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A Discrete Choice Experiment in Poland**

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ABSTRACT

Working from Home during a Pandemic – A Discrete Choice Experiment in Poland*

The COVID-19 pandemic has transformed working from home from a rarity to a widely adopted job amenity. We study workers' willingness to pay for working from home, and how it may be affected by subjective and objective assessments of COVID-19-related risks. We conducted a discrete choice experiment with more than 10,000 workers in Poland. We randomised wage differences between otherwise identical home- and office-based jobs. We also randomised an information provision treatment in which we informed 50% of workers about the level of exposure to contagion in their occupation, and how it may be reduced by working from home. We found that the demand for working from home was substantial – the majority of participants would prefer to work from home if they were offered the same wage for a home-based job as they would earn in an office-based job. On average, workers would sacrifice 5.1% of their earnings for the option to work from home, especially for 2-3 days a week (7.3%) rather than 5 days a week (2.8%). We also found that the perception of COVID-19 mattered, as workers who perceived it as a threat were willing to give up a much higher share of their earnings than those who did not. However, the willingness to pay did not differ significantly between individuals depending on whether their occupation had a high or a low level of exposure, or between individuals treated in the information experiment and those in the control group.

JEL Classification: J21, J44

Keywords: working from home, discrete choice, information provision experiment, occupational exposures, COVID-19

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1. Introduction

The COVID-19 pandemic has resulted in a significant transformation of workplaces as many companies have implemented alternative work arrangements, such as working from home, flexible schedules, or part-time work. Before COVID-19 vaccines became available, these steps were necessary given that workplace interactions constitute the majority of social contacts among people of working ages (Klepac et al., 2020; Mossong et al., 2008), and are important transmission channels that can influence the spread of respiratory diseases (Adda, 2016; Lewandowski, 2020; Qiu et al., 2020). These arrangements helped reduce contact between workers and shielded them from economic and health risks (Alipour et al., 2021). Early evidence from the UK and the US suggests that the COVID-19 shock will translate into a long-term shift towards working from home (WfH). The share of workers who can perform most tasks from home has increased (Adams-Prassl et al., 2022), and workers can benefit from greater flexibility and reduced commuting, while firms can benefit from higher productivity and lower office costs (Barrero et al., 2021). An important question is how workers and firms would share these benefits, particularly if workers are willing to forego other job amenities, especially wages, for the option to work from home.

In this paper, we address this question by conducting a pre-registered discrete choice experiment aimed at estimating workers' preferences regarding working from home. We conducted the experiment in Poland, a post-transition country in which the incidence of WfH and job flexibility before the pandemic was low. In 2019, 4.6% of employees in Poland usually worked from home (5.4% in the EU). In 2020, the share of home-based workers doubled to 8.9% but remained below the EU average of 12.0% (Eurostat). At the same time, Poland was severely affected by the COVID-19 pandemic: in 2020-2021, the cumulative excess mortality rate in the country was the third-highest in the EU (Eurostat). This makes Poland an interesting case for studying preferences regarding working from home.

Our first contribution is to provide evidence of workers' preferences regarding working from home and their drivers in the context of the COVID-19 pandemic. We implemented a discrete choice survey experiment with more than 10,000 workers using vignettes that involved asking individuals to state their preferences regarding hypothetical job offers that differed in terms of wages and the option to work from home. The discrete choice approach has advantages over traditional surveys, as it requires participants to make trade-offs between different options. It is often used to estimate workers' willingness to pay (WTP) for flexible working arrangements.¹ The novelty in our study is that we conducted the experiment during the COVID-19 pandemic, when working from home went from being a privilege of selected, usually well-educated workers to being a widely adopted work pattern. To ensure that working from home was a realistic option for the individuals in our experiment, we focused on workers in professional, managerial, clerical, or sales and services occupations. Employees in these occupations can perform some or all of their duties while working from home (see Table A3 in Appendix A), and over 50% of workers in Poland were employed in these occupations in 2020 (Labour Force Survey).²

¹Previous studies using this method found that people value flexibility in the workplace, and may be willing to give up a portion of their wages for the option to work from home (He et al., 2021; Maestas et al., 2018; Mas and Pallais, 2017; Datta, 2019), or for flexible time schedules (Bustelo et al., 2022). There is also evidence that the preference to work from home tends to be higher among married individuals (He et al., 2021) and college-educated workers (Maestas et al., 2018).

²Previous studies investigated either specific groups, such as highly educated, white-collar workers in the IT sector (He et al., 2021) or call centre applicants (Mas and Pallais, 2017); or nationally representative samples (Datta, 2019; Maestas et al., 2018).

Our second contribution is to assess how individuals' perceptions of the COVID-19 pandemic and occupational factors shape their preferences for working from home. The extent to which work duties can be performed from home varies between occupations (Dingel and Neiman, 2020), as well as between more and less developed countries that differ in their levels of technology adoption and their skill supply (Hatayama et al., 2020). At the same time, occupations require varying levels of personal contact and exposure to contagion.³ It is, therefore, possible that workers' preferences regarding WfH may depend on their level of occupational exposure to contagion, as well as on their risk aversion and perception of the pandemic as a threat. However, some workers, especially those in the so-called non-essential jobs, may not be fully aware of the level of occupational risk they face, while other workers, for instance, those in office jobs, may overestimate it. To assess whether knowledge of their level of exposure may affect workers' preferences for job amenities, we combined a discrete choice experiment with an information provision experiment. Specifically, we informed a random subset of workers about the level of exposure to contagion in their occupation before they were asked to choose between working from home and working in the office. This allowed us to investigate a causal effect of information provision on workers' preferences.

Thus, this paper adds to the growing literature investigating the role of information provision in changing individuals' behaviour in the context of the COVID-19 pandemic. Recent studies have shown that providing people with information about preventive behaviours may increase the reporting of health symptoms and hand-washing (Banerjee et al., 2020), decrease individual mobility (Breza et al., 2021; Banerjee et al., 2020), increase self-reported protective behaviours (Torres et al., 2021), and increase the willingness to get a vaccine (Alsan et al., 2021). However, there is also evidence that providing information alone does not affect COVID-19 preventive behaviours (Bahety et al., 2021). To the best of our knowledge, the explicit framing of the WfH option in terms of COVID-19 risk is a novelty in the literature on working from home. It also distinguishes our paper from previous studies on WfH that were often focused on differences in preferences for job amenities between socio-demographic groups (Maestas et al., 2018; Mas and Pallais, 2017). Knowing the interactions between labour market behaviours and pandemic awareness and messaging is important for understanding the role of working from home in the post-COVID economy, and for formulating both health and labour market policies.

We find that the majority of workers in our experiment preferred to work from home, with most preferring to work from home 2-3 days per week rather than the whole week. We also observe that the reductions in the preference for WfH in response to wage cuts were stronger than the increases in these preferences in response to equivalent wage increases. This finding suggests that workers were more likely to be discouraged from working from home than encouraged to do so. We estimate that, on average, workers were willing to sacrifice 5.1% of their earnings for the option to work from home. Importantly, we find substantial heterogeneity in the willingness to pay for the option to WfH. First, we observe that workers who perceived COVID-19 as a serious health risk were much more willing to pay than workers who did not perceive COVID-19 as a threat. Second, we show that women were more willing to

The first approach is more accurate but has limited external validity; while the second approach provides estimates that are representative of the working population, but that may be biased by the inclusion of occupations that cannot be performed from home.

³ Lewandowski (2020) constructed an index of occupational exposure to infectious diseases, which showed that apart from health care workers, workers in medium-skilled service occupations (personal care workers, protective services workers, personal service workers) are the most exposed. Information and communications technology professionals, business and administration professionals, farmers, and handicraft and printing workers were found to be among the occupations that are the least exposed to contagion at work.

pay than men, especially when presented with the option of WfH for 2-3 days per week. Third, we find that commuting time mattered, as workers with commutes longer than 30 minutes had a greater willingness to pay than those with short commutes, especially when offered the option of WfH for five days a week. At the same time, our results indicate that neither objective measures of the level of occupational exposure to contagion nor the provision of information about this exposure affected workers' preferences regarding working from home.

Our findings suggest that despite the optimism about the shift towards working from home, workers may not be willing to accept large wage cuts to secure jobs that provide them with such an option. Despite the wide adoption of working from home during the COVID-19 pandemic, conflicting forces will likely affect its popularity. On the one hand, working from home can increase worker productivity (Bloom et al., 2015; Harrington and Emanuel, 2021) and improve work-life balance, especially among couples (Bryan and Sevilla, 2017). On the other hand, it can be associated with more overtime hours (Arntz et al., 2022), make it harder for workers to acquire and share new information across the network (Yang et al., 2021), and reduce chances of promotion (Harrington and Emanuel, 2021). Hence, there is no one-size-fits-all approach to working from home. Moreover, we show that differences in workers' preferences regarding WfH may depend on factors that are not easily observable, such as workers' perceptions of the health risks associated with COVID-19; or on factors that depend on the conditions of a particular job, such as commuting time. It also appears that influencing these preferences with health-oriented messaging can be rather challenging. Thus, the extent to which WfH can reduce occupational exposure to contagion may be limited, especially in countries where WfH is a novelty, such as Poland.

In the second section, we describe the design of the study and present information about the study participants and methodology. In the third section, we present the descriptive results. In the fourth section, we provide the econometric results. The fifth section concludes.

2. Data and descriptive statistics

In this section, we describe our experimental framework and data collection process. We also present the sample characteristics and the balance tests for the randomised experiment. Finally, we provide descriptive evidence.

2.1. Experimental framework

We conducted a discrete choice survey experiment based on vignettes to (i) elicit workers' preferences for working from home and (ii) examine whether the provision of information about occupational exposure to COVID-19 affected these preferences. The design of the study is shown in Diagram 1.

To assess their preferences for working from home, the participants were shown five screens with vignettes.⁴ On each screen, there were two job offers. Each job offer had four attributes: occupation, working hours, ability to work from home, and wages. Each pair of offers varied in terms of two attributes: the ability to work from home and the wages. Job offer A did not allow the study participants to work from home, while job offer B allowed them to work from home either five days a week or 2-3 days a week (with equal probability). The number of days participants could work from home in job offer B was selected randomly. The wage in job offer A was equal to the wage that

⁴ We presented information on how to interpret 'work from home', and provided a few examples (Appendix A, Tables A4-A5).

each participant provided earlier in the survey. The wage in offer B was randomised (uniform distribution) in the range of $\{-24\%, -20\%, -16\%, \dots, 0, \dots, 16\%, 20\%, 24\%\}$ deviations from the wage in offer A. Table 1 summarises the vignettes' attributes and values.

To examine whether the provision of information about work-related COVID risks affected workers' preferences regarding working from home, we randomly allocated participants to either the treatment or the control group.⁵ Before they selected job offers, the treated individuals received information about the level of occupational exposure to COVID-19. They were asked to read carefully a short message about the level of exposure to COVID-19 contagion in the workplace with the following content. First, social distancing and limiting interpersonal contacts are necessary actions for preventing the spread of COVID-19. Second, the risk of transmitting infectious diseases such as COVID-19 is especially high in workplaces because employees spend most days at work, where they interact with their co-workers and/or with clients. Third, some workers are more exposed to contagion than others, as some occupations require more frequent social contact, more physical proximity to others, or even direct contact with infected individuals in the workplace. Fourth, the individuals received information about whether the level of exposure to contagion in their occupation was high or low. This information about the level of occupational exposure was not provided to the control group. The vignettes' specifications are displayed in Table 1. The full text that was shown to the treated participants, examples of the vignettes presented to the control and the experimental groups, and the allocation of occupations to groups with low or high exposure levels, can be found in Appendix A (Tables A6-A7 and Table A3, respectively).

Our sample size ($N = 11,166$; N in the treatment group = 5,512; N in the control group = 5,654) was sufficient to investigate the main effect size between the treatment and the control groups, as well as the effects among various subgroups. With standard parameters of alpha (the significance level) equal to 0.05 and power equal to 0.80, the projected sample size needed to estimate the effect size of around 2 pp. in the binary outcome (choosing to work from home) was approximately 1,960 participants (9,800 choices) per treatment group.

The study has received ethics approval from the Rector's Committee for Ethics of Research with Human Participants at the University of Warsaw (decision 88/2021). It was pre-registered in the American Economic Association's registry for randomised controlled trials (RCT ID: AEARCTR-0007373).

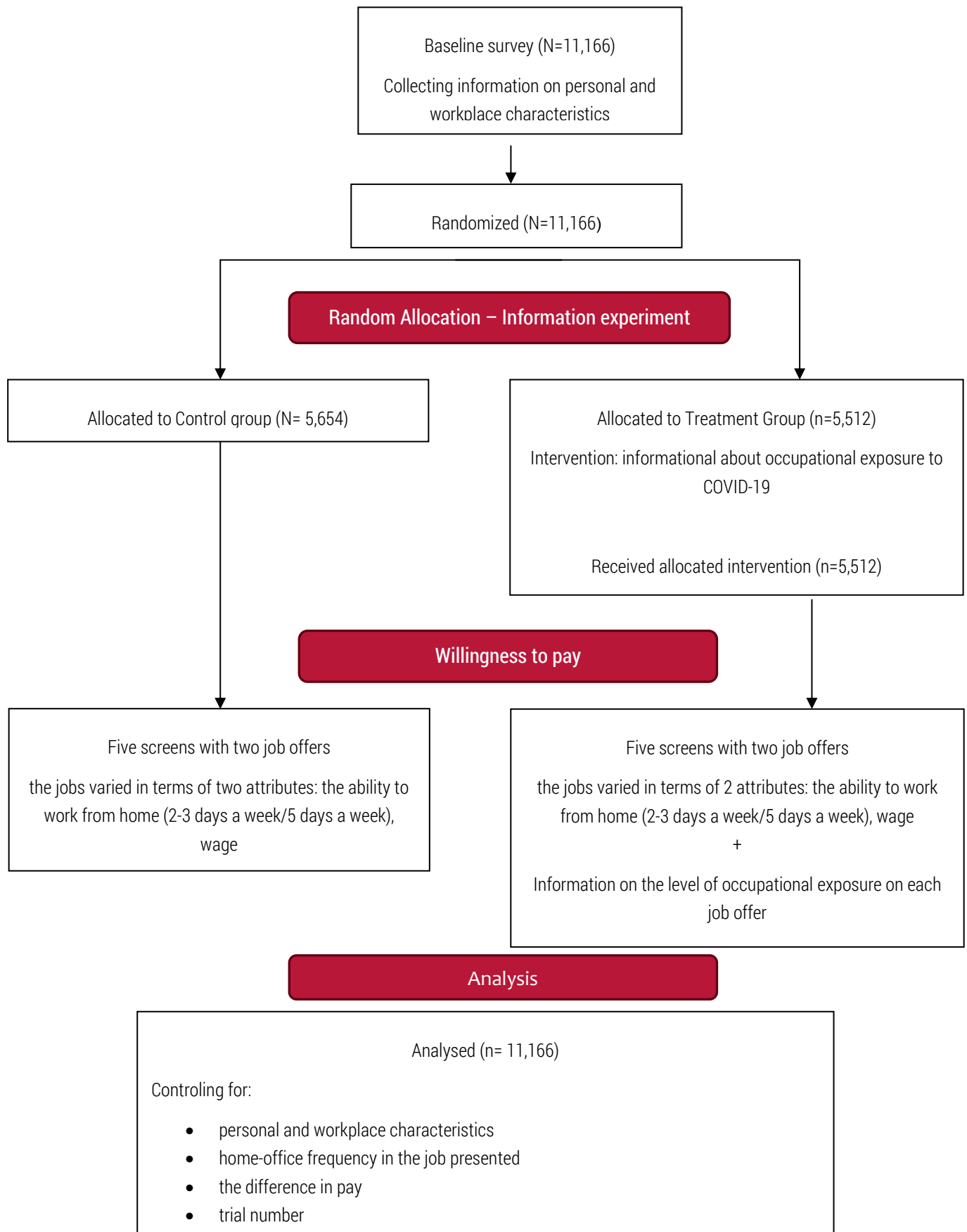
⁵ Allocation to groups was based on the date of birth of the participants. Individuals born on even days were assigned to the treatment group, and individuals born on odd days were assigned to the control group.

