Labour market reactions early in CoViD-19 Pandemic: Empirical Evidence on hours, home office, and expectations

Hans-Martin von Gaudecker [β,ι]

Radost Holler [γ]

Lena Janys [β,ι]

Bettina Siflinger [τ]

Christian Zimpelmann [ι,γ]

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Using a survey module administered in late March 2020, we analyze how working hours change under the social distancing regulations enacted to fight the CoViD-19 pandemic. We study the Netherlands, which are a prototypical Western European country, both in terms of its welfare system and its response to the pandemic. We show that total hours decline and more so for the self-employed and those with lower educational degrees. The education gradient appears because workers with a tertiary degree work a much higher number of hours from home. The strength of this effect is dampened by the government defining some workers to be essential for the working of the economy. These tend to have lower degrees and do not reduce their hours at the usual workplace to the same degree as other workers. Across sectors, we show that there are two clusters: One dominated by office-type occupations with high shares of academics, home-office hours, and low fractions of essential workers; and one where manual tasks and social interactions are prevalent with low shares of academics, home office hours, and often high shares of essential workers. Short-term expectations show that workers expect current patterns to prevail and

that they expect a lot from government support schemes. In particular, many workers expect to keep their jobs in early June due to government support and the expected unemployment response is far lower than in the U.S. or the U.K..

The next section describes our survey module and the data set. We outline the institutional context in Section 2, paying particular attention to the definition of essential workers. Section 3 contains our main analysis on patterns of changes in working hours under social distancing restrictions, broken down along the extensive and intensive margins as well as various covariates. Finally, in Section 4, we describe the worries and expectations of workers in the short run.

1 Data Description

We designed a module asking members of the Longitudinal Internet Studies for the Social Sciences (LISS) panel about behaviors, beliefs and expectations during the CoViD-19 crisis. The module was fielded between March 20th and 31st 2020, a few days into the lockdown. The LISS panel is based on a probability sample of individuals registered by Statistics Netherlands; it has been running since 2007 and constitutes of roughly 4,000 Dutch households comprising about 7,000 individuals. It is administered by CentERdata, a survey research institute affiliated with Tilburg University, the Netherlands. The response rate for our questionnaire was in excess of 80%, which translates into a sample of 5,544 individuals.

In our questionnaire, we asked people to fill out a 2×2 matrix on hours:

> On average, how many hours per week did you work at the workplace and from home in early March (or before the coronavirus affected your work)? And in the past seven days?

> If you always work from home, fill in all hours at 'From home'. Enter zero (0) if you never work at your workplace or at home.

	At the workplace	From home
Before the pandemic	.	.
In the past seven days	.	.

We only consider workers who identified as employed or self-employed in the beginning of March or before the crisis started to affect their job. Our analysis is based on 2,918 individuals. We make use of background data on education and income in February 2020. Table 1 contains the descriptive statistics on our sample. Almost half of the workforce has some form of tertiary education (wo/hbo), 37% have completed upper secondary education (havo/vwo/mbo), and the remaining 15% left school with a primary or lower secondary degree (bo/vmbo). 11% of the sample are self-employed and 27% work in an occupation

identified as being essential to the working of public life (see Section 2.2 for more detail). Net personal income is available for most of the sample.

Table 1: Descriptive statistics

	Obs.	Mean	Std. dev.	$q_{0.25}$	$q_{0.5}$	$q_{0.75}$
female	2918	0.52				
education: lower sec. & less	2918	0.15				
education: upper sec.	2918	0.37				
education: tertiary	2918	0.48				
self-employed	2918	0.11				
essential occupation	2918	0.27				
income	2740	2080	1116	1465	2020	2641

2 Institutional context

2.1 Social distancing policies and economic support measures

As many other countries, the Netherlands has shut down large parts of economic and social life and enacted large-scale economic relief programs in response to the CoViD-19 pandemic. On March 12, the Dutch government released a first set of regulations: All people should reduce social contacts; people with signs of a cold, cough or sore throat were asked stay at home; gatherings with more than 100 people were cancelled; working from home was encouraged whenever possible; colleges and universities were advised to switch to online teaching; employees in the care sector and in companies considered to be critical were asked not to travel anymore.

On March 15, these regulations were tightened and a number of additional restrictions were announced. These included the immediate closure of all schools and childcare facilities, and the shutdown of restaurants, cafes, and bars and other businesses involving personal contacts. All measures were announced to be in place at least until April 6. On March 23, the Dutch government announced another tightening of existing regulations: People were advised to stay at home, to keep a distance of at least 1.5 meter to each other and to avoid social contacts; the number of visitors at home is restricted to a maximum of three people and with 1.5 meter distance. The ban on gatherings—including those with less than 100 persons—was extended to June 1. Public locations such as beaches, parks, or parking areas can be shut down on demand. On March 31, the government announced that the validity period for all regulations would be extended to April 28. Importantly, the Dutch government exempted stores, such as for clothes, utilities, or coffee shops from the shutdown; social distancing rules still apply. Thus, while the regulations restrict individuals' personal lives, they are more relaxed than in many other European countries.[1]

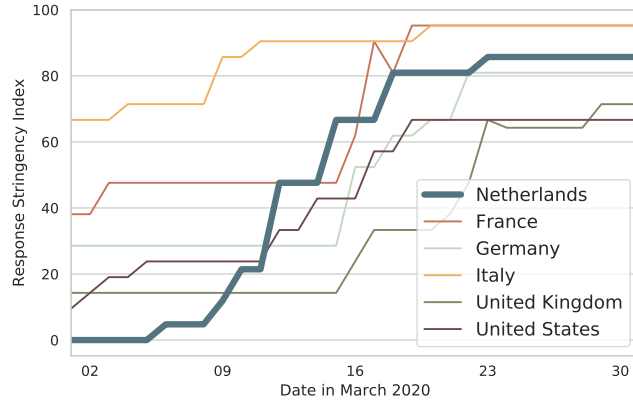[1]Regulations in place from March 23 regarding social life (in Dutch) are described at

Figure 1: Stringency of responses to CoViD-19 in different countries, March 2020

Source: Own graphics based on numbers in (Hale et al., 2020), downloaded on 11 April 2020.

