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Centre for Economic Policy Research
33 Great Sutton Street, London EC1V 0DX, UK
Tel: +44 (0)20 7183 8801
www.cepr.org

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Abstract

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JEL Classification: J21, J22, J24, J33, J63

Keywords: Recessions, inequality, Labor market, unemployment, Coronavirus

Abigail Adams - abi.adams@economics.ox.ac.uk
University of Oxford, Institute for Fiscal Studies and CEPR

Teodora Boneva - teodora.boneva@econ.uzh.ch
University of Zurich and CEPR

Christopher Rauh - cr542@cam.ac.uk
University of Cambridge, INET Institute

Marta Golin - marta.golin@nuffield.ox.ac.uk
University of Oxford

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Abi Adams-Prassl, Teodora Boneva, Marta Golin, and Christopher Rauh*

April 23, 2020

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*Adams-Prassl: University of Oxford (email: abi.adams@economics.ox.ac.uk). Boneva: University of Zurich (email: teodora.boneva@econ.uzh.ch). Golin: University of Oxford (email: marta.golin@nuffield.ox.ac.uk). Rauh: University of Cambridge, Trinity College Cambridge (email: cr542@cam.ac.uk). Ethics approval was obtained from the Central University Research Ethics Committee (CUREC) of the University of Oxford: ECONCIA20-21-09. We thank Toke Aidt and Hamish Low for valuable feedback. We are grateful to the Economic and Social Research Council, the University of Oxford, the University of Zurich, and the Cambridge INET for generous financial support, and Marlis Schneider for excellent research assistance.

1 Motivation

In recent weeks, the COVID-19 outbreak has caused severe disruptions to labor supply in many countries around the world, bringing whole economies grinding to a halt. As a result of measures that limit people's ability to do their jobs, individuals are already suffering large and immediate losses in terms of income and employment. Obtaining a better understanding of the distribution of impacts of the COVID-19 crisis is crucial for designing policy responses that target those individuals who have been most affected by the crisis. In this paper, we provide evidence from real time surveys conducted in the US, the UK and Germany in March and April 2020, with a total of 20,910 respondents. We examine which workers were most likely to reduce their hours, lose their jobs and experience a decrease in their earnings. Our focus lies on documenting cross-country differences as well as understanding which job characteristics allow individuals to buffer the shock of the crisis.

The impacts of the COVID-19 crisis are large and unequal within and across countries. There are several key results that emerge from our study. First, we find staggering cross-country differences in the labor market impacts of the COVID-19 epidemic. In early April, 18% and 15% of individuals in our sample report having lost their jobs within the last four weeks due to the coronavirus outbreak in the US and the UK, respectively, compared to only 5% in Germany.[1] Germany has a well-established short-time work (STW) scheme and we find that 35% of employees have been asked to reduce their hours to benefit from this scheme. Furloughing has been relatively prevalent in the UK but not as prevalent in the US; 43% and 31% of employees in the UK and US respectively report having being furloughed in their main job. Though it might be too early to claim that the "German economic miracle" witnessed during the Great Recession (Rinne and Zimmermann, 2012) is repeating itself, we find that the shock has been much smaller for German workers thus far.

Second, there are striking differences in the impacts within countries depending on job and worker characteristics. Workers who report that they can do a high share of their tasks from home are substantially less likely to report to have lost their jobs due to the coronavirus outbreak. This relationship has become steeper as the crisis has unfolded. Second, there are large differences in job loss probabilities between employed and self-employed workers, as well as between employees in different work arrangements.

[1] We note that our aggregate figures for the US are comparable to recent results from other studies, e.g. Bick and Blandin (2020) who find that 16.5% of workers in the US lost their jobs.

Employees in permanent contracts and in salaried jobs were significantly less likely to lose their jobs compared to employees in other alternative work arrangements. Third, there are large differences in job loss probabilities across different occupations, mostly owing to the fact that the average percentage of tasks workers report being able to do from home varies substantially across occupations. Interestingly, even within occupations the percentage of tasks workers can do from home is a significant predictor of job loss, over and above what can be explained by occupation or other job characteristics.

Turning to individual differences in job loss probabilities, in the US and the UK there are marked differences between men and women and between people with and without university education. Women and workers without a college degree are significantly more likely to have lost their jobs. Remarkably, while occupation fixed effects and the percentage of tasks one can do from home can account for all of the gap in job loss between college-educated workers and workers without a college degree, this is not the case for the gender gap. The gender gap persists even once we control for these job characteristics, indicating that other factors play a role. This does not only contrast with usual recessions in which men tend to be more likely to lose their jobs.[2] It also stands in contrast with the results from Germany, where neither gender nor having a college degree significantly predict job loss. Turning to time use data, we note that amongst the population working from home, women spend significantly more time homeschooling and caring for children.

Individual outlooks on the future are bleak. The average perceived probability of losing one's job within the next months is 37% in the US and 32% in the UK for workers who are still employed. Even in Germany, where the share of workers who have lost their job already is much smaller than in the anglophone countries, the average perceived probability of losing one's job before August 2020 is 25%. Individuals are worried about being able to pay their usual bills and expenses. 46% in the US, 38% in the UK, and 32% in Germany already have struggled to pay their usual bills. Overall, the results suggest that immediate action is required and that policies that aim to mitigate the shocks of the crisis should take into account the inequality in labor market impacts.

Our paper contributes to several strands of the literature. First, it contributes to the large literature on the impact of economic downturns on labor market outcomes (see, e.g., Hoynes, Miller and Schalle 2012; Christiano, Eichenbaum and Trabandt 2015) and the importance of short-time work schemes to buffer economic shocks (see, e.g.,

[2]See, for instance, Bredemeier, Juessen and Winkler (2017).

Giupponi and Landais 2018; Cahuc, Kramarz and Nevoux 2018; Kopp and Siegenthaler 2018). Second, it closely relates to the literature on alternative work arrangements and the role of firms in providing workers insurance against shocks to labor demand (Mas and Pallais 2020; Koustas 2018; Malcomson 1999). We show that firms are sheltering permanent workers more than those on temporary contracts. More surprisingly, we find that even amongst those on permanent contracts, workers on flexible hours contracts or who are paid by the hour have been hit hardest. Third, our paper contributes to the small but exponentially growing economic literature on the effect of the COVID-19 pandemic. Recent research using real time data has studied the relationship between the outbreak and stock returns and volatility, subjective uncertainty in business expectations surveys, business closures, worries regarding the aggregate economy, and household spending (Alfaro et al. 2020; Baker et al. 2020*a*,*b*; Bartik et al. 2020; Fetzer et al. 2020; Carvalho et al. 2020). Other research using data collected before the crisis has discussed channels through which the current crisis may affect workers differently depending on their gender and occupation (Alon et al. 2020; Dingel and Neiman 2020; Mongey and Weinberg 2020).[3] Looking at job ads, Kahn, Lange and Wiczer (2020) find that in the US demand for labor has decreased drastically. We provide real time evidence on the effect of the pandemic on the supply-side of labor market outcomes.

This paper is structured as follows. Section 2 describes the institutional background, the characteristics of our sample and the survey design. Sections 3 and 4 present the inequality in impacts by job characteristics, while Section 5 shows the inequality in impacts by individual characteristics. Section 6 presents our evidence regarding expectations for the future, while Section 7 concludes.

2 Institutional Background and Data

2.1 Institutional Background

There are many institutional differences between the US, UK and German labor markets. In this section we briefly highlight some cross-country differences in labor market policies that may buffer the negative impacts of the COVID-19 crisis. One prominent countercyclical policy tool is short-time work (STW) or 'furloughing'. STW allows firms

[3]Recent work on COVID-19 has also investigated partisan differences in social distancing (Allcott et al. 2020), differences in testing and infection rates among different groups in the population (Borjas 2020), or differences in access to high speed internet across regions (Chiou and Tucker 2020).

affected by temporary shocks to reduce their employees' hours instead of laying them off. Government subsidies pay short-time compensation to employees who reduce their hours, proportional to the reduction in hours (up to a cap). STW is aimed at correcting the inefficiencies which arise if liquidity-constrained firms must first fire and then re-hire and re-train new workers. Separation is costly as match-specific human capital is lost. STW allows firms to preserve or 'freeze' existing matches, thereby contributing to a swift recovery of the economy in the aftermath of the pandemic. Recent evidence on the effectiveness of STW schemes suggests that short-time work can have sizeable impacts on employment and firm survival (see, e.g., Giupponi and Landais 2018; Cahuc, Kramarz and Nevoux 2018; Kopp and Siegenthaler 2018). Furloughing is similar to short-time work only that working hours typically need to be reduced to zero, i.e. the employee is not allowed to take up any work for their employer while being furloughed.

Germany has one of the oldest and most comprehensive, well-established STW programs in the world.[4] The German *Kurzarbeit* scheme allows firms to reduce their employees' hours for up to 12 months. While a reduction of working hours to zero is possible, the *Kurzarbeit* scheme provides a considerable degree of flexibility. Different employees within the same firm can work 0-100% of their usual working hours. The rate at which forgone net monthly earnings are replaced (up to a cap) is 60% (or 67% for employees with children). This wage subsidy is referred to as the *Kurzarbeitergeld* and it is claimed by the employer from the Federal Employment Agency. On March 13, 2020, in response to the COVID-19 crisis, the German Bundestag and Bundesrat passed a law making the eligibility criteria for STW less stringent, allowing more firms and workers to benefit from the scheme.

In the United Kingdom, the government announced a new scheme to protect jobs on March 20, 2020. The newly established *Coronavirus Job Retention Scheme* allows firms to furlough workers for up to three months, starting March 1, 2020. Through this scheme, the government replaces 80% of employees' wages, up to a maximum of £2,500 per month. Employers are responsible for claiming through the Job Retention Scheme on behalf of their employees. In contrast to the German *Kurzarbeit*, furloughed workers cannot undertake *any* work for their employer. This rigidity may create inefficiencies as a minimum number of hours may be necessary to sustain critical business operations. It may also make it more attractive for firms to lay off and re-hire workers rather than retain them, if workers are not allowed to do any work while being furloughed. Another

[4] Short-time work dates back to 1910 when it was first used in the mining industry.

difference between the UK and German schemes is that the UK scheme is currently only open for three months. While the government did announce the possibility of an extension, there is considerable uncertainty about the length of the scheme.

The United States has a similar furloughing scheme in place as the United Kingdom. The Coronavirus Aid, Relief, and Economic Security (CARES) Act was signed into law on March 27, 2020. The CARES Act includes provisions to expand unemployment benefits to include people furloughed, gig workers, and freelancers, with unemployment benefits increased by $600 per week for a period of four months, as well as direct payments to families of $1,200 per adult and $500 per child for households making up to $75,000.[5]

Germany and the United Kingdom have also made provisions for the self-employed. To support small businesses, freelancers and the solo self-employed, the German federal government put together an emergency assistance program which was approved on March 27, 2020. Businesses with up to five (full-time equivalent) employees can apply for a one-off payment of up to 9,000 euros for a period of three months. Businesses with up to ten employees can receive up to 15,000 euros. Federal states have put additional assistance programs in place, the generosity of which varies considerably across states. The UK *Self-employment Income Support Scheme* allows self-employed individuals to claim a taxable grant worth 80% of their trading profits up to a cap of £2,500 per month for up to three month. This scheme was announced on March 26, 2020.

2.2 Data Collection and Samples

To study the labor market impacts of the coronavirus shock, we collected primary survey data on large geographically representative samples of individuals in the United States, the United Kingdom and Germany. In the US and the UK, we collected two waves of survey data, while in Germany we collected one wave of data. The data were collected by a professional survey company.[6] In the US, the first wave of data ($N = 4,003$) was collected on March 24-25, 2020, while the second wave of data ($N = 4,000$) was collected on April 9-11, 2020. In the UK, the first wave ($N = 3,974$) was collected on March 25-26, 2020, while the second wave ($N = 4,931$) was collected on April 9-

[5] Some US states also have short-time compensation (STC) schemes. STC programs are implemented at the sate level and there are differences among state programs.

[6] All participants were part of the company's online panel and participated in the survey online. The survey was scripted in the online survey software Qualtrics. Participants received modest incentives for completing the survey.

14, 2020. In Germany, the data ($N = 4,002$) was collected on April 9-12, 2020. We deliberately chose to survey new participants in the second survey wave for the US and the UK, i.e. there are no participants who participated in the survey twice.

Given the speed at which events and policy responses unravelled, it is important to situate the moment our surveys were launched. At the time we collected the first wave of data (in the US and the UK), there were more than 55,000 confirmed cases of coronavirus and fewer than 1,000 reported deaths in the US. About half of the US population was already under stay-at-home orders. In the UK, there were still fewer than 10,000 confirmed cases and 500 reported deaths. The lockdown had already been in place for a few days, but Prime Minister Boris Johnson had not yet announced the Self-employment Income Support Scheme. All three countries had some lockdown or social distancing measures in place at the time we collected data in early April.

To be eligible to participate in the study, participants had to be resident in the US, UK or Germany, be at least 18 years old, and report having engaged in any paid work during the previous 12 months, either as an employee or self-employed.[7] Within each country, the samples were selected to be representative in terms of region. Appendix Tables A.1 to A.3 show the distribution of respondents across regions and the comparison to the national distribution of individuals across the different regions, separately for the three countries in our sample and for each survey wave. As can be seen from the tables, for all countries and survey waves the two distributions are very similar.

We compare the characteristics of the respondents in our sample to nationally representative samples of the working population in each respective country. Appendix Table A.4 shows the demographic characteristics of a nationally representative sample and our samples.[8] While there are some differences between our samples and the nationally representative samples, all our results are robust to re-weighing our sample using survey weights.[9] We present unweighted results throughout the text and weighted results in the Appendix.

Because we are interested in the recent labor market impact of the COVID-19 pandemic, in all subsequent analysis we focus on respondents who are either still in work at the time of the survey or lost their job less than a month before the data

[7]We asked participants to think about all the paid work they engaged in other than completing surveys.

[8]For the US, we use the February 2020 monthly CPS data, for the UK the 2019 Labour Force Survey data, and for Germany the 2017 SOEP data as a benchmark.

[9]We re-weight our sample to ensure that the joint density of gender, education, and age in our samples matches that of the economically active population in each respective country.

collection due to the coronavirus outbreak. More detail on how we elicit this information is provided below.

2.3 Survey Design

Information on Employment In all countries and survey waves, we collect detailed information on respondents' current work arrangements. We ask respondents to report how many jobs they have been working in over the past 7 days, either as employees or as self-employed.[10] Respondents who report having at least one job are asked to provide details on their main job as well as on their second job if they have one. We also ask all respondents how many hours they worked in the previous week and how many hours they worked in a typical week in February.

