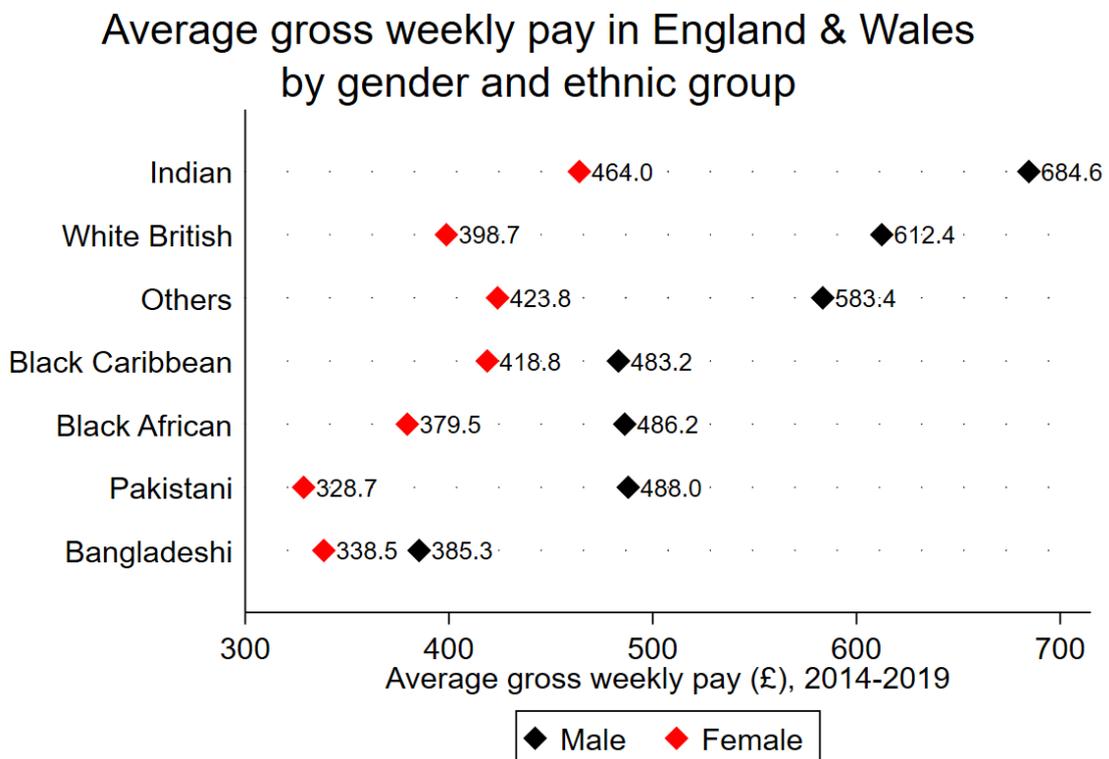


Figure A.3



Source: Labour Force Survey, quarter 1 2014 to quarter 4 2019

Figure A.4



Source: Labour Force Survey, quarter 1 2014 to quarter 4 2019

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***Replication file for the report: "Covid-19 and the Welsh economy: shutdown sectors and key workers" ***

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Access the file on this [link](#)

To visualize the file, you need to have installed the program STATA 11 or above.

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