Regarding these regulations, the Oxford Response Stringency Index (Hale et al., 2020) assigns the Netherlands scores between 81 and 86 for the second half of March 2020, placing it close to Germany, see Figure 1. It is well below countries like Italy and France that enacted stricter lockdowns and above countries like the U.K. or the U.S., which have pursued less stringent policies.

In addition to these regulations on social life, the government announced strategies on March 17 to support distressed businesses and to countervail adverse consequences for the Dutch economy. One important policy measure targeting workers is the short-term allowance. In order to prevent job loss due to the crisis, the Dutch government supports all businesses that expect a loss in gross revenues of at least 20% between March 2020 and May 2020 with advanced money for labor costs. The amount of advancement depends on the expected revenue loss. A business that expects a loss of 100% can request 90% of its labor costs from the government. The advancement is paid out at three points in time, with a first chunk being paid within 2-4 weeks after a positive decision on the request. Employers who get the advancement commit to pay full salaries to their employees and to not fire employees due to reduced business activities. Moreover, employers can revert dismissals that already have taken place. The advancement can also be requested for employees with fixed-term contracts or temporary workers. This form of short-time work (see, e.g., Giupponi and Landais, 2020, for a current perspective) has been used previously by the Dutch government to protect workers from job loss and is thus well-known

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https://www.rijksoverheid.nl/onderwerpen/coronavirus-covid-19/nieuws/2020/03/23/aangescherpte-maatregelen-om-het-coronavirus-onder-controle-te-krijgen

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among Dutch workers.[2] The entire emergency program for the Dutch economy amounts to about 10-20 billions, which is about 2-3 percent of the Dutch GDP.

The Dutch economic policy research institute CPB estimates unemployment rates to go up from 3.4% in 2019 to 4-6% in 2020.[3] This is far below estimates for the U.S., where recent evidence indicates a drop in the employment rate by eight percentage points by April 8 (Coibion, Gorodnichenko, and Weber, 2020). While unemployment rates in 2019 were comparable in the Netherlands and the U.S., a 10% unemployment rate seems to be a lower bound for the 2020 U.S. estimates.

2.2 Essential workers

The Dutch government has identified a number of areas of the economy that are exempt from the restrictions on public life. Facilities in these areas remain open and parents working in these occupations are eligible for emergency daycare and after school care. A non-exhaustive list of occupations and industries includes care, youth aid and social support, including transportation and production of medicine and medical devices; teachers and school staff, required for online learning, exams and childcare; public transportation; food production and distribution, such as supermarkets, food production and food transportation, farmers, farmworkers and so forth; transportation of fuel, coal, diesel and so forth; transportation of waste and garbage; daycare; media and communications; emergency services such as fire department, ambulance, regional medical organizations; necessary administrative services on the provincial and municipality level. In addition, about 100 companies have been identified as necessary to sustain public life, operating in sectors such as gas and fuel production, distribution and transportation, communication and online services, water supply, securities trading, infrastructure, etc..

Table 2 shows the distribution of essential workers across different sectors of the economy. Overall, 27% of individuals indicate that they work in an essential occupation.[4] This lines up well with estimates based on the 2019 Labor force survey (LFS) of Statistics Netherlands.[5] In the fourth quarter of 2019, about 34% of respondents worked in an occupation later to be declared essential. The share of essential workers in our sample is highest in the health and welfare sector (63%) and lowest in the construction sector.

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[2]The short-time work programs are still ongoing but is currently replaced by the CoViD-19 emergency regulations. The full emergency program for workers and business in response to the CoViD-19 crisis can be found here (in Dutch)https://www.rijksoverheid.nl/onderwerpen/coronavirus-financiele-regelingen/overzicht-financiele-regelingen

[3]https://www.cpb.nl/sites/default/files/omnidownload/CPB-Scenarios-maart-2020-Scenarios-economische-gevolgen-coronacrisis.pdf

[4]Note that this number might not be fully accurate for two reasons. First, people might not be sure whether their work is included unless they have small children and make use of emergency childcare. Second, we get our data on essential from a question about compliance to a potential curfew. The answering options were "yes", "no" or "I work in a critical profession". We take all individuals who answered the latter to count as working in a critical occupation.

[5]For details see https://www.cbs.nl/nl-nl/faq/corona/economie/hoeveel-mensen-werken-er-in-cruciale-beroepen-.

Table 2: Sectors, essential workers, and home office shares

	obs	share essen-tial worers	share with ter-tiary degree	share home office hours, before CoViD-19	share home office hours, late March	Change in total hours
healthcare & welfare	495	0.63	0.49	0.07	0.28	-3.48
transport & communication	118	0.34	0.30	0.07	0.41	-4.19
education	202	0.25	0.85	0.13	0.74	-5.26
public services	201	0.20	0.56	0.12	0.76	-2.03
retail	176	0.20	0.22	0.06	0.31	-5.34
catering	71	0.13	0.25	0.06	0.27	-14.63
industry	195	0.11	0.38	0.06	0.32	-3.98
business services	180	0.08	0.71	0.20	0.71	-2.67
environment, culture & recreation	73	0.05	0.56	0.14	0.65	-8.88
financial	117	0.04	0.65	0.18	0.80	-0.87
construction	92	0.01	0.28	0.05	0.31	-1.76
other	394	0.19	0.36	0.15	0.43	-4.03

To economize on space, Table 2 also includes sectoral shares of workers with a tertiary degree, shares of home office hours before and early in the crisis, and the average change in total hours. We will come back to these numbers below. Here, we only compare the share of respondents who work from home with the number from the LFS. In the LISS, about 33% of respondents reported to work from home for at least one hour, while this was about 34% in the LFS. The numbers in LISS and the LFS are similar across most sectors. In the education sector, 54.0% of LISS respondents work from home (60.6% in the LFS); in the public services sector, 46.2% of LISS respondents work from home (48.1% in the LFS); in business administration, 47.2% work from home (47.5% in the LFS); in the health and welfare sector 24.0% work from home (33.1% in the LFS).[6] Despite some of the numbers being smaller, all in all, they line up very well with each other.

