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## ABSTRACT

# Return-to-Office Mandates, Health and Well-Being: Evidence from a Natural Experiment<sup>\*</sup>

We here exploit an exogenous shift in working conditions for public-sector workers in Italy to establish the causal effect of a return-to-office (RTO) mandate on worker health and well-being. In nine waves of quarterly panel data we first find a significant fall in teleworking for those affected by the RTO mandate, who also spend more time outdoors, work fewer hours, and interact less with relatives and friends. The net effect of these lifestyle changes on a battery of health and well-being measures following the return to office work is insignificant. The place of work post-pandemic has neither positive nor negative health implications.

JEL Classification:	I18, I31, J88
Keywords:	return to office, working from home, health, well-being

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#### 1. Introduction

The COVID-19 pandemic produced a seismic shift in the way we work, with social-distancing measures leading to the widespread adoption of remote work (Dingel and Neiman, 2020), also called working from home (WFH) or teleworking, in non-essential sectors. The potential advantages and disadvantages of home versus office on worker health and well-being have been the subject of considerable debate (see Del Boca *et al.*, 2020; Moens *et al.*, 2020; Alipur *et al.*, 2021; Béland *et al.*, 2023, among many others). Causal evidence is less common (Bertoni *et al.*, 2021; Giovanis and Ozdamar, 2021; Gueguen and Senik, 2021; Senik *et al.*, 2024), but consistently concludes that WFH negatively affected worker health and well-being, with various individual characteristics (such as gender, marital status, and parity) acting as moderators. The potential channels behind this relationship include blurred boundaries between work and personal life, reduced social interactions potentially fostering workplace well-being and contributing to career advancement: see Granovetter, 1973; Rajkumar *et al.*, 2022; Vacchiano *et al.*, 2024).<sup>1</sup>

Post-pandemic, employers have re-evaluated workplace policies, often imposing a physical return to the office via return-to-office (RTO) mandates. For example, Boeing and UPS reinstated a full five-day office attendance regime for their employees in early 2024. Later the same year, Amazon announced the end of its hybrid work policy, ordering employees back to the office five days a week.<sup>2</sup> These RTO mandates aimed to increase worker productivity by facilitating work-related collaboration, as well as building and maintaining workplace culture and the employees' connection to the firm. In terms of worker outcomes, as returning to the office is the mirror image of working from home, it might be expected that going back to the office would have a positive effect on health and well-being through improved work-life balance, reduced social isolation, and greater productivity. However, not all employees may like these mandates,<sup>3</sup> as they disrupt the daily pattern of life to which they had become accustomed after a substantial period of WFH (Senik

<sup>&</sup>lt;sup>1</sup> Although other channels produce a positive relationship, such as reduced commuting costs (in terms of both time and money).

<sup>&</sup>lt;sup>2</sup> <u>https://www.cnbc.com/2024/02/04/the-ceo-return-to-office-or-else-is-having-limited-success-this-year.html;</u> https://www.bloomberg.com/news/newsletters/2024-02-06/will-the-ups-five-day-return-to-office-plan-deliver;

https://www.theguardian.com/technology/2024/sep/16/amazon-in-person-office-policy (last access: October 8<sup>th</sup>, 2024).

<sup>&</sup>lt;sup>3</sup> <u>https://www.cnbc.com/2024/02/04/the-ceo-return-to-office-or-else-is-having-limited-success-this-year.html</u> (last access: October 8<sup>th</sup>, 2024).

*et al.*, 2024). In addition, the productivity justification used by firms implies that employees are considered to be less productive when not physically at work: as such, workers may perceive a mandated RTO as revealing the firm's lack of trust in them.

To the best of our knowledge, few papers have analysed the effect of RTO mandates on employees. Using US data, Ma and Ding (2023) find that returning to the office reduced employee job satisfaction, with no effect on firms' financial performance or values on average. Consistent with reduced job satisfaction, Van Dijcke *et al.* (2024) show that RTO mandates in large tech companies have led to an outflow of senior employees to competing firms. We are the first, to the best of our knowledge, to appeal to an exogenous shift in working conditions in order to identify the causal impact of a forced return to the office on worker health and well-being. Different from the papers above, we focus on a government-mandated RTO that differentially affected workers in the public and private sector in a European country, Italy. Starting in February 2020, WFH became the standard working arrangement for all Italian employees in teleworkable occupations. However, on October 15<sup>th</sup> 2021, a governmental decree mandated the return of public-sector employees to their physical workplaces, while private-sector employees retained the option to WFH until September 1<sup>st</sup> 2022.

Our analysis draws upon data from the COVID-19, Mental Health, Resilience, and Selfregulation (COME-HERE) dataset. This longitudinal survey, collected by the University of Luxembourg, contains quarterly individual-level information from nationally-representative samples in Italy, France, Germany, Spain and Sweden. This dataset is particularly useful for the investigation of the effects of place of work, as it includes both a large set of job characteristics and time-use variables, as well as measures of health and well-being. The first nine COME-HERE survey waves cover April 2020 to June 2022, allowing us to follow individuals who work in the Italian public sector (the treatment group) and private sector (the control group) as the October 2021 RTO mandate came into force. The difference-in-differences analysis in a quasiexperimental set-up will allow us to establish the causal effect of going back to the office on worker outcomes, excluding possible confounders such as self-selection to return on site due to personal characteristics and any individual time-invariant heterogeneity. Last, as the COME-HERE survey is multi-country, we can carry out a triple difference-in-differences analysis to address unobserved macro-economic confounding shocks, and use non-Italian private-sector workers as an alternative control group (to tackle concerns about treatment contamination). Unsurprisingly, we find that home-working fell amongst public-sector employees following the RTO mandate. We also show that worker lives were affected in a number of ways, so that the net effect on health and well-being is *a priori* ambiguous. For example, public-sector employees spent more days outside and reduced their working hours but also spent significantly less time with close friends and family. Our main results establish the net effect of the RTO mandate on health and well-being, an effect that we systematically find to be zero for a battery of measures, suggesting that the positive and negative consequences of going back to the office cancelled each other out.

As with any difference-in-differences analysis, we provide empirical evidence for the validity of the parallel trends assumption. We also complement our analysis with a battery of robustness checks: our conclusions remain unchanged even when accounting for attrition, negative weights, the potential confounding of macroeconomic shocks and when changing the control group and the measurement of the key outcome variables. Heterogeneity analyses on the basis of workers' characteristics (namely gender, age, education and parity) reveal no significant differences among groups. The remainder of the paper is organised as follows. Section 2 describes the Italian institutional context, and Section 3 presents the data and identification strategy. The results, including robustness checks and heterogeneity analyses, appear in Section 4. Last, Section 5 concludes.

#### 2. Institutional context

The Italian government first introduced a legal framework for working from home via the Law n.81 of May  $22^{nd}$  2017. This introduced WFH as a potential alternative to traditional forms of work, and underlined that a formal written agreement had to be signed between employees and employers describing the working arrangements (e.g., the number of WFH days and their location). Although this law provided legal recognition for WFH, Lodovici *et al.* (2021) show that the proportion of teleworkers in Italy remained below the European average (4.7% as compared to the EU-27 average of 14.4% in 2019), and teleworking was *de facto* not implemented in the public sector.

The COVID-19 pandemic led to the imposition of WFH for many workers, leading governments to adapt their legal frameworks. Italy was the first European country to declare a State of Emergency in February 2020, and shortly afterwards facilitated WFH for all non-essential workers via the Decree Law (DL) n. 6 of February 23<sup>rd</sup> 2020. This Law allowed employees to

work from home even without the written agreement that appeared in the 2017 Law. This simplified WFH procedure remained in place throughout the early stages of the pandemic. The DL n. 18 of March 17<sup>th</sup> 2020 subsequently confirmed WFH as the ordinary work arrangement, with article 87.1 specifically mentioning WFH as the ordinary form of working for public-sector employees (with the exception of essential workers, who were required to work on-site throughout the pandemic).

The DL of March 2020 remained in place until the then Italian Prime Minister Mario Draghi introduced the Ministerial Decree (DPCM) of September 23<sup>rd</sup> 2021, which abruptly changed the working conditions for public-sector employees. In particular, the decree declared in-office work to be the standard work arrangement for public-sector workers starting from October 15<sup>th</sup> 2021, with the DL n. 139 of October 8<sup>th</sup> 2021 setting out the guidelines for this return to the workplace.<sup>4</sup> Public-sector workers continued to have greater flexibility than in the pre-pandemic period, as WFH was still allowed for up to two days per week (even if in-person work became the norm). However, these WFH arrangements were now again subject to written agreement with the employer, as established in the 2017 Law. In addition, Article 1.3 Section b of the decree stipulated that public institutions must implement a rotation system for remote working in order to ensure in-presence public services. None of these changes applied to private-sector workers, who were allowed to continue teleworking via the simplified WFH procedure and without limits on teleworking days up to the 1<sup>st</sup> of September 2022.<sup>5</sup> A summary of these various Laws and Decrees appears in Table 1.

Contrary to Decree Laws, which need to be approved by the Parliament to be implemented, Ministerial Decrees are a legislative tool with immediate application issued by the Prime Minister in emergency situations and do not involve a Parliamentary vote. The sole purpose of the September 2021 DPCM was to mandate the return to the office for public-sector workers. In addition, we have not identified any other regulatory changes in Italy between October 2021 and September 2022 that differentially affected public- and private-sector workers. The Return to the

<sup>&</sup>lt;sup>4</sup> The intention of having public-sector workers return to the office as the default option was already mentioned by Public Administration Minister Renato Brunetta in early August 2021, although without specific details on implementation: <u>https://www.ilsole24ore.com/art/brunetta-scuote-pa-carriere-piu-premianti-sfruttare-recovery-AEMMRXa</u> (last access: October 8<sup>th</sup>, 2024).

<sup>&</sup>lt;sup>5</sup> According to the Ministerial Decree n. 149 of August 22<sup>nd</sup> 2022, starting from the 1<sup>st</sup> of September 2022 privatesector employers had to send details of WFH arrangements to the Ministry of Labour (similar again to the law n. 81 of 2017).