For each job, we collect detailed information on different job characteristics, including occupation and industry.[11] We further ask respondents to state whether they are employed or self-employed in this job. Importantly, we ask all respondents what percentage of their tasks they could do from home. Answers were recorded using a slider ranging from 0-100%. To ease comprehension of this question, we provided participants with some examples. 'E.g. Andy is a waiter and cannot do any of his work from home (0%). Beth is a website designer and can do all her work from home (100%)'.

If a respondent reports being employed in any of their jobs, they are further asked to report whether they are on a permanent or temporary contract, whether their work schedule is fixed or flexible, and whether they are salaried or non-salaried, i.e. paid in a different way for their work (e.g. by the hour).

Individuals who report not having a job are asked similar questions about their last main job. In addition, they are asked to provide information on when they lost their last job and whether they think they lost their job because of the coronavirus crisis. Answers to the latter were recorded on a 5-point Likert scale. We classify individuals as having lost their job due to coronavirus if (i) they lost their job in the four weeks before data collection, and (ii) if they answer 'definitely yes' or 'probably yes' to the question on how likely it was that their job loss could be attributed to the coronavirus outbreak.

[10]In the early April wave, in which we also asked about furloughing, we made it explicit that individuals should count all jobs, including the ones in which they have been furloughed.

[11]For the US and the UK, we use the Standard Occupations Classification 2018 major groups for our occupation grouping and the Standard Industry Classification for our industry grouping. For Germany, we use the main categories from the ISCO-08 classification for the occupation grouping.

Information on STW/Furloughing To obtain a better understanding of the use of furloughing and STW schemes, in the early April survey wave, we included questions on furloughing and STW. In the US and the UK, if respondents reported being employed in any of their jobs we asked them to report whether they have been furloughed, and, if yes, whether they have still been asked by their employer to do any work. In the UK, respondents provided us with additional information on whether their employer is topping up the government wage support, and whether they lost any annual leave entitlements. In the US, we additionally asked whether employees lost their health insurance coverage. In Germany, we asked employees whether they were on the STW scheme. We further asked respondents to state the official share of their usual hours that they are asked to work, and for the share of hours that they actually work.

Monthly Earnings To obtain a clearer picture of the impacts of the crisis and the earnings lost, we ask all individuals in the early April survey wave to report their net monthly earnings from all sources for the months of January, February, and March. Throughout the paper, we define 'earnings loss' as a binary variable that takes a value of one if a respondent earned less in March 2020 compared to his / her average earnings over the months of January and February 2020. We also ask respondents to state whether they have already struggled to pay their usual bills or expenses.

Time Use In the early April survey wave, we asked respondents directly about their time use on a typical working day over the past week. For individuals with children living in the household, we asked about the number of hours and minutes spent on active childcare and on homeschooling.

Expectations for the Future To obtain a better sense of how individuals think about their future labor market outcomes, we ask respondents how likely they think it is that certain events will occur before August 1st, 2020, on a 0-100% chance scale. Most notably, those include whether respondents think they will lose their job or shut their business (if self-employed), and have trouble paying their usual bills and expenses. To understand how long individuals think the crisis will last, we also asked all individuals in the second wave how likely they think it is that some form of social distancing measures will still be in place on August 1st, 2020, using a 0-100% scale.

3 Impacts by Job Characteristics

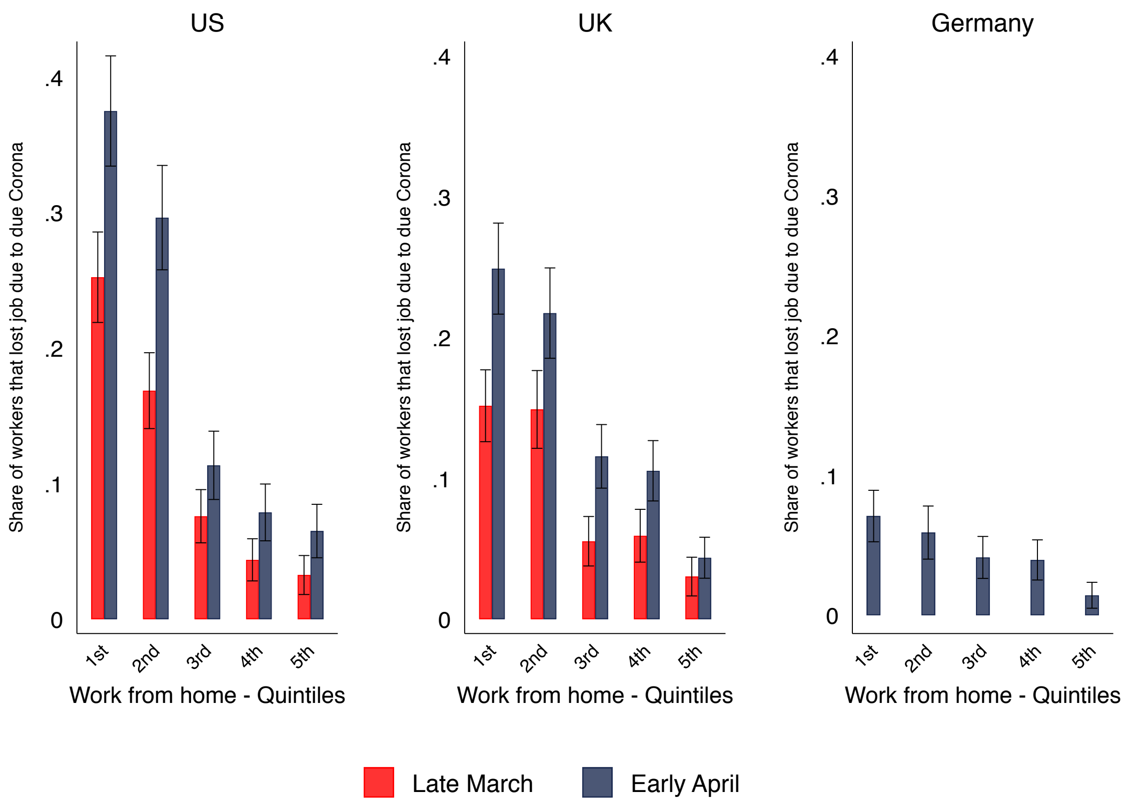
The COVID-19 crisis has had large and unequal impacts on workers in all three countries. In late March, 11% and 8% of respondents report having lost their jobs within the last four weeks due to the coronavirus outbreak in the US and UK, respectively. In early April, those figures rose to 18% (US) and 15% (UK). These figures stand in stark contrast to the figures from Germany, where only 5% of respondents report having lost their jobs in early April.

While there are staggering cross-country differences in the percentage of workers who lost their jobs, there are certain notable similarities in terms of who was most affected by the crisis. The outbreak has caused significant disruptions to the economy but the impact has been unequal across different types of jobs. An important characteristic of a job is the % of tasks individuals can do from home. Figure 1 displays the percentage of people who lost their job due to the coronavirus outbreak by the percentage of tasks individuals report being able to do from home (summarized into quintiles). In all three countries, there is a clear monotonic relationship between the percentage of tasks one can do from home and job loss. In the US and the UK, this relationship has become even steeper as the crisis has unfolded. The most salient cross-country differences in job loss can be observed in the bottom quintile of the distribution. While 40.1% of workers in the bottom quintile lost their jobs in the US, the corresponding figure is 7.6% in Germany.

Figure 2 displays the probability of job loss across different occupations in the US (left), UK (center) and Germany (right). Appendix Figure B.2 gives the results by industry. The percentage of people having lost their jobs varies substantially across the different occupations and industries. We see that both in the US and the UK people working in "food preparation and serving" and "personal care and service" are very likely to have lost their job due to the pandemic. On the other side of the spectrum, people working in "computer and mathematical" occupations or "architecture and engineering" have been most likely to keep their job. Similarly in Germany, people working in "auxiliary" and "mechanical" occupations had the highest likelihood of losing their job, while "technicians" and people working in "office and administration" had among the lowest.

Turning to differences in job loss for employed workers by work arrangements, Figure 3 shows the differences in job loss probabilities depending on whether the individual was employed (i) on a temporary or permanent contract, (ii) had a non-salaried or

Figure 1: Job loss probability due to Covid-19 by % tasks that can be done from home

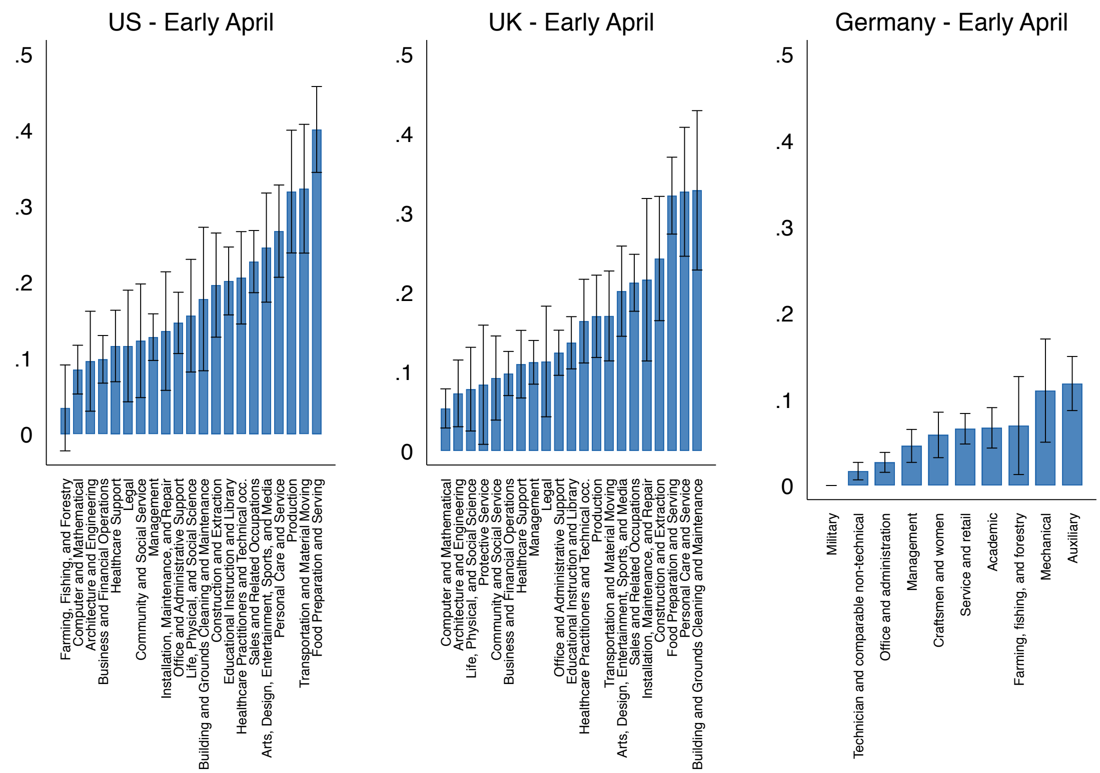


Notes: The quintiles on the x-axis are defined by the share of tasks the respondents report that they can do from home. The thin black bars represent the 95% confidence intervals. The figure shows the share of individuals who were in paid work four weeks before data collection that lost their job due to Covid-19.

salaried job, and (iii) had varying or fixed hours. We observe the same pattern in all three countries. Workers with permanent, salaried, fixed hour contracts were less likely to be affected compared to workers who were on temporary contracts, non-salaried and whose hours varied.

The share of tasks that can be done from home within occupation and industry is a powerful predictor of the share of workers that lost their jobs. It alone can explain 69%, 54% and 58% of the variation in job loss due to Covid-19 across occupations in the US, the UK and Germany, respectively (Figure B.3). As can be seen in Figure B.3 in occupations in which a larger share of tasks can be done from home (x-axis) the job loss probability due to Covid-19 (y-axis) has been much lower. We find a similar

Figure 2: Job loss probability due to Covid-19 by occupation



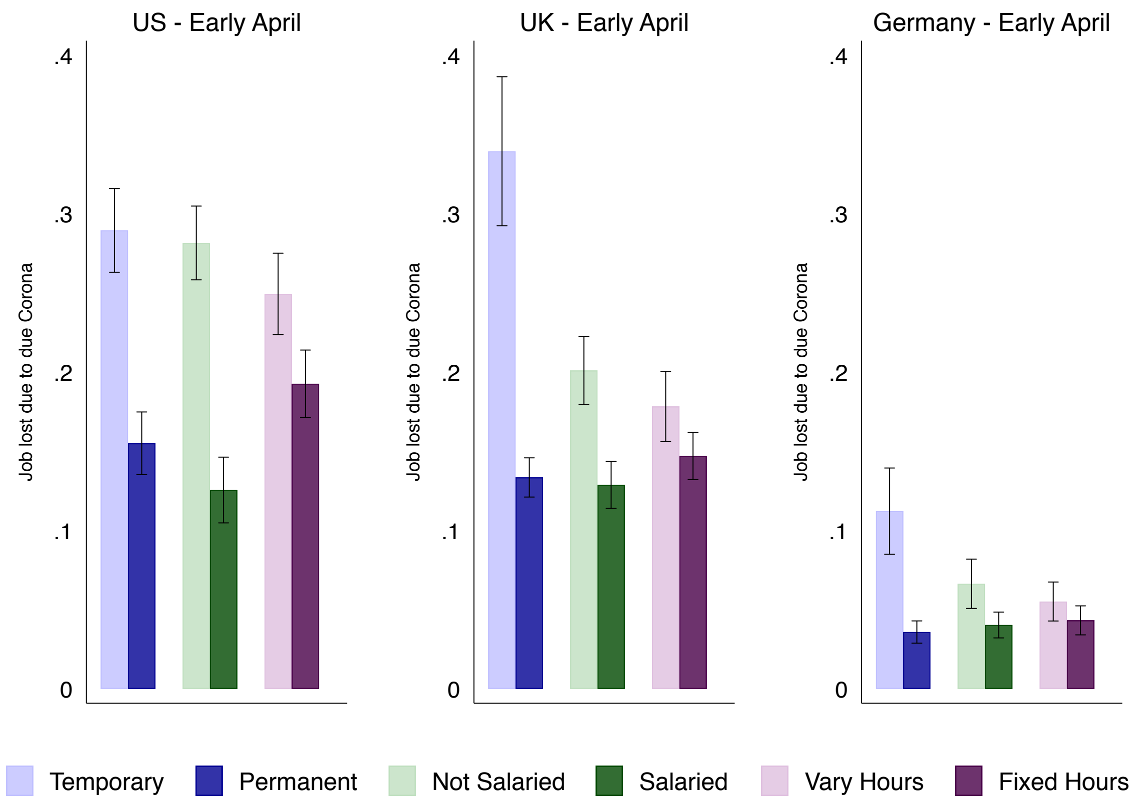
Notes: The thin black bars represent the 95% confidence intervals. The figure shows the share of individuals who were in paid work four weeks before data collection that lost their job due to Covid-19 by occupation.

pattern when we investigate the relationship between the share of tasks that can be done from home and job loss across industries (Figures B.4).

