

# Cambridge-INET Institute

Cambridge-INET Working Paper Series No: 2020/09

Cambridge Working Papers in Economics: 2022

## INEQUALITY IN THE IMPACT OF THE CORONAVIRUS SHOCK: NEW SURVEY EVIDENCE FOR THE US

Abi Adams-Prassl  
(University of Oxford)

Teodora Boneva  
(University of Zurich)

Marta Golin  
(University of Oxford)

Christopher Rauh  
(University of Cambridge)

Using new US survey data collected on March 24th 2020, we already find that: 65% of workers engaged in less paid work over the past week than usually. 11% of workers had already lost their job due to COVID-19. For those still in work, the expected probability of job loss within the next four months is 40%. On average, workers expect to earn 39% less in the next four months compared to usual. As a consequence, workers expect there is a 56% chance of having problems paying their bills. 93% of respondents expect to have problems paying usual bills with above zero probability. The harsh impacts are not evenly distributed across the population; the young, and low income earners have been hit hardest. Workers without paid sick leave are more likely to go to work in close proximity to others.

# Inequality in the Impact of the Coronavirus Shock:

## New Survey Evidence for the US

Abi Adams-Prassl<sup>1</sup>, Teodora Boneva<sup>2</sup>, Marta Golin<sup>1</sup>, and Christopher Rauh<sup>\*3</sup>

<sup>1</sup>Department of Economics, University of Oxford

<sup>2</sup>Department of Economics, University of Zurich

<sup>3</sup>Department of Economics, University of Cambridge

April 1, 2020

## 1 Main Findings

Using new US survey data collected on March 24th 2020, we already find that:

1. 65% of workers engaged in less paid work over the past week than usually.
2. 11% of workers had already lost their job due to COVID-19. For those still in work, the expected probability of job loss within the next four months is 40%.
3. On average, workers expect to earn 39% less in the next four months compared to usual. As a consequence, workers expect there is a 56% chance of having problems paying their bills. 93% of respondents expect to have problems paying usual bills with above zero probability.
4. The harsh impacts are not evenly distributed across the population; the young, and low income earners have been hit hardest.
5. Workers without paid sick leave are more likely to go to work in close proximity to others.

---

\*Ethics approval was obtained from the Central University Research Ethics Committee (CUREC) of the University of Oxford:

## 2 Executive Summary

COVID-19 is not only a global health pandemic; it has brought whole economies grinding to a halt. In this briefing note, we provide new evidence on inequalities in the economic impact of COVID-19. To provide timely information on the emerging and expected impacts of the current crisis, we collected novel survey data from a large representative sample of US workers on 24th March 2020. We find significant differences in the impact of the economic disruption across workers of different income levels, ages, and those employed under different work arrangements. Our findings suggest that many US workers are already feeling the effects of the economic slowdown and expect significant economic hardship as a result of containment measures. This suggests a need to speed-up the implementation of stimulus and social assistance packages to provide quick assistance to help those hit hardest.

Our evidence suggests that this downturn is highly likely to increase inequality across the income distribution, between young and old, and between those on insecure and secure contracts. Preventing this shock from having permanent effects on the employment progression of the younger generation and the less-economically advantaged is of first-order policy importance.

In summary, our key findings are as follows:

1. **Age:** Younger workers have already been hit hard by the economic downturn and expect to be much more severely affected than older workers.
  - Younger workers are more likely to have worked fewer hours and earned less than usual in the past week. 72% of workers aged under 30 report working fewer hours last week compared to usual and 61% report earning less, compared to 62% and 55% of workers aged 40-55 respectively.
  - Younger people who are still in work believe they are more likely to lose their job by August. On average, currently employed workers aged under 30 believe they have a 43% chance of losing their job by August, compared to 40% for those aged 40-55.
2. **Income:** Workers on low incomes are less able to work from home, are more likely to have lost their job because of COVID-19 in the last 4 weeks, and expect to lose a greater proportion of their usual earnings between now and August.
  - Workers on low incomes can do fewer of the usual tasks in their main job from home and were less likely

to work from home last week. Workers who earned less than \$20,000 last year can do only 42% of the tasks in their main job from home compared to 57% for those earning more than \$50,000. While only 39% of workers earning less than \$20,000 last year worked more from home last week, 66% of those earning more than \$50,000 did.

- Workers on low incomes are more likely to have lost their job in the last four weeks and attribute this to COVID-19. Of those in work last month, 16% of workers earnings less than \$20,000 are now unemployed “definitely” or “probably” because of COVID-19 compared to 7% of workers earning more than \$50,000.
- Workers on low incomes expect to earn a smaller proportion of their usual income between now and August. Workers who earned less than \$20,000 last year expect to earn just 48% of their usual income between now and August. Those who earned more than \$50,000 last year, expect to make 69% of their usual income on average.