Office mandate of September 2021 is then a distinct change in working arrangements that affected workers in one sector but not in others.

#### 3. Data and empirical strategy

#### **3.1. Data**

The data used in this paper comes from COME-HERE (COVID-19, Mental Health, Resilience and Self-regulation), an ongoing quarterly longitudinal study carried out by the University of Luxembourg since April 2020.<sup>6</sup> The survey collects data for nationally-representative (on the basis of age, gender and region of residence) samples of adults from France, Germany, Italy, Spain and Sweden. COME-HERE respondents are followed over time and asked questions on their living conditions, life events, and health during the pandemic and beyond, alongside standard socio-economic and demographic characteristics such as age, gender, education, and labour-force status.

The analysis here covers nine waves of the COME-HERE survey, spanning just under three years following the COVID-19 outbreak, at roughly three-month intervals: April, June, August and November 2020; March, June and October 2021: and February and June 2022.<sup>7</sup> There were 8,063 respondents in Wave 1 (1,710 in Italy), 86 percent of whom participated in at least one other survey wave (88 percent in Italy). Around 1,750 individuals appear in all nine survey waves (399 individuals in Italy). We will examine attrition in greater detail in Section 4.3, and show that the use of weights to correct for attrition does not greatly affect the results.

We now describe the main variables used in our analysis, and how they are measured in COME-HERE.

**Working from Home**. The key right-hand side variable is WFH, which is measured by the question: "In each of the following months, where did you mostly work?".<sup>8</sup> For each month, respondents could indicate that they were working either mostly at home, mostly not at home, or that they were not working. The WFH variable, which only applies to workers, is a dummy for having worked mostly at home (as opposed to mostly not at home) in at least one of the months

<sup>&</sup>lt;sup>6</sup> Ethics approval for this survey was granted by the Ethics Review Panel of the University of Luxembourg.

<sup>&</sup>lt;sup>7</sup> On September 1<sup>st</sup> 2022 the simplified WFH procedure that applied to our control group of private-sector employees was abolished. As such, the control group became treated after this date. We therefore do not use any survey waves after Wave 9 in our analysis (Wave 10 data was collected at the end of November 2022).

<sup>&</sup>lt;sup>8</sup> The WFH question was first asked retrospectively in Wave 5 (March 2021), for each month from February 2020 to February 2021. From Wave 6 (June 2021) onwards, the WFH question was asked in reference to each month between the current and the previous waves.

between the two survey waves.<sup>9</sup> This WFH variable could be affected by recall bias, and may also mechanically change as the COME-HERE surveys are not exactly equally-spaced over time. The econometric specification, set out in Section 3.2 below, addresses these issues via the inclusion of individual and survey-wave fixed effects. If recall bias is an individual trait then it will be picked up by the individual fixed effects, and the wave fixed effects hold any systematic differences between survey waves constant.

**Public sector.** Conditional on working, respondents were asked whether they were a publicsector employee, a private-sector employee, self-employed/small business owner (including family members working for self-employed people), or other (e.g. apprentice/trainee/internship). Individuals in the first two categories correspond to the treated and control groups respectively.

**Time use**. To understand how the RTO mandate affected respondents' daily routines, we have a series of questions on time use. These include the average number of hours spent on a typical weekday on childcare activities, paid work, household chores, leisure activities, and media consumption. Respondents were also asked about the number of days they had gone outside in the week before each survey wave, as well as the number of days they engaged in moderate or vigorous physical activity for 15 minutes or more in the same week.

**Frequency of interactions**. In each wave COME-HERE participants indicated whether the number of days per week they interacted with various groups of people had changed between two survey waves (or since the beginning of the pandemic in Wave 1). We use these responses to create four dummy variables for participants who reported 'interacting less with their household members', 'interacting less with relatives living outside of the household', 'interacting less with close friends' and 'interacting more with co-workers' – these are the changes in interactions that would naturally be expected following a RTO mandate.

**Health outcomes**. The health and well-being of COME-HERE participants are assessed using a combination of psychometrically-validated scales and self-reported medical diagnoses. Mental health is first measured by recent self-reported diagnoses by a healthcare professional (typically, the period ranging from the previous to the current survey wave). There are eight of these: major depression, generalised anxiety disorder, post-traumatic stress disorder (also including adjustment disorder), somatic symptom disorder (and hypochondria), eating disorders (including bulimia, binge eating and anorexia), alcohol or substance dependence / abuse, panic disorder, and phobias.

<sup>&</sup>lt;sup>9</sup> Alternative WFH measures will be considered in Section 4.1.

In order to pick up undiagnosed mental ill-health, we also have three psychometrically-validated scales: the 9-item Patient Health Questionnaire, capturing depressive symptoms (PHQ-9: Kroenke *et al.*, 2001), the 7-item Generalised Anxiety Disorder (GAD-7: Plummer et al., 2016), and the 10-item Perceived Stress Scale (PSS-10: Cohen *et al.*, 1983). Each of these is coded so that higher scores indicate greater mental distress. Last, body mass index (BMI) is considered to be a good proxy for individuals' physical health, given the correlation between BMI values outside of the normal range and adverse health outcomes such as cardiovascular diseases and mortality (Ng *et al.*, 2020; Strulik, 2023).

Well-being outcomes. Broad feelings of well-being are picked up by both evaluative and eudemonic measures. For the former, we use the standard evaluative life satisfaction question: "Overall, in the past week, how satisfied have you been with your life?". For eudemonic well-being, which emphasises the realisation of one's potential (Ryff, 1989), we use the answers to the question "In the past week, to what extent have you felt the things you are doing in your life are worthwhile?". The answers to both of these questions are on an 11-point Likert scale, with higher values corresponding to greater well-being. We last consider a psychometrically-validated measure of perceived social isolation: the 8-item UCLA-Loneliness Scale (ULS-8; Hays and DiMatteo, 1987) on a scale of 8 to 32, with higher numbers indicating greater loneliness.

This array of measures allows for a comprehensive evaluation of the health and well-being impacts of returning to the office. For comparison purposes, all of these measures are dichotomised into variables indicating poorer health or well-being. The diagnoses variables are already binary, and we apply international standards and thresholds used to screen for at-risk individuals to the other measures. For BMI, this is a value outside of the 'normal weight' thresholds established by the WHO ('normal' being BMI within the 18.5 to 24.9 range). For the psychometrically-validated scales, which are often used for diagnostic purposes, we apply commonly-used diagnostic thresholds where available: following Kroenke *et al.* (2001; 2007), PHQ-9  $\geq$  15 and GAD-7  $\geq$  15 are used to identify severe depression and anxiety disorders. For evaluative and eudemonic well-being, we adopt the distributional approach of Flèche and Layard (2017) and Dolan *et al.* (2021), with dummy variables for 'misery' and 'worthlessness' corresponding to respondents in the bottom 10% of the distributions of, respectively, life satisfaction and worthwhileness.

categorised as 'stressed' and 'lonely'. Section 4.2 below will discuss the results when these variables are not dichotomised.

#### **3.2.** Empirical strategy

We wish to establish the effect of the Italian decree to return to the office on workers' health and well-being. One key characteristic of the decree was that it applied only to public-sector workers (the working from home conditions for private-sector workers were unchanged until September 2022). We can thus estimate a Difference-in-Differences (DiD) regression, where public-sector workers are the treated group and private-sector workers the control group. The standard DiD equation with panel data is as follows:

$$Y_{it} = \alpha_1 Treat_{it} + \alpha_2 Treat_{it} \times Post_t + \alpha_3 X_{it} + \mu_i + \lambda_t + \varepsilon_{it}, \tag{1}$$

where  $Y_{it}$  is first the WFH probability of worker *i* in survey wave *t* (first-stage compliance) and then the time-use, frequency of interactions, health and well-being outcomes discussed above. *Treat<sub>it</sub>* is the treatment status dummy for working in the public sector, and *Post<sub>t</sub>* a dummy for survey waves collected after October 15<sup>th</sup> 2021 (the date at which the decree was implemented). Equation (1) also includes survey wave dummies,  $\lambda_t$  (which capture the main effect of *Post<sub>t</sub>*), and a vector of standard individual socio-demographic controls  $X_{it}$ . These latter are age, age squared, and dummies for gender, higher education (*i.e.* holding a university degree), the presence of children in the household, living with a partner and net monthly household income categories.<sup>10</sup> Our preferred specification additionally includes individual fixed effects  $\mu_i$ : when these appear in the regression, the time-invariant controls in  $X_{it}$  are automatically dropped. The coefficient of interest in Equation (1) is  $\alpha_2$ , which shows how the RTO mandate changed WFH, time use, interactions, health and well-being. We estimate Equation (1) using OLS; standard errors are clustered at the individual level.

<sup>&</sup>lt;sup>10</sup> The categories of net monthly household income are: 0-1250 Euros, 1250-2000 Euros, 2000-4000 Euros, 4000-6000 Euros, 6000-8000 Euros, 8000-12500 Euros, more than 12500 Euros, and 'prefer not to say'.

To test the parallel-trend assumption required for the causal interpretation of DiD results, and establish whether the treatment effect is heterogeneous over time, we estimate an equation where the treatment dummy is interacted with all of the separate survey wave dummies:

$$Y_{it} = \beta_0 Treat_{it} + \sum_{t=2}^{9} \beta_t Treat_{it} \times \lambda_t + \alpha_2 X_{it} + \mu_i + \lambda_t + \varepsilon_{it}.$$
 (2)

Equations (1) and (2) are identical in all other respects. Survey waves 1 to 6 correspond to the pre-implementation period, and waves 7 to 9 to the post-implementation period. In Equation (2) the outcome difference between public- and private-sector workers in Wave 1 is the reference category: the parallel-trend assumption requires that  $\beta_2$  to  $\beta_6$  be zero, with  $\beta_7$  to  $\beta_9$  revealing the effects of the RTO mandate over time.