Appendix Figure B.6 shows the average share of tasks that can be done from home by occupation (y-axis) and industry (x-axis), while Appendix Figure B.7 shows the share of jobs lost due to Covid-19. Occupations in industries in which less tasks can be done from home have seen more jobs being lost due to the pandemic. Whether or not the share of tasks one can do from home predicts job loss over and above what can be predicted by occupation and industry is a question we explore in Section 4.[12]

[12]In Appendix Figures B.1 and B.5 we see that even within occupations and industries the share of tasks that can be done from home varies substantially.

Figure 3: Job loss probability due to Covid-19 by work arrangements



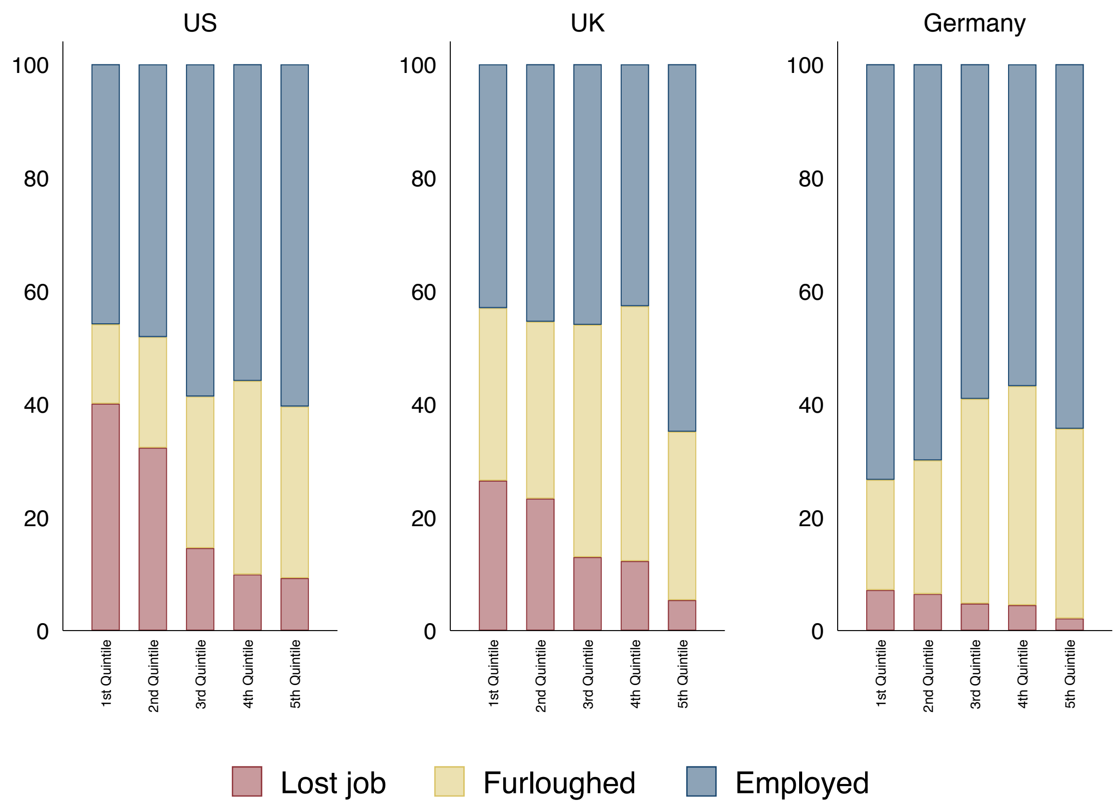
Notes: The thin black bars represent the 95% confidence intervals. The figure shows the share of individuals who were employees four weeks before data collection that lost their job due to Covid-19.

Furloughing and STW Another response to the coronavirus crisis has been the introduction and increased use of furloughing and STW schemes. In early April, 31% (US), 43% (UK) and 35% (Germany) of employees report being furloughed or in STW. Figure 4 shows the percentage of employees who are still employed without being furloughed or in STW (blue), as well as the percentage of employees who have been furloughed or in STW (yellow) or laid off (red) by the percentage of tasks individuals report being able to do from home (again summarized into quintiles).[13] In all three countries, the percentage of employees being furloughed or in STW is substantial and increases somewhat with the percentage of tasks one can do from home. Figures B.11 and B.12 in the Appendix show the same breakdown by occupation and industry, respectively. There is substantive variation in the extent to which employees were furloughed across industries. In the UK, for example, 68% of employees working in the "mining and quarrying" industry were furloughed, against a figure of around 5% for "public administration and defence". Similarly, furloughing and STW schemes are differentially used across occupations. Within countries, we also see significant variation in the terms of furloughing. In the UK for example, employers can choose to top up the wage of their furloughed employees and 70% of our respondents who were furloughed report that their employer offered to do so. However, 50% of employees in the UK were also asked to take annual leave and 15% of them were asked to work while on furlough. In the US, 53% of employees who were furloughed also lost their health insurance coverage. Remarkably in Germany, we find no difference between the percentage of hours that employees were officially asked to work while on STW (49% on average) and the hours that they actually work (50% on average).

Impact on Hours Worked Conditional on Working Job loss is only one aspect of the labor market shock. Workers who have kept their job might now be working different hours. Adjustment on the intensive margin could be driven by changes in the level and distribution of aggregate economic activity or by changes in labor supply arising from health restrictions or other responsibilities such as child care. Among those who still had a paid job in early April, we observe a stark decline in the number of hours worked. The average change in hours worked (compared to a typical week in February) was 5 hours (US), 7 hours (UK) and 4 hours (Germany). Figure 5 shows the average change in hours worked by occupation amongst workers still working. The x-

[13] Note that in the figures, "Furloughing" should be interpreted as the STW scheme in Germany.

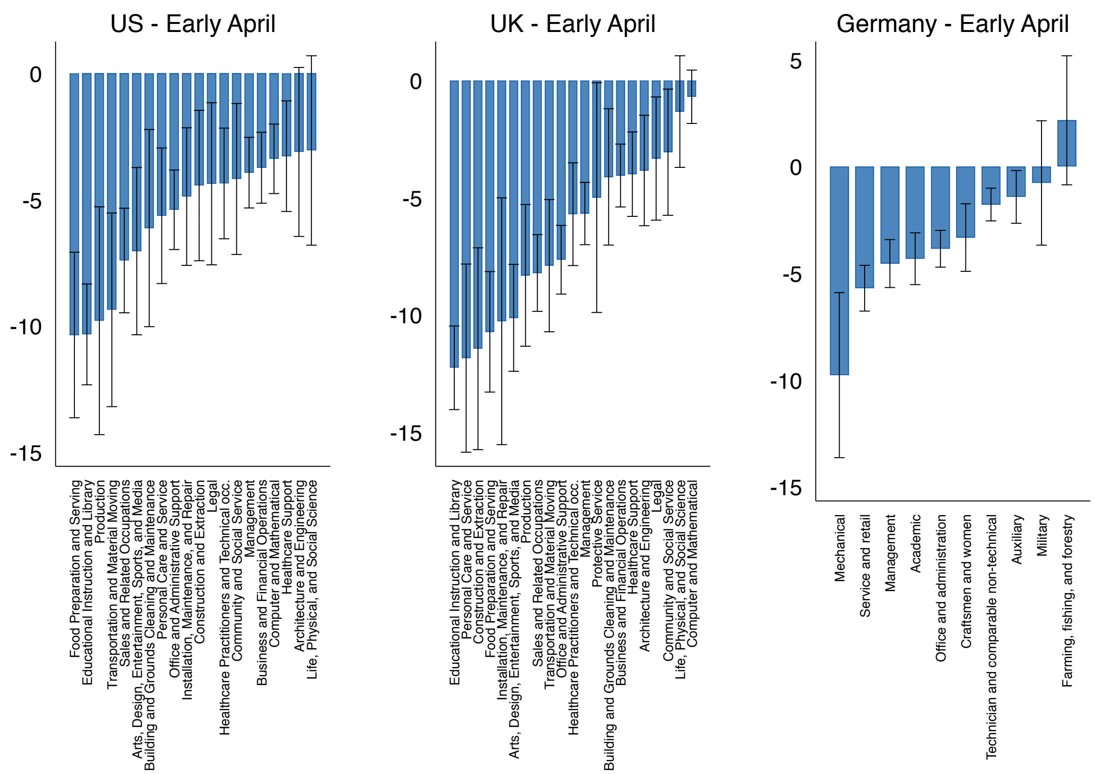
Figure 4: Employment status by % of tasks that can be done from home



Notes: The figure shows the share of individuals who are employed, furloughed or lost their job due to the COVID-19 crisis, by the percentage of tasks workers report being able to do from home. The sample is restricted to employees (in their main or last job) only.

axis displays the difference between the two. We see that, across all occupations, those in paid work are working fewer hours on average. However, there is large variation across occupations and sectors. For instance, in the UK workers in "computer and mathematical" occupations on average saw hardly any change in hours worked , while for those working in "educational instruction and library" the average drop in hours worked was about 12 hours in the given week. In Appendix Figure B.9, we see that occupations that saw the largest drop in hours also saw the largest share of workers laid off. Note that this is not a mechanical effect as the reduction in hours worked is amongst those that are still working so the change only reflects the intensive margin. In Appendix Figures B.8 and B.10 we see that the same patterns hold within industry.

Figure 5: Change in hours worked by occupation



Notes: The thin black bars represent the 95% confidence intervals. The figure shows the average change in hours worked between a usual week in February and the last week by occupation, for individuals that were in paid work at the time of data collection.

4 Predictors of Job and Earnings Loss

We now move on to analyzing the predictors of job and earnings loss in a regression framework, where we estimate linear probability models focusing on data from the early April wave. Columns (1) - (3) of Table 1 show regressions where the dependent variable is a binary variable for having lost one's job in the last month because of coronavirus. All specifications control for region, occupation, and industry fixed effects. In all three countries, workers' ability to perform more of their tasks from home is associated with a lower likelihood of them losing their job. Interestingly, this relationship survives even when we control for occupation and industry fixed effects, suggesting that the variation in the percentage of tasks one can do from home within an occupation also plays an important role in explaining differences in job loss probabilities.

Table 1 also speaks to the importance of contractual arrangements in sheltering workers from the economic downturn that the COVID-19 outbreak induced. Controlling for workers' ability to work from home and the occupation and industry they work in, we find that employees in less secure work arrangements are more likely to have lost their jobs following the coronavirus outbreak. In the UK, employees with a permanent contract are 17 percentage points less likely to have lost their job relative to employees on temporary contracts. In the US and Germany, permanent employees are 7 and 5 percentage points less likely to now be out of work. Salaried employees in the US (Germany) were 6 (2) percentage points less likely to lose their jobs relative to non-salaried employees.[14]

Among the respondents in our sample who still have a paid job in early April, 35% (US), 30% (UK) and 20% (Germany) report having had lower earnings in March (compared to Jan-Feb). We now investigate which job characteristics predict whether individuals experienced a drop in earnings. As can be seen in Columns 4 and 5 of Table 1, the probability of a fall in labor earnings is larger for workers in the US and the UK who can perform fewer of their tasks from home. For Germany we do not find a similar association. In the US (UK), individuals who can perform all of their tasks from home are 25 (15) percentage points less likely to have suffered a fall in earnings compared to individuals who cannot work from home.

As for job loss, the likelihood of earnings loss significantly varies with work ar-

[14] In Appendix Table B.5 we pool the first and second survey wave for the US and the UK and additionally control for a dummy variable indicating whether respondents were part of the second survey wave. Individuals in the second wave were significantly more likely to report having lost their job. All other results are robust to using both survey waves.

Table 1: Job and earnings loss probability

	Job loss			Earnings loss		
	US	UK	DE	US	UK	DE
	(1)	(2)	(3)	(4)	(5)	(6)
Tasks from Home	-0.2617***	-0.1917***	-0.0397***	-0.1328***	-0.0737***	-0.0202
	(0.0216)	(0.0195)	(0.0128)	(0.0303)	(0.0267)	(0.0233)
Self-Employed	-0.0996***	-0.0463*	0.0051	0.0224	0.0945**	0.0615*
	(0.0228)	(0.0257)	(0.0174)	(0.0320)	(0.0373)	(0.0322)
Permanent	-0.0659***	-0.1711***	-0.0546***	-0.0116	-0.0224	0.0030
	(0.0165)	(0.0205)	(0.0114)	(0.0233)	(0.0302)	(0.0210)
Salaried	-0.0632***	0.0110	-0.0193*	-0.0911***	-0.0455**	-0.0629***
	(0.0181)	(0.0154)	(0.0108)	(0.0248)	(0.0207)	(0.0197)
Fixed Hours	0.0022	-0.0094	0.0035	-0.0714***	-0.1108***	-0.0927***
	(0.0164)	(0.0151)	(0.0097)	(0.0232)	(0.0203)	(0.0175)
Constant	0.4475***	0.2720***	0.1288***	0.3757***	0.3765***	0.2933***
	(0.0875)	(0.0667)	(0.0355)	(0.1208)	(0.0886)	(0.0645)
Observations	2995	3760	3354	2396	3111	3165
R^2	0.1600	0.1138	0.0654	0.1057	0.0890	0.0671
Region F.E.	yes	yes	yes	yes	yes	yes
Occupation F.E.	yes	yes	yes	yes	yes	yes
Industry F.E.	yes	yes	yes	yes	yes	yes

Notes: OLS regressions. The dependent variable in Columns 1 - 3 is a binary variable for whether a respondent lost their job within the past month and attributed the job loss to the coronavirus outbreak. The dependent variable in Columns 4 - 6 is a binary variable for whether a respondent earned less in March 2020 than the average earnings over January and February 2020. In Columns 4 - 6 the sample is restricted to those who were in work at the time of data collection. Tasks from Home is the fraction of tasks respondents could do from home in their main or last job. Self-employed is a binary variable for being self-employed in the main or last job. Permanent, salaried and fixed hours take value 1 for employees with permanent contracts, who are salaried and whose work hours are fixed, respectively. Region fixed effects refer to state fixed effects for the US and Germany, and fixed effects for regions as reported in Table A.1 for the UK.

rangements in all three countries. Amongst those who have kept their job, salaried employees and those with fixed work schedules have been relatively sheltered from the shock. We find that salaried employees are between 5 and 9 percentage points less likely to have seen their earnings fall between January-February and March 2020, compared to non-salaried employees. Similarly, employees with fixed hour contracts have a 7-11 percentage point lower likelihood of losing any of their earnings compared to workers whose work hours vary.