Table 1. Vignettes' attributes and specifications

Attributes	Values	
Control group in the information experiment		
	Job offer A	Job offer B
Occupation	Occupation indicated by study participants in the survey	
Work hours	Full-time position. Work from Monday to Friday from 9 a.m. to 5 p.m.	
Ability to work from home	Cannot work from home	(1) Can work from home 2 or 3 days a week (2) Work from home 5 days a week. Cannot work from the office.
Wage	Wage indicated by study participants in the survey	Change in relation to job offer A: {-24%, -20%, -16%, -12%, -8%, -4%, 0%, +4%, +8%, +12%, +16%, +20%, +24%}
Treated group in the information experiment		
Attributes	Values	
	Job offer A	Job offer B
Occupation	Occupation indicated by study participants in the survey	
Occupational exposure to COVID-19	High or low	
Work hours	Full-time position. Work from Monday to Friday from 9 a.m. to 5 p.m.	
Ability to work from home	Cannot work from home	(1) Can work from home 2 or 3 days a week (2) Work from home 5 days a week. Cannot work from the office.
Wage	Wage indicated by study participants in the survey	Change in relation to job offer A: {-24%, -20%, -16%, -12%, -8%, -4%, 0%, +4%, +8%, +12%, +16%, +20%, +24%}

Source: Own elaboration.

Diagram 1. The design of the study



Source: own elaboration.

2.2. Data collection

We used a Computer-Assisted Web Interviewing (CAWI) technique. The survey was carried out in July and August 2021. We cooperated with an external research company that was responsible for recruiting the study participants from the independent nationwide research panel (named Ariadna), and for administering the survey.⁶ The participants were rewarded with loyalty points that could be exchanged for gift vouchers or converted into cash.

The participants in our study were between the ages of 20 and 64; were employed or were actively looking for a job; and were living in a city of at least 100,000 inhabitants, or in a location within a 45-minute commute of such a city. We aimed to include people working (for at least 20 hours per week) in jobs that could be done from home. Therefore, we restricted our sample to workers in the following occupations (according to the major groups of the International Standard Classification of Occupations from 2008 – ISCO-08): managers (ISCO 1), professionals (except for health professionals, ISCO 2), technicians and associate professionals (except for health associate professionals, ISCO 3), clerical support workers (ISCO 4), and service and sales workers (ISCO 5). To ensure that the sample was representative, we set quotas for key socio-demographic and geography variables (gender, age, educational level, occupations with high and low levels of exposure to contagion, municipality size, region).

In the first part of the survey, we collected basic information about the participants' socio-demographic characteristics. In the second part of the survey, we provided participants in the treated group with information about levels of occupational exposure to contagion. Then, we introduced a discrete choice framework and asked all participants to state their preferences regarding hypothetical job offers.

Since the participants might have made different choices in the survey than they would have in real life, we accounted for two key sources of bias in discrete choice experiments: inattention and 'hypothetical bias'. To measure inattention, we asked the participants to solve two simple equations ('2+2', '20-7'). Out of 11,166 participants, only 65 (0.6%) gave the wrong answer to any of these questions. Therefore, we conclude that the study was not biased by the participants' inattention, as this number was too low to affect the results. To measure hypothetical bias, we followed a two-step procedure proposed by Datta (2019). First, to emphasise the real-life importance of the study, we informed the participants that the results of the study would be presented to Polish policymakers (which was true). Second, after each vignette, we included a follow-up question and asked the participants to indicate their level of confidence in their choices on a 0-100 scale. Overall, the participants were quite confident in their choices: the median confidence level was 90 points, the bottom quartile was 75 points, and the first decile was 60 points (see Table A2 in Appendix A). Hence, we believe that our experiment provided a good approximation of real-life choices. Indeed, Mas and Pallais (2017) presented evidence that preferences regarding flexible work arrangements investigated via survey are similar to those expressed in real-life application processes.

⁶ Before carrying out the large-scale survey, we ran a pilot study to evaluate the quality of the survey software and the clarity of the questions. The pilot survey was completed by 332 participants. To get more detailed insights into the participants' reactions, we conducted online interviews with nine study participants. The interviewed individuals filled out a questionnaire in the presence of a member of the research team. Afterwards, they shared their opinion about the survey. The feedback we received helped us to improve the questionnaire.

2.3. Sample characteristics and balance tests for the information provision experiment

We recruited 11,116 participants. The sample structure in terms of demographic characteristics, educational level, and occupations was close to the structure of the population of workers aged 20-64 employed in occupations ISCO 1 to 5 (Table 2). Slightly over half of the study participants (56.1%) had a university degree; in line with the share in the reference population. Women were overrepresented in our sample (52.5% in our sample vs. 45.9% in the general population). Compared to the general population, our sample had a higher share of people aged 20-34 (40.6% vs. 31.1%), a lower share of people aged 35-49 (37.6% vs. 46.3%), and a virtually identical share of people aged 50-64 (21.8% vs. 22.6%). Regarding the occupational structure, the share of people in our sample who belonged to each of the three occupational groups (managers, professionals, service and sales workers) lined up well with the national data. However, technicians and associate professionals were underrepresented (12.7% vs. 22.8%), while clerical support workers were overrepresented (27.4% vs. 11.9%). These differences may have arisen in part because participants may have struggled to distinguish between associate professional and clerical support occupations (in the LFS, participants are assisted by a trained interviewer). They are unlikely to bias our results, as both occupational groups include middle-skilled jobs that can be performed either in the office or from home.

Table 2. Sample characteristics

	Sample structure			Population structure
	N	%	% (weighted)	%
Gender				
Women	5,861	52.5	46.0	45.9
Men	5,305	47.5	53.9	54.1
Age group				
20-34	4,535	40.6	31.2	31.1
35-49	4,193	37.6	46.3	46.3
50-64	2,438	21.8	22.5	22.6
Education				
Secondary or lower	3,808	43.9	44.3	44.1
Tertiary	6,265	56.1	55.7	55.9
Occupational group				
Managers	1,073	9.6	11.6	11.6
Professionals	3,210	28.7	32.0	32.1
Technicians and associate professionals	1,419	12.7	11.8	22.8
Clerical support workers	3,062	27.4	23.0	11.9
Service and sales workers	2,402	21.5	21.6	21.6
Technicians/associate professionals and clerical support workers	4,481	40.1	34.8	34.7
Occupational exposure to contagion				
Low	5,568	49.9	53.1	53.2
High	5,548	51.1	46.9	46.8

Note: The sample structure is weighted with our survey weights, the population structure is weighted with the LFS survey weights. Source: Own calculations using data gathered for the experiment, and annual data for 2020 from Poland's Labour Force Survey.

To make the structure of the sample more accurate, we introduced weights and rebalanced the data so that our sample matched the relevant employment structure concerning the distribution of key variables: gender, age, education, region, working hours, level of occupational exposure to contagion, and four occupational groups (managers, professionals, service/sales workers, and a combined group consisting of technicians/associate professionals and clerical support workers). We used 2020 Polish Labour Force Survey (LFS) data to create the weights. The weighted structure of the sample is shown in Table 2.

The randomisation in the information provision experiment delivered well-balanced treatment (5,512 individuals, 49.4% of the sample) and control groups (5,654, 50.6%). We performed a battery of mean t-tests to check that there were no statistically significant differences between the treatment and the control groups. We accounted for socio-demographic variables (gender, age, education, place of residence), labour market variables (occupation, contract type, working hours, level of occupational exposure to contagion), and household structure (children present in the household, single-person household). In all cases, the differences in the means between the groups were tiny (less than 2 p.p.) and were statistically insignificant (see Table 3 and Table A1 in Appendix A).

Table 3. Balance table for the information provision experiment. Selected variables

	Control (%)	Treatment (%)	Control - Treatment (p.p.)
Gender			
Women	53.1	51.8	1.3 (0.009)
Men	46.9	48.2	-1.3 (0.009)
Age group			
20-34	41.1	40.1	1.0 (0.009)
35-49	37.5	37.6	-0.1 (0.009)
50-64	21.4	22.3	-0.9 (0.008)
Education			
Primary	1.1	0.9	0.3 (0.002)
Vocational	8.7	8.9	-0.2 (0.005)
Secondary	34.4	33.8	0.6 (0.009)
Tertiary	55.8	56.4	-0.7 (0.009)
Occupation group			
Managers	9.5	9.7	-0.2 (0.006)
Professionals	28.3	29.2	-0.9 (0.009)
Technicians and associate professionals	13.0	12.4	0.6 (0.006)
Clerical support workers	27.4	27.4	0.0 (0.008)
Service and sales workers	21.7	21.3	0.4 (0.008)
Occupational exposure to contagion			
Low	49.0	50.7	-1.7 (0.009)
High	51.0	49.3	1.7 (0.009)

Note: N in control group= 5,654; N in treatment group=5,512. Standard errors are reported in parentheses. A balance table with all variables estimated by t-test is available in Appendix A (Table A1). Levels of significance: *** $p < .01$, ** $p < .05$, * $p < .1$.

Source: Own calculations using data gathered for the experiment.

2.4. Descriptive results

The majority of participants (54%) indicated that they preferred a job offer that allowed them to work from home (Table 4), especially if they could combine WfH for 2-3 days a week with working in the office the other days (58%), rather than being limited to WfH only (51%). There were differences between socio-demographic groups. WfH was chosen more often by women than by men (56% vs. 53%), and by younger than by older people (57% of 20-34-year-olds vs. 55% of 35-49-year-olds vs. 51% of 50-64-year-olds). It was also chosen more often by workers with tertiary education or primary education (around 56% in both groups) than by workers with basic vocational education (53%) or secondary education (54%), although these differences were small. Moreover, parents chose WfH (56%) more often than people caring for older adults (54%). Also, people who were commuting for a longer time chose WfH more often. There were also noticeable differences based on the participants' perceptions of the COVID-19 pandemic, as people who considered COVID-19 a threat chose WfH more often than those who did not (56% vs. 52%). However, people who were working in occupations highly exposed to contagion were as likely to choose to work from home as people with low levels of occupational exposure (54.2% vs. 54.5%).

Table 4. The shares of participants who chose to work from home (%)

	WfH 5 days a week	WfH 2-3 days a week	WfH – total	N
Total	50.8	57.9	54.4	55,825
Gender				
Women	50.9	60.8	55.9	29,304
Men	50.8	55.5	53.1	26,521
Age				
20-34	53.9	59.9	56.9	22,675
35-49	50.9	58.2	54.5	20,963
50-64	46.6	54.6	50.6	12,187
Education				
Primary or lower	49.6	62.6	56.0	560
Vocational	50.5	54.4	52.5	4,905
Secondary	51.6	56.4	54.0	19,037
Higher	50.9	60.1	55.5	31,323
Care obligations				
Children	52.5	58.5	55.5	25,333
Older adults	50.9	56.0	53.5	13,375
Commute to work time				
< 30 mins	49.1	57.0	53.0	39,662
30 - 60 mins	54.7	60.3	57.5	10,798
> 60 mins	56.3	60.0	58.2	5,365
Occupational exposure to contagion				
High	51.2	57.2	54.2	27,987
Low	50.5	58.6	54.5	27,838
Considers COVID-19 a threat				
Yes	52.4	59.1	55.8	37,442
No	47.6	55.4	51.5	18,383

Note: Participants chose between a WfH job offer and an office-based job offer that differed only in wage levels. 50% of vignettes offered 2-3 days a week of WfH, 50% of vignettes offered 5 days a week of WfH. Sample size refers to the total number of vignettes. Source: Own calculations using data gathered for the experiment.

In the experimental component, there were noticeable differences in the likelihood of selecting WfH depending on the wages offered (Table 5). People who were offered a wage premium for WfH were much more likely to prefer to work from home (79%) than people who were offered the same wage for WfH as for an office-only job (63%), and especially than people who faced a wage penalty for WfH (28%).

There was virtually no difference in the likelihood of choosing WfH between the treatment and the control groups in the information provision experiment (Table 5). However, people in the highly exposed occupations in the treatment group chose to work from home slightly more often (55%) than people in the less exposed occupations in the treatment group and people in the highly exposed occupations in the control group (both around 54%).

Table 5. The shares of people who chose to work from home in the treatment and the control groups, by the level of occupational exposure to contagion, and by the wage differences associated with WfH (%)

	WfH 5 days a week	WfH 2-3 days a week	WfH – total	N
Total	50.8	57.9	54.4	55,825
Wages presented				
Premium for working from home	75.1	82.7	79.0	25,679
Equal	55.2	71.6	63.2	4,281
Penalty for working from home	25.9	30.2	28.1	25,865
Experimental group				
Treatment	51.4	57.5	54.5	27,557
High occupational exposure to contagion	52.2	57.8	55.0	13,584
Low occupational exposure to contagion	50.7	57.3	54.0	13,973
Control	50.3	58.3	54.3	28,268
High occupational exposure to contagion	50.2	56.7	53.5	14,403
Low occupational exposure to contagion	50.4	59.9	55.0	13,865

Note: Participants had to choose between a job offer with WfH and an identical office-based job offer that differed only in its wage level. 50% of vignettes offered 2-3 days a week of WfH, 50% of vignettes offered 5 days a week of WfH. Sample size refers to the total number of vignettes presented.