#### **3.3. Estimation sample**

Our estimation sample covers all Italian adult employees in COME-HERE of working age (18-65). We exclude the self-employed and those in training (e.g. interns and apprentices). We also exclude individuals with incomplete information on the variables of interest and only keep those who appeared in the survey at least once before and once after the RTO mandate, as the use of individual fixed-effects requires within-individual variation. To maximise the sample size, we allow *Treat<sub>it</sub>* in Equations (1) and (2) to be time-varying within individual. As such, the estimation sample includes workers who switch between the public and private sectors across survey waves. However, to ensure that the estimated treatment effects are not biased by selfselection into or out of the treatment group following the reform, we do exclude workers who switched sector after the RTO announcement in September 2021.<sup>11</sup> The final estimation sample consists of 2,358 observations on 382 unique individuals from April 2020 to June 2022.

The descriptive statistics on the various outcome variables in the empirical analysis appear in Table 2, and Appendix Table A1 provides analogous numbers for the control variables. These refer to the estimation sample of public- and private-sector workers aged 18-65 in Italy. 30 percent of the observations refer to public-sector workers, and about a third of observations correspond to working from home. For time use, just under seven hours are worked on an average weekday and

<sup>&</sup>lt;sup>11</sup> We show in the robustness checks that including all switchers or, conversely, excluding all switchers does not alter our conclusions.

around two hours each spent on childcare, household chores and leisure. Individuals left their home four days per week, and carried out moderate to vigorous physical activities twice per week.

The prevalence of most of the diagnosed mental-health disorders in Table 2 ranges between one and three percent, which is in line with national Italian figures on diagnosed mental disorders (Silvestri *et al.*, 2023). Higher figures are found for a recent diagnosis of panic disorder (seven percent) or anxiety disorder (12 percent). The percentages of respondents with major depression, severe anxiety and high perceived stress are all around 10 percent (or slightly above) when using psychometrically-validated scales (i.e., PHQ-9, GAD-7, and PSS-10). Last, 40 percent of observations come from respondents with a BMI score outside of the 'normal range', which is slightly below the pre-pandemic figure of 48.6 percent reported by Eurostat for Italy in 2019.<sup>12</sup>

While most of these figures are in line with national statistics, we may worry about reporting bias for health and well-being in survey questionnaires (e.g. from social desirability bias). Nonetheless, the estimated treatment effects should not be affected by this reporting bias as the individual fixed effects will pick up any time-invariant differences in reporting styles across respondents. Even in models without individual fixed effects, reporting bias will not affect the treatment effects as long as the gap in reporting styles between the treatment and control groups remains constant over time.

#### 4. Main results

#### 4.1. The effect of RTO on WFH and time use

Table 3 shows how the reform affected the probability of working primarily from home, as well as time use. The figures here are the OLS estimates of the DiD coefficient  $\alpha_2$  in Equation (1), with each row referring to a different outcome. The specification in column (1) is a simplified version of Equation (1), including only the treatment dummy, the interaction between the treatment and the post-reform dummy, and wave fixed-effects. Columns (2) and (3) introduce the time-invariant and time-varying controls in turn, and column (4) the individual fixed-effects (and is thus the complete version of Equation (1)). All of the outcomes (apart from the dummy variables) are standardised to have a mean of zero and a standard deviation of one for comparison purposes, as

<sup>&</sup>lt;sup>12</sup> The figures can be found at: <u>https://ec.europa.eu/eurostat/databrowser/view/hlth\_ehis\_bm1i/default/table?lang=en</u>.

they are measured on different scales (0-24 for daily time use, and 0-7 for days per week) and have different distributions.

In the first row of Table 3, as expected, the return to office mandate reduced the likelihood that public-sector workers (the treatment group) work mostly from home. The estimated coefficient is very similar across the four columns, in line with the treatment being orthogonal to the control variables. In our preferred specification – column (4) – the probability that the treated work mostly from home after the RTO mandate fell by 14.1 percentage points. This is a substantial figure, and is around 40% of the baseline prevalence of WFH in the treated group pre-reform. We considered alternative definitions of WFH, based on (i) working at home at least the majority of the months between the two survey waves, (ii) working at home every month between the two survey waves, or (iii) the share of months spent mostly working at home between the two waves. These results appear in Appendix Table A2: all of the RTO mandate treatment effects are negative and significant, so that the fall in working from home is not contingent on the way in which the latter is measured.

The following rows of Table 3 refer to workers' time use and frequency of interactions. Consistent with the treatment reducing the number of days working from home, the RTO mandate led to a rise in the number of days respondents went outside (21.9% of a standard deviation in our preferred specification). There is also a fall in daily working hours of an estimated 21.6% of a standard deviation (roughly 33 minutes), perhaps reflecting increased commuting time or reduced overtime/atypical working hours (Arntz *et al.*, 2022) . None of the other time-use variables (childcare, chores, leisure, media and physical activity) changed significantly following the treatment. While increased time spent outdoors and reduced working hours are generally associated with improved health and well-being (Lepinteur, 2019; Stock *et al.*, 2022), we also observe significant declines in the frequency of interactions with non-household relatives rising by 9.2 percentage points (from an average of 40 percent, as shown in Table 2) and with close friends by 9.7 percentage points (from an average of 34 percent in Table 2).

Pre-reform parallel trends in the outcomes of public-sector workers (the treatment group) and private-sector workers (the control group) are essential for DiD regressions to produce causal

estimates. Figure 1 shows the simple plots of the first-stage outcome variable, working mostly from home, over time for public- and private-sector workers in the estimation sample. This reveals not only very-similar pre-reform trends in working from home, but also almost identical average prevalence levels. On the contrary, there is a notable divergence after the reform, with public-sector workers working from home significantly less than private-sector workers in Waves 8 and 9 (February and June 2022). The cross-group difference in Wave 7 (October 2021), immediately after the reform, shows a qualitatively similar trend but is not statistically significant. This likely reflects an adjustment period for public-sector workers in the transition to office work and the definition of WFH in this period, which relies on some pre-treatment months.<sup>13</sup>

A parametric alternative to the plots in Figure 1 is to estimate the treatment effect of the RTO mandate over time, with Wave 1 serving as the reference period, as in Equation (2). Under the parallel-trend assumption, the outcomes of workers in the (treated) public sector and (control) private sector should move in the same way up to October 2021. Appendix Table A3 lists the resulting estimates of the treatment effects over time for all of the outcomes reported in Table 3. With the exception of leisure and daily working hours and the frequency of interactions with co-workers, none of the pre-reform variables attracts statistically-significant point estimates. This suggests a note of caution for the results regarding these three variables, but not for the others. The robustness checks in Section 4.3 will further discuss potential issues with the exclusion restriction by appealing to the cross-country dimension of our dataset to change the control group.<sup>14</sup>

#### 4.2. The effect of RTO on health and well-being

Working at the office, rather than at home, will likely affect many aspects of workers' lives. The list in Table 3 is not exhaustive, but does highlight changes in time use and social interactions that will arguably produce an overall ambiguous effect on health and well-being. Figure 2 summarises our estimates of this net effect for the 15 health and well-being measures described in Section 3.1,

<sup>&</sup>lt;sup>13</sup> As mentioned in the description of the institutional context, Public Administration Minister Renato Brunetta had already announced his intention in early August 2021 to implement an RTO mandate for public-sector workers. Since the last pre-treatment wave was measured in June 2021, the reported pre-trends in Figure 1 are not affected by any announcement effect.

<sup>&</sup>lt;sup>14</sup> The descriptive statistics presented in Table 2 show that some respondents reported implausibly high amounts of time spent on certain activities, with some claiming to spend up to 23.5 hours per day working, in childcare, or engaging in leisure. In Appendix Table A4, we address this issue by excluding, for each outcome, respondents in the top 5% of the outcome's distribution. This adjustment for outliers does not affect our conclusions.

using the full specification in Equation (1). None of the 15 point estimates are significant in this Figure. These unanimous results do not in addition depend on econometric specification. Table 4 mimics the structure of Table 3, and shows how the progressive inclusion of controls affects the estimated coefficients. Only three of the 60 estimated coefficients in Table 4 are significant at the ten per cent level. The firm conclusion here is that returning to the office had no effect on worker health and well-being.

However, even though all of the point estimates are insignificant, some are relatively large in size compared to average prevalence. This is particularly true for the diagnostic outcomes in Table 2. As such, while we can confidently conclude that there is no effect of the RTO mandate on having BMI outside of the normal range, either statistically or mathematically (the point estimate is 0.75% of the mean prevalence of 40%), it could be argued that there is not enough variation to be sure that the effects of most of the diagnoses are actual zeroes rather than Type-2 errors. We address this issue by using a series of count measures of the number of health and well-being issues, first overall and then separately for the more-objective outcomes (self-reported recent diagnoses by a healthcare professional, and self-reported BMI being outside of the 18.5-24.9 range) and the subjective conditions (severe depression, severe anxiety, high perceived stress, misery, worthless and lonely). These produce scales running from 0-15, 0-9 and 0-6 respectively. In addition to the count, we also consider a simple dummy variable for reporting at least one of the conditions (separately for overall, objective, and subjective) and carry out a principal component analysis of on the 15 original dummy variables (which produces five principal components).<sup>15</sup> Last, we can consider the continuous values of the original PHQ-9, GAD-7, PSS-10, life satisfaction, worthwhileness and loneliness measures, rather than their dummy-variable counterparts. The descriptive statistics for these 17 additional health and well-being variables appear at the foot of Table 2.

Table 5 lists the estimated RTO coefficients for these new health and well-being outcomes. This table takes the same form as Table 4, with results from four different specifications. Irrespective of the set of controls employed, there are almost no significant effects of RTO these alternative health and well-being measures. As well as being statistically insignificant, the effect sizes in

<sup>&</sup>lt;sup>15</sup> Rotated factor loadings and uniqueness are reported in Appendix Table A5.