5 Impacts by Individual Characteristics

An important question that emerges is whether the impact of the COVID-19 outbreak varies across individuals with different background characteristics. Table 2 shows the results from linear probability models in which the dependent variable is job loss. The results in Columns (1) and (3) suggest that in the US and UK women were significantly more likely to lose their jobs, while people with a university degree were significantly less likely to experience job loss. The magnitudes of the effects are large. Women in the US (UK) are 7 (5) percentage points more likely to lose their jobs (compared to men), while workers with a college degree in the US (UK) were 8 (6) percentage points less likely to lose their jobs (compared to workers without a college degree). In Germany we find that neither gender nor a university degree predict job loss significantly. However, in Germany we do find that those under the age of 30 were more likely to lose their job.

In the US and UK, we find a large gender gap in respondents' ability to work from home: in the US (UK), women on average report they can do 42% (41%) of their tasks from home, compared to 53% (46%) for men. In contrast, in Germany we find no significant difference: men report that 41% of their tasks can be done from home and women report 39%. Further, previous literature shows that men and women, as well as workers with different levels of educational attainment, sort into different occupations. In order to take these differences into account, in Columns (2), (4) and (6) we additionally control for the percentage of tasks that can be done from home as well as occupation and industry fixed effects. The coefficient on university education is no longer significant in these specifications and estimated to be close to zero, indicating that the percentage of tasks one can do from home and occupation dummies can explain most if not all of the variation in job loss across the two education groups. In contrast, the gender coefficient is still positive and significant in the US and UK, albeit reduced in size, suggesting that other factors we are not capturing in this regression play a role in driving the gender gaps.

One potential reason for these gender differences is that women are spending more time homeschooling and caring for children. Figure B.14 presents the average number of hours that men and women who are working from home reported spending on different activities during a typical work day. As can be seen from this figure, women spend a lot more time on childcare than men. In Appendix Table B.6, we show that restricting the sample to those that are spending some time working from home and controlling for a range of individual, job, and geographic characteristics, we still find that women

Table 2: Job loss probability - Individual characteristics

	United States		United Kingdom		Germany	
	(1)	(2)	(3)	(4)	(5)	(6)
Female	0.0652***	0.0321**	0.0483***	0.0242*	0.0014	-0.0002
	(0.0151)	(0.0157)	(0.0124)	(0.0129)	(0.0077)	(0.0084)
University degree	-0.0789***	-0.0050	-0.0629***	-0.0070	-0.0116	0.0071
	(0.0151)	(0.0161)	(0.0123)	(0.0131)	(0.0083)	(0.0098)
30-39	-0.0325	-0.0043	0.0222	0.0304*	-0.0436***	-0.0188*
	(0.0201)	(0.0195)	(0.0156)	(0.0156)	(0.0097)	(0.0103)
40-49	-0.0286	-0.0087	0.0259	0.0229	-0.0343***	-0.0143
	(0.0214)	(0.0209)	(0.0171)	(0.0173)	(0.0115)	(0.0124)
50-59	0.0005	0.0171	0.0036	-0.0074	-0.0338***	-0.0207
	(0.0247)	(0.0241)	(0.0215)	(0.0216)	(0.0120)	(0.0127)
60+	0.0135	0.0111	0.0256	0.0111	0.0318	0.0289
	(0.0257)	(0.0253)	(0.0366)	(0.0359)	(0.0201)	(0.0207)
Tasks from home		-0.2574***		-0.1913***		-0.0406***
		(0.0219)		(0.0197)		(0.0132)
Self-Employed		-0.1003***		-0.0477*		0.0059
		(0.0230)		(0.0260)		(0.0176)
Permanent		-0.0639***		-0.1720***		-0.0511***
		(0.0166)		(0.0206)		(0.0116)
Salaried		-0.0592***		0.0112		-0.0193*
		(0.0185)		(0.0156)		(0.0109)
Fixed Hours		0.0018		-0.0123		0.0057
		(0.0165)		(0.0152)		(0.0097)
Constant	0.2371***	0.4311***	0.1191***	0.2454***	0.0857***	0.1317***
	(0.0689)	(0.0888)	(0.0253)	(0.0678)	(0.0132)	(0.0358)
Observations	3025	2995	3816	3760	3584	3354
R^2	0.0448	0.1618	0.0169	0.1161	0.0170	0.0679
Region F.E.	yes	yes	yes	yes	yes	yes
Occupation F.E.	no	yes	no	yes	no	yes
Industry F.E.	no	yes	no	yes	no	yes

Notes: OLS regressions. The dependent variable is a binary variable for whether a respondent lost their job within the past month and attributed the job loss to the coronavirus outbreak. Tasks from home is the fraction of tasks respondents could do from home in their main or last job. Self-employed is a binary variable for being self-employed in the main or last job. Permanent, salaried and fixed hours take value 1 for employees with permanent contracts, who are salaried and whose work hours are fixed, respectively. Region fixed effects refer to state fixed effects for the US and Germany, and fixed effects for regions as reported in Table A.1 for the UK.

spent about one hour more on childcare and home schooling. However, in Germany we find a sizeable gender gap in active time spent on children but no such gap in the probability of job loss.

Appendix Figure B.13 presents the coefficients of the occupation fixed effects from the regressions in Columns (2), (4) and (6) in Table 2. We see that qualitatively the estimated coefficients resemble the unconditional patterns presented in Figure 2. "Food preparation and serving", for instance, is associated with a 13 (12) percentage point higher job loss probability in the US (UK).[15]

Table B.4 presents results from linear probability models in which the dependent variable is whether or not the individual has experienced an earnings loss between January-February and March 2020, and where the sample is restricted to respondents who report still being in work in April 2020. In all three countries, women who did not lose their job were no more likely to experience a fall in their income compared to men. In the US and the UK, college-educated workers still in work were less likely to experience a fall in their earnings compared to workers without a college degree. We do not find a similar pattern in Germany.

[15]The industry fixed effects are less precisely estimated (not presented) suggesting that occupation might be the dimension which is better at explaining job loss.

6 Expectations for the Future

Focusing on workers in the second survey wave who still report having a job, we find that individual outlooks on the future are bleak. On average, those still in work report a perceived likelihood of losing their job within the next few months of 37% and 32% in the US and UK. In Germany, where job loss has been much less prevalent, still 25% fear losing their job over the next months. Table 3 shows the results of least square regressions in which we show what characteristics predict individual perceptions of the likelihood of job loss. We find that older workers and employees on more secure work arrangements perceive a lower chance of job loss, with the exception of workers on permanent contracts in the US. Interestingly, women and those who report being able to do fewer tasks from home are more optimistic about their chance of keeping their job in the US and UK. This stands in contrast to the realized experience of these groups so far.

We also analyze whether individual beliefs about the likelihood of social distancing measures still being in force in August 2020 are associated with their job loss perceptions. Individuals believe it is likely that some form of social distancing measures will be in place at the end of the summer; the average response to this question was 58% in the US, 62% in the UK, and 53% in Germany. Those who believe that social distancing measures will persist into the summer perceive the chance that they will lose their job as significantly higher.

All respondents irrespective of their current employment status were further asked about their perceived likelihood of struggling to pay their usual bills and expenses in the future. The average response to this question was 53% in the US, 46% in the UK, and 33% in Germany, indicating that many individuals think they will struggle financially. Indeed, 46%, 38%, and 32% of individuals in the US, UK, and Germany report that they have *already* had more difficulties meeting their usual bills and expenses compared to normal. Providing timely assistance to those most affected should be a high priority.

Table 3: Perceived probability of job loss

	United States		United Kingdom		Germany	
	(1)	(2)	(3)	(4)	(5)	(6)
Female	-0.0998***	-0.0590***	-0.0533***	-0.0100	0.0222**	0.0447***
	(0.0138)	(0.0141)	(0.0106)	(0.0107)	(0.0102)	(0.0095)
University degree	0.0198	0.0167	0.0136	0.0092	0.0656***	0.0327***
	(0.0140)	(0.0146)	(0.0106)	(0.0108)	(0.0112)	(0.0112)
30-39	0.0129	0.0075	-0.0491***	-0.0243*	-0.0001	0.0152
	(0.0185)	(0.0176)	(0.0135)	(0.0129)	(0.0128)	(0.0117)
40-49	0.0084	0.0022	-0.1407***	-0.0873***	-0.0909***	-0.0216
	(0.0195)	(0.0189)	(0.0147)	(0.0144)	(0.0153)	(0.0140)
50-59	-0.1269***	-0.0849***	-0.2361***	-0.1571***	-0.1465***	-0.0609***
	(0.0229)	(0.0220)	(0.0183)	(0.0177)	(0.0156)	(0.0143)
60+	-0.2102***	-0.1505***	-0.2514***	-0.2087***	-0.1858***	-0.1124***
	(0.0239)	(0.0232)	(0.0317)	(0.0299)	(0.0270)	(0.0241)
Tasks from home		0.1105***		0.1180***		0.1385***
		(0.0200)		(0.0166)		(0.0152)
Self-Employed		0.0059		-0.1077***		-0.0932***
		(0.0206)		(0.0231)		(0.0205)
Permanent		0.0443***		-0.0778***		0.0023
		(0.0152)		(0.0186)		(0.0135)
Salaried		-0.0244		-0.0297**		-0.1086***
		(0.0163)		(0.0129)		(0.0125)
Fixed Hours		-0.0368**		-0.0587***		-0.0297***
		(0.0150)		(0.0125)		(0.0111)
Measures still in August		0.3562***		0.2170***		0.2147***
		(0.0238)		(0.0203)		(0.0164)
Constant	0.3804***	0.1608**	0.4165***	0.3478***	0.3368***	0.3363***
	(0.0639)	(0.0801)	(0.0214)	(0.0563)	(0.0182)	(0.0420)
Observations	2402	2382	3115	3094	3179	3116
R^2	0.1320	0.2713	0.0831	0.2333	0.0792	0.3085
Region F.E.	yes	yes	yes	yes	yes	yes
Occupation F.E.	no	yes	no	yes	no	yes
Industry F.E.	no	yes	no	yes	no	yes

Notes: OLS regressions. The dependent variable is a binary variable for whether a respondent lost their job within the past month and attributed the job loss to the coronavirus outbreak. Tasks from home is the fraction of tasks respondents could do from home in their main or last job. Self-employed is a binary variable for being self-employed in the main or last job. Permanent, salaried and fixed hours take value 1 for employees with permanent contracts, who are salaried and whose work hours are fixed, respectively. 'Measures still in August' refers to the perceived probability of some social distancing measures being in place in August. Region fixed effects refer to state fixed effects for the US and Germany, and fixed effects for regions as reported in Table A.1 for the UK.

7 Conclusion

The COVID-19 crisis has had large impacts on the economy. The results from our study suggest that the impacts are highly unequal. The percentage of tasks workers can do from home is highly predictive of job loss and so are individual work arrangements. Firms have played some role in smoothing the shock for permanent and salaried employees, and for those who usually work on fixed schedules.

In the US and UK women and workers without a college degree are significantly more likely to already have lost their jobs, while younger individuals are significantly more likely to experience a fall in their earnings. The outlook on the future is bleak with many workers expecting to lose their jobs over the next months. The results highlight the need for immediate policy responses that target those groups in the population that are most affected by the crisis.

Finally, we find large differences in the magnitude of the shock between the anglophone countries, the US and the UK, versus Germany. The anglophone countries have seen much more employment ties cut. This might not only increase the share of population suffering hardship at the moment, but could also prove important for recovery as well due to the need for matching between workers and firms and the loss in employer-employee specific human capital. Further research into understanding which institutional factors are driving these differences is of high policy importance.

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A Online Appendix A: Data Description

Table A.1: Distribution of respondents across regions - UK

Region	National	Late March	Early April
Scotland	8.42	8.48	8.54
Northern Ireland	2.76	2.57	2.80
Wales	4.79	4.83	4.87
North East	4.06	4.08	4.12
North West	11.00	11.02	11.11
Yorkshire and the Humber	8.24	8.28	8.34
West Midlands	8.80	8.86	8.92
East Midlands	7.27	7.32	7.38
South West	8.59	8.63	8.70
South East	13.70	13.79	13.87
East of England	9.29	8.91	8.03
Greater London	13.15	13.24	13.32
Observations		3974	4931

Notes: National figures refer to the latest available estimates for the population of residents aged 18 or above and come from the Office for National Statistics. Data source: Office for National Statistics (2019).

Table A.2: Distribution of respondents across area codes - US

Region	National	Late March	Early April
Area code 0	7.40	7.39	7.40
Area code 1	10.33	10.32	10.32
Area code 2	10.04	10.04	10.05
Area code 3	14.41	14.41	14.40
Area code 4	10.02	10.02	10.03
Area code 5	5.25	5.25	5.25
Area code 6	7.17	7.17	7.18
Area code 7	11.94	11.94	11.95
Area code 8	7.13	7.12	7.13
Area code 9	16.30	16.34	16.30
Observations		4003	4000

Notes: National figures refer to the latest available estimates for the population of residents aged 18 or above and come from the United States Census Bureau. Data source: U.S. Census Bureau, Population Division (2019).

Table A.3: Distribution of respondents across states - Germany

Region	National	Early April
Baden-Württemberg	13.33	13.29
Bayern	15.75	15.74
Berlin	4.39	4.40
Brandenburg	3.03	3.02
Bremen	0.82	0.82
Hamburg	2.22	2.22
Hessen	7.55	7.55
Mecklenburg-Vorpommern	1.94	1.97
Niedersachsen	9.62	9.62
Nordrhein-Westfalen	21.60	21.59
Rheinland-Pfalz	4.92	4.92
Saarland	1.19	1.20
Sachsen	4.91	4.90
Sachsen-Anhalt	2.66	2.65
Schleswig-Holstein	3.49	3.50
Thüringen	2.58	2.60
Observations		4002

Notes: National figures refer to the latest available estimates for the population of residents and come from the Statistische Ämter des Bundes und der Länder. Data source: Statistische Ämter des Bundes und der Länder (2018).