Source: Own calculations using data gathered for the experiment.

3. Econometric methodology

3.1. Stated preferences regarding working from home

First, we estimate a logistic regression of the probability that an individual prefers to work from home rather than in the office:

$$\Pr(\text{WfH}_i = 1) = F(\beta_0 + \beta_1 X_j + \beta_2 P_j + \lambda_i + \kappa_i + \Theta_i + \gamma_{jiv} + \varepsilon_{jiv}) \quad (1)$$

where $F(Z) = \frac{e^Z}{1+e^Z}$, j stands for the individual, i for a job offer, and v for the vignette number. X_j is a vector of personal and workplace characteristics (set of indicator variables for gender, age, education, caring for children or

older adults, employment status, working part-time, type of contract, commute time, and commute means), P_j is a set of indicator variables of working in a highly exposed occupation and perceiving COVID-19 as a serious threat; λ_i is an indicator variable that reflects the number of WfH workdays offered (2-3 days vs. five days); κ_i is an indicator variable of the information experiment treatment; Θ_i are a set of indicator variables that capture wage differences between job offers, and γ_{ji} corresponds to the order of offers (WfH on the left or right) and the vignette number (1 to 5) presented to the participant. Standard errors, ε_{ji} , are clustered at the participant level.

3.2. Willingness to pay for working from home

Second, we estimate the willingness to pay for working from home. We model the participant's utility as:

$$U_{ijv} = \alpha_0 + \alpha_1 X_i + \alpha_2 O_j + \alpha_3 W_j + v_{ji} + \varepsilon_{jiv} \quad (2)$$

where i stands for the individual, j for job offer, and v for the vignette number. X_i stands for the individual characteristics of participant i , O_j represents job offer amenities (the option of working from home, the number of WfH days per week), W_j is the relative wage difference offered in job offer j as compared to an office-based job,⁷ and v_{ji} represents a set of indicator variables for vignette numbers (1 to 5).

Job offer j is chosen if it provides a higher expected utility than the other job offer k presented in the same vignette v , $U_{jiv} > U_{kiv}$. The indicator variable Y_{ijv} equals one if participant i selected job j presented in a vignette v . Therefore,

$$\Pr(Y_{ijv} = 1) = \Pr(U_{ijv} > U_{ikv}) \quad (3)$$

We estimate the parameters using logit models, where $F(U) = \frac{e^U}{1+e^U}$. Standard errors ε_{jiv} are clustered at the participant level. We estimate the willingness to pay for a job amenity as the ratio of point estimates of parameters $WTP(O_j) = -(\frac{\alpha_2}{\alpha_3})$. We compute the confidence intervals using the Stata *wtp* command with the default delta method (Hole, 2007).

To quantify the heterogeneity in WTP between subgroups, we interact both the wage variable and the indicator variable for working from home, with a given subgroup's fixed effect. We apply this approach to the pooled sample. We also re-estimate our models on subpopulations defined according to the number of WfH days offered (2-3 vs. five days), as this appears to be a key feature affecting the appeal of working from home (Barrero et al., 2021).

⁷ We checked whether treating the differences in earnings between a home-based job and an office-based job as a continuous variable instead of as a set of indicator variables yielded comparable regression results. The results were indeed very similar, as Figure B1 in Appendix B shows. Full estimation results are available upon request.

4. Results

We start by discussing the predicted probabilities of preferring to work from home, followed by estimated willingness to pay, and robustness checks.

4.1. Stated preferences regarding working from home

Estimating a logit model (1), we find that the demand for working from home among the participants of our experiments was substantial: when offered the same wage in an office-based job and in a job with the option of WfH, 64% of participants would prefer WfH (Figure 1). As expected, the higher the wage offered in a WfH job, the higher the predicted probability that WfH was selected. However, the effect of wage premiums and wage penalties was asymmetrical: for each level of wage difference, a wage penalty reduced the preference for WfH to a larger extent than an equivalent wage premium increased this preference. The size of this effect was particularly pronounced for small wage differences: according to our results, a 4% wage penalty reduced the preference for WfH by 21 pp., but a 4% wage premium did not affect it. Substantial wage penalties (20-24%) reduced the probability of choosing WfH to 18-20%, while equivalent wage premiums increased it to merely 70-71% (from 64%).

Moreover, we find that the participants' preferences regarding working from home depended on the number of WfH days offered. It appears that combining WfH with working in the office was seen as more appealing than only working from home. The probability that the participants would select WfH was by approx. 7 pp. higher if they were offered 2-3 days a week of WfH than if they were offered an otherwise similar job that required them to WfH for five days a week (Table B1 in Appendix B). Similar findings have been reported for the US (Barrero et al., 2021).

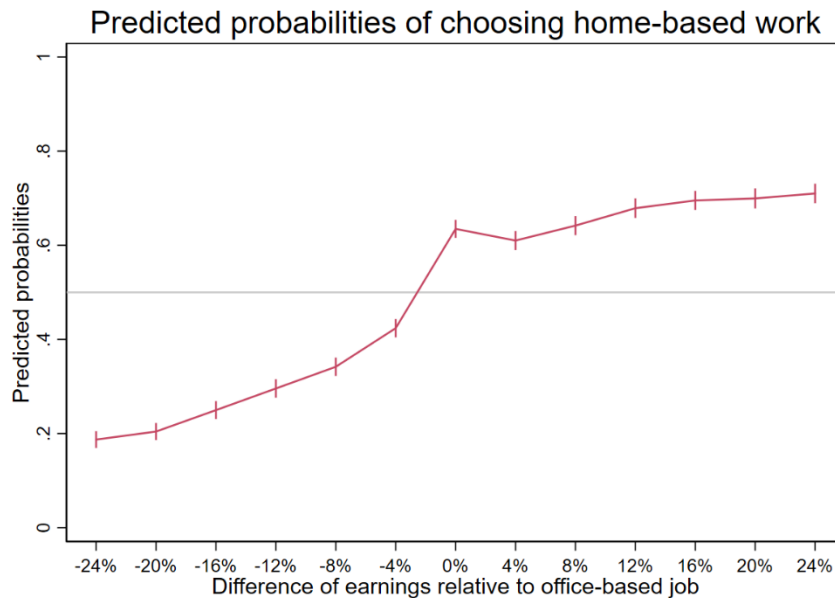
Our results also show that workers' perceptions of COVID-19 played an important role in their preferences for WfH.⁸ People who perceived COVID-19 as a threat were found to be more likely to choose WfH than people who did not perceive COVID-19 as a threat, regardless of the level of wage penalty or premium (65% compared to 60% when the pay offered was equal, Figure 2).

The demand for WfH estimated in our experiment was consistent with the findings from other studies. In particular, while the demand we observed was substantial, one in three participants preferred to have an office-based job. In an experiment focused on middle-skilled, cognitive jobs, Mas and Pallais (2017) found that about 20% of US workers preferred to work in an office even if there was no wage premium for doing so. Bloom et al. (2015) reported that around 50% of workers in a Chinese firm preferred to work in the office, all else being constant. Being concerned about feeling isolated or lonely when working from home, or placing a high value on social interactions and teamwork, may partly explain this phenomenon (Bloom et al. 2015). In Poland, technological constraints (in Poland, household access to the internet is below the EU average, connectivity tends to be slow, and households often have substandard computers), as well as insufficient space at home (among the EU countries, Poland has one of the lowest numbers of rooms per person (Eurostat), may also play a role. Whether WfH is an option or a requirement is also important. Mas and Pallais (2017) investigated WfH as an option, while Bloom et al. (2015) investigated it

⁸ We estimated a model with an interaction between the wage penalty/premium indicator variables, and a variable related to perceptions of COVID-19 as a serious threat. We present the results as predicted probabilities of choosing to work from home. The full estimation results of these regressions are available upon request

as a requirement. We find that workers were more likely to prefer WfH when it was presented as an option for 2-3 days a day (about 70%) than when it was presented as a requirement for five days a week (about 50%).

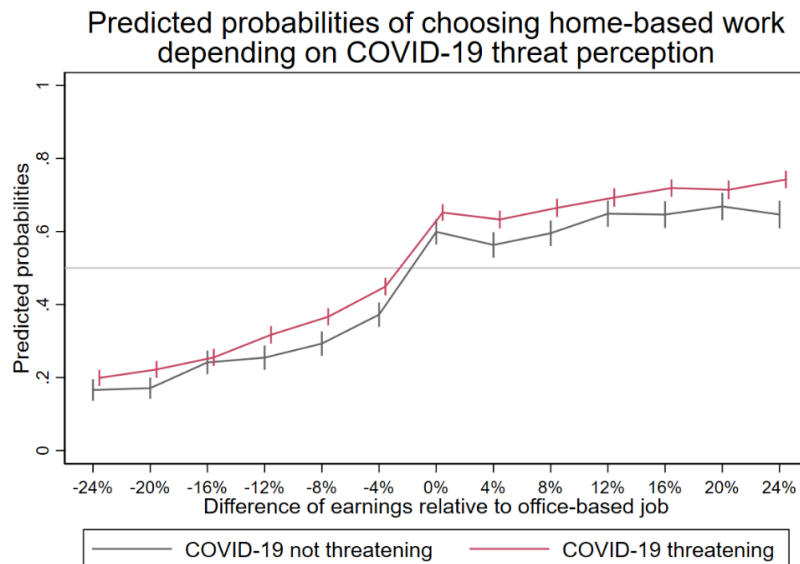
Figure 1. Predicted probabilities of choosing to work from home conditional on the differences in earnings between a WfH job and an office-based job



Note: Marginal effects calculated from a model that includes controls for personal and workplace characteristics, frequency of WfH in the job presented, differences in pay, order of jobs presented on the screen, and vignette number, see column (3) of Table 6. Standard errors clustered at the participant level.

Source: Own calculations using data gathered for the experiment.

Figure 2. Predicted probabilities of choosing to work from home conditional on the differences in earnings between a WfH job and an office-based job, depending on perceiving COVID-19 as a threat



Note: Marginal effects calculated from a model that includes controls for personal and workplace characteristics, frequency of WfH in the job presented, differences in pay, order of jobs presented on the screen, and vignette number, see column (3) of Table 6; and interactions between the wage differences and the indicator variable for perceiving COVID-19 as a threat. Full estimation results are available upon request. Standard errors clustered at the participant level.

Source: Own calculations using data gathered for the experiment.

On average, informing workers about their level of occupational exposure did not affect their preferences regarding working from home (Table 6). However, we find a significant, positive effect (3 pp.) among workers in occupations highly exposed to contagion, and no effect among workers in occupations with low levels of exposure (column 3 of Table 6). At the same time, we observe that the participants' levels of occupational exposure to contagion did not affect their preferences for WfH per se (columns 1-3 of Table 6).

Table 6. Marginal effects from logistic regressions of choosing to work from home – information provision experiment and occupational exposure

	Socio-demographic & occupational controls + Perception of COVID-19 as a threat (1)	(1) + Treatment in information provision experiment (2)	(2) + High occupational exposure interacted with information provision treatment (3)
Treatment in information provision experiment		0.005 (0.007)	-0.008 (0.009)
High occupational exposure X treatment in information provision experiment			0.029** (0.014)
High occupational exposure	-0.000 (0.007)	-0.000 (0.007)	-0.014 (0.010)
Perceiving COVID-19 as highly threatening	0.052*** (0.008)	0.052*** (0.008)	0.053*** (0.008)
Observations	55,825	55,825	55,825

Note: Marginal effects calculated from a model that also includes controls for the type of contract, differences in pay, order of jobs presented on the screen, and vignette number. Reference group: men, aged 35-49, secondary education, employed, part-time employed, commutes to work in a car for over 60 minutes, low occupational exposure to contagion, no care obligations, and no information treatment. The full set of results is available in Table B1 in Appendix B. Standard errors are clustered at the participant level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Source: Own calculations using data gathered for the experiment.

In our models, we controlled for a range of personal and workplace characteristics. The marginal effects for all controls are shown in Table B1 in Appendix B. The groups who were significantly more likely to prefer WfH were: women rather than men (by 1.5 pp.); younger workers (aged 20-34) rather than prime-aged workers (aged 35-49, by about 2 pp.) and older workers (aged 50 or older, 3-4 pp. less likely to prefer to WfH than prime-aged workers); tertiary-educated workers rather than secondary-educated workers (by 1.3 pp.) and workers with vocational education (by about 2 pp.). Caring for children was associated with a higher probability of choosing to WfH (by 1.7 pp.). By contrast, caring for older adults was associated with a lower probability of choosing WfH (by 1.6 pp.).

We also find that commuting patterns were associated with differences in preferences regarding WfH (Table B1 in Appendix B). Workers who were spending less than 30 minutes commuting to work were less likely to choose to work from home (by almost 5 pp.) than workers who were spending between 30 and 60 minutes commuting, while workers who were spending at least an hour commuting did not significantly differ in their preferences from those who were spending 30-60 minutes commuting.

4.2. Willingness to pay for working from home

The estimated willingness-to-pay values indicate that, on average, workers would sacrifice 5.1% of their earnings for the option to work from home (Table 7).⁹ We find substantial differences in the WTP depending on the number of WfH days offered: it was much higher when people were offered the option to combine working from home 2-3 days per week with working in the office (7.3% of earnings) than when they were offered an opportunity to WfH without an option to work in the office (2.8). This confirms that such a hybrid organisation of work appears more appealing to workers than working either only in the office or only from home. Similar preference was declared by participants of surveys in the US (Barrero et al., 2021) and 25 middle- or high-income countries (Aksoy et al., 2022).

Importantly, we find considerable heterogeneity between groups in the WTP for working from home. The WTP was above-average among individuals who perceived COVID-19 as a serious threat (6.0% of earnings), while participants who did not feel threatened by COVID-19 were willing to give up 3.1% of earnings for the option to work from home. While people who perceive COVID-19 as a threat tend to be better educated and older than those who do not, we find that the WTP was higher among people who perceived COVID-19 as a threat in all subpopulations defined by age or educational level (see Table B2 in Appendix B). At the same time, the WTP did not differ between individuals depending on whether their occupation had a high or a low level of exposure, or whether they were treated in the information experiment or were in the control group. Our findings suggest that preferences regarding WfH were more strongly associated with subjective perceptions of COVID-19 than with the objective level of occupational exposure and receiving information about that exposure.