Column (4) of Table 5 are all small, with the point estimates ranging from 0.1% to 9% of a standard deviation.<sup>16</sup>

The switch from home to office work in Italy therefore had no effect on worker health or wellbeing. This may well reflect its counterbalancing positive and negative consequences. The positive effects include the return to normal life, a better separation of work and private life, greater collaboration with colleagues and increased social contacts. On the negative side, there is a loss of flexibility affecting work-life balance, greater commuting costs, and a potential perception of distrust by the employer.

Appendix Tables A6 to A9 reproduce the analysis in Appendix Table A3 for the parallel trends in the health and well-being outcomes: only six of the 160 point estimates (thirty-two outcomes × five pre-reform observations) are significantly different from zero at the 10% level. Adjusting for multiple hypothesis testing, all of these estimates are insignificant. The last three rows in these tables confirm the absence of any RTO effect for each of the separate post-reform waves, with only five point estimates out of 96 being significant at the 10% level.

#### 4.3. Robustness checks

We carry out a set of robustness checks, the results of which appear in Appendix Table A10. Column (1) of this table lists the baseline estimates, as depicted in Figure 2 above, to serve as a benchmark. These tests are replicated for the effect of RTO on the alternative measures of health and well-being, working from home, and time-use measures (Appendix Tables A11 and A12).

As noted above, individuals in our main sample can transition between the public and private sectors, although we drop those who switched sectors after the announcement of the RTO mandate to avoid issues of post-reform self-selection into the treatment group. It could however be argued that there is still some selection from individuals who switched sector prior to the reform or, conversely, that we should include post-reform switchers in the sample to account for all of the effects of the RTO mandate. Columns (2) and (3) of Appendix Table A10 list the results for the samples including and then excluding all switchers (both pre- and post-reform) respectively. This

<sup>&</sup>lt;sup>16</sup> The only exception is the RTO coefficient for the GAD-7 anxiety scale, which is 12% of a standard deviation and is marginally significant in Column (4) of Table 5. This is consistent with Schifano *et al.* (2023), who show that working from home is associated with a reduction in anxiety.

has no substantive effect on our conclusion of little overall effect of going back to the office on health and well-being.

The interviews for COME-HERE Wave 7 took place during the latter half of October 2021, immediately following the implementation of the RTO mandate. As such, this wave might be too close to the implementation date for any effects to be detected. Column (4) of Appendix Table A10 shows that excluding this Wave 7 from the estimation sample does not change our conclusions.

De Chaisemartin and D'Haultfoeuille (2020) recently highlighted the potential bias introduced by negative weights in two-way fixed effects models, particularly in cases where treatment effects are heterogeneous over time and/or across groups. Column (5) shows that our results are not affected when applying the de Chaisemartin and D'Haultfoeuille (2020) DiD estimator.

The purpose of the RTO mandate was to bring public-sector workers back to the office. However, some of them (those in essential occupations) never left. Including the latter in the treatment group will likely bias the estimated coefficients towards zero. We thus consider a restricted sample excluding both public- and private-sector workers in healthcare, security, cleaning and transport (these are the industries with the lowest WFH probability pre-reform in our estimation sample). In the first row in Column (6) of Appendix Table A12 this exclusion increases the estimated post-reform drop in WFH (by around 25%), as expected. However, the treatment effects on health and well-being for this restricted group in Column (6) of Appendix Table A10 continue to be insignificant.

Moreover, DL n. 127/2021, approved on September 16<sup>th</sup> 2021, could potentially affect the results. This DL required all public- and private-sector workers to have a 'Green Pass' certificate in order to work starting from October 15<sup>th</sup> 2021. This certificate was issued to vaccinated individuals or to those who had recovered from COVID-19. Workers without this pass were not required to return to the office, but were not paid either. The Green Pass requirement remained in place until May 2022. While this pass applied to both public- and private-sector employees, the DL n. 172 of November 2021 required the former to have mandatory vaccinations starting from December 15<sup>th</sup> 2021(healthcare workers had already been subject to this vaccination requirement since April 2021: DL n. 44 of April 1<sup>st</sup> 2021). To see whether these different vaccination requirements affect the baseline estimates, Column (7) of Appendix Table A10 includes the respondent's vaccination status as an additional control variable. This does not affect the conclusions.

The results above used information from the Italian component of the COME-HERE survey. As there are four other countries in the survey (France, Germany, Spain and Sweden), we can also estimate a triple DiD of the form:

$$Y_{it} = \gamma_{1} Treat_{it} + \gamma_{2} Treat_{it} * Post_{t} + \gamma_{3} Treat_{it} * Italy_{i} + \gamma_{4} Post_{t} * Italy_{i} + \gamma_{5} Treat_{it} * Post_{t} * Italy_{i} + \gamma_{6} X_{it} + \mu_{i} + \lambda_{t} + \varepsilon_{it}$$
(3)

where  $Italy_i$  is a dummy for the respondent living in Italy. This inclusion of other countries allows us to control for any confounding cross-country macro shocks that may have affected workers in the public and private sectors differently. The coefficient of interest in this equation is  $\gamma_5$ , which captures the RTO treatment effect in Italy conditional on the changing public-private gap in the four other countries. The estimated coefficients appear in Column (8), and again show no effect of returning to the office.

The untreated control group in the main regressions above is private-sector workers. Although they were not directly treated, they could have been affected by RTO in other ways: for example, direct spillovers where one member of a household is in the private sector and another in the public sector, or indirectly via media or peer exposure. We can again use the cross-country dimension of the data, and instead use private-sector workers from France, Germany, Spain and Sweden as the control group. These results appear in Column (9), and are overall similar to those in the baseline specification in Column (1).

The last two columns of Appendix Table A10 address the issue of attrition. While the Wave 1 data were nationally-representative in terms of gender, age and region of residence, attrition rose over time, as is common in panel surveys. Column (10) weights the observations from Wave 2 onwards in order to maintain the initial national representativeness, and Column (11) applies an Inverse Probability Weighting (IPW) procedure to address selective attrition. The similarity of the results in both cases to those in the benchmark suggests little attrition bias.<sup>17</sup>

Some of the existing literature cited in the Introduction noted the moderating effect of some individual characteristics (such as gender, age and parity) on the health and well-being

<sup>&</sup>lt;sup>17</sup> We additionally check whether being exposed to the RTO mandate disproportionately affects the risk of attriting from the sample. The reform coefficient (standard error) in this case is -0.001 (0.027), confirming that public-sector employees do not leave the sample at higher rates compared to private-sector employees after the implementation of the RTO mandate.

consequences of working from home. To see whether these play a role here, Appendix Table A13, re-estimates Equation (1) separately in turn by sex, age, education, and the presence of children in the household. The first row of this table shows that the RTO mandate had a greater effect on the probability of working from home for women and older respondents. However, in the remaining rows there are no striking patterns in the health and well-being effects of returning to the office between different groups, with almost all of the estimated coefficients being insignificant.

#### 5. Conclusion

An Italian Ministerial Decree of September 23<sup>rd</sup> 2021 declared in-office work to be the norm for public-sector workers starting October 2021. We apply a difference-in-differences analysis of panel data, with private-sector workers being the control group, to establish the effect of a return to office work on workers' health and well-being. The mandate did indeed shift the place of work, with a notable reduction in working from home for public-sector workers, along with a greater number of days in which the respondent went outside and fewer working hours – which usually are associated with better health and wellbeing outcomes. However, we also find that the treated workers interacted significantly less with close friends and relatives following the introduction of the mandate. Overall, we have found no evidence that the RTO mandate affected any of the fifteen health and well-being outcomes we analysed, suggesting that these positive and negative aspects linked to a forced return to the office likely counterbalanced each other.

Given that workers' well-being and health are critical drivers of productivity (Bellet *et al.*, 2024) and strong predictors of turnover (Clark, 2001), the Italian experience with RTO provides useful insights for employers. First, they should not expect productivity gains to result directly from improved worker well-being or health from a return to the office. Any increase in productivity will more likely reflect other factors, such as greater collaboration, improved communication, and closer managerial supervision. In addition, unchanged health and well-being at home and at the office suggest little effect on absenteeism and turnover. While this stability helps prevent disruptions, it also underlines that office work will not improve retention (which will likely require a focus on broader aspects of employee satisfaction and engagement).

While the quasi-experimental nature of the Italian RTO mandate likely produces causal relationships, more work is needed to understand whether these results are context-sensitive. First, the RTO mandate only applied to public-sector workers, who are often associated with a stigma of

low productivity, particularly in Italy (Bugamelli *et al.*, 2018). Given the potential differences between Italian public-sector employees and their counterparts in other countries or sectors, further research is required in other countries and sectors. Second, the RTO decree appeared during the second year of the pandemic, when the state of emergency was still in place. Some of the positive and negative consequences of the return to the office in this context may well be different outside of a public-health crisis. While the COVID-19 pandemic showed us that radical changes to working arrangements are possible, and over a relatively short time period, much remains to be learned on the effects that these working arrangements have on worker well-being and health, on the one hand, and firm productivity on the other.

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### **Figures and Tables**

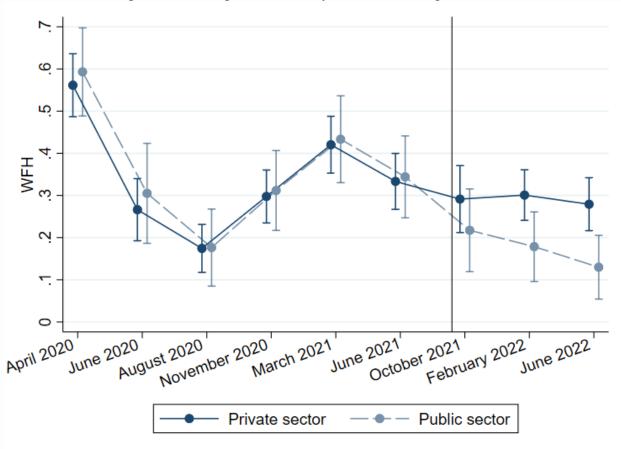


Figure 1: Working from Home by Treatment Group

*Notes*: This figure plots the prevalence of WFH over time, by treatment status, for the estimation sample of Italian workers aged 18-65 in the COME-HERE survey. The vertical line indicates the first COME-HERE survey wave at which the RTO mandate was effective. The error bars represent 95% confidence intervals.