3 Total working hours and substitution patterns between home office and the workplace

Table 3 shows that on average, hours decreased by 13%. This effect, however, is distributed very unequally across where individuals perform their duties. Before

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[6]In the LFS individuals were asked for the average hours working from home per week/month. For details please see https://www.cbs.nl/nl-nl/nieuws/2020/15/bijna-4-op-de-10-werkenden-werkten-vorig-jaar-thuis.
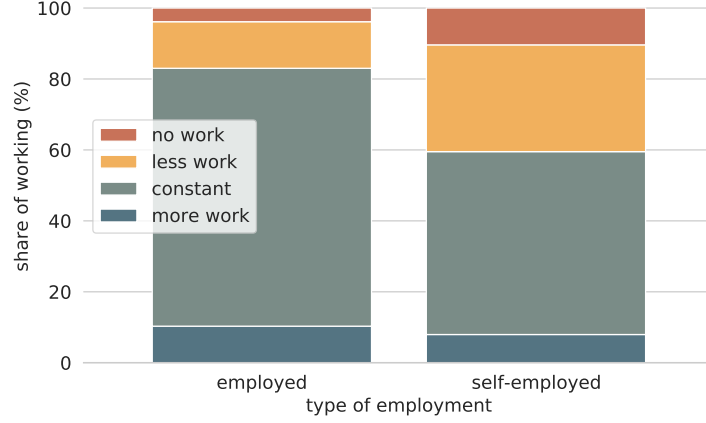
Figure 2: Share of workers with different changes in the number of hours, by type of employment

Share of workers whose working hours dropped to zero, decreased (but not to zero), stayed constant, or increased. The bars correspond to the type of employment. Number of observations per group: employed: 2,595; self-employed: 323.

the crisis, workers worked on average 29 hours at their workplace and 4 hours from home. In late March, total hours worked had decreased by 4 hours or 13%. These hours are now spent in equal shares at the workplace and at home.

Table 3: Working hours at the workplace and at home

	workplace	home	total
before CoViD-19	29.1	4	33.1
	(0.24)	(0.16)	(0.24)
late March	14.5	14.3	28.9
	(0.31)	(0.31)	(0.30)

The remainder of this section breaks this down into differences between the employed and the self-employed, across education and income groups, sectors and between workers in essential occupations and others.

3.1 Employees vs. the Self-Employed

Figure 2 shows that, relative to the self-employed, salaried employees are much less likely to see a reduction in hours to zero (4% vs 10%) or to a positive value (13% vs 30%). Hours stay constant for 73% of employees but only for 52% of the self-employed; work increased for 10% of employees and 8% of the self-employed.

Not surprisingly, this is also reflected in changes of mean total hours. Figure 3 shows that salaried employees show a much smaller decrease of total hours
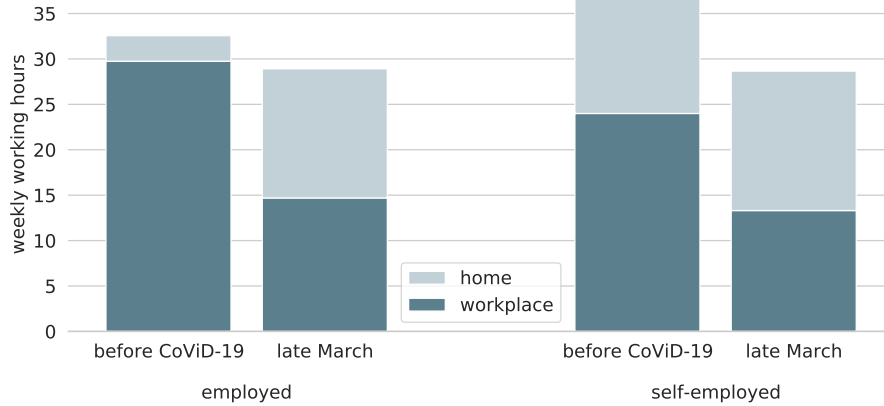
Figure 3: Working hours at the workplace and at home, by type of employment

The bars show average weekly working hours that are spent at the workplace and at home by type of employment. Number of observations per group: employed: 2,595; self-employed: 323.

(-11%), but a much larger reaction in substituting workplace hours by home office hours. Weekly home office hours increase from below 3 to more than 14 hours. Hours of the self-employed drop by 23%; on average, they only work a little more than two additional hours from home.

This pattern is consistent with many small businesses operating in industries that are hit particularly hard by the restrictions—bars and restaurants, hairdressers, etc.—as well as firms providing insurance to their employees (Guiso, Pistaferri, and Schivardi, 2005). The distributions of home office hours for the self-employed show a large spike at zero before and after the introduction of the restrictions. Self-employed whose business allowed them to work from home already did so to a significant degree before CoViD-19. They continued to do so afterwards, possibly with fewer total hours. Those who worked outside their home did so because they could not work from home and consequently do not report increased hours working at home in late March.