Table 7. Estimated willingness to pay for working from home, overall and by subpopulations (% of wage in an office-only job, 95% with confidence intervals)

All workers – average effect	-5.07 *** (-5.89; -4.26)	Men	-4.25 *** (-5.21; -3.28)
COVID-19 perceived as a high threat	-6.00 *** (-6.87; -5.13)	Women	-6.04 *** (-6.97; -5.11)
COVID-19 perceived as a low threat	-3.14 *** (-4.23; -2.06)	Commute under 30 mins	-4.11 *** (-4.99; -3.24)
High occupational exposure	-4.94 *** (-5.96; -3.91)	Commute between 30 and 60 mins	-7.50 *** (-8.65; -6.35)
Low occupational exposure	-5.19 *** (-6.08; -4.30)	Commute over 60 mins	-7.19 *** (-9.07; -5.31)
Treatment group – information experiment	-5.15 *** (-6.12; -4.19)	WfH 2-3 days/week offered	-7.31 *** (-8.18; -6.44)
Control group – information experiment	-4.99 *** (-5.91; -4.08)	WfH 5 days/week offered	-2.82 *** (-3.71; -1.92)

*Note: WTP estimated from a model with controls for personal and workplace characteristics, number of WfH days per week offered, differences in pay, order of jobs presented on the screen, and vignette number. Full estimation results are available upon request. Standard errors clustered at the participant level. Total N = 111,655. *** p<0.01, ** p<0.05, * p<0.1.*

Source: Own estimations using data gathered for the experiment.

⁹ Our estimated WTP values are at the lower end of the spectrum of those estimated for the most developed economies (the UK and the US), which have varied from 4% (Maestas et al., 2018), to 8% (Mas and Pallais, 2017), to almost 25% (Datta, 2019). We think that the relatively low WTP observed in Poland can be attributed to the country being less technologically advanced, having worse housing conditions, and having a lower incidence of the WTP before the pandemic than the UK or the US.

We also find that having a longer commuting time was associated with a higher WTP for working from home (Table 7). People who were commuting for more than an hour were willing to sacrifice 7.2% of earnings, while people who were commuting between 30 and 60 minutes were willing to forfeit roughly the same amount. However, people who were commuting for less than 30 minutes were willing to sacrifice only 4.1% of their earnings for the opportunity to work from home. This is in line with pre-pandemic evidence from Germany that showed that people who combine WfH with working at an employer's premises tend to commute noticeably longer distances than those who do not work from home (Arntz et al., 2022). Finally, our results also show women were willing to sacrifice a higher share of earnings for the WfH option (6.0%) than men (4.3%). This finding is in line with earlier evidence for middle-skilled workers in the US (Mas and Pallais, 2017).

Next, we explore heterogeneities between groups of workers, conditional on the number of WfH days offered. First, we find that for most groups the WTP for 2-3 days of working from home per week combined with working in the office was noticeably higher than the WTP for working from home five days a week (Table 8). In particular, women exhibited a substantially higher WTP than men for working from home for 2-3 days a week (10.5% vs. 6.9%), but the same low WTP as men for working from home for five days a week (only about 1.1% for both genders). Thus, the higher overall WTP among women (6.0% vs 4.3% among men, Table 7) may be attributed to their much higher WTP for working from home for 2-3 days per week. Moreover, people who were commuting for less than 30 minutes a day were willing to sacrifice a significant portion of their earnings (8.1%) for working from home for 2-3 days a week, but showed no significant WTP for working from home for five days a week. People who were commuting for more than half an hour a day also indicated a greater WTP for working from home for 2-3 days a week (10.2% for a commute time of 30-60 minutes, and 9.1% for a commute time of longer than 60 minutes) than for five days a week (4.4% and 4.8%), but their WTP for working only from home was still significant.

Second, our estimates of the WTP for working from home for five days a week allow identifying groups with the most polarised preferences regarding WfH. In particular, people who perceived COVID-19 as a threat were willing to sacrifice a significant portion of their earnings (2.1%) for WfH for five days a week, but people who did not perceive COVID-19 as a threat were not willing to sacrifice any earnings at all for WfH for five days a week (Table 8). We also find that the provision of information on the level of occupational exposure to contagion translated into a significant WTP for working from home for five days a week (1.6%), while people in the control group were not willing to sacrifice any earnings to work from home for five days a week. The WTP for working from home for 2-3 days a week in both the treatment and the control groups was higher and was essentially identical (8.3% and 9.0%, respectively). These results suggest that the provision of information on occupational exposure may have swayed some workers in highly exposed occupations to shift to full-time work from home and to avoid work-related contacts altogether, but it did not affect the WTP for a hybrid mode of work (WfH for 2-3 days a week).¹⁰

¹⁰ We have also verified if the effects of information provision treatment differed between workers in occupations with high or low level of occupational exposure, and between workers who perceive COVID-19 as a threat and those who do not. We found that there were no significant differences in the effects of information provision treatment between these subpopulations. Results are available upon request.

Table 8. Estimated willingness to pay for working from home, by the number of WfH days offered, overall and by subpopulations (% of wage in an office-only job, 95% with confidence intervals)

Group	WfH 2-3 days/week	WfH 5 days/week
All workers – average effect	-8.60 *** (-9.56; -7.64)	-1.11 ** (-2.20; -0.01)
COVID-19 perceived as a high threat	-9.44 *** (-10.48; -8.41)	-2.11 *** (-3.27; -0.95)
COVID-19 perceived as a low threat	-6.79 *** (-8.03; -5.55)	0.92 (-0.53; 2.37)
High occupational exposure	-8.11 *** (-9.30; -6.93)	-1.31 * (-2.66; 0.04)
Low occupational exposure	-9.04 *** (-10.09; -7.98)	-0.93 (-2.13; 0.27)
Treatment group – information experiment	-8.25 *** (-9.37; -7.13)	-1.61 ** (-2.91; -0.31)
Control group – information experiment	-8.95 *** (-10.04; -7.87)	-0.61 (-1.81; 0.59)
Men	-6.95 *** (-8.08; -5.82)	-1.14 * (-2.44; 0.15)
Women	-10.51 *** (-11.60; -9.42)	-1.06 * (-2.30; 0.17)
Commute under 30 mins	-8.07 *** (-9.11; -7.04)	0.27 (-0.89; 1.44)
Commute between 30 and 60 mins	-10.24 *** (-11.57; -8.91)	-4.36 *** (-5.95; -2.76)
Commute over 60 mins	-9.12 *** (-11.29; -6.95)	-4.84 *** (-7.21; -2.46)

*Note: WTP estimated from models with controls for personal and workplace characteristics, earnings differences, order of jobs presented on the screen, and vignette number. Full estimation results are available upon request. Standard errors clustered at the participant level. N = 55,634 for WfH 2-3 days/week offers; N = 56,016 for WfH 5 days/week offers. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Source: Own estimations using data gathered for the experiment.*

4.3. Robustness checks

We performed several robustness checks. Their results are summarised in Figure 3 and are presented in detail in Appendix C. In the first two checks, we reduced the sample size to only the offers presented on the left (or the right) side of the screen. In the following two checks, we reduced the sample size by removing observations that may have introduced noise due to the participants' inattention or low confidence in the choices made. In the last three checks, we changed the estimation method. All of these checks confirmed our findings.

First, we reduced the sample size by running our models only on jobs presented on the left (or the right) screens. This resulted in almost the same WTP estimates (Tables C1A-B and C2A-B): the average WTP was 5.2% (5.0% for right screens) of earnings, compared to 5.1% of earnings in the total sample (Table 7). The remaining heterogeneities in the WTP were similar to our baseline results.¹¹

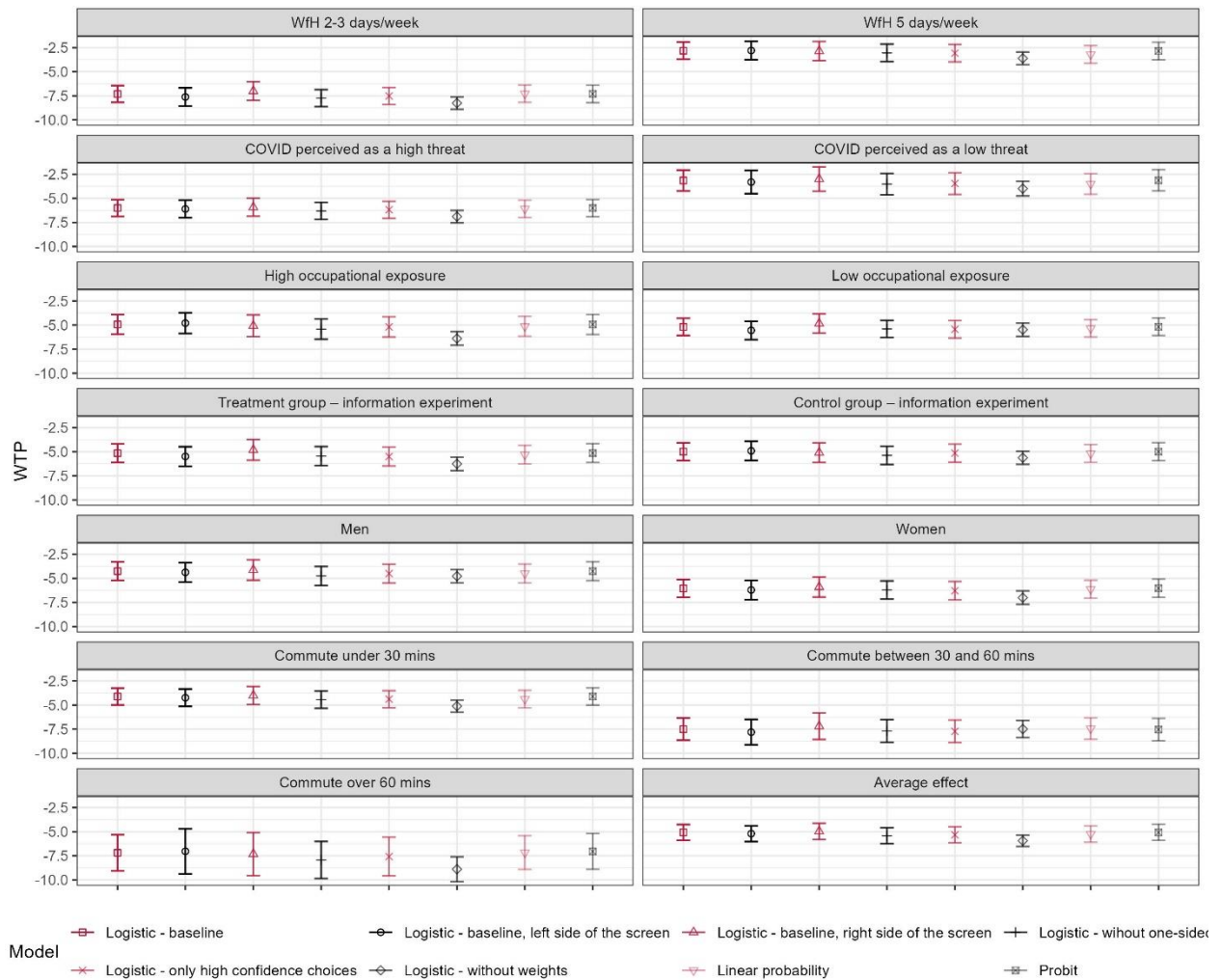
Second, we removed participants who chose options on the same side of the screen in all of the vignettes they were shown, as this may have suggested inattention.¹² In total, 2,495 (21.8%) participants acted this way (Table A2 in Appendix A). The resulting WTP estimates (Table C3) were slightly larger in absolute terms than the baseline

¹¹ The only differences relative to the full sample were in the subsample restricted to job offers on the right screens and with five WfH days per week: (1) the WTP was not significant because of a noisy estimate – the point estimates did not differ much between the full (1.1%, Table 8) and the restricted sample (0.9% Table C2A), and their confidence intervals mostly overlapped. (2) The WTP in the information experiment treatment (-1.1%, Table C2B) was not significant. Hence, we re-estimated the model on the full sample with additional interactions between the screen side and the treatment group, and found that the baseline results held. Estimation results are available upon request.

¹² The number of people who failed the inattention checks was very small, at only 65 out of 11,166 participants.

estimates but were not significantly different. In particular, the average WTP amounted to 5.4% of earnings (with a 95% confidence interval between 4.6% and 6.2%), compared to 5.1% of earnings in the pooled sample (4.3% to 5.9%, Table 7). The heterogeneities in WTP were the same as in our baseline results. Next, we removed observations in the first decile of the distribution of participants' confidence in their choices (10,650 observations, Table C4). This re-estimation yielded similar results: the WTP estimates were slightly larger in absolute terms – the average WTP was equal to 5.3% of earnings (with a 95% confidence interval between 4.5% and 6.2%) – but the heterogeneities between the subpopulations were identical to those in the baseline results. We conclude that there was no evidence of inattention or hypothetical bias in our baseline findings.

Figure 3. Robustness check: different models yield similar willingness to pay estimates (% of wage in an office-only job, 95% with confidence intervals)



Note: We present WTP estimates for all job offers. Point estimates with 95% confidence intervals. Results of estimations of separate models by the number of WfH days offered are shown in Appendix C.

Source: Own estimations using data gathered for the experiment.

In the further three checks, we modified the estimation method. We re-estimated our regressions as logistic models without weights (Table C5), as linear probability models (Table C6), and as probit models (Table C7). In unweighted regressions, we obtained larger WTP estimates in absolute terms than in the baseline regressions (Figure 3), but the differences were below 1 pp., and the heterogeneities were the same as in the baseline specification: the WTP

was higher if 2-3 days of WfH per week were offered rather than five days of WfH per week; and it was higher among people who perceived COVID-19 as a threat, among women, and among workers with longer commutes. Changing the estimation method to OLS or probit had a minimal impact on our results (Figure 3).

5. Summary and conclusions

In this paper, we studied workers' willingness to pay for working from home, and how it was affected by subjective and objective assessments of COVID-19-related risks. To this end, we conducted a discrete choice experiment in Poland – a country severely affected by the COVID-19 pandemic, in which working from home was rare before the pandemic. We investigated how workers' perceptions of COVID-19 as a threat and their levels of occupational exposure to contagion affected their preferences to work from home. We also analysed whether the provision of information about occupational exposure to COVID-19 affected these preferences. In our sample, we included workers in professional, clerical, and service occupations for whom working from home was a realistic option.