3. **Work Arrangements:** The self-employed, those not paid a salary, and workers with variable hours at employers’ discretion (e.g. zero-hours contracts) are more likely to have been negatively affected by the downturn already and believe that they are more likely to face economic difficulties between now and August.

- Self-employed workers, those not paid a salary, and those with variable hours were more likely to work and earn less. For example, 68% of the self-employed, 50% of temporary workers, and 63% of workers with variable schedules set by their employer earned less last week compared to 47% of permanent, salaried employees.
- Workers employed on less secure work arrangements were more likely to have lost their job in the last four weeks and attribute this to COVID-19. Of those in work last month, 19% of temporary workers and 17% of those with variable hours set by their employer are now unemployed “definitely” or “probably” because of COVID-19 compared to 6% of permanent, salaried employees.
- Workers on less secure work arrangements expect to earn a smaller proportion of their usual income between now and August. For example, self-employed workers, temporary workers, and those with variable hours set by their employer expected to make only 57%, 64% and 60% respectively of their usual earnings between now and August compared to 76% of permanent, salaried of employees.

### 3 Data Collection

This briefing note relies on primary survey data that we collected on a large representative sample of individuals in the United States of America ( $N = 4003$ ). The data were collected by a professional survey company on March 24 2020.<sup>1</sup>

To be eligible to participate in the study, participants had to be resident in the US, 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.<sup>2</sup> The sample was selected to be representative in terms of region. 62% of respondents are female and the average age is 38.6. 44% have a university degree and the average annual individual income is around \$46,127. 52% are married or cohabiting, and the average number of children below the age of 18 is 0.72.

### 4 Realized Impacts

We first present results on the impact that the COVID-19 impact had on workers in the last two weeks. Specifically, respondents were asked:

*“Think about the last two weeks. Due to the coronavirus outbreak, did you...*

- *Work fewer hours*
- *Work more from home*
- *Earn less money than usual*
- *Have to change your work patterns to care for others”*

**Age.** Figure 1 shows the proportion of workers who experienced changes in their work patterns and earnings last week. While we find significant movement for all groups, we find striking age patterns in these outcomes. Younger workers were more likely to have worked fewer hours last week, to have earned less in the last week, and to have had to change their work patterns due to caring commitments.

Figure 1 (e) shows the experienced “corona” job loss probability by age group. Specifically, this is the proportion of individuals who report having become unemployed within the last four weeks “definitely” or “probably” because

---

<sup>1</sup>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.

<sup>2</sup>We asked participants to think about all the paid work they engaged in other than completing surveys.

of COVID-19 as a fraction of all individuals employed at some point in the last four weeks. The age-effect exhibits a U-shaped pattern. 11% of under 30s who have been in work in the last four week say they are unemployed because of the coronavirus. Workers aged over 50 are also more likely than those in their 40s to report COVID-19 related unemployment.

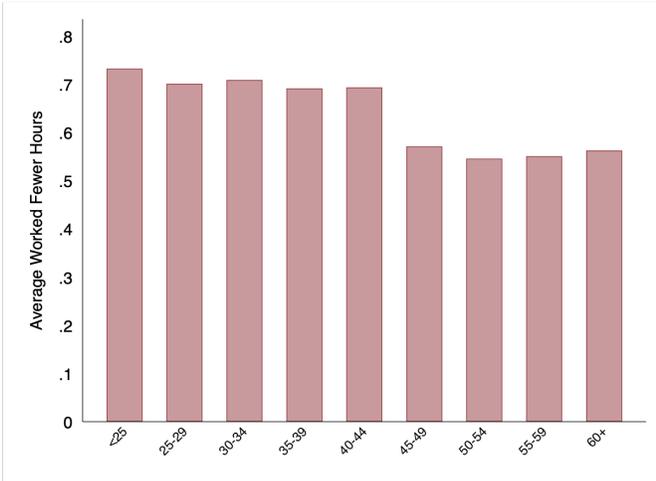
**Income.** Figure 2 shows the proportion of workers experiencing changes in their work conditions last week by the labour income they earned last year. The inequality in impact across the income distribution is evident. The income gradient in working more from home last week is striking; while 66% of workers earning more than \$50,000 worked more from home, 39% of workers earning less than \$20,000 did.

The proportion of low-income individuals who became unemployed in the last month because of the coronavirus is significant. 16% of those who earned less than \$20,000 last year in our sample lost their jobs in their opinion because of the impact of COVID-19, while 7% of those earning more than \$50,000 last year did.