Firms may, of course, hold on to their employees mainly due to legal firing restrictions and because the government acts as a reinsurer via the short-term work program. Indeed, Adams-Prassl et al. (2020) document much larger effects for employees in the UK and the US. Their results stem from two surveys collected on March 25th, where they ask individuals about their current and past employment situation. In both the US and the UK, the share of workers reporting fewer paid hours and job loss is much higher than in the Netherlands. In both countries, around 60% of respondents claim to have worked fewer hours. In our sample, this fraction is only 27%. The share of workers who lost their employment (probably or definitely) due to the virus, is much higher in both countries, with 12% (US) and 9% (UK), as opposed to 3% reporting zero hours
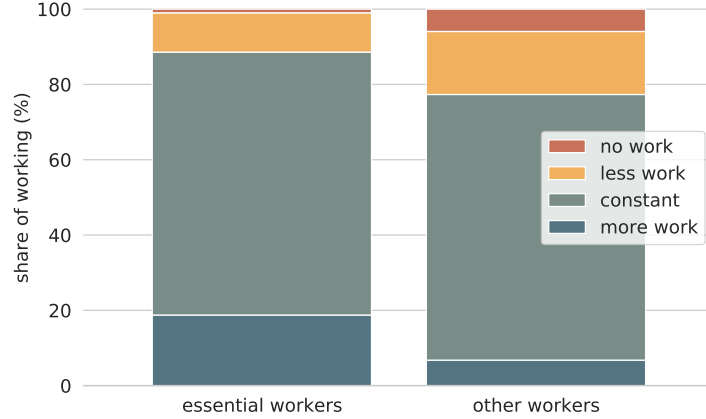
Figure 4: Share of workers with different changes in the number of hours, by essential worker status

Bars correspond to workers whose working hours dropped to zero, decreased (but not to zero), stayed constant, or increased by essential worker status. Number of observations: 777 essential workers, 2,141 others.

in the Netherlands. These results give a quantitative underpinning to models like the one in Giupponi and Landais (2020), suggesting that short-time work allows archetypical European welfare states to better weather the storm, so long as it is of transitory nature. By preserving valuable worker-firm matches, it also helps improving chances for the shock to remain transitory. At a minimum, it buys governments time at a point where a lot of their energy is needed to address pressing public health questions.

3.2   Essential Workers

The CoViD-19 crisis can be expected to have very different labor market consequences for essential workers than for the remaining workforce. First and almost by definition, they are expected to be less affected by the demand shock during the onset of the pandemic. Second, in many of the most salient cases (e.g., doctors, nurses, cashiers, transportation, etc.) jobs require physical presence at the workplace. One would thus presume that essential workers substitute less workplace hours by home office hours.

Figure 4 shows that essential workers are indeed very unlikely to reduce their hours to zero (1%) or to even reduce them (10.4%). For other workers, the corresponding numbers are 6% and 16.7%, respectively. Almost 19% of essential workers report more work than previously.

Figure 5 depicts average hours by where duties were performed before the pandemic and in late March, split by essential worker status. First note that essential workers' hours differ from those of others already before the onset of

the CoViD-19 crisis. Essential workers work a bit less on average (31.5 hours vs. 33.6 hours) and they are much less likely to work from home.

After the onset of the CoViD-19 crisis, the gap in total working hours is reversed. Average hours are higher now for essential workers (30.3 vs. 28.4 hours). At the same time, both groups experience a sharp increase in the share of hours worked from home, but the gap in the share of home office hours widens further. Home office shares are 23% for essential workers and 60% for others.
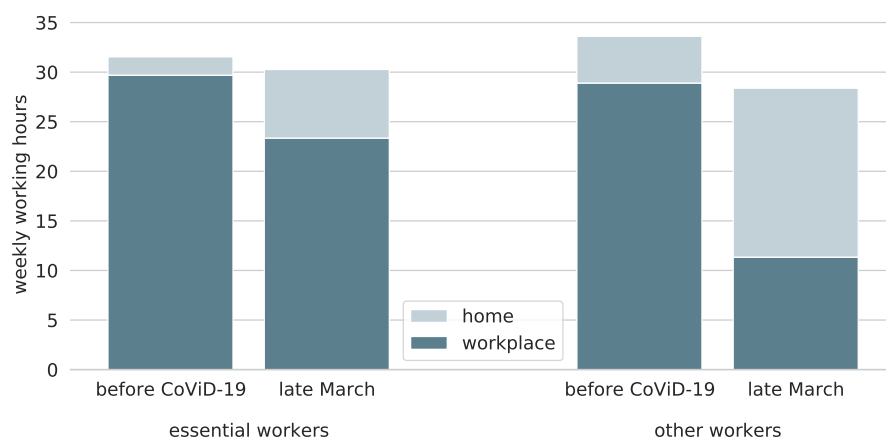

Figure 5: Working hours at the workplace and at home, by essential worker status

The bars show average weekly working hours by type of occupation. Number of observations: 777 essential workers, 2,141 others.

3.3 Education

Figure 6 shows that the least-educated group in our sample is most likely to work zero hours. The fraction of almost 10% is twice as high as in the middle education group and almost four times higher than among those with a tertiary degree. In contrast to this, the share of workers with reduced hours lies at around 13.5% and 16% and rises in education. Working more hours is more prevalent among those with upper secondary education (a bit more than 11%) than in the other groups.
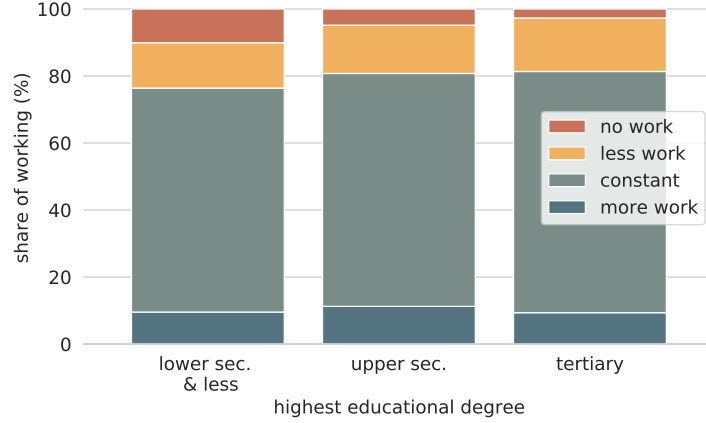

Figure 6: Share of workers with different changes in the number of hours, by level of education

Share of workers whose working hours dropped to zero, decreased (but not to zero), stayed constant, or increased. The bars correspond to the highest level of education: lower sec. & less=bo/vmbo (N=439), upper sec.=havo/vwo/mbo (N=1079), tertiary=wo/hbo (N=1391).