We found that the majority of the workers surveyed preferred to work from home if they were offered the same wages in a WfH job as in an office-based job. Combining WfH 2-3 days per week with working in an office was more appealing for workers than WfH five days a week. However, workers' preferences for WfH were responsive to differences in wages between home- and office-based jobs. For each level of wage penalty, the reduction in this preference was larger, in absolute terms, than the increase associated with an equivalent wage premium.

We estimated that the participants in our study were willing to sacrifice about 5% of their earnings for the option to work from home. This value was at the lower end of estimations for the UK or the US in the past, which may be attributable to Poland being less technologically advanced and having more overcrowded housing. Importantly, we found that people's subjective perceptions of COVID-19 mattered more than objective information on occupational exposure. Workers who perceived COVID-19 to be a threat were willing to sacrifice a greater share of their earnings to work from home than those who did not see COVID-19 as a threat. However, being informed about the level of occupational risk did not affect people's willingness to pay for working from home. Further research may investigate if the provision of information about the COVID-19 risks provided by a health professional would yield different results, as some studies suggest it matters who provides health-oriented messaging (Alsan et al., 2021; Torres et al., 2021; Banerjee et al., 2020). We also found that the willingness to pay was noticeably higher among workers with longer commutes, especially when it came to the option of working from home for five days a week. Future research may study the role of other pre-existing factors, such as housing conditions, as well as potential benefits to cover costs related to working from home, such as energy costs, in the demand for working from home.

Our study showed that workers' demands for working from home are likely to be high in the post-COVID world. However, our results also pointed to challenges that may arise when promoting working from home as a way to reduce social contact and the transmission of infectious diseases. It is, therefore, possible that workers would sort into working from home largely based on their subjective perceptions of COVID-19. This, in turn, may create challenges for the employer, as such perceptions are not easily observable, and may differ considerably between workers performing the same tasks. Moreover, as women had a higher willingness to pay for working from home than men, especially for a hybrid model of work, the shift towards working from home may widen the gender pay gap. However, it may also expand the set of job offer options for women as women were found to be less willing to commute than men (Le Barbanchon et al., 2021). Hence, the overall effect of widespread working from home on gender gaps in labour market outcomes appears ambiguous and may be a subject of future research.

References

- Adams-Prassl, A., Boneva, T., Golin, M., Rauh, C., 2022. Work that can be done from home: evidence on variation within and across occupations and industries. *Labour Economics* 74, 102083. <https://doi.org/10.1016/j.labeco.2021.102083>
- Adda, J., 2016. Economic Activity and the Spread of Viral Diseases: Evidence from High Frequency Data. *The Quarterly Journal of Economics* 131, 891–941. <https://doi.org/10.1093/qje/qjw005>
- Aksoy, C.G., Barrero, J.M., Bloom, N., Davis, S.J., Dolls, M., Zarate, P., 2022. Working from Home Around the World, WFH Research mimeo.
- Alipour, J.-V., Fadinger, H., Schymik, J., 2021. My home is my castle – The benefits of working from home during a pandemic crisis. *Journal of Public Economics* 196, 104373. <https://doi.org/10.1016/j.jpubeco.2021.104373>
- Alsan, M., Stanford, F.C., Banerjee, A., Breza, E., Chandrasekhar, A.G., Eichmeyer, S., Goldsmith-Pinkham, P., Ogbu-Nwobodo, L., Olken, B.A., Torres, C., Sankar, A., Vautrey, P.-L., Duflo, E., 2021. Comparison of Knowledge and Information-Seeking Behavior After General COVID-19 Public Health Messages and Messages Tailored for Black and Latinx Communities: A Randomized Controlled Trial. *Ann Intern Med* 174, 484–492. <https://doi.org/10.7326/M20-6141>
- Arntz, M., Yahmed, S.B., Berlingieri, F., 2022. Working from Home, Hours Worked and Wages: Heterogeneity by gender and parenthood. *Labour Economics* 102169. <https://doi.org/10.1016/j.labeco.2022.102169>
- Bahety, G., Bauhoff, S., Patel, D., Potter, J., 2021. Texts Don't Nudge: An Adaptive Trial to Prevent the Spread of COVID-19 in India. CGD Working Paper.
- Banerjee, A., Alsan, M., Breza, E., Chandrasekhar, A., Chowdhury, A., Duflo, E., Goldsmith-Pinkham, P., Olken, B., 2020. Messages on COVID-19 Prevention in India Increased Symptoms Reporting and Adherence to Preventive Behaviors Among 25 Million Recipients with Similar Effects on Non-recipient Members of Their Communities (No. w27496). National Bureau of Economic Research, Cambridge, MA. <https://doi.org/10.3386/w27496>
- Barrero, J.M., Bloom, N., Davis, S.J., 2021. Why Working from Home Will Stick (No. w28731). National Bureau of Economic Research. <https://doi.org/10.3386/w28731>
- Bloom, N., Liang, J., Roberts, J., Ying, Z.J., 2015. Does Working from Home Work? Evidence from a Chinese Experiment. *The Quarterly Journal of Economics* 130, 165–218. <https://doi.org/10.1093/qje/qju032>
- Breza, E., Stanford, F.C., Alsan, M., Alsan, B., Banerjee, A., Chandrasekhar, A.G., Eichmeyer, S., Glushko, T., Goldsmith-Pinkham, P., Holland, K., Hoppe, E., Karnani, M., Liegl, S., Loisel, T., Ogbu-Nwobodo, L., Olken, B.A., Torres, C., Vautrey, P.-L., Warner, E.T., Wootton, S., Duflo, E., 2021. Effects of a large-scale social media advertising campaign on holiday travel and COVID-19 infections: a cluster randomized controlled trial. *Nat Med* 27, 1622–1628. <https://doi.org/10.1038/s41591-021-01487-3>
- Bryan, M.L., Sevilla, A., 2017. Flexible working in the UK and its impact on couples' time coordination. *Rev Econ Household* 15, 1415–1437. <https://doi.org/10.1007/s11150-017-9389-6>
- Bustelo, M., Diaz, A.M., Lafortune, J., Piras, C., Salas, L.M., Tessada, J., 2022. What is the price of freedom? Estimating women's willingness to pay for job schedule flexibility. *Economic Development and Cultural Change*. <https://doi.org/10.1086/718645>
- Datta, N., 2019. Willing to pay for security: a discrete choice experiment to analyse labour supply preferences. CEP Discussion Papers, Centre for Economic Performance, LSE.

- Dingel, J.I., Neiman, B., 2020. How many jobs can be done at home? *Journal of Public Economics* 189, 104235. <https://doi.org/10.1016/j.jpubeco.2020.104235>
- Harrington, E., Emanuel, N., 2021. "Working" Remotely? Selection, Treatment, and Market Provision of Remote Work.
- Hatayama, M., Viollaz, M., Winkler, H., 2020. Jobs' Amenability to Working from Home : Evidence from Skills Surveys for 53 Countries (Text/HTML No. 9241), Policy Research Working Paper. World Bank, Washington, D.C.
- He, H., Neumark, D., Weng, Q., 2021. Do Workers Value Flexible Jobs? A Field Experiment. *Journal of Labor Economics* 39, 709–738. <https://doi.org/10.1086/711226>
- Hole, A.R., 2007. A comparison of approaches to estimating confidence intervals for willingness to pay measures. *Health Economics* 16, 827–840. <https://doi.org/10.1002/hec.1197>
- Klepac, P., Kucharski, A.J., Conlan, A.J., Kissler, S., Tang, M.L., Fry, H., Gog, J.R., 2020. Contacts in context: large-scale setting-specific social mixing matrices from the BBC Pandemic project (preprint). *Epidemiology*. <https://doi.org/10.1101/2020.02.16.20023754>
- Le Barbanchon, T., Rathelot, R., Roulet, A., 2021. Gender Differences in Job Search: Trading off Commute against Wage. *The Quarterly Journal of Economics* 136, 381–426. <https://doi.org/10.1093/qje/qjaa033>
- Lewandowski, P., 2020. Occupational exposure to contagion and the spread of COVID-19 in Europe (No. 02/2020), IBS Working Papers. IBS.
- Maestas, N., Mullen, K., Powell, D., von Wachter, T., Wenger, J., 2018. The Value of Working Conditions in the United States and Implications for the Structure of Wages (No. w25204). National Bureau of Economic Research, Cambridge, MA. <https://doi.org/10.3386/w25204>
- Mas, A., Pallais, A., 2017. Valuing Alternative Work Arrangements. *American Economic Review* 107, 3722–3759. <https://doi.org/10.1257/aer.20161500>
- Mossong, J., Hens, N., Jit, M., Beutels, P., Auranen, K., Mikolajczyk, R., Massari, M., Salmaso, S., Tomba, G.S., Wallinga, J., Heijne, J., Sadkowska-Todys, M., Rosinska, M., Edmunds, W.J., 2008. Social Contacts and Mixing Patterns Relevant to the Spread of Infectious Diseases. *PLoS Med* 5, e74. <https://doi.org/10.1371/journal.pmed.0050074>
- Qiu, Y., Chen, X., Shi, W., 2020. Impacts of Social and Economic Factors on the Transmission of Coronavirus Disease 2019 (COVID-19) in China. *Journal of Population Economics* 1127–1172.
- Torres, C., Ogbu-Nwobodo, L., Alsan, M., Stanford, F.C., Banerjee, A., Breza, E., Chandrasekhar, A.G., Eichmeyer, S., Karnani, M., Loisel, T., Goldsmith-Pinkham, P., Olken, B.A., Vautrey, P.-L., Warner, E., Duflo, E., COVID-19 Working Group, Balinda, I.G., Bido-Medina, R., Brandt, A., Brown, K., Burnett-Bowie, S.-A., Carter, L.P., Chou, J., Cohen-Hauseman, A., Cotter, K., Davila, C., Daza, P., Frey-Vogel, A., Galligani, L., Gonzalez, W., Gove, M., Hall, D., Hartjes, K.T., Hauseman, J., Herrera Santos, L., Holland, K.J., Hsieh, K., James, A., Janoowalla, H., Kwete, G., Lissanu, D., Logan, M., Lopez, L., Lopez-Rodriguez, W., Mathenge, N., Matute, J., Molina, G., Morelli, L., O'Neill, M., Oseni, T., Osho, A., Otuya, V., Perez, N., Perlman, M., Puleo, R., Romero Crousillat, D., Rosales, A.M., Saboori, S., Salazar, G., Scott-Vernaglia, S., Shaw, A.Y., Stapleton, S., Van Den Berghe, C., Velez, C., 2021. Effect of Physician-Delivered COVID-19 Public Health Messages and Messages Acknowledging Racial Inequity on Black and White Adults' Knowledge, Beliefs, and Practices Related to COVID-19: A Randomized Clinical Trial. *JAMA Netw Open* 4, e2117115. <https://doi.org/10.1001/jamanetworkopen.2021.17115>
- Yang, L., Holtz, D., Jaffe, S., Suri, S., Sinha, S., Weston, J., Joyce, C., Shah, N., Sherman, K., Hecht, B., Teevan, J., 2021. The effects of remote work on collaboration among information workers. *Nat Hum Behav* 1–12. <https://doi.org/10.1038/s41562-021-01196-4>

Appendix A. Methodological details

Table A1. Balance table for the information provision experiment – all variables

	Control (%)	Treatment (%)	Control - Treatment (p.p.)
Gender			
Women	53.1	51.8	1.3 (0.009)
Men	46.9	48.2	-1.3 (0.009)
Age group			
20-34	41.1	40.1	1.0 (0.009)
35-49	37.5	37.6	-0.1 (0.009)
50-64	21.4	22.3	-0.9 (0.008)
Education			
Primary	1.1	0.9	0.3 (0.002)
Vocational	8.7	8.9	-0.2 (0.005)
Secondary	34.4	33.8	0.6 (0.009)
Tertiary	55.8	56.4	-0.7 (0.009)
Region			
South-West	30.1	31.5	-1.3 (0.009)
North-West	27.9	27.7	0.1 (0.008)
East	14.6	14.5	0.1 (0.007)
Central	27.4	26.3	1.1 (0.008)
Employment status			
Employed	74.6	74.7	-0.1 (0.008)
Jobseekers	25.4	25.3	0.1 (0.008)
Occupation group			
Managers	9.5	9.7	-0.2 (0.006)
Professionals	28.3	29.2	-0.9 (0.009)
Technicians and associate professionals	13.0	12.4	0.6 (0.006)
Clerical support workers	27.4	27.4	0.0 (0.008)
Service and sales workers	21.7	21.3	0.4 (0.008)
Number of hours worked weekly			
At least 40	87.4	87.3	0.1 (0.006)
About 30	7.4	7.0	0.5 (0.005)
About 20	5.1	5.8	-0.6 (0.004)
Contract type			
Employment contract	79.6	79.5	0.1 (0.008)
Individual contractor	9.4	9.3	0.1 (0.006)
Self-employed	7.1	7.4	-0.3 (0.005)
Other	3.9	3.9	0.0 (0.004)
Occupational exposure to contagion			
Low	49.0	50.7	-1.7 (0.009)
High	51.0	49.3	1.7 (0.009)
Household members			
Single-person household	7.6	7.7	-0.1 (0.005)
Children present in the household	45.9	44.8	1.0 (0.009)

Source: Own calculations using data gathered for the experiment.

Table A2. Indicators of inattention and hypothetical bias

a) Confidence among study participants regarding their choices	
	Confidence level (points on the 0-100 scale)
Mean	85.0
Standard deviation	17.0
Minimal value	0.0
Maximal value	100
Percentiles	
1st	33
5th	52
10th	60
25th	75
50th	90
75th	100
90th	100
95th	100
99th	100
N (number of choices)	55,830
b) Individuals who chose job offers displayed only on one side of the screen	
Left side only	941 (8.4%)
Right side only	1,554 (13.4%)
N (number of participants)	11,166 (100%)
c) Individuals who provided the wrong answer to the trap questions	
What is 2+2	32 (0.3%)
What is 20-7	33 (0.3%)
N (number of participants)	11,166 (100%)

Source: Own calculations using data gathered for the experiment.

Table A3. Occupations (two-digit ISCO-08) included in the study, their exposure to COVID-19, and their teleworkability level

Occupation group	Exposure to contagion	Teleworkability (% of occupations that can be done from home)
Managers		
Chief executives, senior officials, and legislators	Low	89%
Administrative and commercial managers	Low	90%
Production and specialised services managers	Low	56%
Hospitality, retail, and other services managers	High	50%
Professionals		
Science and engineering professionals	Low	63%
Teaching professionals	Low	97%
Business and administration professionals	Low	93%
Information and communications technology professionals	Low	100%
Legal, social, and cultural professionals	High	67%
Technicians and Associate Professionals		
Science and engineering associate professionals	Low	20%
Business and administration associate professionals	High	71%
Legal, social, cultural, and related associate professionals	High	60%
Information and communications technicians	High	82%
Clerical Support Workers		
General and keyboard clerks	Low	100%
Customer services clerks	High	29%
Numerical and material recording clerks	Low	56%
Other clerical support workers	High	60%
Services and Sales Workers		
Personal service workers	High	17%
Sales workers	High	20%
Personal care workers	High	18%
Protective services workers	High	11%

Source: Own elaboration based on the index of occupational exposure to contagion developed by Lewandowski (2020) and the classification of teleworkability developed by Dingel and Neiman (2020).