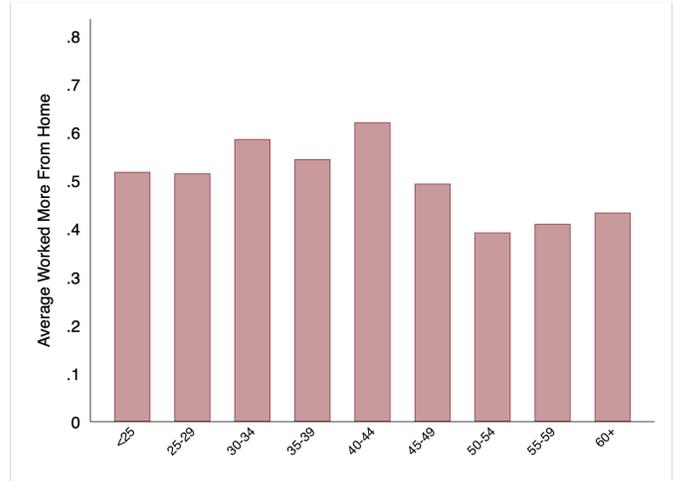
**Work Arrangements.** Figure 3 shows the proportion of workers experiencing changes in their work conditions last week by their work arrangement. While all workers worked less on average, this was less likely to result in income losses for salaried employees, those on permanent contracts, and for employees with fixed schedules. Those made unemployed due to coronavirus were more likely to be in temporary, non-salaried jobs, where employers determined how much individuals worked week to week.