One of the most striking graphs of this paper suggests that this may largely be due to the increased flexibility of the highly educated to work from home. Figure 7, breaks down the change in total working hours by those performed at the usual workplace and at home. The CoViD-19 pandemic strongly amplifies pre-crisis differences in shares of working hours worked from home and total weekly working hours between low, medium and highly educated individuals. This pattern intensifies differences in total hours worked between education groups.

While both low and medium educated individuals worked a bit more than 8% of their hours from home before the CoViD-19 pandemic, the highly educated had a share in excess of 15%. During the onset of the CoViD-19 crisis, all groups increased their home office shares. However, hours worked from home almost quadrupled among the highly educated (+16 hours), while they tripled for the medium educated (+6.5 hours) and not even doubled for the low-educated (+2.2 hours).
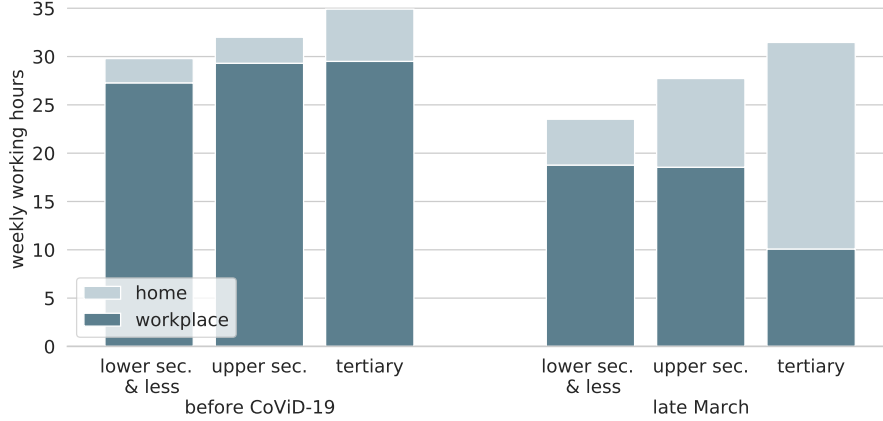
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Figure 7: Working hours at the workplace and at home, by level of education

The bars show average weekly working hours by level of education. Numbers of observations: lower sec. & less=bo/vmbo (N=439), upper sec.=havo/vwo/mbo (N=1079), tertiary=wo/hbo (N=1391)

Investigating the reduction in working hours reveals a similar divide. Pre-crisis working hours are lowest among low educated, and highest among highly educated with the medium educated between them (low: 29.8, medium: 32, high: 34.9 weekly hours). The onset of the CoViD-19 pandemic strongly magnifies this division. Low educated workers experience the largest decrease in terms of absolute and relative working hours (-21%), medium educated workers the second largest decrease (-13%), while the decrease is less than 10% for highly educated workers.

A natural explanation for the stronger reduction in total working hours for lower educated individuals is that their jobs are associated with a lower flexibility to work from home. Three mechanisms come to mind: First, differences in the task-compositions of the respective jobs can explain why some jobs can be more easily done from home than others. Second, if set-up costs are involved (e.g. laptop by the employer) and/or resources to work from home are limited (VPN connections), the employers might be forced to allow only a part of the workforce to work from home. A third mechanism could be that the share of essential workers rises in education. The next subsections collect suggestive evidence for these mechanisms.

Essential workers and education

We now investigate whether the education gradient in home office and total working hours is driven by an uneven distribution of educational groups across essential workers vs. others. Table 4 contains the distribution of worker type by education groups. The share of essential workers is largest among those with upper secondary education and lowest among those with a tertiary degree.

Table 4: Fractions with different levels of education by essential worker status

essential education	essential workers	other workers
lower sec. & less	0.28	0.72
upper sec.	0.33	0.67
tertiary	0.21	0.79

These results would be generally consistent with the idea that lower educated workers are much more likely to be classified as essential workers and thus do not shift hours from the workplace to home because they continue to work at their usual workplace.

However, Figure 8 draws a different picture. When comparing educational groups within essential worker status, the gradient in hours worked from home holds up within both groups. The gradient is—not surprisingly—much more pronounced among non-essential workers. Among essential workers, the lowest education group still loses the most relative total hours (-7.7%), reductions are very similar for the medium and highly educated (-3.6% and -3.2%, respectively). When considering other workers, the differences across education groups becomes larger. Non-essential low educated workers reduce their hours by approximately 26%, while their highly educated counterparts only lose 11.6% of their working hours on average.

The numbers clearly show that both education and essential worker status matter greatly in explaining differences in home office as well as hours reductions. Even within groups defined by essential worker status, the educational
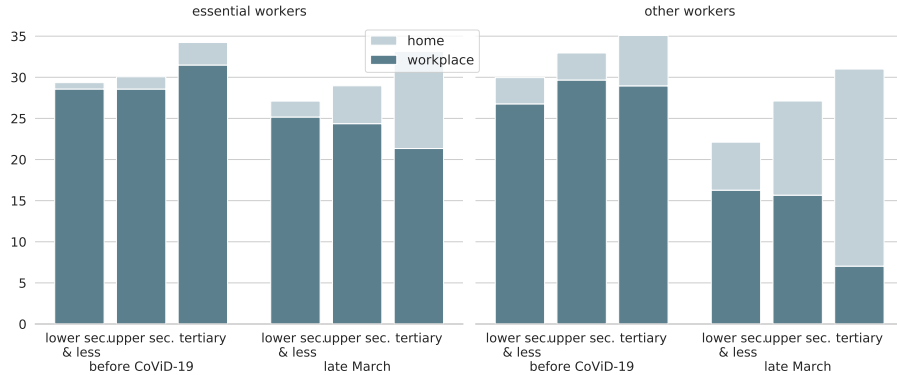

Figure 8: Working hours at the workplace and at home, by level of education and essential worker status.

The bars show average weekly working hours by level of education and type of worker. The numbers of observations are, among essential workers: lower sec. & less 123, upper sec. 357, tertiary 296. Among other workers, they are: lower sec. & less 316, upper sec. 722, tertiary 1095.

gradient is large. Thus, the educational gradient is not exclusively driven by an uneven distribution of education across essential worker status.