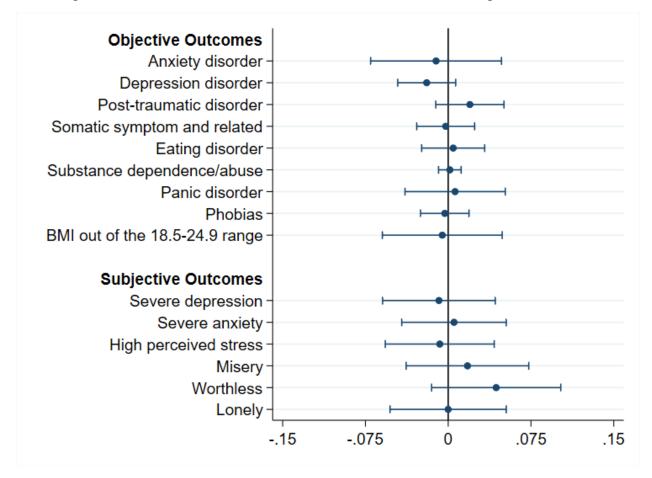


Figure 2: The Effect of the RTO Mandate on Health and Well-Being - Panel Results

*Notes:* The dots in the figure are the estimated  $\alpha_2$  coefficients from the full specification of Equation (1), controlling for survey-wave and individual fixed-effects, as well as time-varying characteristics (monthly net household income categories, a dummy for being married and a dummy for having at least one child in the household). These figures appear in column (4) of Table 4. The estimation sample is Italian workers aged 18-65 in the COME-HERE survey. The error bars represent 95% confidence intervals.

Name	Content
Law n. 81 "22/05/2017"	WFH for the private sector introduced in the legal framework.
	Written agreement needed between employee and employer.
DL n. 6 "23/02/2020"	WFH automatically in place for all employees in response to the
	COVID-19 pandemic.
DL n. 18 "17/03/2020"	WFH declared as the ordinary form of work for all workers (special
	focus on public employees). Simplified WFH procedure in place.
DPCM "23/09/2021"	RTO mandate for public-sector employees starting from October
	15 <sup>th</sup> 2021, with DL n. 139 "08/10/2021" delineating the RTO
	guidelines.
DM n. 149	The end of the simplified WFH procedure for private-sector
"22/08/2022"	employees on September 1 <sup>st</sup> 2022.

Table 1: The Italian Institutional Context Related to WFH over Time

*Notes:* DPCM stands for 'Decreto del Presidente del Consiglio dei Ministri', a decree emanating from the Prime Minister that does not need to be voted in Parliament. Similarly, DM is for 'Decreto Ministeriale', an administrative act emanating from a Minister in the exercise of their function. Last, DL is for 'Decreto Legge', a decree from the President of the Republic; in order to remain applicable, a Parliamentary vote is required to convert it into law.

Source: <u>https://www.gazzettaufficiale.it/</u> (official website of the Italian Republic where all laws and decrees must be published in order to be applicable).

Table 2: Descriptive Statistics – Est				
	Mean	SD	Min	Max
<u>Key variables:</u>				
Work from Home	0.32		0	1
Public Sector	0.30		0	1
Post-RTO	0.33		0	1
<u>Time use:</u>				
Work time (hours/day)	6.72	2.52	0	23.50
Childcare time (hours/day)	1.51	1.68	0	23.50
Household chores time (hours/day)	1.57	1.23	0	18.00
Leisure time (hours/day)	1.95	1.65	0	23.50
Media time (hours/day)	2.53	2.04	0	22.00
Went outside (times per week)	3.99	2.32	0	7
Physical activity (times per week)	2.32	1.94	0	7
Frequency of interactions:				
Less with household members	0.20		0	1
Less with relatives outside of household	0.40		0	1
Less with close friends	0.32		0	1
More with co-workers	0.18		0	1
Health and well-being:	0.10		0	-
<u>Dummy variables (objective conditions):</u>				
Anxiety disorder (Diagnosis)	0.12		0	1
Depressive disorder (Diagnosis)	0.02		0	1
Post-traumatic disorder (Diagnosis)	0.02		0	1
Somatic symptom and related (Diagnosis)	0.03		0	1
Eating disorders (Diagnosis)	0.02		0	1
Substance dependence/abuse (Diagnosis)	0.03		0	1
Panic disorder (Diagnosis)	0.01		0	1
Phobias (Diagnosis)	0.07		0	1
BMI outside of the 18.5-24.9 range	0.02		0	1
Dummy variables (subjective conditions):	0.40		0	1
	0.14		0	1
Severe Depression (PHQ-9 $\geq$ 15)	0.14		0 0	1 1
Severe Anxiety (GAD-7 $\geq$ 15)			•	
High perceived stress (PSS-10 – Top 10%)	0.10		0	1
Misery (Life Satisfaction – Bottom 10%)	0.11		0	1
Worthless (Worthwhile – Bottom 10%)	0.13		0	1
Lonely (ULS-8 – Top 10%)	0.11		0	1
<u>Additional variables:</u>	1 40	1.64	0	1.5
Sum of conditions	1.40	1.64	0	15
At least one condition	0.64	0.07	0	1
Sum of all objective conditions	0.71	0.86	0	9
At least one objective condition	0.53		0	1
Sum of all subjective conditions	0.68	1.17	0	6
At least one subjective condition	0.35		0	1
PCA Factor 1: Subjective mental health	0.00	1.00	-2.55	4.90
PCA Factor 2: Subjective well-being	0.00	1.00	-1.60	3.66
PCA Factor 3: Phobias, stress, anxiety, and panic disorder	-0.00	1.00	-2.10	10.55
PCA Factor 4: Somatisation and PTSD	-0.00	1.00	-2.85	7.73
PCA Factor 5: Dependence and food-related issues	-0.00	1.00	-3.93	8.39
Depression (PHQ9 score)	7.52	6.05	0	27
Anxiety (GAD7 score)	7.06	5.17	0	21
Stress (PSS score)	16.74	6.52	0	39
Life Satisfaction	6.25	2.05	0	10
Worthwhile	6.79	2.18	0	10
Loneliness (UCLA score)	17.56	4.97	8	32

Table 2: Descriptive Statistics – Estimation Sample

Note: These numbers refer to the 2358 workers (N=382) aged 18-65 in the Italian sample from the COME-HEREsurvey.

		Effect of RT	O Mandate	
-	(1)	(2)	(3)	(4)
Work from home	-0.136*** (0.042)	-0.137*** (0.042)	-0.135*** (0.043)	-0.141***
Daily hours spent in:	× ,	× ,	× /	× ,
Work	-0.163 <sup>**</sup>	-0.157 <sup>**</sup>	-0.151 <sup>**</sup>	-0.216 <sup>***</sup>
	(0.079)	(0.077)	(0.076)	(0.077)
Childcare	0.013	0.010	-0.027	0.022
	(0.083)	(0.083)	(0.080)	(0.080)
Household chores	-0.036	-0.038	-0.041	0.008
	(0.075)	(0.074)	(0.073)	(0.076)
Leisure	-0.003	0.002	0.023	0.031
	(0.075)	(0.076)	(0.076)	(0.073)
Media	-0.021	-0.020	-0.009	0.009
	(0.092)	(0.093)	(0.091)	(0.097)
Days per week:			· · · ·	· · · ·
Went outside	0.192 <sup>**</sup>	0.198 <sup>**</sup>	0.195 <sup>**</sup>	0.219 <sup>**</sup>
	(0.087)	(0.087)	(0.086)	(0.085)
Physical activity	-0.111	-0.108	-0.112	-0.042
	(0.084)	(0.084)	(0.084)	(0.074)
Frequency of interactions:				. ,
Less with household members	0.028	0.028	0.027	0.046
	(0.036)	(0.037)	(0.037)	(0.037)
Less with relatives outside of household	$0.077^{*}$	$0.076^{*}$	$0.075^{*}$	$0.092^{**}$
	(0.040)	(0.040)	(0.040)	(0.042)
Less with close friends	0.074	0.073	0.073	$0.097^{**}$
	(0.047)	(0.047)	(0.047)	(0.049)
More with co-workers	0.054	0.056	0.057	0.057
	(0.041)	(0.041)	(0.041)	(0.041)
Pre-determined Characteristics	No	Yes	Yes	No
Time-varying Characteristics	No	No	Yes	Yes
Individual Fixed Effects	No	No	No	Yes
Observations	2358	2358	2358	2358

Table 3: The Effect of the RTO Mandate on the Probability to Work from Home and Time Use – Pooled and Panel Results

*Notes:* These are linear regressions. Standard errors in parentheses are clustered at the individual level. The table lists the estimated  $\alpha_2$  coefficients from Equation (1). All of the regressions include survey wave fixed-effects. The predetermined characteristics are gender, age, age squared and a dummy for holding a university degree. The time-varying characteristics are monthly net household income categories, a dummy for being married and a dummy for having at least one child in the household. The estimation sample is Italian workers aged 18-65 in the COME-HERE survey. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% levels respectively.