Table A.4: Demographic Variables in the Population & Surveys

	US			UK			DE	
	CPS	March	April	LFS	March	April	SOEP	April
Female	0.472	0.621	0.581	0.47	0.532	0.552	0.481	0.475
University	0.395	0.440	0.494	0.357	0.422	0.488	0.255	0.323
<30	0.231	0.322	0.255	0.232	0.295	0.281	0.168	0.398
30-39	0.224	0.262	0.264	0.230	0.272	0.333	0.205	0.284
40-49	0.203	0.179	0.215	0.217	0.203	0.238	0.209	0.146
50-59	0.198	0.130	0.136	0.217	0.151	0.114	0.251	0.132
60+	0.144	0.107	0.130	0.104	0.079	0.033	0.166	0.040

Notes: The table shows the mean demographic characteristics of economically active individuals in each respective country. These were calculated using the frequency weights provides in the CPS for the US, LFS for the UK, and SOEP for Germany. The unweighted averages of these demographic variables in our survey waves are also reported.

B Online Appendix B: Additional Tables and Figures

Figure B.1: Share of tasks that can be done from home by occupation

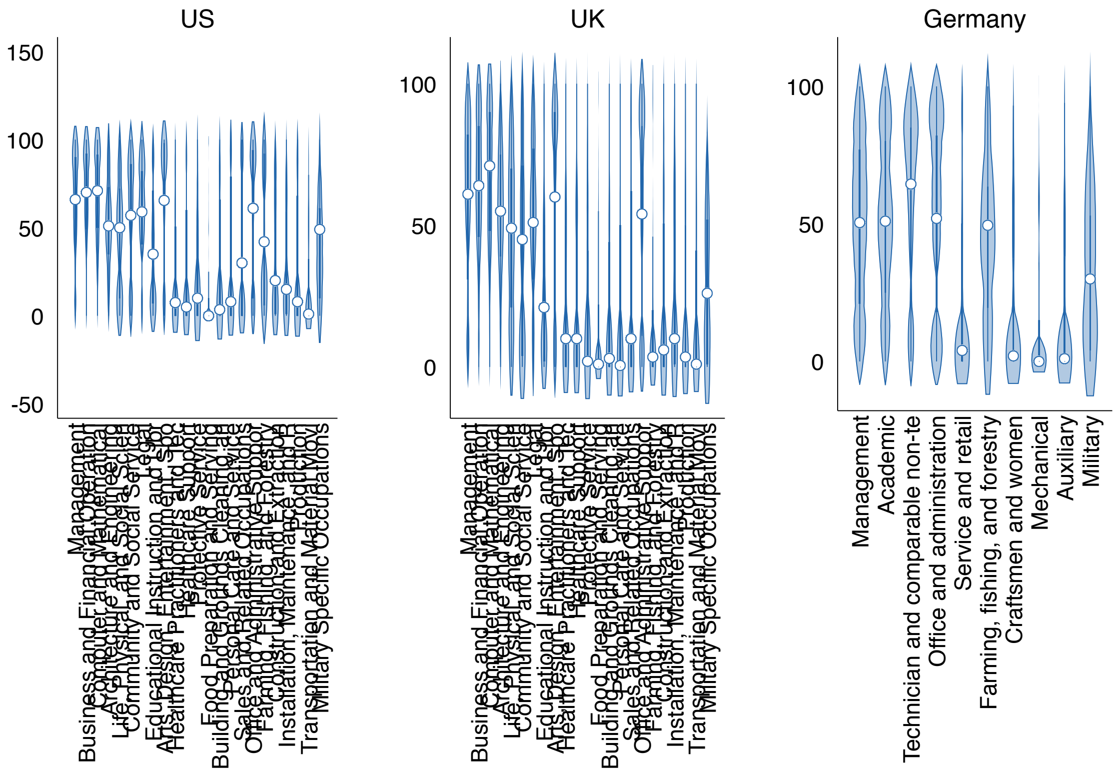
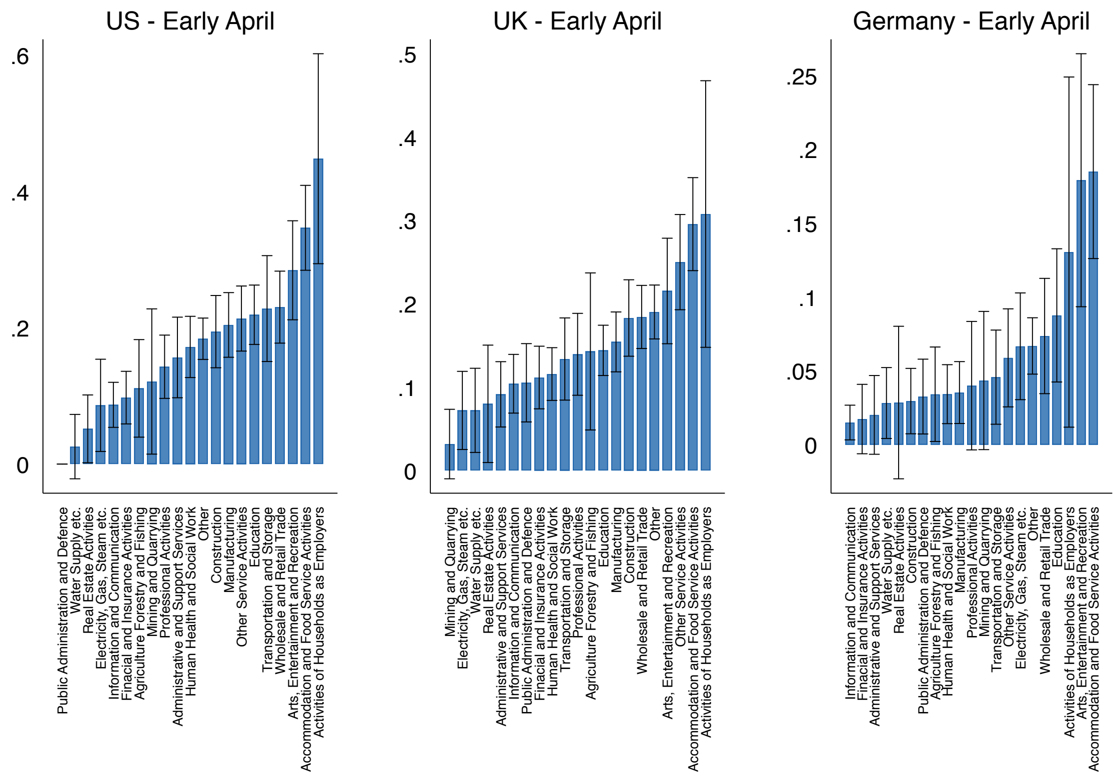
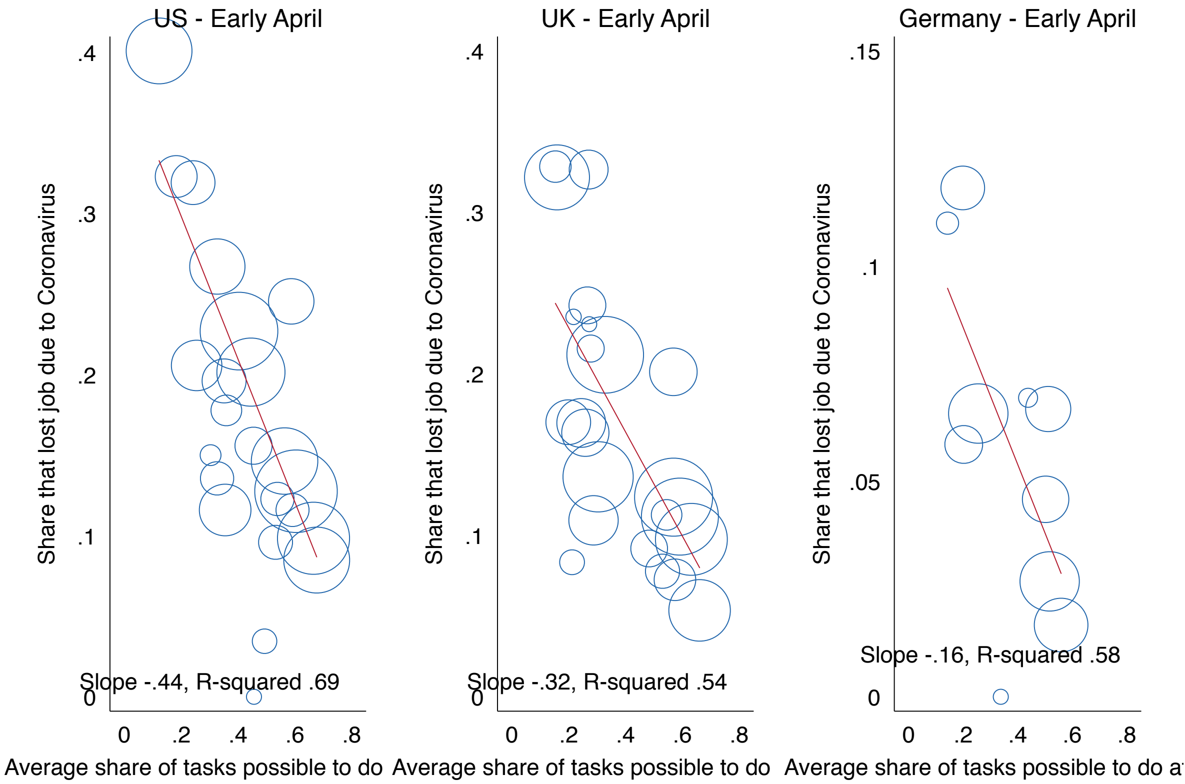


Figure B.2: Job loss probability due to Covid-19 by industry



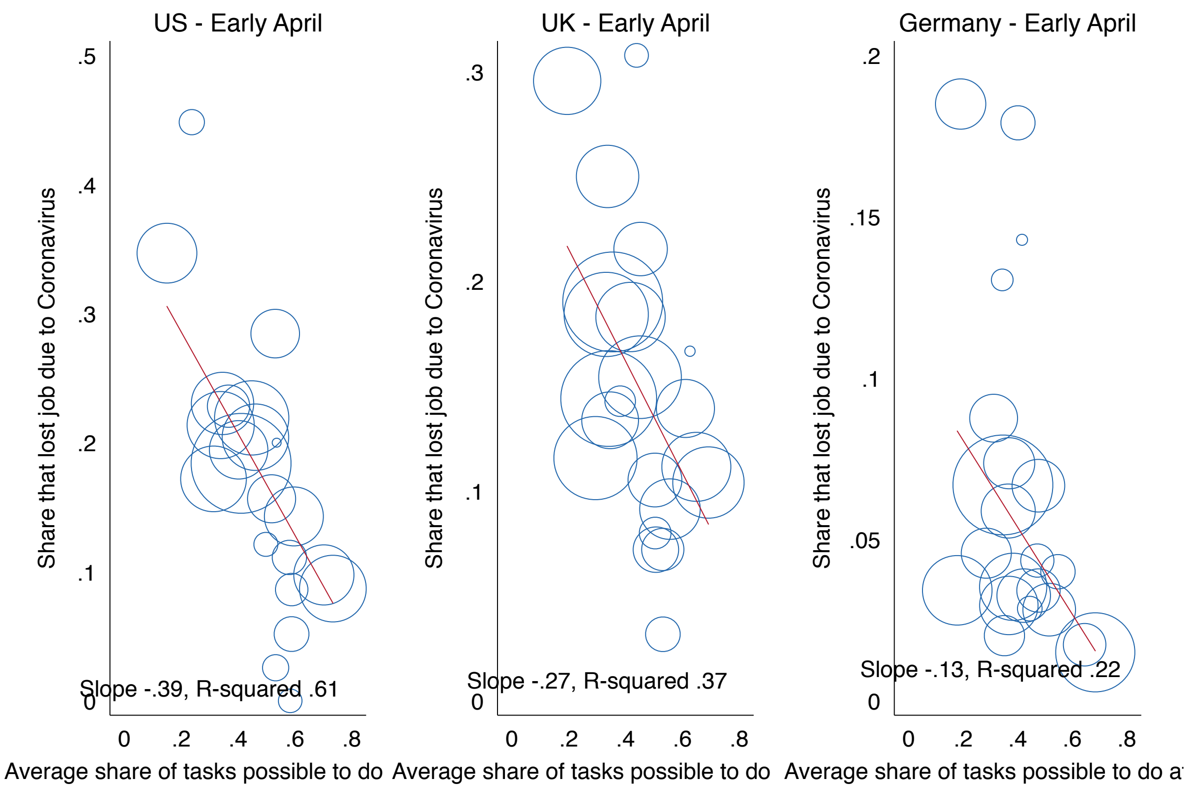
Notes: The thin black bars represent the 95% confidence intervals. The figure shows the share of individuals who were in paid work four weeks before data collection that lost their job due to Covid-19 by occupation.

Figure B.3: Share of tasks that can be done from home versus job loss probability due to Covid-19 by occupation



Notes: Each bubble represents an occupation and the size is proportional to the number of observations we have for that occupation.

Figure B.4: Share of tasks that can be done from home versus job loss probability due to Covid-19 by industry



Notes: Each bubble represents an industry and the size is proportional to the number of observations we have for that industry.