Income and education

In this section, we investigate the incidence of changes in working hours in response to CoViD-19 across the net income distribution. Income can generally be seen as a proxy of how much an individual is worth to a firm. If the home office gradient in education is driven by income, it could be seen as suggestive evidence that at least parts of the previously described results are driven by resource constraints on the part of the employer.

We restrict the sample to individuals working at least 30h per week before the crisis. Otherwise, the figures including hours would be dominated by part-time or marginal work. This reduces the sample by 909 individuals or 31%. Results hold qualitatively also without this restriction. Furthermore, we lose another 162 individuals due to missing or zero income information, leaving us with a sample of 1847 individuals. In our analyses, we then approximately make a median split at 2300€.

Not surprisingly, the equivalent of Figure 7 looks very similar for income: The share of home office work is higher in the high-income group already before the crisis (15% vs. 11%); it increases much more afterwards (64% vs 40%). The combination of both effects leads to a lower reduction in total hours (-8% vs -14%). To economize on space, we do not show these numbers, but rather break down Figure 7 by income group in Figure 9.
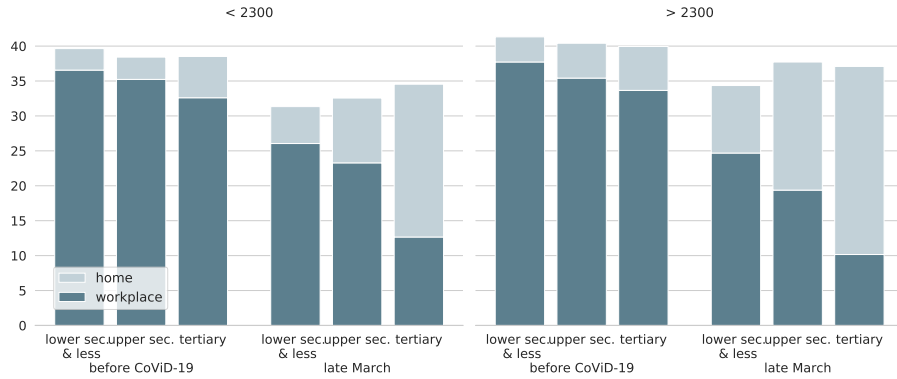

Figure 9: Working hours at the workplace and at home, by income group and education level.

The bars show average weekly working hours by level of education and income group. The numbers of observations are, in the low income category: lower sec. & less 166, upper sec. 436, tertiary 363. In the high income group, they are: lower sec. & less 54, upper sec. 211, tertiary 617.

When considering the share in home office hours within income groups, we find that education is still a very important predictor for observed differences.

Among low income individuals, those with low education cannot substitute their working hours at the workplace by working hours at home to the same extent as highly educated individuals. While for the low educated the share in home office hours increases from 3 to 5 hours, highly educated individuals increase their home office hours from 6 to 22. This substitution pattern for the highly educated is even more pronounced within higher income groups. The biggest substitution between hours worked at the workplace and from home can be observed for high income and highly educated individuals. About 73% of their total hours worked during the crisis are from home. Interestingly, among the high earners, those with upper secondary education now see a similar and maybe even smaller reduction in total hours. This is despite the fact that they have a much lower increase in home office hours than those with tertiary education.

The fact that education still plays an important role for the share of hours worked from home after controlling for income, indicates that the home office share is mostly driven by the task-composition of jobs instead of limited availability of home office resources, which might be given first to those with greater responsibility and, thus, income. We will investigate this further by looking at education shares within sectors in the next section.

3.4 Sectors

The descriptive statistics in 2 show that sectors with higher shares of essential workers feature lower home office shares before the crisis and in late March. For example, healthcare and welfare has the highest share of essential workers (63%), but among the lowest shares of home office hours (7% before the pandemic, 28% in late March). In contrast to this, business services or the financial sector have very low shares of essential workers (5-8%), but the among the highest shares of hours worked from home before the pandemic (18-20%) and after the social distancing regulations came into effect (71-80%).

Figure 11 shows the relation between sectoral shares of workers with a tertiary degree and the change in total hours. Leaving heavy-hit sectors such as catering or environment/culture/recreation aside, there is a mildly positive relationship only. The low correlation is what is to be expected from the two countervailing effects: Sectors with high shares of essential workers—indicated by darker colors—have lower shares of academics on average and feature low reductions of hours because large parts are identified as critical for the functioning of basic public life. Sectors with high shares of academics feature low reductions in total hours because workers can substitute time usually spent at the workplace by working from home instead.

With all this in mind, it might not be too surprising that Figure 10 shows an extremely strong relationship between sectoral shares of workers with an academic degree and sectoral home office shares after the social distancing restrictions took effect. There are two clusters of sectors. One is made up of office occupations, the education sector, and environment/culture/recreation. All these sectors feature shares of workers with a tertiary degree in excess of 55% and home office shares of at least two thirds during the lockdown. These
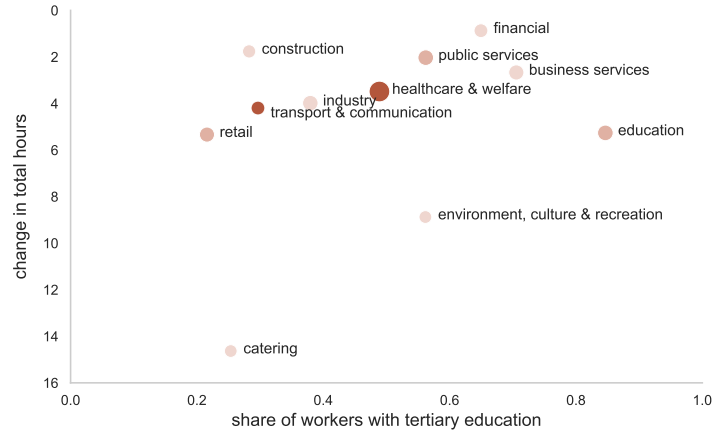
Figure 10: Changes in total hours by sectoral shares of workers with tertiary education, before the onset of the CoViD-19 to late March 2020

Bubbles show sectors scaled by their size and colored with the share of essential workers (three groups, $[0.0, 0.15], (0.15, 0.3], (0.3, 1.0]$), darker colors mean a higher share. Descriptive statistics are in 2.

sectors generally have a low share of essential workers. The other cluster consists of occupations that often involve manual work or social interactions, like retail, healthcare and welfare, or transport/communication. In all of these sectors, workers with a tertiary degree are the minority and home office shares are below 50%. Shares of essential workers are disproportionately high.