Pooled a	and Panel R			
-		Effect of R		
	(1)	(2)	(3)	(4)
Anxiety disorder	-0.002	-0.001	-0.004	-0.011
	(0.030)	(0.030)	(0.030)	(0.030)
Depression disorder	-0.026*	-0.025*	-0.025*	-0.019
	(0.014)	(0.014)	(0.013)	(0.013)
Somatic symptom and related	-0.012	-0.012	-0.010	-0.002
	(0.014)	(0.014)	(0.014)	(0.013)
Post-traumatic disorder	0.014	0.014	0.015	0.020
	(0.015)	(0.015)	(0.015)	(0.016)
Eating disorder	-0.006	-0.006	-0.006	0.005
	(0.016)	(0.016)	(0.016)	(0.015)
Substance dependence/abuse	-0.004	-0.004	-0.003	0.001
	(0.005)	(0.005)	(0.005)	(0.005)
Panic disorder	-0.006	-0.005	-0.006	0.006
	(0.023)	(0.023)	(0.022)	(0.023)
Phobias	-0.006	-0.006	-0.007	-0.003
	(0.011)	(0.011)	(0.012)	(0.011)
BMI out of the 18.5-24.9 range	0.053	0.057	0.051	-0.005
_	(0.038)	(0.037)	(0.037)	(0.028)
Severe Depression (PHQ9 cutoff)	-0.012	-0.012	-0.009	-0.008
	(0.028)	(0.027)	(0.027)	(0.026)
Severe Anxiety (GAD7 cutoff)	0.001	0.000	-0.001	0.005
, ,	(0.024)	(0.024)	(0.024)	(0.024)
High Perceived Stress (PSS cutoff)	-0.016	-0.016	-0.015	-0.008
-	(0.028)	(0.028)	(0.028)	(0.025)
Misery	0.004	0.003	0.005	0.017
-	(0.028)	(0.028)	(0.028)	(0.028)
Worthless	0.037	0.038	0.041	0.043
	(0.030)	(0.030)	(0.030)	(0.030)
Lonely	-0.015	-0.016	-0.015	-0.000
2	(0.028)	(0.028)	(0.028)	(0.027)
Pre-determined Characteristics	No	Yes	Yes	No
Time-varying Characteristics	No	No	Yes	Yes
Individual Fixed Effects	No	No	No	Yes
Observations	2358	2358	2358	2358

 Table 4: The Effect of the RTO Mandate on Objective and Subjective Health and Well-Being Outcomes –

 Pooled and Panel Results

*Notes:* These are linear regressions. Standard errors in parentheses are clustered at the individual level. The table displays the estimated  $\alpha_2$  coefficients from Equation (1). All of the regressions include survey wave fixed-effects. The pre-determined characteristics are gender, age, age squared and a dummy for holding a university degree. The time-varying characteristics are monthly net household income categories, a dummy for being married and a dummy for having at least one child in the household. The estimation sample is Italian workers aged 18-65 in the COME-HERE survey. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% levels respectively.

	]	Effect of R	FO Mandate	e
	(1)	(2)	(3)	(4)
Sum of conditions	-0.001	0.002	0.004	0.026
	(0.082)	(0.081)	(0.078)	(0.065)
At least one condition	-0.009	-0.005	-0.009	-0.021
	(0.038)	(0.038)	(0.038)	(0.030)
Sum of all objective conditions	0.006	0.013	0.005	-0.001
	(0.083)	(0.083)	(0.081)	(0.066)
At least one objective condition	0.031	0.036	0.030	0.017
	(0.041)	(0.041)	(0.042)	(0.034)
Sum of all subjective conditions	-0.001	-0.002	0.006	0.043
-	(0.086)	(0.085)	(0.083)	(0.078)
At least one subjective condition	0.020	0.021	0.024	0.030
·	(0.040)	(0.039)	(0.039)	(0.037
PCA Factor 1: Subjective mental health	-0.042	-0.044	-0.043	-0.032
	(0.088)	(0.086)	(0.084)	(0.077)
PCA Factor 2: Subjective well-being	0.062	0.062	0.069	0.092
	(0.086)	(0.086)	(0.086)	(0.083
PCA Factor 3: Phobias, stress, anxiety, and panic	-0.107	-0.104	-0.108	-0.059
disorder	(0.086)	(0.086)	(0.081)	(0.076
PCA Factor 4: Somatisation and PTSD	-0.030	-0.032	-0.024	0.057
	(0.091)	(0.091)	(0.091)	(0.086
PCA Factor 5: Dependence and food-related issues	0.086	0.091	0.087	0.049
	(0.079)	(0.079)	(0.080)	(0.076
Depression (PHQ9 score)	-0.079	-0.079	-0.085	-0.018
	(0.085)	(0.081)	(0.080)	(0.070)
Anxiety (GAD7 score)	0.065	0.064	0.058	0.117*
	(0.077)	(0.075)	(0.074)	(0.067
Stress (PSS score)	-0.010	-0.011	-0.010	0.038
	(0.084)	(0.081)	(0.081)	(0.066
Life Satisfaction (0-10)	0.001	0.004	-0.002	-0.015
	(0.087)	(0.088)	(0.088)	(0.079)
Worthwhile (0-10)	-0.061	-0.062	-0.076	-0.064
	(0.087)	(0.087)	(0.086)	(0.080)
Loneliness (UCLA score)	-0.100	-0.098	-0.093	0.001
	(0.080)	(0.078)	(0.076)	(0.061)
Pre-determined Characteristics	No	Yes	Yes	No
Time-varying Characteristics	No	No	Yes	Yes
Individual Fixed Effects	No	No	No	Yes
Observations	2358	2358	2358	2358

Table 5: The Effect of the RTO Mandate on Objective and Subjective Health and Well-Being Outcomes – Additional Measures

*Notes:* These are linear regressions. Standard errors in parentheses are clustered at the individual level. The table displays the estimated  $\alpha_2$  coefficients from Equation (1). All of the regressions include survey wave fixed-effects. The pre-determined characteristics are gender, age, age squared and a dummy for holding a university degree. The time-varying characteristics are monthly net household income categories, a dummy for being married and a dummy for having at least one child in the household. The estimation sample is Italian workers aged 18-65 in the COME-HERE survey. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% levels respectively.

### **Online Appendix**

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	Mean	SD	Min	Max
<u>Controls</u>				
Age	43.14	10.46	20	65
Female	0.50		0	1
University degree	0.52		0	1
At least one child in HH	0.52		0	1
Living with a partner	0.64		0	1
Monthly net household income:				
0-1,250 euros	0.08		0	1
1,250 – 2,000 euros	0.29		0	1
2,000 - 4,000 euros	0.45		0	1
4,000 - 6,000 euros	0.08		0	1
6,000 - 8,000 euros	0.02		0	1
8,000 – 12,500 euros	0.01		0	1
Greater than 12,500 euros	0.01		0	1
Prefer not to say	0.06		0	1
Observations	2358			
Individuals	382			

*Note*: These numbers refer to the sample of Italian workers aged 18-65 in the COME-HERE survey.

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Table A2: The Effect of RTC	Mandate on V	′arıous 'Work	from Home' N	Measures – Pa	anel Results

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	Baseline	$P(WFH \ge 50\%)$	P(WFH=100%)	Share of WFH
	(1)	(2)	(3)	(4)
Effect of RTO Mandate	-0.141***	-0.134***	-0.100***	-0.308***
	(0.039)	(0.036)	(0.031)	(0.080)
Observations	2358	2358	2358	2358

*Notes:* These are linear regressions. Continuous dependent variables are standardised. Standard errors in parentheses are clustered at the individual level. The table lists the estimated  $\alpha_2$  coefficients from Equation (1). All of the regressions include individual and survey wave fixed-effects as well as time-varying characteristics (monthly net household income categories, a dummy for being married and a dummy for having at least one child in the household). The estimation sample is Italian workers aged 18-65 in the COME-HERE survey. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% levels respectively.

					T	ime Use						
	Work		Daily	hours spen	ıt in			of days per eek:	Fi	requency of	interaction	IS:
	from	Work	Childcare	Chores	Leisure	Media	Went outside	Physical activity	Less with HH members	Less with relatives outside of HH	Less with close friends	More with co- workers
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Treat x June 2020	-0.004	-0.095	-0.059	-0.032	0.168	-0.091	-0.184	-0.022	-0.059	0.080	0.104	-0.239 <sup>***</sup>
	(0.075)	(0.194)	(0.189)	(0.154)	(0.189)	(0.169)	(0.154)	(0.159)	(0.075)	(0.091)	(0.095)	(0.082)
Treat x August	-0.048	-0.372*	0.009	0.144	0.007	-0.158	-0.202	-0.062	-0.063	-0.104	-0.087	0.044
2020	(0.071)	(0.193)	(0.161)	(0.129)	(0.199)	(0.166)	(0.160)	(0.153)	(0.074)	(0.089)	(0.086)	(0.083)
Treat x November 2020	-0.065	-0.370 <sup>**</sup>	0.124	0.091	0.247	-0.019	-0.065	-0.097	-0.005	0.001	-0.030	-0.088
	(0.066)	(0.156)	(0.172)	(0.160)	(0.181)	(0.188)	(0.148)	(0.143)	(0.075)	(0.082)	(0.086)	(0.058)
Treat x March 2021	-0.071	-0.209	0.137	0.122	0.344 <sup>**</sup>	-0.088	-0.245	-0.022	0.035	-0.021	0.044	0.017
	(0.066)	(0.174)	(0.163)	(0.146)	(0.174)	(0.153)	(0.152)	(0.138)	(0.078)	(0.080)	(0.086)	(0.064)
Treat x June 2021	-0.065	-0.280 <sup>*</sup>	0.195	-0.136	0.102	0.012	-0.040	-0.087	-0.019	-0.078	-0.017	-0.013
	(0.069)	(0.164)	(0.175)	(0.147)	(0.173)	(0.162)	(0.151)	(0.142)	(0.069)	(0.086)	(0.086)	(0.072)
Treat x October 2021	-0.143*	-0.489 <sup>***</sup>	0.131	0.091	0.132	-0.054	0.171	-0.307*	0.031	0.056	0.083	0.060
	(0.079)	(0.183)	(0.186)	(0.144)	(0.165)	(0.174)	(0.172)	(0.169)	(0.077)	(0.093)	(0.091)	(0.083)
Treat x February 2022	-0.216 <sup>***</sup>	-0.642 <sup>***</sup>	0.031	-0.005	0.206	-0.159	-0.002	-0.090	0.052	0.183 <sup>**</sup>	0.108	-0.074
	(0.070)	(0.179)	(0.171)	(0.155)	(0.177)	(0.171)	(0.165)	(0.144)	(0.070)	(0.088)	(0.084)	(0.067)
Treat x June 2022	-0.191 <sup>**</sup>	-0.195	0.171	0.041	0.207	0.100	0.169	0.064	0.014	-0.032	0.080	0.089
	(0.074)	(0.202)	(0.167)	(0.125)	(0.168)	(0.198)	(0.158)	(0.164)	(0.071)	(0.085)	(0.082)	(0.077)
Observations	2358	2358	2358	2358	2358	2358	2358	2358	2358	2358	2358	2358

Table A3: Differences between Public-Sector and Private-Sector Workers over Time – Panel Results for the Probability to Work from Home and

*Notes:* These are linear regressions. Each column reports the estimated  $\beta_t$  coefficients from Equation (2) for different outcomes. Standard errors in parentheses are clustered at the individual level. All the regressions control for survey wave and individual fixed-effects, as well as time-varying characteristics (monthly net household income categories, a dummy for being married and a dummy for having at least one child in the household). The estimation sample is Italian workers aged 18-65 in the COME-HERE survey. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% levels respectively.