Figure B.5: Share of tasks that can be done from home by industry

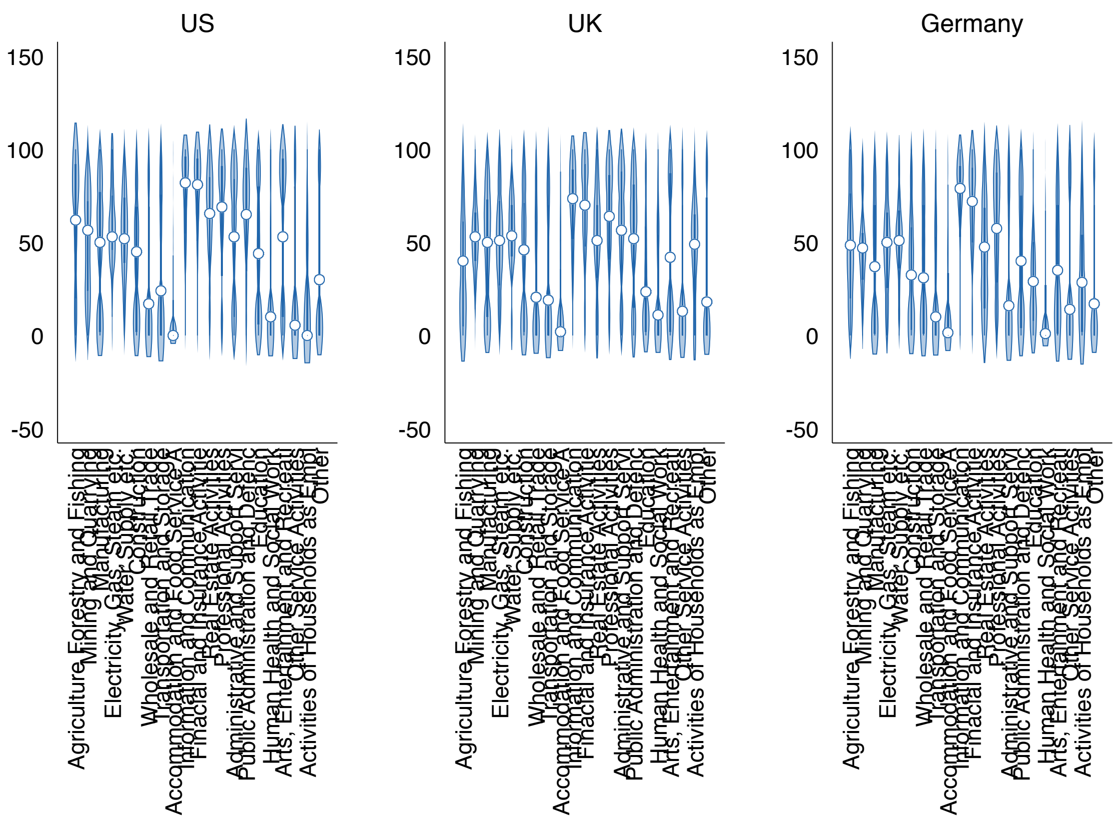
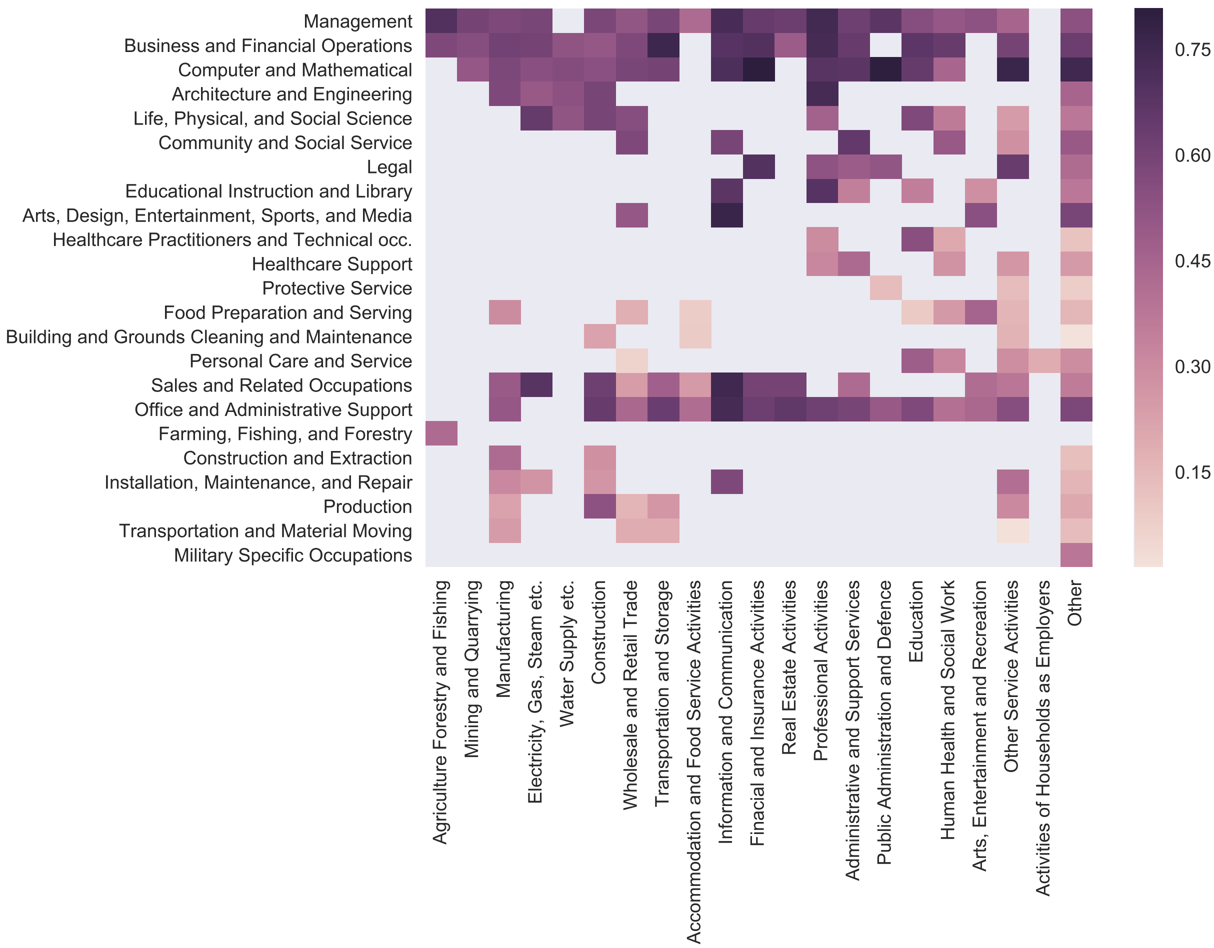


Figure B.6: Share of tasks that can be done from home by occupation and industry

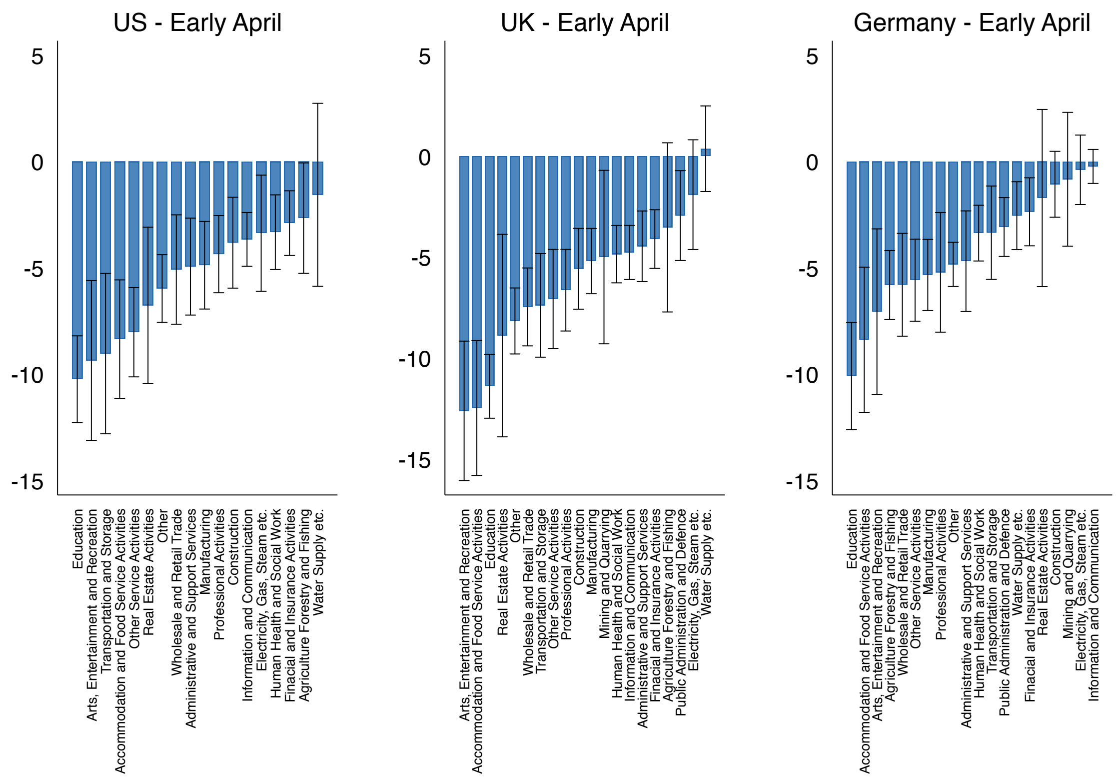


Notes: Joint data for US and UK from wave 2 of the surveys. Cells with less than 10 observations are dropped.

Figure B.7: Jobs lost due to Coronavirus by occupation and industry

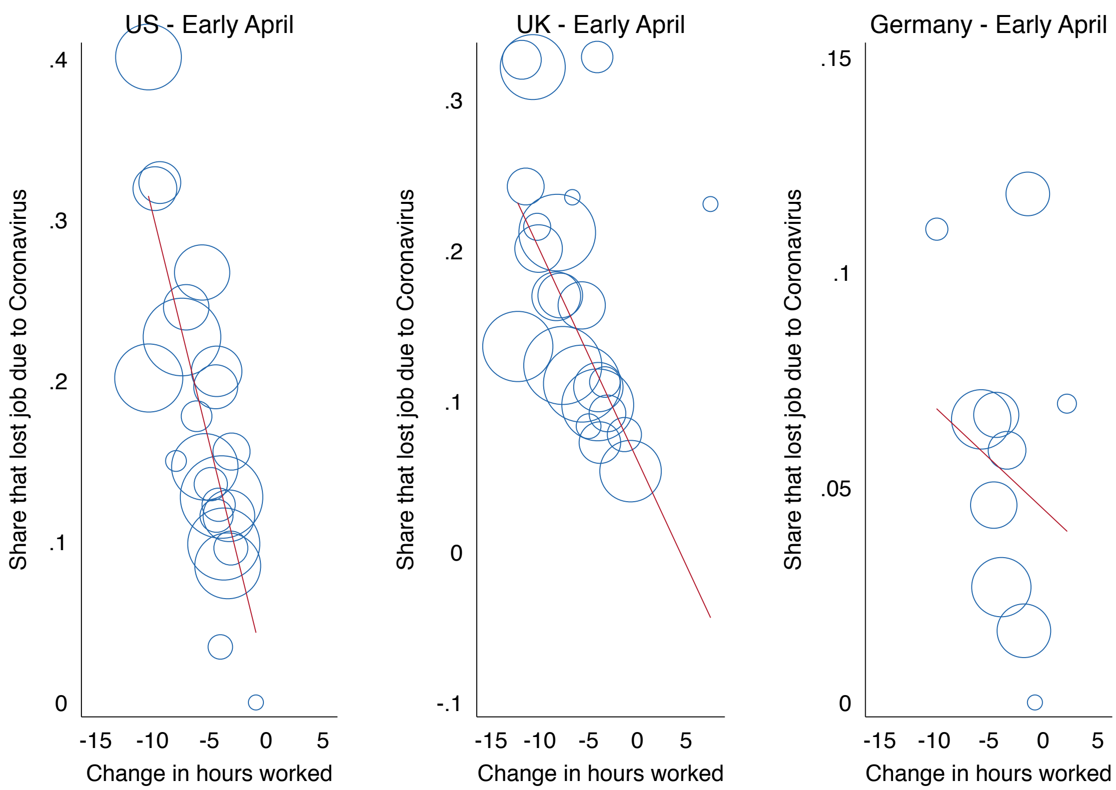
Notes: Joint data for US and UK from wave 2 of the surveys. Cells with less than 10 observations are dropped.

Figure B.8: Change in hours worked by industry



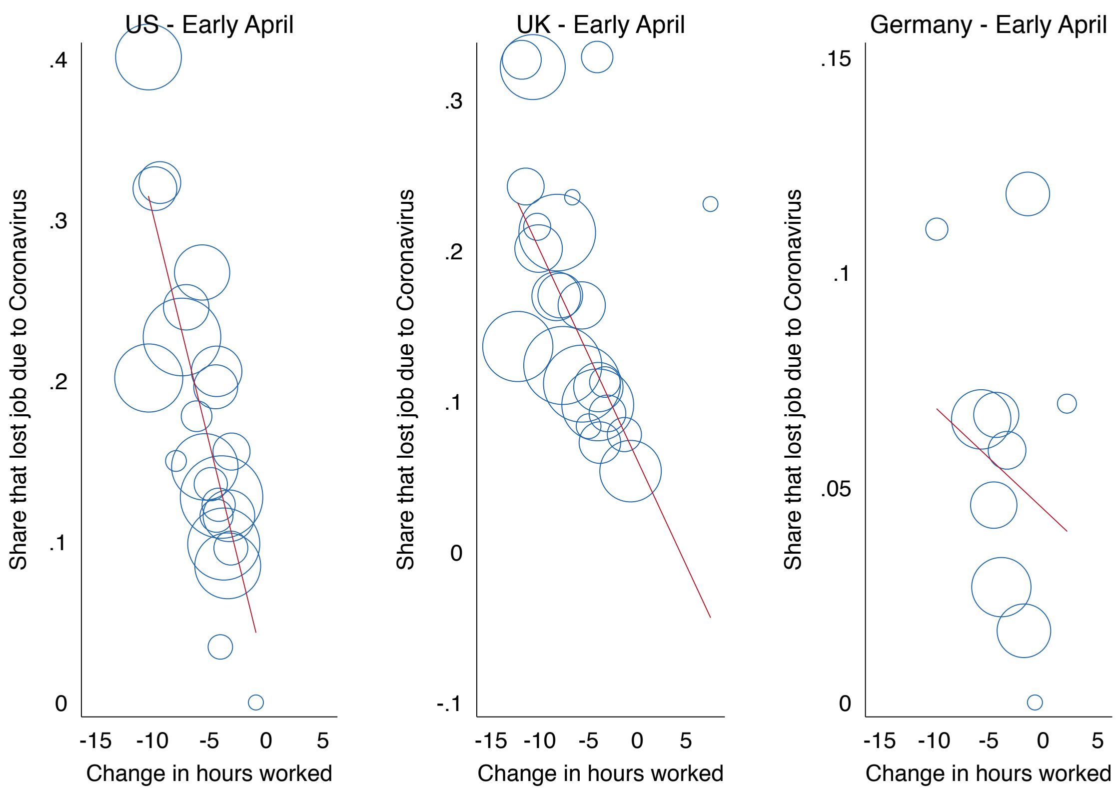
Notes: The thin black bars represent the 95% confidence intervals. The figure shows the average change in hours between a usual and the last week by industry.