While we do not have direct task information, this pattern lines up very well with results reported in Alon et al. (2020). They classify occupations by how well they can be performed remotely and find that those occupations where only a small share of respondents replies that they are able to telecommute (Transportation and Material Moving, Food Preparation and Serving, Building and Grounds Cleaning and Maintenance, Production, Healthcare Support, Construction) typically have lower education requirements than the six occupations most suited for telecommuting (Management, business, science, and arts, Legal, Business operations specialists, Architecture and engineering, Financial specialists Computer and Mathematical). All in all, we are thus confident that it is indeed tasks driving much of the changes in hours among non-essential workers.
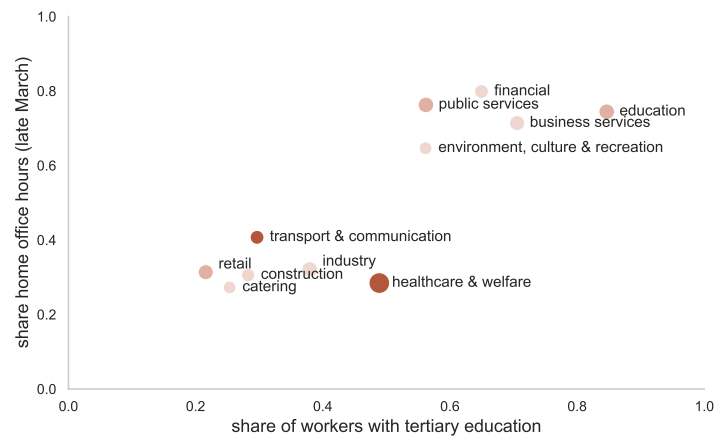
Figure 11: Share of home office hours by sectoral share of workers with tertiary education, late March 2020

Bubbles show sectors scaled by their size and colored with the share of essential workers (three groups, $[0.0, 0.15], (0.15, 0.3], (0.3, 1.0])$, darker colors mean a higher share. Descriptive statistics are in 2.

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4 Worries and expectations about job prospects in the short run

In this section, we investigate how different groups of individuals judge their future job prospects and job loss. In the analysis, we focus on differences by employment type and education.

4.1 Job worries in the near future

In our questionnaire, we ask working individuals about their worries regarding job loss and business activities over the next month. Employed individuals are asked whether they are worried to lose their job over the next month, starting from March 20th. Self-employed individuals are asked whether they expect that their company will face financial difficulties. Respondents are asked to rate these and other worries on a 5-point scale ranging from not being worried at all to being very worried.

Figure 12 shows the mean of job-related problems over the next month as a consequence of the crisis. Among employed individuals, more than 75% are not worried that they will lose their job. Only a small share of respondents, about 3%, is very worried about this job loss. This is very different for the self-employed, where the degree of being worried about financial difficulties is almost equally distributed across the five levels. The two extremes are the smallest categories, with 18% being not worried at all and 13% expressing severe worries.

The results suggest that employees are much less concerned about their job prospects in the short run than self-employed individuals are. This makes sense for at least three reasons. First, employees may be insured against transitory shocks like the CoViD-19 crisis by their firms (potentially because the government insures the firms), while business owners may fully absorb it. Thus, the share of employees who are worried to lose the job is relatively low. Second, business owners might have more realistic expectations regarding the development of their business, leading to more concerns about financial difficulties. Third, the events that are asked for differ slightly as described above.

4.2 Expectations about Changes in Hours by Education

We next analyze short-term job-related expectations by education in order to see whether the previous patterns are expected to persist. Since the questions differ between employees and the self-employed, we focus on the former. Figure 13 plots the average probabilities of future events associated with the crisis by education.

Among low educated individuals, the average probability assigned to employers not being heavily affected by the crisis and job retention is 67%. 21% are assigned to job retention only because of government support for employers; the average job loss probability is 6%. In contrast, academics assign 77% prob-
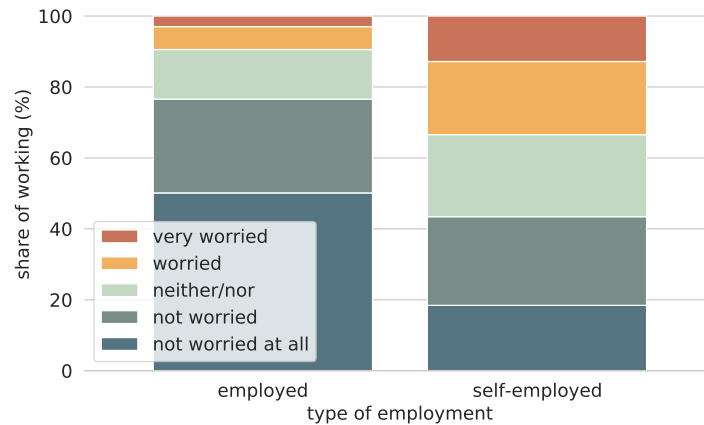
Figure 12: Share of workers in different degrees of being worried about their work, by employment status

Bars show shares of workers who are not worried at all, not worried, neither/nor, worried or very worried to lose their job (employed) or to experience financial difficulties with their business (self-employed) in the next four weeks. Number of observations are 2,595 (employed) and 323 (self-employed).

ability to the scenario where they keep their job without their company needing support; 14% to the one where government interventions will help them keep their jobs; and less than 5% to the job loss scenario. Individuals with upper secondary education are in between the other two on all counts, but generally closer to the low educated. In order to generate mutually exclusive events, we also added a category "something else will happen". The probability assigned to this is 6.5% for the lower two education groups and 4.7% for academics. Since it is rather similar and will not change any conclusions, we need not speculate what might hide in this category.