		Effect of RT	O Mandate	
	(1)	(2)	(3)	(4)
Daily hours spent in:	• •	• •	• •	• •
Work	-0.142**	-0.136**	-0.133**	-0.222***
	(0.068)	(0.066)	(0.065)	(0.062)
Childcare	-0.026	-0.028	-0.061	-0.020
	(0.073)	(0.073)	(0.070)	(0.071)
Household chores	-0.024	-0.027	-0.031	0.009
	(0.065)	(0.065)	(0.064)	(0.064)
Leisure	-0.001	0.005	0.017	0.025
	(0.067)	(0.068)	(0.068)	(0.066)
Media	-0.000	-0.000	0.010	0.024
	(0.067)	(0.066)	(0.066)	(0.062)
Pre-determined Characteristics	No	Yes	Yes	No
Time-varying Characteristics	No	No	Yes	Yes
Individual Fixed Effects	No	No	No	Yes

Table A4: The Effect of the RTO Mandate on Time Use – Pooled and Panel Results after Excluding Potential Outliers

*Notes:* These are linear regressions. Standard errors in parentheses are clustered at the individual level. The table displays the estimated  $\alpha_2$  coefficients from Equation (1). All of the regressions include survey wave fixed-effects. The predetermined characteristics are gender, age, age squared and a dummy for holding a university degree. The time-varying characteristics are monthly net household income categories, a dummy for being married and a dummy for having at least one child in the household. The estimation sample is Italian workers aged 18-65 in the COME-HERE survey. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% levels respectively.

Variable	Factor1	Factor2	Factor3	Factor4	Factor5	Uniqueness
Anxiety disorder	0.273	0.107	0.406	0.235	-0.066	0.690
Depression disorder	0.160	0.036	0.599	-0.040	-0.031	0.612
Somatic symptom and related	-0.064	0.024	0.054	0.716	-0.225	0.429
Post-traumatic disorder	0.149	-0.053	0.053	0.527	0.211	0.650
Eating disorder	0.013	0.065	0.147	0.487	0.404	0.573
Substance dependence/abuse	-0.033	-0.004	0.477	-0.004	0.454	0.565
Panic disorder	0.263	0.045	0.462	0.147	0.150	0.671
Phobias	0.037	0.081	0.571	0.185	-0.208	0.588
BMI out of normal range	0.010	0.040	-0.098	-0.084	0.732	0.445
Severe Depression (PHQ9 cutoff)	0.773	0.025	0.158	-0.048	0.049	0.372
Severe Anxiety (GAD7 cutoff)	0.758	0.114	0.117	-0.024	-0.059	0.394
High Perceived Stress (PSS cutoff)	0.576	0.350	-0.097	0.084	-0.029	0.529
Misery	0.131	0.853	0.020	0.029	0.042	0.253
Worthless	0.051	0.866	0.040	-0.007	-0.008	0.246
Lonely	0.512	0.166	-0.237	0.287	0.131	0.554

Table A5: Rotated Factor Loadings and Unique Variances

*Notes:* These are rotated factor loadings. The rotation of the loading matrix is performed using the orthogonal varimax approach. Rotated factor loadings greater than 0.4 are in bold. The estimation sample is Italian workers aged 18-65 in the COME-HERE survey.

	Anxiety disorder	Depressive disorder	Post- traumatic	Somatic symptom and related	Eating disorder	Substance dependence/ abuse	Panic disorder	Phobias	BMI out of the 18.5- 24.9 range
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treat x June 2020	0.010	0.035	-0.052	0.025	-0.053*	-0.025	-0.017	-0.024	-0.019
	(0.062)	(0.025)	(0.039)	(0.023)	(0.028)	(0.018)	(0.045)	(0.031)	(0.050)
Treat x August 2020	0.016	0.021	-0.021	0.046	-0.015	-0.012	0.038	-0.028	0.069
	(0.046)	(0.028)	(0.029)	(0.029)	(0.030)	(0.014)	(0.041)	(0.024)	(0.044)
Treat x November 2020	0.057	0.029	-0.031	0.021	-0.006	-0.008	-0.005	-0.007	-0.043
	(0.057)	(0.025)	(0.027)	(0.013)	(0.029)	(0.013)	(0.042)	(0.027)	(0.042)
Treat x March 2021	-0.020	$0.047^{*}$	-0.063*	0.015	-0.000	0.004	0.034	-0.024	0.008
	(0.061)	(0.025)	(0.033)	(0.024)	(0.034)	(0.021)	(0.044)	(0.034)	(0.042)
Treat x June 2021	0.004	0.016	-0.025	$0.041^{*}$	-0.033	-0.019	0.013	-0.007	0.007
	(0.048)	(0.020)	(0.030)	(0.024)	(0.031)	(0.013)	(0.042)	(0.027)	(0.046)
Treat x October 2021	0.063	0.018	-0.040	0.001	-0.044	-0.012	-0.000	-0.013	0.022
	(0.065)	(0.028)	(0.029)	(0.025)	(0.031)	(0.016)	(0.046)	(0.030)	(0.052)
Treat x February 2022	0.014	0.000	-0.012	0.009	-0.013	-0.005	-0.001	-0.014	0.020
ž	(0.055)	(0.025)	(0.034)	(0.019)	(0.029)	(0.013)	(0.045)	(0.029)	(0.048)
Treat x June 2022	-0.061	0.001	0.008	0.051*	0.015	-0.008	0.051	-0.023	-0.050
	(0.062)	(0.024)	(0.033)	(0.028)	(0.027)	(0.015)	(0.044)	(0.029)	(0.049)
Observations	2358	2358	2358	2358	2358	2358	2358	2358	2358

Table A6: Differences between Public-Sector and Private-Sector Workers over Time - Panel Results for Objective Health and Well-Being Outcomes

*Notes:* These are linear regressions. Each column reports the estimated  $\beta_t$  coefficients from Equation (2) for different outcomes. Standard errors in parentheses are clustered at the individual level. All the regressions control for survey wave and individual fixed-effects as well as time-varying characteristics (monthly net household income categories, a dummy for being married and a dummy for having at least one child in the household). The estimation sample is Italian workers aged 18-65 in the COME-HERE survey. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% levels respectively.

	Severe Depression	Severe Anxiety	High Perceived Stress	Misery	Worthless	Lonely
	(1)	(2)	(3)	(4)	(5)	(6)
Treat x June 2020	0.045	-0.049	0.008	0.043	-0.056	-0.053
	(0.064)	(0.043)	(0.061)	(0.046)	(0.049)	(0.047)
Treat x August 2020	0.004	-0.008	0.034	-0.020	-0.063	0.039
C C	(0.056)	(0.045)	(0.068)	(0.045)	(0.046)	(0.051)
Treat x November 2020	0.026	-0.053	-0.024	0.077	-0.042	0.026
	(0.053)	(0.051)	(0.054)	(0.053)	(0.051)	(0.045)
Treat x March 2021	0.063	0.002	-0.020	-0.032	-0.034	-0.041
	(0.052)	(0.047)	(0.060)	(0.051)	(0.056)	(0.050)
Treat x June 2021	0.077	-0.026	0.004	0.016	-0.035	-0.017
	(0.051)	(0.043)	(0.055)	(0.046)	(0.054)	(0.054)
Treat x October 2021	0.047	-0.015	-0.025	-0.015	-0.005	-0.053
	(0.058)	(0.051)	(0.059)	(0.054)	(0.061)	(0.052)
Treat x February 2022	-0.027	-0.051	-0.045	-0.017	-0.046	0.019
	(0.054)	(0.051)	(0.056)	(0.051)	(0.057)	(0.050)
Treat x June 2022	0.079	0.020	0.038	0.120**	0.074	-0.001
	(0.055)	(0.045)	(0.058)	(0.055)	(0.062)	(0.047)
Observations	2358	2358	2358	2358	2358	2358

Table A7: Differences between Public-Sector and Private-Sector Workers over Time – Panel
Results for Subjective Health and Well-Being Outcomes

*Notes:* These are linear regressions. Each column reports the estimated  $\beta_t$  coefficients from Equation (2) for different outcomes. Standard errors in parentheses are clustered at the individual level. All of the regressions control for survey wave and individual fixed-effects as well as time-varying characteristics (monthly net household income categories, a dummy for being married and a dummy for having at least one child in the household). The estimation sample is Italian workers aged 18-65 in the COME-HERE survey. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% levels respectively.