Table A4. Definition of the term ‘work from home’ displayed to the study participants

Please see the table below. It shows how we understand the term ‘work from home’. In the next part of the survey, we will ask about your opinion on this type of work.	
Work from home	
No	Yes
The employee works in the office and cannot work from home.	<p>The employee can do all or part of the work from home.</p> <p>He/she can work from home all days of the week or several days a week. For example, he/she can work in the office on Mondays and Tuesdays and work from home on Wednesdays, Thursdays, and Fridays.</p> <p>He/she can also work in the office for a few hours each day and work from home for the remaining few hours. For example, he/she can work in the office every morning between 9:00 a.m. and 1:00 p.m., and can then work from home between 3:00 p.m. and 7:00 p.m.</p>

Source: Own elaboration.

Table A5. Examples displayed to the study participants

<p>Work in the office</p> <p>Anna works in the city hall from Monday to Friday between 7:30 a.m. and 3:30 p.m. Her duties include mainly office work – she draws up letters and prepares documents for the public procurement procedure. She works in the office every day between 7.30 a.m. to 3.30 p.m. and does not work from home.</p>
<p>Work from home</p> <p>Anna works in the city hall from Monday to Friday between 7:30 a.m. and 3:30 p.m. Her duties include mainly office work – she draws up letters and prepares documents for the public procurement procedure. She agreed with her employer that she would work in the office from Monday to Wednesday and would work from home from Thursday to Friday. The employer gave her a computer that provides her with access to the office mailbox and other programs that enable her to work from home.</p>

Source: Own elaboration.

Table A6. Information provided to the treatment group

Social distancing and limits on mobility and interpersonal contacts are necessary actions to prevent the spread of COVID-19.

Research shows that people spend most of the day at work. Meeting other employees or clients increases the risk of transmitting infectious diseases such as COVID-19.

Some occupations require more frequent social contact, more physical proximity to others, or even direct contact with infectious individuals. As a result, some workers are more exposed to contagion than others.

We identified occupations in which the risk of contagion is higher or lower. You will see this information on the following screens.

Source: Own elaboration.

Table A7. Examples of vignettes with job offers displayed to the study participants

Control group		
	Job offer A	Job offer B
Occupation	Application developer	Application developer
Work hours	This is a full-time position. You will work from Monday to Friday from 9 a.m. to 5 p.m.	This is a full-time position. You will work from Monday to Friday from 9 a.m. to 5 p.m.
Work from home	You will be doing the job in the office. You will not have an option to work from home.	You will have an option to work from home 2 or 3 days per week.
Wage	You will be earning a monthly wage of 4,900 PLN net.	You will be earning a monthly wage of 5,684 PLN net.
Treatment group		
	Job offer A	Job offer B
Occupation	Application developer	Application developer
Occupational exposure to COVID-19	Low	Low
Work hours	This is a full-time position. You will work from Monday to Friday from 9 a.m. to 5 p.m.	This is a full-time position. You will work from Monday to Friday from 9 a.m. to 5 p.m.
Work from home	You will be doing the job in the office. You will not have an option to work from home.	You will have an option to work from home 2 or 3 days per week.
Wage	You will be earning a monthly wage of 4,900 PLN net.	You will be earning a monthly wage of 5,684 PLN net.

Source: Own elaboration.

Appendix B. Additional results

Table B1. Marginal effects from baseline logistic regressions – full set of results

	Socio-demographic & occupational controls + Perception of COVID-19 as a threat (1)	(1) + Treatment in information provision experiment (2)	(2) + High occupational exposure interacted with information provision treatment (3)
Treatment in information provision experiment			-0.008 (0.009)
High occupational exposure X treatment in information provision experiment			0.029** (0.014)
Perceiving COVID-19 as highly threatening		0.052*** (0.008)	0.053*** (0.008)
High occupational exposure	-0.001 (0.007)	-0.000 (0.007)	-0.014 (0.010)
Working from home 2-3 days a week	0.068*** (0.005)	0.067*** (0.005)	0.067*** (0.005)
Commute time < 30 min.	-0.043*** (0.014)	-0.047*** (0.014)	-0.047*** (0.013)
Commute time < 60 min.	0.008 (0.015)	0.004 (0.015)	0.003 (0.015)
Used public transport to get to work before COVID-19	-0.004 (0.009)	-0.005 (0.009)	-0.005 (0.009)
Walked or biked to work before COVID-19	-0.002 (0.010)	-0.001 (0.010)	-0.001 (0.010)
Did not commute to work before COVID-19	0.252*** (0.032)	0.255*** (0.033)	0.255*** (0.033)
Jobseeker	0.018** (0.009)	0.020** (0.009)	0.020** (0.009)
Working full-time	-0.011 (0.012)	-0.013 (0.012)	-0.013 (0.012)
Women	0.015** (0.007)	0.015** (0.007)	0.015** (0.007)
Caring for children	0.016** (0.008)	0.017** (0.008)	0.017** (0.008)

	Socio-demographic & occupational controls + Perception of COVID-19 as a threat (1)	(1) + Treatment in information provision experiment (2)	(2) + High occupational exposure interacted with information provision treatment (3)
Caring for older adults	-0.012 (0.008)	-0.016* (0.008)	-0.017** (0.008)
Primary education or lower	0.008 (0.028)	0.012 (0.028)	0.013 (0.028)
Tertiary education	0.015** (0.006)	0.013** (0.006)	0.013** (0.006)
Vocational education	-0.020* (0.011)	-0.018* (0.010)	-0.018* (0.010)
20-34 years of age	0.016** (0.007)	0.019** (0.007)	0.019*** (0.007)
50-64 years of age	-0.035*** (0.011)	-0.041*** (0.011)	-0.042*** (0.011)
Civil contract	0.044*** (0.015)	0.043*** (0.015)	0.043*** (0.015)
Self-employed	0.024* (0.014)	0.026* (0.014)	0.026* (0.014)
Other contract	0.003 (0.017)	0.007 (0.017)	0.007 (0.017)
Work from home job presented on the left	0.021*** (0.005)	0.021*** (0.005)	0.021*** (0.005)
Vignette no. = 1	-0.004 (0.007)	-0.004 (0.007)	-0.004 (0.007)
Vignette no. = 2	0.002 (0.006)	0.002 (0.006)	0.002 (0.006)
Vignette no. = 4	-0.018*** (0.007)	-0.017*** (0.007)	-0.018*** (0.007)
Vignette no. = 5	-0.009 (0.007)	-0.009 (0.007)	-0.009 (0.007)
Observations	55,825	55,825	55,825

Note: Standard errors clustered at the participant level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Source: Own calculations using data gathered for the experiment.

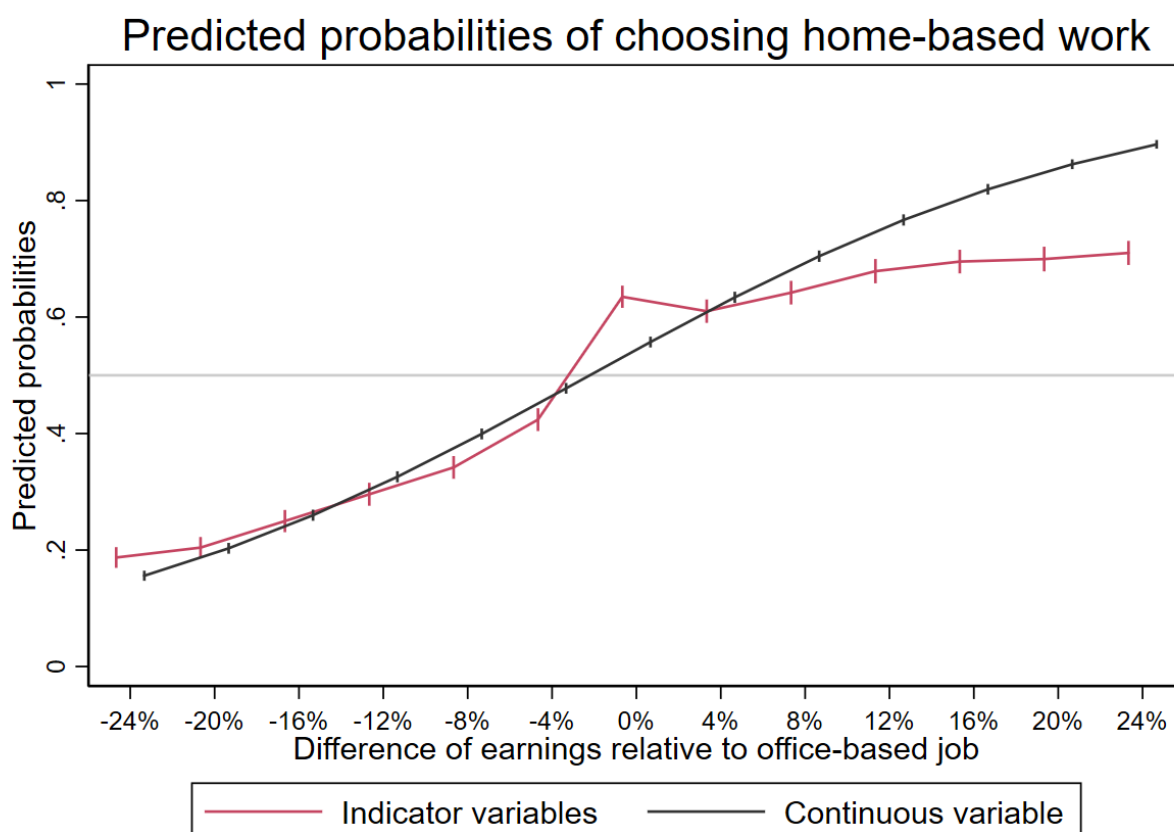
Table B2. Estimated willingness to pay for working from home – results for subpopulations defined by age group and education level (% of wage in an office-only job, 95% with confidence intervals)

Subpopulation	Sample size	COVID perceived as a low threat	COVID perceived as a high threat
Education			
Primary or less	1,120	-2.32 (-10.79; 6.15)	-12.46 *** (-20.62; -4.31)
Secondary	38,077	-3.47 *** (-4.91; -2.03)	-5.76 *** (-7.01; -4.51)
High	62,648	-3.91 *** (-4.91; -2.92)	-6.87 *** (-7.66; -6.07)
Vocational	9,810	-1.58 (-4.72; 1.55)	-3.73 *** (-6.51; -0.95)
Age			
20-34	45,350	-5.16 *** (-6.55; -3.76)	-8.55 *** (-9.59; -7.51)
35-49	41,928	-4.33 *** (-6.01; -2.65)	-5.99 *** (-7.40; -4.58)
50-64	24,377	5.65 *** (2.48; 8.83)	-2.39 ** (-4.52; -0.26)

Note: Standard errors clustered at the participant level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Source: Own calculations using data gathered for the experiment.

Figure B1. Predicted probabilities of choosing a WfH job offer conditional on the differences in earnings between the WfH job and an office-based job, depending on the specification of the earning differences as a set of indicator variables or as a continuous variable

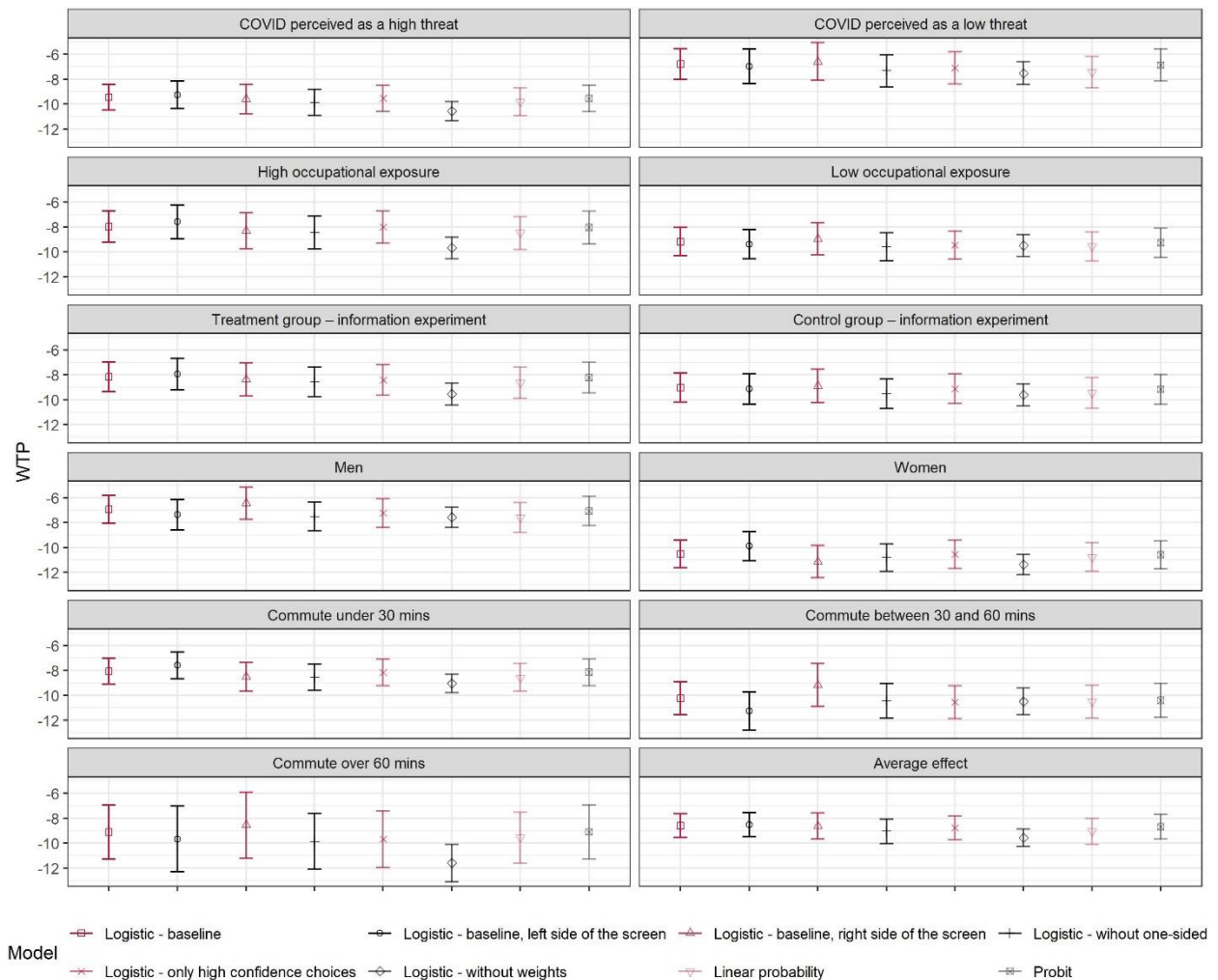


Note: Other controls as in column 3 of Table B1. Standard errors clustered at the participant level. Full estimation results are available upon request.