Figure 14 shows that these patterns are even stronger across essential workers and others. Essential workers assign an average probability of 2% to having lost their job by early June (others: 5.6%); of 12% to the case that government support will their job alive (others: 19%); and 81% to their employer not being affected (others: 69%). Essential workers also are significantly less concerned about job-related matter than others.

The worries and expectations thus are direct extrapolations of the situation during late March into the near future. Importantly, 17% of employees expect to retain their job because of government intervention. Even when taking this into account, the numbers are still well below those reported by Adams-Prassl et al. (2020) for expectations of workers in the United States and the United Kingdom. Those assign 35-40% probability to losing their jobs by August 2020.
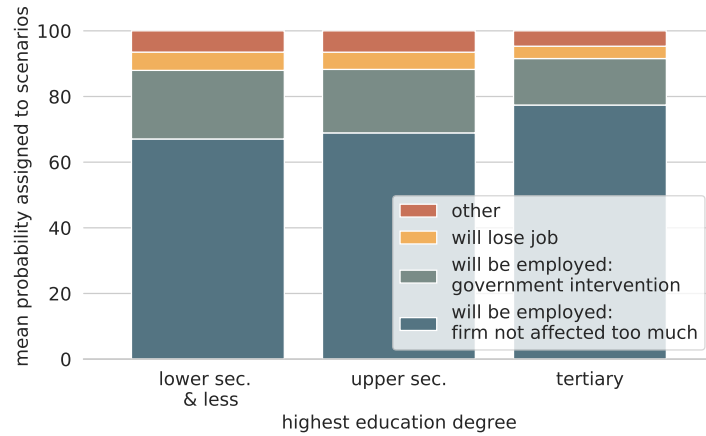
Figure 13: Mean probability assigned to different scenarios in early June, by level of education, employees only

Bars correspond to the mean fraction assigned by employees to different scenarios. The scenarios were: Keep job and firm does not need government intervention; keep job because of government intervention; loose job; something else. Numbers had to add up to 100. Number of observations: lower sec. & less=bo/vmbo (N=385), upper sec.=havo/vwo/mbo (N=1205), tertiary=wo/hbo (N=986)

The Dutch thus expect a lot of their government and put a lot of trust in it.[7]

5   Conclusion

We have presented early survey evidence on labor market reactions to the CoViD-19 pandemic. The first-order effects until late March seem to work on three margins.

First, employees are much less affected than the self-employed. One reason is that firms insure employees against transitory shocks, possibly because of short-time work or other government support schemes. Another explanation is that small businesses may have been disproportionately affected by business closures because of the restrictions (restaurants, bars, hairdressers, etc.).

Second, total hours of essential workers are less affected at this point. They continue to work and frequently (have to) do so at their usual workplace. The increased job security comes at the cost of a higher infection risk, of course.

Third, there is a large education gradient in home office shares with the highly educated working more than two thirds of their hours from home. In comparison, those with low education reach a share of one fifth. This translates into a much steeper gradient in total hours worked after the onset of the crisis.

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[7]We explicitly asked about that in our questionnaire, see https://covid-19-impact-lab.iza.org/app for a breakdown by education category.
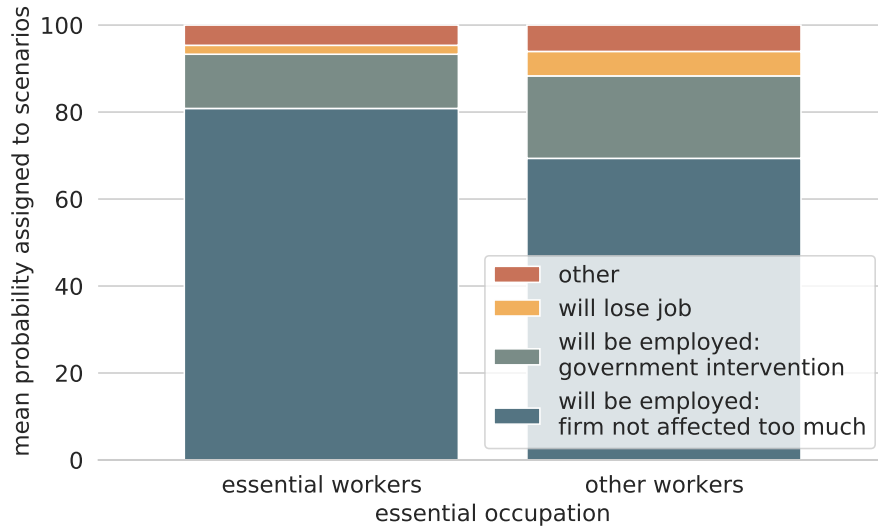
Figure 14: Mean probability assigned to different scenarios in early June, by essential worker status, employees only

Bars correspond to the mean fraction assigned by employees to different scenarios. The scenarios were: Keep job and firm does not need government intervention; keep job because of government intervention; loose job; something else. Numbers had to add up to 100. Number of observations: essential workers (N=736), others (N=1839).

Since a large share of essential workers comes from the low or medium education groups, this effect attenuates the differences between hours worked by essential workers and others.

Across sectors, we show that there are two clusters: One dominated by office-type occupations with high shares of academics, home-office hours, and low fractions of essential workers; and one where manual tasks and social interactions are prevalent with low shares of academics, home office hours, and often high shares of essential workers.

Short-term expectations show that workers expect current patterns to prevail: The self-employed are much more worried about the futures of their businesses than employees are about keeping their jobs. The latter is partly due to the fact that employees expect a lot from government support schemes. In particular, many workers expect to keep their jobs in early June only due to government support. The expected unemployment response is far lower than in the U.S. or the U.K..

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