Figure B.9: Change in hours worked (conditional on working) vs jobs lost due to Coronavirus by occupation



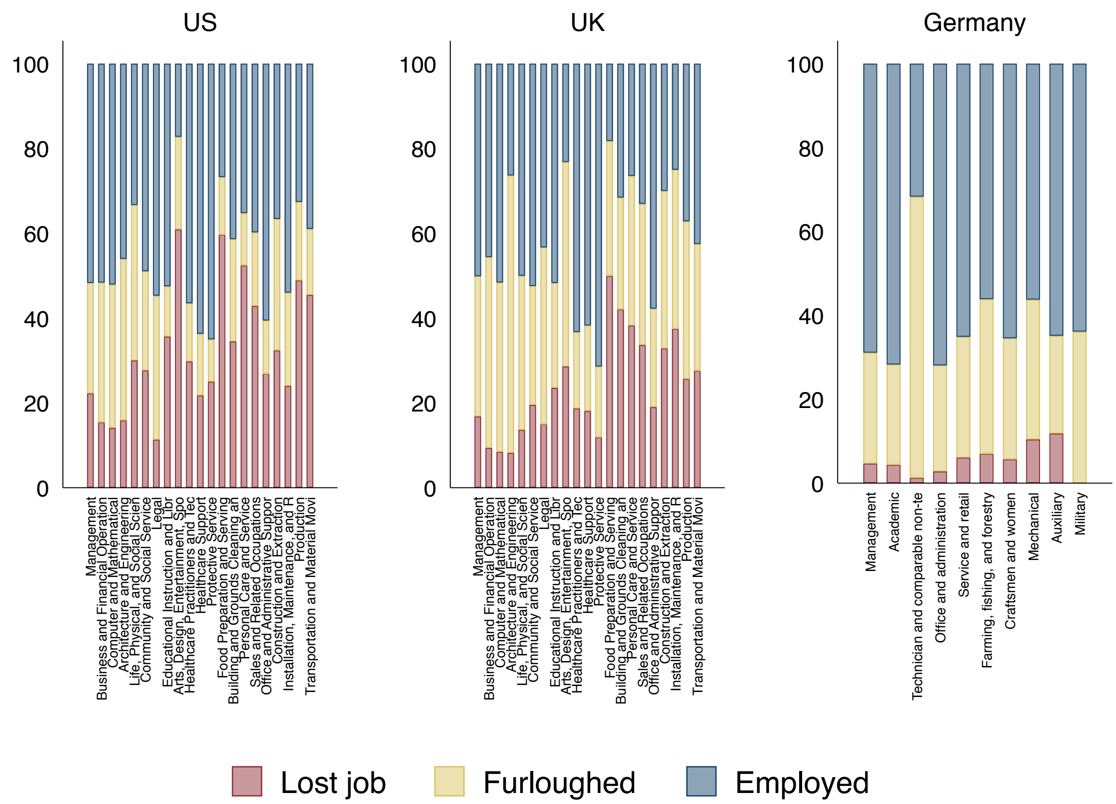
Notes: Each bubble represents an occupation and the size is proportional to the number of observations we have for that occupation. The figure shows the average change in hours between a usual and the last week by occupation on the x-axis and the share of workers that their jobs due to Coronavirus on the y-axis.

Figure B.10: Change in hours worked (conditional on working) vs jobs lost due to Coronavirus by industry



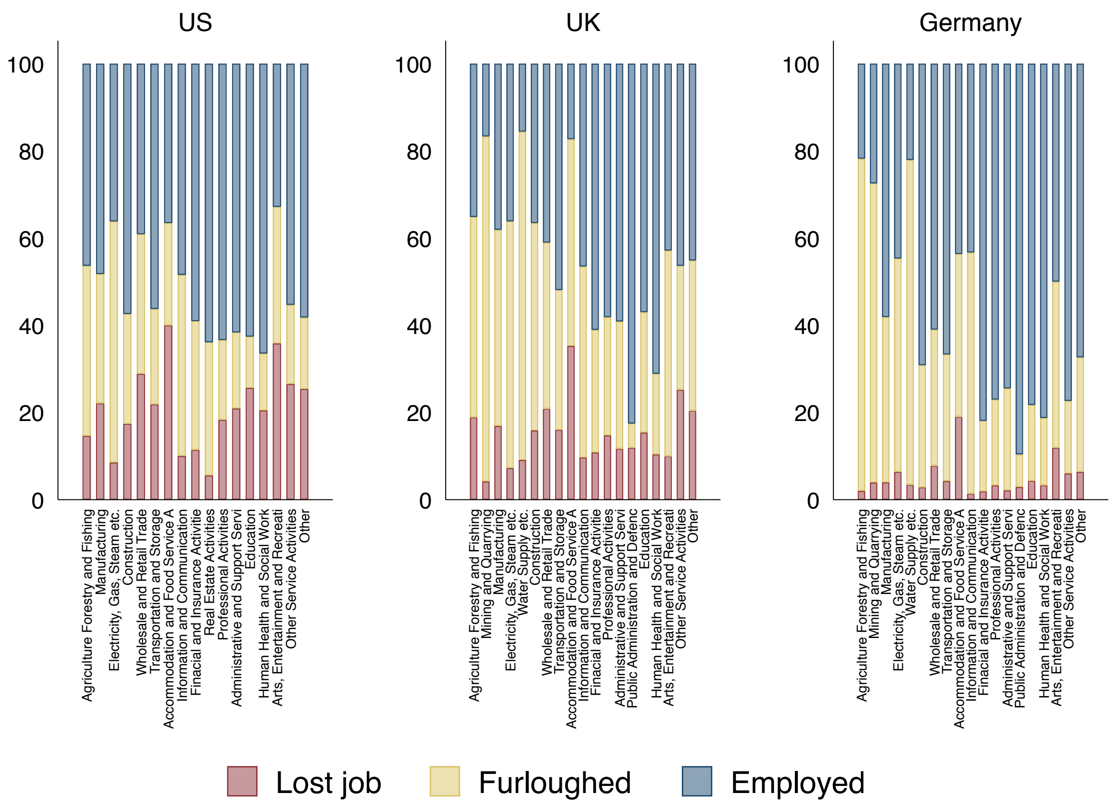
Notes: Each bubble represents an industry and the size is proportional to the number of observations we have for that industry. The figure shows the average change in hours between a usual and the last week by industry on the x-axis and the share of workers that their jobs due to Coronavirus on the y-axis.

Figure B.11: Employment status by occupation



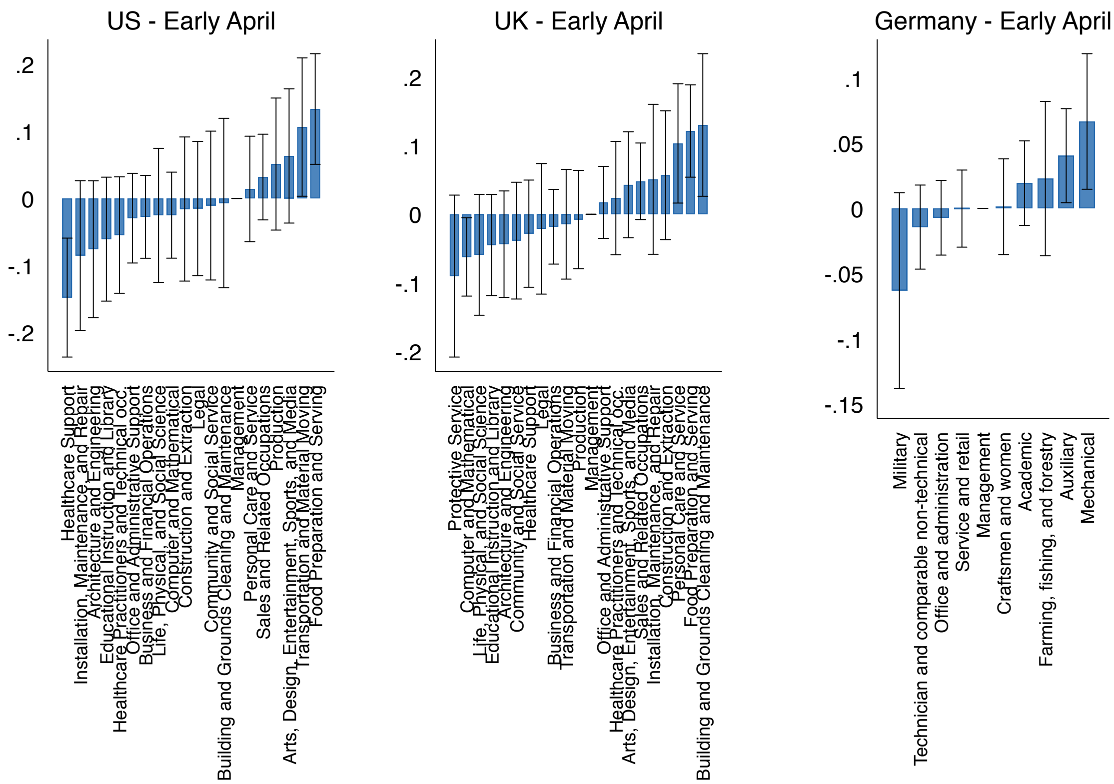
Notes: The figure shows the share of individuals who are employed, furloughed or lost their job due to the COVID-19 crisis, by occupation.

Figure B.12: Employment status by industry



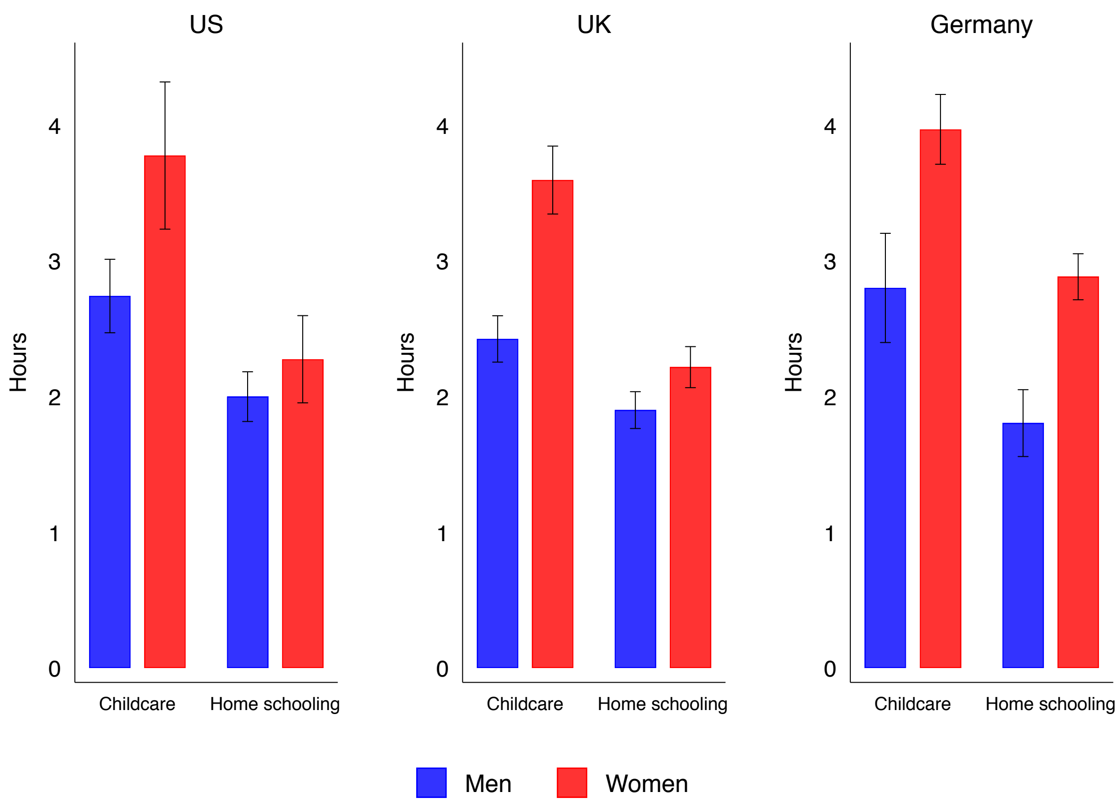
Notes: The figure shows the share of individuals who are employed, furloughed or lost their job due to the COVID-19 crisis, by industry.

Figure B.13: Occupation fixed effect for job loss



Notes: The thin black bars represent the 95% confidence intervals. The bars represent coefficients for occupation fixed effects from the regressions in Table 2 columns (2), (4), and (6) for the US and UK, respectively. Management is the baseline occupation.

Figure B.14: Hours spent on a "typical" work day during the past week on active childcare and home schooling



Notes: Data from wave 2 of the surveys. The thin black bars represent the 95% confidence intervals. The figure shows average number of hours that men and women reported spending on childcare and homeschooling. We restrict the sample to individuals with children who report working from home, and whose answers to the time use questions combined do not exceed 24 hours.

Table B.1: Job and earnings loss probability (weighted)

	Job loss			Earnings loss		
	US	UK	DE	US	UK	DE
Tasks from home	-0.2522***	-0.1996***	-0.0619***	-0.1404***	-0.0756***	-0.0322
	(0.0218)	(0.0196)	(0.0127)	(0.0299)	(0.0264)	(0.0224)
Self-Employed	-0.0887***	-0.0429*	0.0119	0.0271	0.0673*	0.0773**
	(0.0227)	(0.0259)	(0.0191)	(0.0314)	(0.0374)	(0.0348)
Permanent	-0.0616***	-0.2011***	-0.0965***	-0.0006	-0.0527*	-0.0032
	(0.0169)	(0.0213)	(0.0128)	(0.0234)	(0.0310)	(0.0233)
Salaried	-0.0732***	0.0290*	-0.0049	-0.1005***	-0.0172	-0.1145***
	(0.0187)	(0.0153)	(0.0111)	(0.0251)	(0.0203)	(0.0195)
Fixed Hours	0.0088	-0.0079	0.0024	-0.1049***	-0.1473***	-0.0756***
	(0.0168)	(0.0152)	(0.0097)	(0.0232)	(0.0200)	(0.0169)
Constant	0.5098***	0.2916***	0.1546***	0.4225***	0.2951***	0.2918***
	(0.0865)	(0.0651)	(0.0414)	(0.1200)	(0.0857)	(0.0725)
Observations	2995	3760	3354	2396	3111	3165
R^2	0.1630	0.1244	0.0909	0.1229	0.1029	0.0926
Region F.E.	yes	yes	yes	yes	yes	yes
Occupation F.E.	yes	yes	yes	yes	yes	yes
Industry F.E.	yes	yes	yes	yes	yes	yes

Notes: OLS regressions. The dependent variable in Columns 1 - 3 is a binary variable for whether a respondent lost their job within the past month and attributed the job loss to the coronavirus outbreak. The dependent variable in Columns 4 - 6 is a binary variable for whether a respondent earned less in March 2020 than the average earnings over January and February 2020. In Columns 4 - 6 the sample is restricted to those who were in work at the time of data collection. Tasks from home is the fraction of tasks respondents could do from home in their main or last job. Self-employed is a binary variable for being self-employed in the main or last job. Permanent, salaried and fixed hours take value 1 for employees with permanent contracts, who are salaried and whose work hours are fixed, respectively. Region fixed effects refer to state fixed effects for the US and Germany, and fixed effects for regions as reported in Table A.1 for the UK.