Figure 1: Realized Impacts by Age

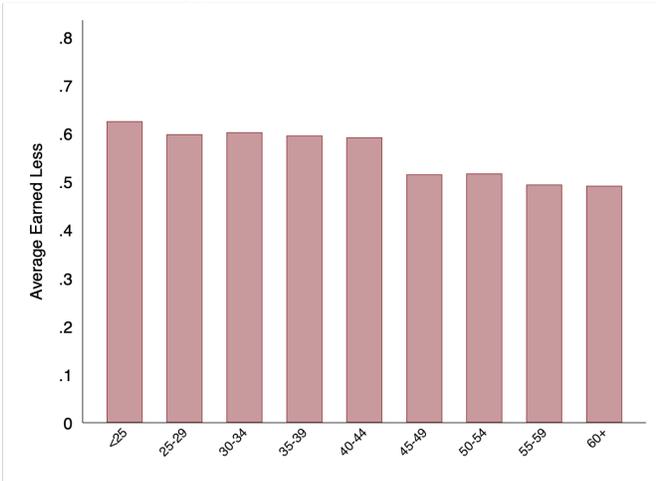
(a) Worked Fewer Hours Last Week



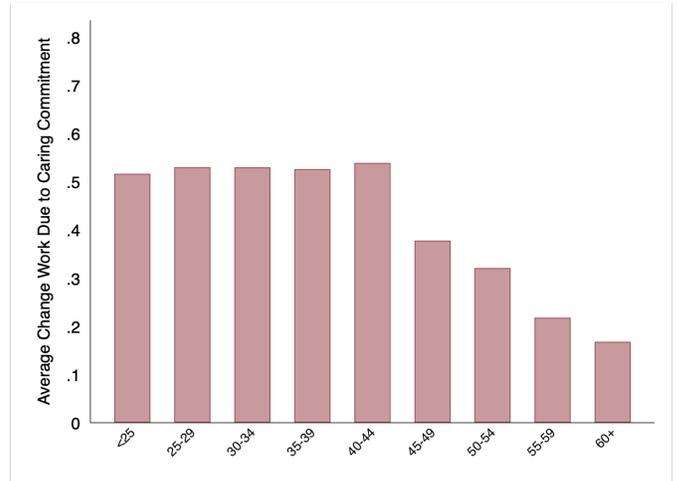
(b) Worked More From Home Last Week



(c) Earned Less Last Week



(d) Changed due to Caring



(e) Corona Job Loss Probability Within Past 4 Weeks

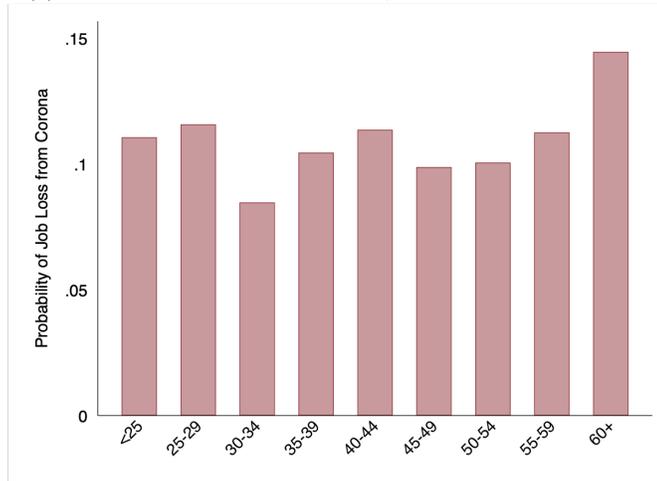
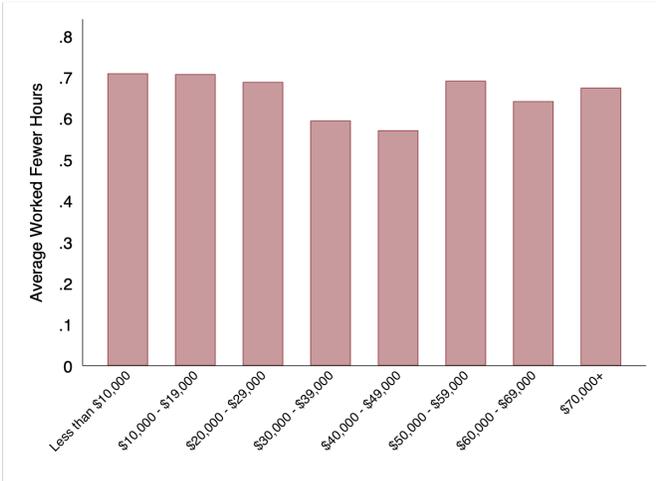
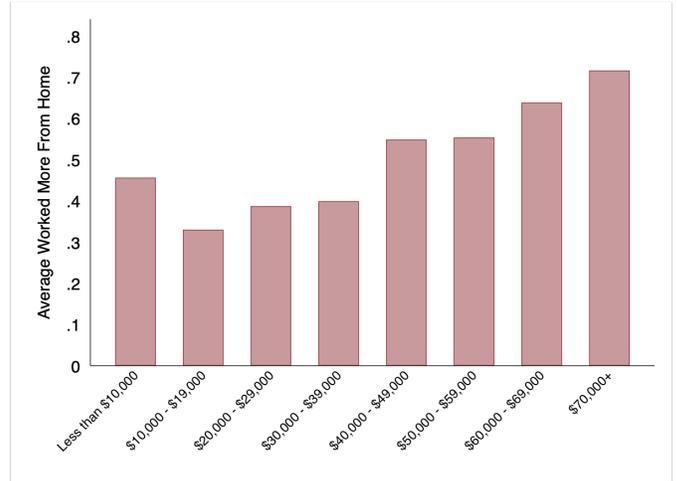