Source: Own calculations using data gathered for the experiment.

Appendix C. Robustness checks

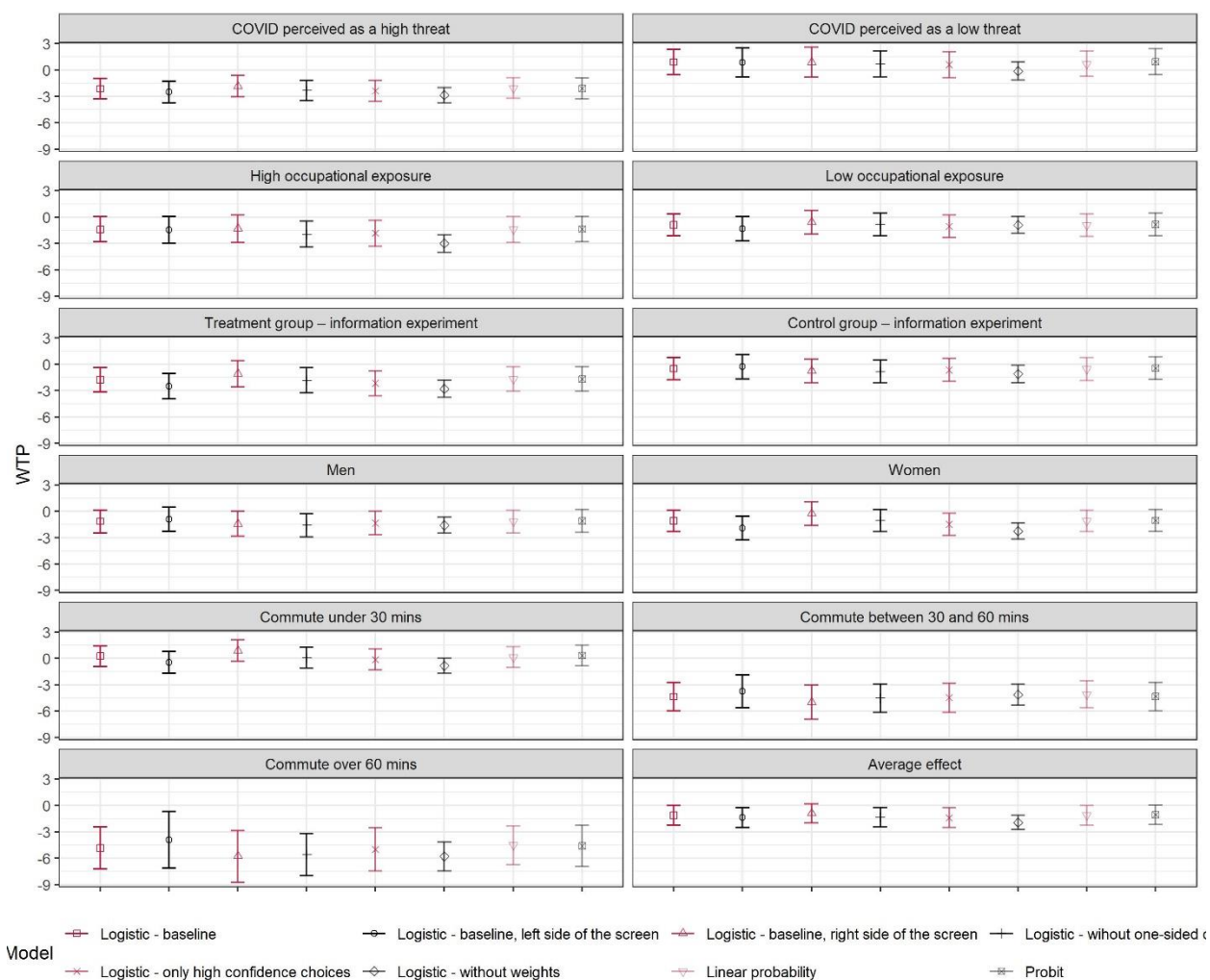
Figure C1. Robustness check: Different models yield similar willingness to pay estimates - WfH 2-3 days/week offered (% of wage in an office-only job, 95% with confidence intervals)



Note: Point estimates with 95% confidence intervals.

Source: Own estimations using data gathered for the experiment.

Figure C2. Robustness check: Different models yield similar willingness to pay estimates – WfH 5 days/week offered (% of wage in an office-only job, 95% with confidence intervals)



Note: Point estimates with 95% confidence intervals.

Source: Own estimations using data gathered for the experiment.

Table C1A. Estimated willingness to pay for working from home – model including only job offers displayed on the left side of the screen, all job offers (% of wage in an office-only job, 95% with confidence intervals)

All workers – average effect	-5.20 *** (-6.02; -4.38)	Men	-4.37 *** (-5.38; -3.36)
COVID-19 perceived as a high threat	-6.10 *** (-7.01; -5.19)	Women	-6.20 *** (-7.21; -5.20)
COVID-19 perceived as a low threat	-3.31 *** (-4.51; -2.11)	Commute under 30 mins	-4.24 *** (-5.14; -3.33)
High occupational exposure	-4.80 *** (-5.88; -3.72)	Commute between 30 and 60 mins	-7.81 *** (-9.12; -6.49)
Low occupational exposure	-5.55 *** (-6.51; -4.60)	Commute over 60 mins	-7.03 *** (-9.37; -4.70)
Treatment group – information experiment	-5.49 *** (-6.51; -4.48)	WfH 2-3 days/week	-7.62 *** (-8.56; -6.68)
Control group – information experiment	-4.91 *** (-5.90; -3.92)	WfH 5 days/week	-2.80 *** (-3.75; -1.85)

Note: WTP estimated from a model with controls for personal and workplace characteristics, number of WfH days offered per week, differences in pay, order of jobs presented on the screen, and vignette number. Full estimation results are available upon request. Standard errors clustered at the participant level. Total N = 55,827. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Source: Own estimations using data gathered for the experiment.

Table C1B. Estimated willingness to pay for working from home – model including only job offers displayed on the left side of the screen, by the number of WfH days offered (% of wage in an office-only job, 95% with confidence intervals)

Group	WfH 2-3 days/week	WfH 5 days/week
All workers – average effect	-8.54 *** (-9.52; -7.57)	-1.38 ** (-2.49; -0.27)
COVID-19 perceived as a high threat	-9.25 *** (-10.35; -8.15)	-2.48 *** (-3.71; -1.25)
COVID-19 perceived as a low threat	-7.01 *** (-8.38; -5.63)	0.89 (-0.75; 2.52)
High occupational exposure	-7.87 *** (-9.12; -6.61)	-1.16 (-2.62; 0.29)
Low occupational exposure	-9.15 *** (-10.30; -8.00)	-1.56 ** (-2.88; -0.24)
Treatment group – information experiment	-8.16 *** (-9.35; -6.97)	-2.32 *** (-3.71; -0.94)
Control group – information experiment	-8.93 *** (-10.11; -7.74)	-0.45 (-1.78; 0.88)
Men	-7.38 *** (-8.58; -6.18)	-0.90 (-2.27; 0.47)
Women	-9.89 *** (-11.06; -8.72)	-1.90 *** (-3.28; -0.53)
Commute under 30 mins	-7.61 *** (-8.68; -6.54)	-0.44 (-1.67; 0.79)
Commute between 30 and 60 mins	-11.30 *** (-12.83; -9.76)	-3.73 *** (-5.61; -1.85)
Commute over 60 mins	-9.66 *** (-12.28; -7.03)	-3.91 ** (-7.14; -0.68)

Note: WTP estimated from models with controls for personal and workplace characteristics, earnings differences, order of jobs presented on the screen, and vignette number. Full estimation results are available upon request. Standard errors clustered at the participant level. N = 22,817 for WfH 2-3 days/week offers; N = 28,008 for WfH 5 days/week offers. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Source: Own estimations using data gathered for the experiment.

Table C2A. Estimated willingness to pay for working from home – model including only job offers displayed on the right side of the screen, all job offers (% of wage in an office-only job, 95% with confidence intervals)

All workers – average effect	-4.96 *** (-5.80; -4.11)	Men	-4.12 *** (-5.18; -3.07)
COVID-19 perceived as a high threat	-5.92 *** (-6.85; -4.98)	Women	-5.90 *** (-6.93; -4.86)
COVID-19 perceived as a low threat	-2.99 *** (-4.25; -1.73)	Commute under 30 mins	-4.01 *** (-4.95; -3.07)
High occupational exposure	-5.08 *** (-6.21; -3.95)	Commute between 30 and 60 mins	-7.20 *** (-8.57; -5.82)
Low occupational exposure	-4.84 *** (-5.83; -3.85)	Commute over 60 mins	-7.31 *** (-9.55; -5.08)
Treatment group – information experiment	-4.81 *** (-5.88; -3.74)	WfH 2-3 days/week	-7.01 *** (-7.97; -6.04)
Control group – information experiment	-5.10 *** (-6.12; -4.08)	WfH 5 days/week	-2.86 *** (-3.84; -1.87)

Note: WTP estimated from a model with controls for personal and workplace characteristics, number of WfH days per week offered, differences in pay, order of jobs presented on the screen, and vignette number. Full estimation results are available upon request. Standard errors clustered at the participant level. Total N = 55,828. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Source: Own estimations using data gathered for the experiment.

Table C2B. Estimated willingness to pay for working from home – model including only job offers displayed on the right side of the screen, by the number of WfH days offered (% of wage in an office-only job, 95% with confidence intervals)

Group	WfH 2-3 days/week	WfH 5 days/week
All workers – average effect	-8.64 *** (-9.68; -7.60)	-0.90 (-2.01; 0.21)
COVID-19 perceived as a high threat	-9.61 *** (-10.77; -8.44)	-1.81 *** (-3.04; -0.59)
COVID-19 perceived as a low threat	-6.60 *** (-8.11; -5.09)	0.9 (-0.79; 2.59)
High occupational exposure	-8.34 *** (-9.72; -6.95)	-1.47 * (-2.96; 0.01)
Low occupational exposure	-8.91 *** (-10.13; -7.69)	-0.40 (-1.71; 0.91)
Treatment group – information experiment	-8.32 *** (-9.62; -7.02)	-0.98 (-2.41; 0.46)
Control group – information experiment	-8.95 *** (-10.22; -7.68)	-0.82 (-2.13; 0.49)
Men	-6.47 *** (-7.75; -5.18)	-1.42 ** (-2.83; 0.00)
Women	-11.14 *** (-12.41; -9.86)	-0.26 (-1.61; 1.10)
Commute under 30 mins	-8.53 *** (-9.69; -7.36)	0.89 (-0.33; 2.11)
Commute between 30 and 60 mins	-9.18 *** (-10.89; -7.47)	-4.97 *** (-6.89; -3.04)
Commute over 60 mins	-8.58 *** (-11.23; -5.93)	-5.78 *** (-8.71; -2.84)

Note: WTP estimated from models with controls for personal and workplace characteristics, earnings differences, order of jobs presented on the screen, and vignette number. Full estimation results are available upon request. Standard errors clustered at the participant level. N = 22,817 for WfH 2-3 days/week offers; N = 28,008 for WfH 5 days/week offers. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Source: Own estimations using data gathered for the experiment.

Table C3A. Estimated willingness to pay for working from home – model without study participants who selected job offers only displayed on one side (left or right) of the screen, all job offers (% of wage in an office-only job, 95% with confidence intervals)

All workers – average effect	-5.42 *** (-6.24; -4.59)	Men	-4.74 *** (-5.73; -3.76)
COVID-19 perceived as a high threat	-6.31 *** (-7.19; -5.42)	Women	-6.20 *** (-7.15; -5.26)
COVID-19 perceived as a low threat	-3.52 *** (-4.63; -2.41)	Commute under 30 mins	-4.44 *** (-5.33; -3.55)
High occupational exposure	-5.43 *** (-6.48; -4.38)	Commute between 30 and 60 mins	-7.69 *** (-8.86; -6.51)
Low occupational exposure	-5.40 *** (-6.30; -4.51)	Commute over 60 mins	-7.94 *** (-9.86; -6.01)
Treatment group – information experiment	-5.45 *** (-6.43; -4.47)	WfH 2-3 days/week	-7.74 *** (-8.62; -6.86)
Control group – information experiment	-5.38 *** (-6.32; -4.45)	WfH 5 days/week	-3.05 *** (-3.96; -2.14)

Note: WTP estimated from a model with controls for personal and workplace characteristics, number of WfH days per week offered, differences in pay, order of jobs presented on the screen, and vignette number. Full estimation results are available upon request. Standard errors clustered at the participant level. Total N = 101,576. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Source: Own estimations using data gathered for the experiment.

Table C3B. Estimated willingness to pay for working from home – model without study participants who selected job offers only displayed on one side (left or right) of the screen, by the number of WfH days offered (% of wage in an office-only job, 95% with confidence intervals)

Group	WfH 2-3 days/week	WfH 5 days/week
All workers – average effect	-9.05 *** (-10.02; -8.08)	-1.33 ** (-2.44; -0.22)
COVID-19 perceived as a high threat	-9.85 *** (-10.89; -8.80)	-2.32 *** (-3.50; -1.14)
COVID-19 perceived as a low threat	-7.32 *** (-8.60; -6.04)	0.72 (-0.75; 2.19)
High occupational exposure	-8.60 *** (-9.83; -7.38)	-1.80 ** (-3.18; -0.43)
Low occupational exposure	-9.44 *** (-10.50; -8.39)	-0.93 (-2.14; 0.29)
Treatment group – information experiment	-8.67 *** (-9.81; -7.54)	-1.76 *** (-3.08; -0.43)
Control group – information experiment	-9.42 *** (-10.53; -8.31)	-0.91 (-2.13; 0.31)
Men	-7.51 *** (-8.65; -6.37)	-1.57 ** (-2.90; -0.25)
Women	-10.81 *** (-11.92; -9.70)	-1.05 (-2.29; 0.20)
Commute under 30 mins	-8.55 *** (-9.60; -7.50)	0.09 (-1.10; 1.27)
Commute between 30 and 60 mins	-10.45 *** (-11.82; -9.08)	-4.50 *** (-6.12; -2.89)
Commute over 60 mins	-9.86 *** (-12.10; -7.61)	-5.58 *** (-7.99; -3.17)

Note: WTP estimated from models with controls for personal and workplace characteristics, earnings differences, order of jobs presented on the screen, and vignette number. Full estimation results are available upon request. Standard errors clustered at the participant level. N = 50,692 for WfH 2-3 days/week offers; N = 50,880 for WfH 5 days/week offers. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Source: Own estimations using data gathered for the experiment.