Table B.2: Job loss probability - Individual characteristics (weighted)

	United States		United Kingdom		Germany	
	(1)	(2)	(3)	(4)	(5)	(6)
Female	0.0480***	0.0259*	0.0479***	0.0385***	-0.0051	0.0034
	(0.0150)	(0.0156)	(0.0124)	(0.0130)	(0.0077)	(0.0084)
University degree	-0.0898***	-0.0135	-0.0611***	-0.0065	-0.0232***	-0.0132
	(0.0153)	(0.0164)	(0.0130)	(0.0137)	(0.0088)	(0.0104)
30-39	-0.0243	-0.0030	0.0302*	0.0371**	-0.0405***	-0.0099
	(0.0223)	(0.0215)	(0.0180)	(0.0178)	(0.0129)	(0.0133)
40-49	-0.0186	-0.0115	0.0283	0.0239	-0.0383***	-0.0142
	(0.0229)	(0.0223)	(0.0183)	(0.0185)	(0.0127)	(0.0133)
50-59	0.0228	0.0244	0.0135	0.0062	-0.0334***	-0.0129
	(0.0232)	(0.0230)	(0.0184)	(0.0188)	(0.0123)	(0.0129)
60+	0.0267	0.0165	0.0161	0.0099	0.0340**	0.0349**
	(0.0251)	(0.0248)	(0.0239)	(0.0239)	(0.0137)	(0.0143)
Tasks from home		-0.2467***		-0.1996***		-0.0557***
		(0.0220)		(0.0198)		(0.0130)
Self-Employed		-0.0912***		-0.0443*		0.0083
		(0.0229)		(0.0263)		(0.0194)
Permanent		-0.0596***		-0.2021***		-0.0957***
		(0.0170)		(0.0214)		(0.0130)
Salaried		-0.0700***		0.0277*		-0.0031
		(0.0190)		(0.0155)		(0.0112)
Fixed Hours		0.0087		-0.0106		0.0032
		(0.0169)		(0.0152)		(0.0097)
Constant	0.3303***	0.4963***	0.1274***	0.2601***	0.1017***	0.1623***
	(0.0669)	(0.0879)	(0.0253)	(0.0661)	(0.0155)	(0.0418)
Observations	3025	2995	3816	3760	3584	3354
R^2	0.0481	0.1648	0.0152	0.1277	0.0289	0.0963
Region F.E.	yes	yes	yes	yes	yes	yes
Occupation F.E.	no	yes	no	yes	no	yes
Industry F.E.	no	yes	no	yes	no	yes

Notes: OLS regressions. The dependent variable is a binary variable for whether a respondent lost their job within the past month and attributed the job loss to the coronavirus outbreak. Work from Home is the fraction of tasks respondents could do from home in their main or last job. Self-employed is a binary variable for being self-employed in the main or last job. Permanent, salaried and fixed hours take value 1 for employees with permanent contracts, who are salaried and whose work hours are fixed, respectively. Region fixed effects refer to state fixed effects for the US and Germany, and fixed effects for regions as reported in Table A.1 for the UK.

Table B.3: Earnings loss probability - In-work respondents

	United States		United Kingdom		Germany	
	(1)	(2)	(3)	(4)	(5)	(6)
Female	0.0126	0.0143	0.0082	0.0273	0.0104	0.0130
	(0.0202)	(0.0217)	(0.0166)	(0.0174)	(0.0145)	(0.0151)
University degree	-0.1501***	-0.0758***	-0.0206	0.0287	-0.0022	0.0325*
	(0.0209)	(0.0226)	(0.0169)	(0.0176)	(0.0165)	(0.0177)
30-39	-0.0129	-0.0044	-0.0777***	-0.0447**	-0.0567***	-0.0288
	(0.0271)	(0.0272)	(0.0209)	(0.0211)	(0.0182)	(0.0185)
40-49	-0.0484*	-0.0676**	-0.0686***	-0.0219	-0.0302	0.0019
	(0.0286)	(0.0291)	(0.0229)	(0.0235)	(0.0218)	(0.0223)
50-59	-0.0973***	-0.1084***	-0.0994***	-0.0612**	-0.0465**	-0.0121
	(0.0335)	(0.0339)	(0.0285)	(0.0290)	(0.0222)	(0.0228)
60+	-0.1044***	-0.1290***	-0.1045**	-0.0861*	-0.1176***	-0.1072***
	(0.0349)	(0.0356)	(0.0491)	(0.0485)	(0.0382)	(0.0382)
Tasks from home	-0.1224***	-0.1258***	-0.0990***	-0.0785***	-0.0280	-0.0281
	(0.0274)	(0.0304)	(0.0236)	(0.0269)	(0.0213)	(0.0239)
Self-Employed		0.0293		0.1045***		0.0678**
		(0.0319)		(0.0377)		(0.0326)
Permanent		-0.0230		-0.0147		0.0078
		(0.0234)		(0.0303)		(0.0214)
Salaried		-0.0683***		-0.0472**		-0.0641***
		(0.0252)		(0.0210)		(0.0198)
Fixed Hours		-0.0699***		-0.1087***		-0.0901***
		(0.0231)		(0.0204)		(0.0176)
Constant	0.4013***	0.4164***	0.3640***	0.3751***	0.1789***	0.2812***
	(0.0939)	(0.1225)	(0.0347)	(0.0901)	(0.0272)	(0.0650)
Observations	2405	2396	3123	3111	3201	3165
R^2	0.0661	0.1207	0.0214	0.0932	0.0139	0.0712
Region F.E.	yes	yes	yes	yes	yes	yes
Occupation F.E.	no	yes	no	yes	no	yes
Industry F.E.	no	yes	no	yes	no	yes

Notes: OLS regressions. Sample is restricted to those who were in work at the time of the survey. The dependent variable is a binary variable for whether a respondent earned less in March 2020 than the average earnings over January and February 2020. Tasks from home is the fraction of tasks respondents could do from home in their main or last job. Self-employed is a binary variable for being self-employed in the main or last job. Permanent, salaried and fixed hours take value 1 for employees with permanent contracts, who are salaried and whose work hours are fixed, respectively. Region fixed effects refer to state fixed effects for the US and Germany, and fixed effects for regions as reported in Table A.1 for the UK.

Table B.4: Earnings loss probability - In-work respondents (weighted)

	United States		United Kingdom		Germany	
	(1)	(2)	(3)	(4)	(5)	(6)
Female	0.0218	0.0235	0.0058	0.0250	0.0042	0.0110
	(0.0197)	(0.0212)	(0.0164)	(0.0173)	(0.0140)	(0.0147)
University degree	-0.1429***	-0.0720***	-0.0127	0.0367**	-0.0099	0.0264
	(0.0205)	(0.0221)	(0.0174)	(0.0181)	(0.0169)	(0.0183)
30-39	-0.0292	-0.0175	-0.0714***	-0.0407*	-0.0441*	-0.0095
	(0.0292)	(0.0291)	(0.0238)	(0.0236)	(0.0234)	(0.0233)
40-49	-0.0494	-0.0673**	-0.0603**	-0.0192	-0.0303	0.0133
	(0.0301)	(0.0304)	(0.0242)	(0.0247)	(0.0231)	(0.0233)
50-59	-0.1196***	-0.1278***	-0.0900***	-0.0573**	-0.0406*	0.0022
	(0.0310)	(0.0315)	(0.0243)	(0.0251)	(0.0222)	(0.0227)
60+	-0.1212***	-0.1457***	-0.0994***	-0.0831***	-0.1081***	-0.0925***
	(0.0336)	(0.0342)	(0.0316)	(0.0319)	(0.0251)	(0.0256)
Tasks from home	-0.1282***	-0.1417***	-0.0909***	-0.0833***	-0.0169	-0.0427*
	(0.0268)	(0.0299)	(0.0230)	(0.0266)	(0.0201)	(0.0229)
Self-Employed		0.0386		0.0805**		0.0920***
		(0.0313)		(0.0379)		(0.0352)
Permanent		-0.0144		-0.0426		0.0045
		(0.0235)		(0.0312)		(0.0237)
Salaried		-0.0772***		-0.0216		-0.1176***
		(0.0254)		(0.0205)		(0.0196)
Fixed Hours		-0.1013***		-0.1451***		-0.0758***
		(0.0231)		(0.0201)		(0.0169)
Constant	0.4498***	0.4672***	0.3476***	0.2984***	0.1654***	0.2722***
	(0.0949)	(0.1217)	(0.0342)	(0.0869)	(0.0297)	(0.0731)
Observations	2405	2396	3123	3111	3201	3165
R^2	0.0743	0.1400	0.0197	0.1080	0.0191	0.1005
Region F.E.	yes	yes	yes	yes	yes	yes
Occupation F.E.	no	yes	no	yes	no	yes
Industry F.E.	no	yes	no	yes	no	yes

Notes: OLS regressions. Sample is restricted to those who were in work at the time of the survey. The dependent variable is a binary variable for whether a respondent earned less in March 2020 than the average earnings over January and February 2020. Work from Home is the fraction of tasks respondents could do from home in their main or last job. Self-employed is a binary variable for being self-employed in the main or last job. Permanent, salaried and fixed hours take value 1 for employees with permanent contracts, who are salaried and whose work hours are fixed, respectively. Region fixed effects refer to state fixed effects for the US and Germany, and fixed effects for regions as reported in Table A.1 for the UK.

Table B.5: Job loss probability - Waves 1 and 2

	United States			United Kingdom		
	(1)	(2)	(3)	(4)	(5)	(6)
Work from Home	-0.2685***	-0.2482***	-0.1372***	-0.1858***	-0.1506***	-0.1091***
	(0.0117)	(0.0127)	(0.0111)	(0.0112)	(0.0124)	(0.0108)
Wave 2	0.0905***	0.0936***	0.1977***	0.0882***	0.0896***	0.1743***
	(0.0088)	(0.0087)	(0.0072)	(0.0080)	(0.0079)	(0.0068)
Self-Employed			-0.0513***			-0.0267*
			(0.0117)			(0.0149)
Permanent			-0.0327***			-0.1051***
			(0.0086)			(0.0122)
Salaried			-0.0317***			0.0103
			(0.0094)			(0.0087)
Fixed Hours			0.0035			-0.0007
			(0.0085)			(0.0086)
Constant	0.2557***	0.2420***	0.1018***	0.1363***	0.1028***	0.0932***
	(0.0401)	(0.0421)	(0.0361)	(0.0148)	(0.0195)	(0.0203)
Observations	6289	6282	5901	7024	7010	6709
R^2	0.1007	0.1226	0.1811	0.0553	0.0783	0.1411
Region F.E.	yes	yes	yes	yes	yes	yes
Occupation F.E	no	yes	yes	no	yes	yes

Notes: OLS regressions. The dependent variable is a binary variable for whether a respondent lost their job within the past month and attributed the job loss to the coronavirus outbreak, and zero if they did not. Work from Home is the fraction of tasks respondents could do from home in their main or last job. Self-employed is a binary variable for being self-employed in the main or last job. Permanent, salaried and fixed hours take value 1 for employees with permanent contracts, who are salaried and whose work hours are fixed, respectively. Region fixed effects refer to state fixed effects for the US, and fixed effects for regions as reported in Table A.1 for the UK.

Table B.6: Hours spent on a "typical" work day during the past week on active childcare or home schooling

	United States		United Kingdom		Germany	
	(1)	(2)	(3)	(4)	(5)	(6)
Female	1.3178***	1.0663**	0.9021*	1.3876***	1.2538***	1.2373***
	(0.4173)	(0.4758)	(0.4818)	(0.2039)	(0.2238)	(0.2236)
University degree	-0.0189	0.1077	0.1043	0.1963	0.1961	0.2005
	(0.4423)	(0.4910)	(0.4902)	(0.2148)	(0.2302)	(0.2301)
Number of kids	0.1462	0.0790	0.0786	0.5518***	0.6184***	0.6249***
	(0.2120)	(0.2359)	(0.2356)	(0.1251)	(0.1288)	(0.1286)
Married	0.3577	0.4534	0.4647	0.2971	0.3673	0.3758
	(0.5084)	(0.5525)	(0.5524)	(0.2533)	(0.2602)	(0.2603)
30-39	-0.5580	-0.4830	-0.4904	0.8583***	0.6391**	0.6397**
	(0.5170)	(0.5743)	(0.5759)	(0.2568)	(0.2699)	(0.2702)
40-49	0.2264	-0.0719	-0.0982	0.2239	-0.0413	-0.0413
	(0.5492)	(0.6219)	(0.6290)	(0.2872)	(0.3043)	(0.3069)
50-59	-1.7315*	-1.6476*	-1.8368*	-1.8240***	-2.2041***	-2.1552***
	(0.8833)	(0.9919)	(1.0013)	(0.4224)	(0.4440)	(0.4457)
60+	-1.6086	-1.6823	-1.7829	-2.8146***	-2.9806***	-3.0226***
	(1.0472)	(1.1566)	(1.1550)	(0.9283)	(0.9515)	(0.9509)
Tasks from home		-0.7789	-0.8137		-1.0187***	-1.0978***
		(0.7520)	(0.7647)		(0.3928)	(0.4018)
Hours worked outside home			-0.0631			-0.1137**
			(0.0814)			(0.0472)
Hours worked from home			0.1067			-0.0520
			(0.0678)			(0.0367)
Constant	1.5196	1.1854	1.2252	3.5933***	2.7605**	3.0701***
	(1.8156)	(2.3639)	(2.3616)	(0.4639)	(1.1043)	(1.1092)
Observations	433	429	429	1310	1273	1273
R^2	0.1665	0.2726	0.2810	0.1094	0.1530	0.1575
Region F.E.	yes	yes	yes	yes	yes	yes
Occupation F.E.	no	yes	yes	no	yes	yes
Industry F.E.	no	yes	yes	no	yes	yes

Notes: OLS regressions. The dependent variable is the number of hours spent on child care or home schooling on a typical day during the last week. Work from home is the fraction of tasks respondents could do from home in their main or last job. Region fixed effects refer to state fixed effects for the US and Germany, and fixed effects for regions as reported in Table A.1 for the UK.