Figure 2: Realized Impacts by Income

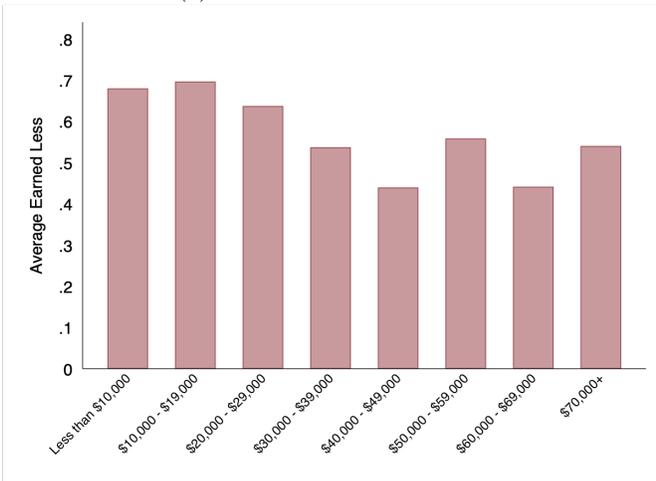
(a) Worked Fewer Hours Last Week



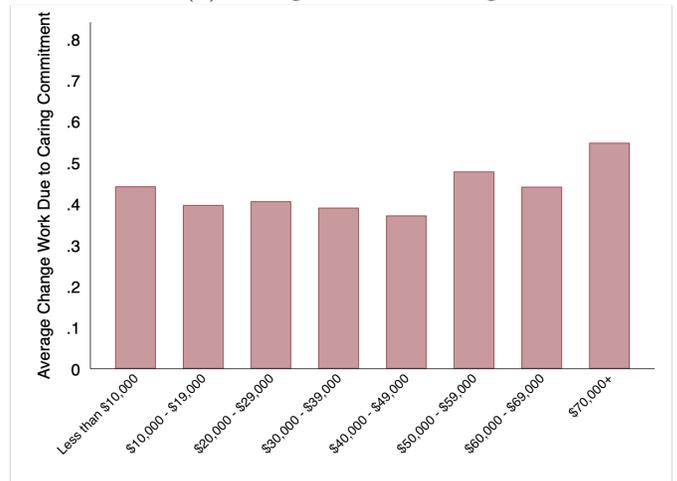
(b) Worked More From Home Last Week



(c) Earned Less Last Week



(d) Changed due to Caring



(e) Corona Job Loss Probability Within Past 4 Weeks

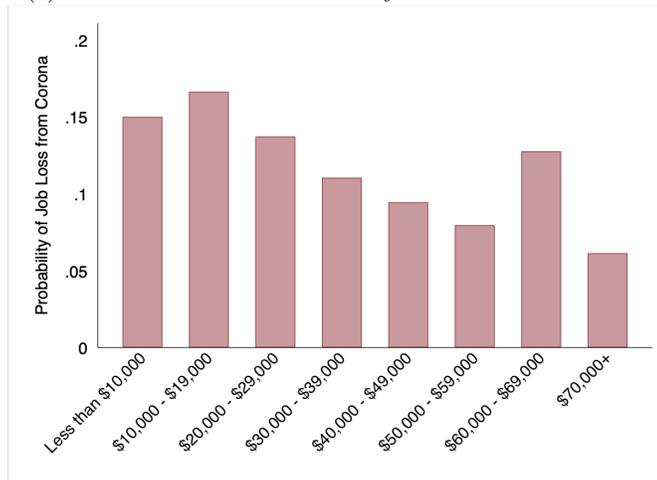
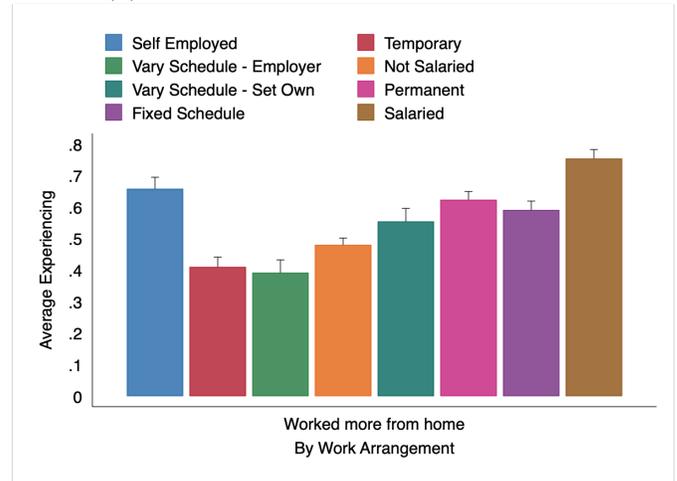


Figure 3: Realized Impacts by Work Arrangement

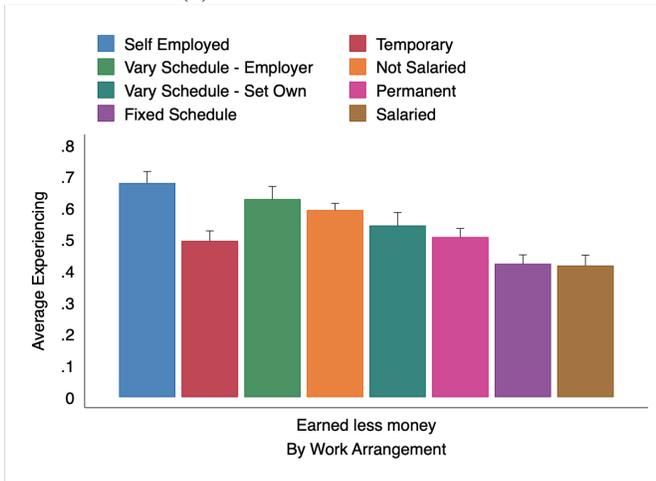
(a) Worked Fewer Hours Last Week



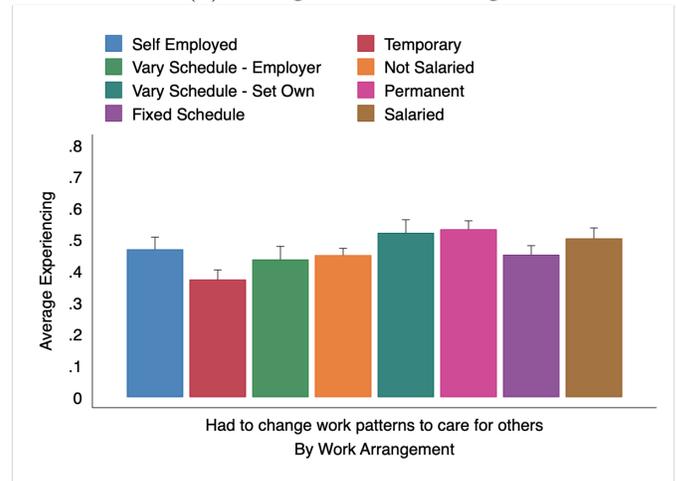
(b) Worked More From Home Last Week



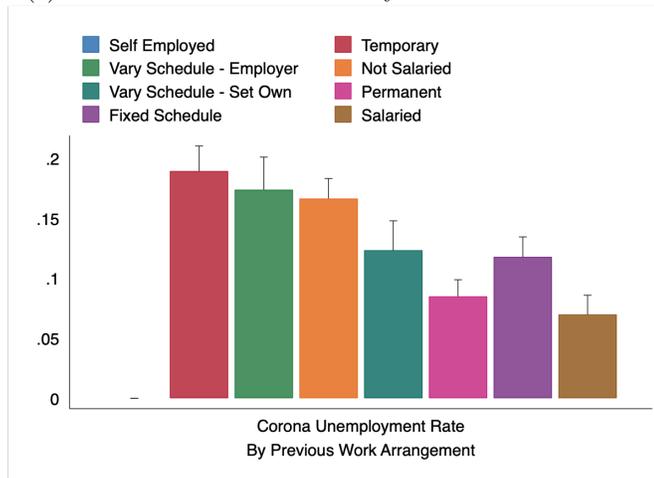
(c) Earned Less Last Week



(d) Changed due to Caring



(e) Corona Job Loss Probability Within Past 4 Weeks



## 5 Expected Impacts

We also asked workers about the impacts they expect in the coming months. Specifically, respondents were asked:

*“On a scale of 0-100%, how likely are the following scenarios to occur before 1st August 2020?”*

- *I will lose my job or shut my business if self-employed*
- *I will work fewer hours than usual*
- *I will have trouble paying my usual bills and expenses”*

Respondents were also asked about the income losses they expected over this period.

*“On a scale of 0-100%, what percentage of your usual income (including government benefits and any sick pay) do you expect to make in the period up to 1st August?”*

We again see striking patterns by age, income, and work arrangement; younger workers, those who earned less last year, and those on less secure work arrangements expect to face more severe economic difficulties in the coming months.

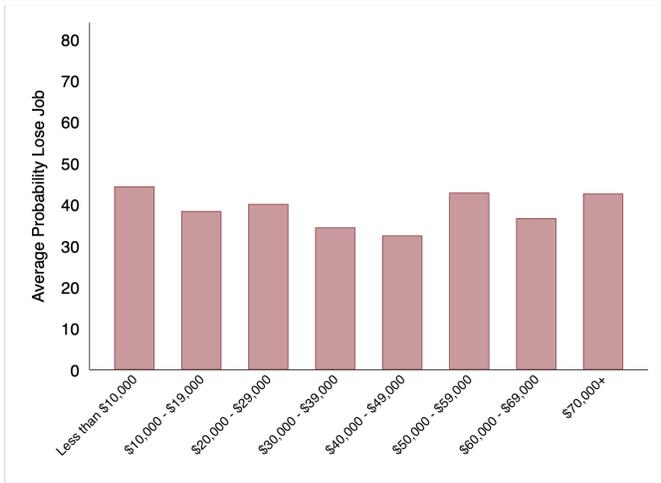
**Age.** Across many outcome measures, younger workers expect a more severe economic shock in the coming months than older workers: younger workers believe they have a larger chance of losing their job and will have difficulties paying their bills, and they also expect to make a smaller percentage of their usual income. Those under 30 expect to have 44% lower earnings on average than usual over the next five months compared to 37% for those aged 40-55.

**Income.** Those on the lowest incomes expect a much greater percentage change in their earnings over the coming months than higher-earners. Workers who earned less than \$20,000 last year expect a 52% decline in their usual income between now and August compared to 31% for those earning over \$50,000.

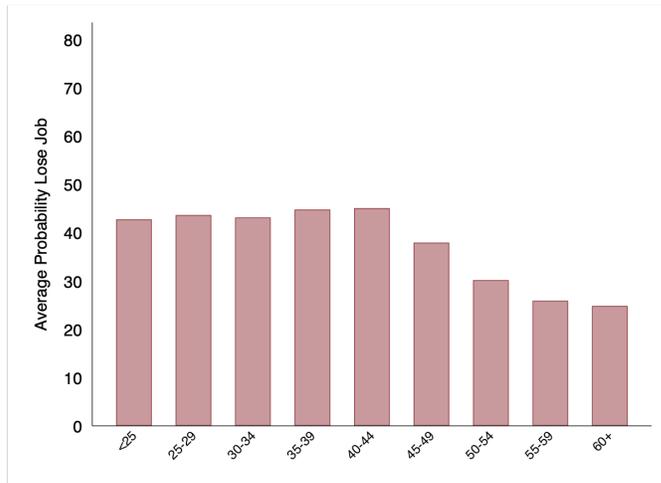
**Alternative Work Arrangements.** The patterns across workers employed on different work arrangements are striking. Those on permanent contracts, workers paid a salary, and those with a stable work schedule expect the most mild economic impacts on average. The self-employed, workers on temporary contracts, and those with variable hours on the other hand expect they are more likely to lose their job, face difficulties paying bills and will face larger reduction in their usual income.