Table C4A. Estimated willingness to pay for working from home among 90% of choices with the highest number of points at the confidence level scale (0-100 scale), all job offers (% of wage in an office-only job, 95% with confidence intervals)

All workers – average effect	-5.32 *** (-6.15; -4.49)	Men	-4.50 *** (-5.49; -3.52)
COVID-19 perceived as a high threat	-6.18 *** (-7.06; -5.30)	Women	-6.28 *** (-7.23; -5.33)
COVID-19 perceived as a low threat	-3.46 *** (-4.59; -2.34)	Commute under 30 mins	-4.39 *** (-5.28; -3.50)
High occupational exposure	-5.19 *** (-6.24; -4.14)	Commute between 30 and 60 mins	-7.73 *** (-8.89; -6.56)
Low occupational exposure	-5.44 *** (-6.34; -4.54)	Commute over 60 mins	-7.58 *** (-9.58; -5.57)
Treatment group – information experiment	-5.50 *** (-6.48; -4.52)	WfH 2-3 days/week	-7.52 *** (-8.40; -6.63)
Control group – information experiment	-5.14 *** (-6.08; -4.21)	WfH 5 days/week	-3.07 *** (-3.98; -2.16)

Note: WTP estimated from a model with controls for personal and workplace characteristics, number of WfH days per week offered, differences in pay, order of jobs presented on the screen, and vignette number. Full estimation results are available upon request. Standard errors clustered at the participant level. Total N = 101,005. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Source: Own estimations using data gathered for the experiment.

Table C4B. Estimated willingness to pay for working from home among 90% of choices with the highest number of points at the confidence level scale (0-100 scale), by the number of WfH days offered (% of wage in an office-only job, 95% with confidence intervals)

Group	WfH 2-3 days/week	WfH 5 days/week
All workers – average effect	-8.77 *** (-9.74; -7.80)	-1.39 ** (-2.50; -0.28)
COVID-19 perceived as a high threat	-9.53 *** (-10.57; -8.48)	-2.34 *** (-3.52; -1.17)
COVID-19 perceived as a low threat	-7.09 *** (-8.37; -5.81)	0.63 (-0.85; 2.11)
High occupational exposure	-8.16 *** (-9.37; -6.94)	-1.74 ** (-3.11; -0.37)
Low occupational exposure	-9.31 *** (-10.38; -8.25)	-1.09 * (-2.30; 0.13)
Treatment group – information experiment	-8.49 *** (-9.63; -7.35)	-2.01 *** (-3.33; -0.70)
Control group – information experiment	-9.05 *** (-10.15; -7.95)	-0.79 (-2.01; 0.44)
Men	-7.24 *** (-8.38; -6.09)	-1.33 ** (-2.66; -0.01)
Women	-10.54 *** (-11.66; -9.43)	-1.46 ** (-2.70; -0.22)
Commute under 30 mins	-8.17 *** (-9.23; -7.12)	-0.14 (-1.32; 1.04)
Commute between 30 and 60 mins	-10.54 *** (-11.86; -9.23)	-4.45 *** (-6.11; -2.79)
Commute over 60 mins	-9.69 *** (-11.95; -7.44)	-4.99 *** (-7.44; -2.54)

Note: WTP estimated from models with controls for personal and workplace characteristics, earnings differences, order of jobs presented on the screen, and vignette number. Full estimation results are available upon request. Standard errors clustered at the participant level. N = 50,836 for WfH 2-3 days/week offers; N = 50,164 for WfH 5 days/week offers. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Source: Own estimations using data gathered for the experiment.

Table C5A. Estimated willingness to pay for working from home – unweighted estimations, all job offers (% of wage in an office-only job, 95% with confidence intervals)

All workers – average effect	-5.94 *** (-6.54; -5.35)	Men	-4.77 *** (-5.45; -4.09)
COVID-19 perceived as a high threat	-6.89 *** (-7.54; -6.25)	Women	-7.00 *** (-7.70; -6.30)
COVID-19 perceived as a low threat	-3.99 *** (-4.75; -3.23)	Commute under 30 mins	-5.11 *** (-5.75; -4.48)
High occupational exposure	-6.40 *** (-7.10; -5.69)	Commute between 30 and 60 mins	-7.49 *** (-8.38; -6.60)
Low occupational exposure	-5.48 *** (-6.17; -4.80)	Commute over 60 mins	-8.89 *** (-10.18; -7.60)
Treatment group – information experiment	-6.26 *** (-6.95; -5.57)	WfH 2-3 days/week	-8.26 *** (-8.90; -7.63)
Control group – information experiment	-5.63 *** (-6.31; -4.95)	WfH 5 days/week	-3.61 *** (-4.26; -2.95)

Note: WTP estimated from a model with controls for personal and workplace characteristics, number of WfH days per week offered, differences in pay, order of jobs presented on the screen, and vignette number. Full estimation results are available upon request. Standard errors clustered at the participant level. Total N = 111,655. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Source: Own estimations using data gathered for the experiment.

Table C5B. Estimated willingness to pay for working from home – unweighted estimations, by the number of WfH days offered (% of wage in an office-only job, 95% with confidence intervals)

Group	WfH 2-3 days/week	WfH 5 days/week
All workers – average effect	-9.57 *** (-10.27; -8.87)	-1.93 *** (-2.73; -1.13)
COVID-19 perceived as a high threat	-10.55 *** (-11.31; -9.79)	-2.84 *** (-3.69; -1.98)
COVID-19 perceived as a low threat	-7.53 *** (-8.43; -6.63)	-0.11 (-1.12; 0.91)
High occupational exposure	-9.67 *** (-10.49; -8.84)	-2.76 *** (-3.68; -1.83)
Low occupational exposure	-9.48 *** (-10.28; -8.67)	-1.10 ** (-2.02; -0.18)
Treatment group – information experiment	-9.54 *** (-10.35; -8.74)	-2.61 *** (-3.53; -1.69)
Control group – information experiment	-9.60 *** (-10.41; -8.79)	-1.27 *** (-2.17; -0.36)
Men	-7.58 *** (-8.38; -6.78)	-1.58 *** (-2.48; -0.67)
Women	-11.36 *** (-12.18; -10.54)	-2.25 *** (-3.19; -1.31)
Commute under 30 mins	-9.04 *** (-9.79; -8.29)	-0.82 * (-1.67; 0.03)
Commute between 30 and 60 mins	-10.50 *** (-11.56; -9.43)	-4.11 *** (-5.29; -2.93)
Commute over 60 mins	-11.59 *** (-13.08; -10.11)	-5.79 *** (-7.47; -4.11)

Note: WTP estimated from models with controls for personal and workplace characteristics, earnings differences, order of jobs presented on the screen, and vignette number. Full estimation results are available upon request. Standard errors clustered at the participant level. N = 55,634 for WfH 2-3 days/week offers; N = 56,016 for WfH 5 days/week offers. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Source: Own estimations using data gathered for the experiment.

Table C6A. Estimated willingness to pay for working from home – linear probability models, all job offers (% of wage in an office-only job, 95% with confidence intervals)

All workers – average effect	-5.24 *** (-6.09; -4.39)	Men	-4.49 *** (-5.47; -3.51)
COVID-19 perceived as a high threat	-6.08 *** (-6.98; -5.19)	Women	-6.12 *** (-7.06; -5.18)
COVID-19 perceived as a low threat	-3.50 *** (-4.58; -2.43)	Commute under 30 mins	-4.38 *** (-5.28; -3.48)
High occupational exposure	-5.13 *** (-6.16; -4.10)	Commute between 30 and 60 mins	-7.44 *** (-8.56; -6.32)
Low occupational exposure	-5.34 *** (-6.24; -4.43)	Commute over 60 mins	-7.16 *** (-8.91; -5.41)
Treatment group – information experiment	-5.30 *** (-6.27; -4.33)	WfH 2-3 days/week	-7.28 *** (-8.18; -6.37)
Control group – information experiment	-5.18 *** (-6.11; -4.25)	WfH 5 days/week	-3.21 *** (-4.13; -2.30)

*Note: WTP estimated from a model with controls for personal and workplace characteristics, number of WfH days per week offered, differences in pay, order of jobs presented on the screen, and vignette number. Full estimation results are available upon request. Standard errors clustered at the participant level. Total N = 111,655. *** p<0.01, ** p<0.05, * p<0.1.*

Source: Own estimations using data gathered for the experiment.

Table C6B. Estimated willingness to pay for working from home – linear probability models, by the number of WfH days offered (% of wage in an office-only job, 95% with confidence intervals)

Group	WfH 2-3 days/week	WfH 5 days/week
All workers – average effect	-9.05 *** (-10.10; -8.00)	-1.12 * (-2.24; 0.00)
COVID-19 perceived as a high threat	-9.82 *** (-10.93; -8.71)	-2.03 *** (-3.2; -0.85)
COVID-19 perceived as a low threat	-7.42 *** (-8.68; -6.16)	0.71 (-0.71; 2.14)
High occupational exposure	-8.63 *** (-9.85; -7.40)	-1.32 * (-2.66; 0.03)
Low occupational exposure	-9.43 *** (-10.55; -8.31)	-0.95 (-2.16; 0.26)
Treatment group – information experiment	-8.73 *** (-9.90; -7.56)	-1.57 ** (-2.86; -0.27)
Control group – information experiment	-9.37 *** (-10.51; -8.23)	-0.68 (-1.89; 0.53)
Men	-7.59 *** (-8.77; -6.41)	-1.15 * (-2.45; 0.15)
Women	-10.77 *** (-11.91; -9.62)	-1.08 * (-2.31; 0.15)
Commute under 30 mins	-8.58 *** (-9.69; -7.47)	0.14 (-1.05; 1.33)
Commute between 30 and 60 mins	-10.51 *** (-11.82; -9.19)	-4.09 *** (-5.65; -2.54)
Commute over 60 mins	-9.57 *** (-11.62; -7.52)	-4.51 *** (-6.72; -2.31)

*Note: WTP estimated from models with controls for personal and workplace characteristics, earnings differences, order of jobs presented on the screen, and vignette number. Full estimation results are available upon request. Standard errors clustered at the participant level. N = 55,634 for WfH 2-3 days/week offers; N = 56,016 for WfH 5 days/week offers. *** p<0.01, ** p<0.05, * p<0.1.*

Source: Own estimations using data gathered for the experiment.

Table C7A. Estimated willingness to pay for working from home – probit regression, all job offers (% of wage in an office-only job, 95% with confidence intervals)

All workers – average effect	-5.07 *** (-5.90; -4.23)	Men	-4.25 *** (-5.24; -3.27)
COVID-19 perceived as a high threat	-6.01 *** (-6.90; -5.12)	Women	-6.02 *** (-6.96; -5.07)
COVID-19 perceived as a low threat	-3.13 *** (-4.22; -2.03)	Commute under 30 mins	-4.11 *** (-5.00; -3.22)
High occupational exposure	-4.94 *** (-5.98; -3.90)	Commute between 30 and 60 mins	-7.54 *** (-8.71; -6.38)
Low occupational exposure	-5.18 *** (-6.08; -4.27)	Commute over 60 mins	-7.04 *** (-8.90; -5.18)
Treatment group – information experiment	-5.14 *** (-6.12; -4.16)	WfH 2-3 days/week	-7.30 *** (-8.20; -6.41)
Control group – information experiment	-4.99 *** (-5.92; -4.06)	WfH 5 days/week	-2.85 *** (-3.76; -1.95)

*Note: WTP estimated from a model with controls for personal and workplace characteristics, number of WfH days per week offered, differences in pay, order of jobs presented on the screen, and vignette number. Full estimation results are available upon request. Standard errors clustered at the participant level. Total N = 111,655. *** p<0.01, ** p<0.05, * p<0.1.*

Source: Own estimations using data gathered for the experiment.

Table C7B. Estimated willingness to pay for working from home – probit regression, by the number of WfH days offered (% of wage in an office-only job, 95% with confidence intervals)

Group	WfH 2-3 days/week	WfH 5 days/week
All workers – average effect	-8.69 *** (-9.68; -7.69)	-1.05 * (-2.16; 0.06)
COVID-19 perceived as a high threat	-9.54 *** (-10.61; -8.47)	-2.07 *** (-3.25; -0.90)
COVID-19 perceived as a low threat	-6.87 *** (-8.14; -5.60)	0.99 (-0.47; 2.44)
High occupational exposure	-8.19 *** (-9.40; -6.98)	-1.27 * (-2.63; 0.09)
Low occupational exposure	-9.13 *** (-10.23; -8.04)	-0.87 (-2.08; 0.35)
Treatment group – information experiment	-8.31 *** (-9.46; -7.16)	-1.57 ** (-2.88; -0.25)
Control group – information experiment	-9.06 *** (-10.18; -7.94)	-0.55 (-1.76; 0.66)
Men	-7.06 *** (-8.22; -5.90)	-1.09 (-2.40; 0.23)
Women	-10.57 *** (-11.70; -9.45)	-1.02 (-2.26; 0.23)
Commute under 30 mins	-8.15 *** (-9.22; -7.08)	0.32 (-0.86; 1.50)
Commute between 30 and 60 mins	-10.41 *** (-11.76; -9.05)	-4.32 *** (-5.94; -2.70)
Commute over 60 mins	-9.11 *** (-11.27; -6.96)	-4.61 *** (-6.94; -2.29)

*Note: WTP estimated from models with controls for personal and workplace characteristics, earnings differences, order of jobs presented on the screen, and vignette number. Full estimation results are available upon request. Standard errors clustered at the participant level. N = 55,634 for WfH 2-3 days/week offers; N = 56,016 for WfH 5 days/week offers. *** p<0.01, ** p<0.05, * p<0.1.*

Source: Own estimations using data gathered for the experiment