Figure 4: Expected Impacts

Will Lose Job or Shut Business

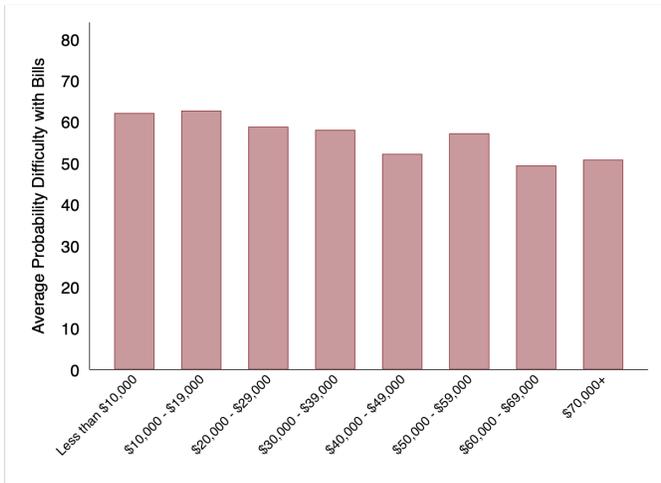


By Income

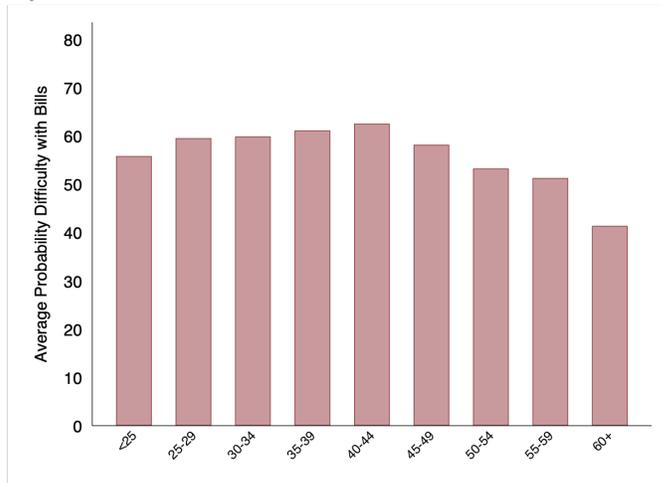


By Age

Will Have Difficulty With Bills

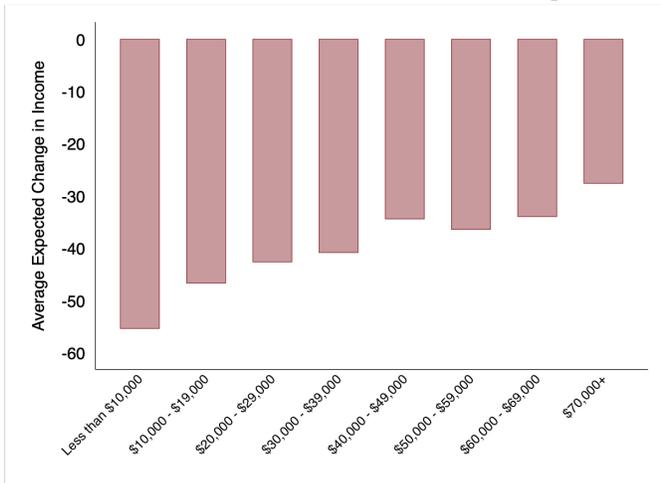


By Income

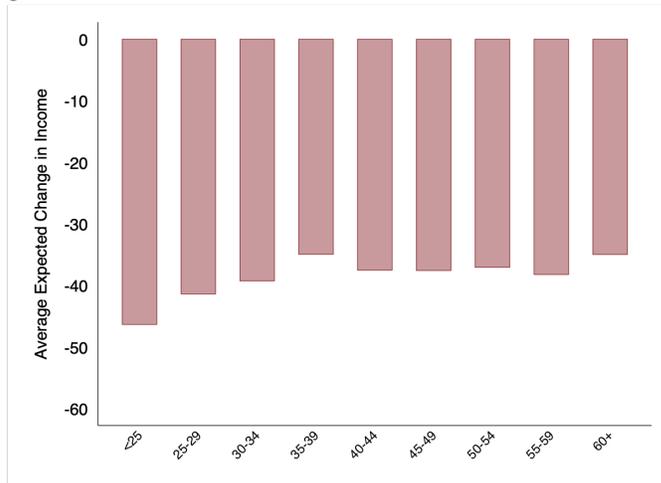


By Age

Expected Change in Income



By Income

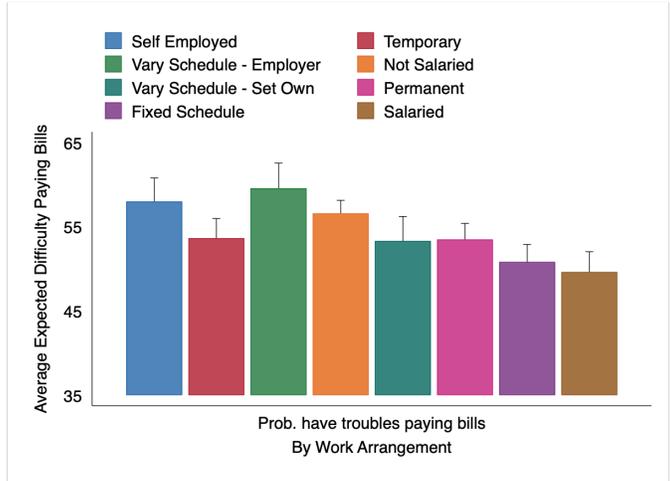


By Age

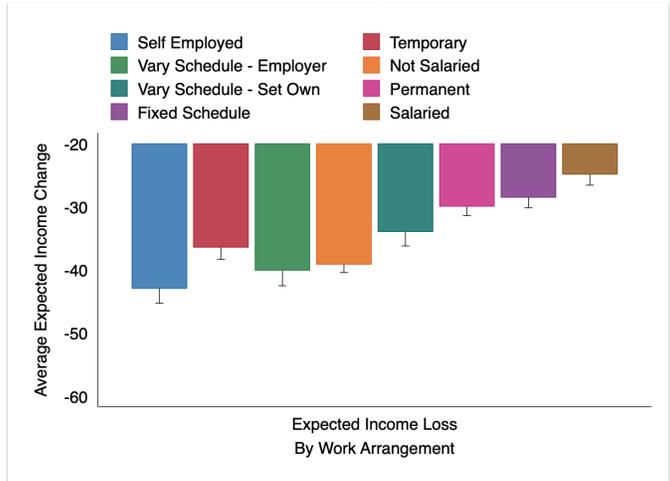
Figure 5: Expected Impact By Work Arrangement



Will Lose Job or Shut Business



Will Have Difficulty With Bills

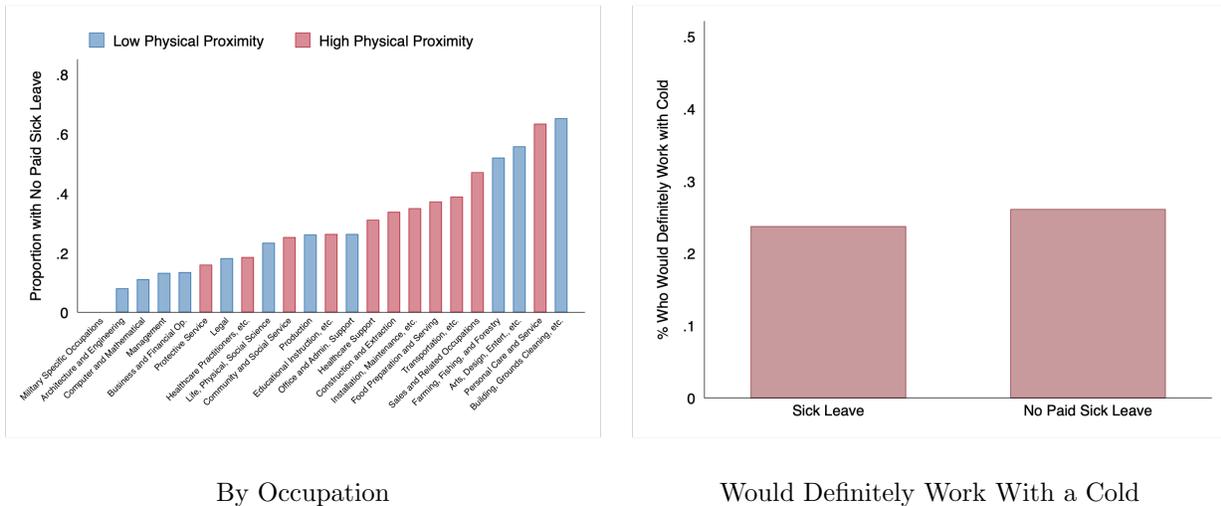


Expected Change in Income

## 6 Availability of Paid Sick Leave

In Figure 6 we show the share of workers without paid sick leave by occupation. We further categorize occupations by the level of physical proximity required in the job using O\*NET data. Red bars indicate a high level of physical proximity. We can see that the share of individuals without paid sick leave varies considerably by occupation, and that this share tends to be higher in occupations with a high level of physical proximity. For instance, in the US more than half of workers in “Personal Care and Service” have no paid sick leave despite working in close proximity to others. Moreover, 26% of workers in the US who do not have paid sick leave report that they would definitely go to work with a cold or light fever, compared to 24% of those with paid sick leave.

Figure 6: No Paid Sick Leave



## 7 Conclusions

Our evidence shows that the immediate impact of the COVID-19 downturn on workers has been large and unequal, with younger workers and those at the bottom of the income distribution being hit hardest. In terms of work arrangement, the self-employed and those on un-salaried, variable contracts are particularly vulnerable. The same patterns hold for expectations about the near future. Our evidence thus suggests that this downturn is highly likely to increase inequality across the income distribution, between young and old, and between those on insecure and secure contracts.

In the short run, there is a need to provide quick assistance to help those hit hardest to cover their essential bills in the coming weeks; 57% of workers have already reported lower earnings and the expected likelihood of having

problems to cover usual bills is 56%. In the long run, preventing this shock from scarring the employment progression of the younger generation and the less-economically advantaged is of high importance to prevent permanent damage to the economy and individual welfare.