	Sum of	At least one	Sum of all objective	At least one	Sum of all subjective	At least one
	conditions	condition	conditions	objective condition	conditions	subjective condition
	(1)	(2)	(3)	(4)	(5)	(6)
Treat x June 2020	-0.130	0.038	-0.140	0.065	-0.054	0.051
	(0.146)	(0.063)	(0.158)	(0.063)	(0.140)	(0.071)
Treat x August 2020	0.050	0.058	0.131	0.145**	-0.013	0.007
-	(0.120)	(0.059)	(0.123)	(0.061)	(0.148)	(0.066)
Treat x November 2020	0.005	0.012	0.009	0.034	0.008	0.053
	(0.127)	(0.053)	(0.129)	(0.057)	(0.143)	(0.065)
Treat x March 2021	-0.029	0.007	0.001	0.025	-0.054	0.049
	(0.154)	(0.059)	(0.174)	(0.061)	(0.144)	(0.067)
Treat x June 2021	-0.003	-0.011	-0.004	0.056	0.016	0.083
	(0.133)	(0.057)	(0.142)	(0.059)	(0.142)	(0.068)
Treat x October 2021	-0.050	0.004	-0.005	0.090	-0.056	0.069
	(0.137)	(0.065)	(0.141)	(0.068)	(0.155)	(0.078)
Treat x February 2022	-0.105	-0.026	-0.001	0.088	-0.142	0.004
2	(0.132)	(0.058)	(0.135)	(0.058)	(0.151)	(0.070)
Treat x June 2022	0.187	0.004	-0.019	0.025	$0.282^{*}$	0.152**
	(0.146)	(0.061)	(0.138)	(0.065)	(0.159)	(0.074)
Observations	2358	2358	2358	2358	2358	2358

Table A8: Differences between Public-Sector and Private-Sector Workers over Time – Panel Results for the Probability to Work from Home and Alternative Health and Well-Being Outcomes – Part 1

*Notes:* These are linear regressions. Each column reports the estimated  $\beta_t$  coefficients from Equation (2) for different outcomes. Continuous dependent variables are standardised. Standard errors in parentheses are clustered at the individual level. All of the regressions control for survey wave and individual fixed-effects, as well as time-varying characteristics (monthly net household income categories, a dummy for being married and a dummy for having at least one child in the household). The estimation sample is Italian workers aged 18-65 in the COME-HERE survey. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% levels respectively.

			Alle	mative He	ann and w	en-Being Out	comes – Pa	rt Z			
	PCA	PCA	PCA	PCA	PCA	Depression	Anxiety	Stress	Life	Worthwhile	Loneliness
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	(PHQ9)	(GAD7)	(PSS)	Satisfaction		(UCLA score)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Treat x June 2020	-0.005	-0.006	-0.056	-0.184	-0.348*	-0.009	-0.067	-0.115	0.014	0.033	-0.142
	(0.137)	(0.153)	(0.202)	(0.159)	(0.191)	(0.136)	(0.129)	(0.135)	(0.132)	(0.144)	(0.126)
Treat x August 2020	0.109	-0.130	-0.108	0.136	-0.041	0.009	-0.025	-0.153	0.041	-0.073	-0.024
-	(0.159)	(0.150)	(0.178)	(0.179)	(0.153)	(0.125)	(0.138)	(0.144)	(0.133)	(0.126)	(0.126)
Treat x November 2020	-0.040	0.073	0.058	0.032	-0.162	-0.129	0.020	-0.128	-0.077	0.080	-0.078
	(0.141)	(0.167)	(0.167)	(0.136)	(0.132)	(0.115)	(0.131)	(0.119)	(0.144)	(0.142)	(0.116)
Treat x March 2021	0.043	-0.127	0.185	-0.222	-0.017	0.090	0.032	-0.196	0.079	0.033	-0.078
	(0.148)	(0.162)	(0.218)	(0.195)	(0.177)	(0.108)	(0.120)	(0.131)	(0.141)	(0.140)	(0.107)
Treat x June 2021	0.071	-0.044	-0.045	0.023	-0.240	0.045	-0.010	-0.008	0.121	0.085	0.019
	(0.132)	(0.160)	(0.165)	(0.155)	(0.164)	(0.116)	(0.118)	(0.118)	(0.145)	(0.139)	(0.117)
Treat x October 2021	0.020	-0.045	0.077	-0.241	-0.172	-0.034	0.031	-0.116	-0.030	-0.042	-0.131
	(0.156)	(0.170)	(0.171)	(0.179)	(0.164)	(0.124)	(0.132)	(0.137)	(0.161)	(0.153)	(0.114)
Treat x February 2022	-0.096	-0.101	-0.061	0.027	-0.007	-0.031	0.104	-0.143	0.130	-0.018	0.071
	(0.152)	(0.161)	(0.162)	(0.167)	(0.153)	(0.123)	(0.131)	(0.131)	(0.139)	(0.150)	(0.119)
Treat x June 2022	0.078	0.303*	-0.112	0.216	-0.089	0.011	0.190	0.075	-0.073	-0.034	-0.105
Trout A June 2022	(0.146)	(0.177)	(0.180)	(0.174)	(0.173)	(0.127)	(0.143)	(0.142)	(0.167)	(0.154)	(0.118)
Observations	2358	2358	2358	2358	2358	2358	2358	2358	2358	2358	2358

Table A9: Differences between Public-Sector and Private-Sector Workers over Time – Panel Results for the Probability to Work from Home and Alternative Health and Well-Being Outcomes – Part 2

*Notes:* These are linear regressions. Each column reports the estimated  $\beta_t$  coefficients from Equation (2) for different outcomes. Continuous dependent variables are standardised. Standard errors in parentheses are clustered at the individual level. All of the regressions control for survey wave and individual fixed-effects, as well as time-varying characteristics (monthly net household income categories, a dummy for being married and a dummy for having at least one child in the household). The estimation sample is Italian workers aged 18-65 in the COME-HERE survey. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% levels respectively.

Table A10: The Effect of the RTO Mandate on Objective and Subjective Health and Well-Being Outcomes – Robustness Checks									KS		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Anxiety disorder	-0.011	-0.022	-0.015	-0.034	0.058	0.002	-0.014	-0.029	-0.018	-0.006	-0.027
	(0.030)	(0.029)	(0.031)	(0.033)	(0.051)	(0.032)	(0.030)	(0.027)	(0.027)	(0.036)	(0.034)
Depression disorder	-0.019	-0.023*	-0.004	-0.026*	-0.002	-0.017	-0.019	-0.016	-0.018	-0.024	-0.025
	(0.013)	(0.014)	(0.010)	(0.014)	(0.019)	(0.012)	(0.013)	(0.013)	(0.012)	(0.016)	(0.018)
Somatic symptom and related	-0.002	-0.001	0.006	0.006	-0.003	-0.001	-0.004	0.009	$0.017^{*}$	-0.007	0.003
	(0.013)	(0.015)	(0.015)	(0.016)	(0.024)	(0.015)	(0.013)	(0.011)	(0.010)	(0.016)	(0.016)
Post-traumatic disorder	0.020	0.018	0.026	0.029	0.008	0.025	0.020	0.008	0.008	0.024	0.022
	(0.016)	(0.015)	(0.018)	(0.020)	(0.030)	(0.018)	(0.016)	(0.014)	(0.014)	(0.018)	(0.017)
Eating disorder	0.005	0.007	0.012	0.016	$0.041^{*}$	0.008	0.003	-0.009	-0.010	0.005	0.005
	(0.015)	(0.015)	(0.015)	(0.016)	(0.021)	(0.016)	(0.015)	(0.011)	(0.011)	(0.016)	(0.016)
Substance dependence/abuse	0.001	0.002	0.001	0.003	0.005	0.002	0.002	-0.006	$-0.006^{*}$	0.001	0.001
	(0.005)	(0.005)	(0.005)	(0.005)	(0.010)	(0.006)	(0.005)	(0.004)	(0.003)	(0.006)	(0.006)
Panic disorder	0.006	-0.004	0.029	0.012	0.052	0.004	0.006	-0.010	0.001	0.019	-0.000
	(0.023)	(0.022)	(0.023)	(0.027)	(0.037)	(0.023)	(0.023)	(0.020)	(0.020)	(0.033)	(0.025)
Phobias	-0.003	-0.004	-0.014	-0.006	0.026	-0.009	-0.004	-0.014	-0.001	-0.006	-0.001
	(0.011)	(0.011)	(0.010)	(0.014)	(0.018)	(0.011)	(0.011)	(0.011)	(0.010)	(0.012)	(0.014)
BMI out of the 18.5-24.9 range	-0.005	-0.006	-0.002	-0.014	0.014	0.002	-0.006	0.001	0.014	-0.001	0.008
	(0.028)	(0.027)	(0.031)	(0.030)	(0.038)	(0.031)	(0.028)	(0.025)	(0.023)	(0.031)	(0.032)
Severe Depression (PHQ9 cutoff)	-0.008	-0.002	0.001	-0.019	-0.050	-0.016	-0.005	-0.011	0.001	-0.015	-0.020
	(0.026)	(0.026)	(0.029)	(0.027)	(0.046)	(0.027)	(0.026)	(0.023)	(0.021)	(0.030)	(0.030)
Severe Anxiety (GAD7 cutoff)	0.005	0.001	0.004	0.004	0.034	-0.007	0.005	-0.007	0.003	0.004	0.010
	(0.024)	(0.024)	(0.026)	(0.027)	(0.042)	(0.025)	(0.024)	(0.020)	(0.019)	(0.026)	(0.028)
High Perceived Stress (PSS cutoff)	-0.008	-0.006	-0.023	-0.006	-0.018	0.000	-0.008	-0.015	-0.009	-0.009	0.001
	(0.025)	(0.024)	(0.027)	(0.029)	(0.042)	(0.028)	(0.025)	(0.024)	(0.022)	(0.027)	(0.029)
Misery	0.017	0.020	0.029	0.037	0.004	0.014	0.015	0.019	0.051	0.018	0.023
	(0.028)	(0.028)	(0.031)	(0.031)	(0.041)	(0.032)	(0.028)	(0.027)	(0.026)	(0.031)	(0.032)
Worthless	0.043	0.041	0.014	0.050	-0.012	0.051	0.041	$0.042^{*}$	0.071***	0.047	$0.061^{*}$
	(0.030)	(0.029)	(0.032)	(0.033)	(0.048)	(0.033)	(0.030)	(0.025)	(0.024)	(0.032)	(0.033)
Lonely	-0.000	0.009	0.020	0.018	0.004	0.007	-0.001	-0.017	0.003	0.007	0.011
	(0.027)	(0.027)	(0.030)	(0.028)	(0.046)	(0.030)	(0.027)	(0.024)	(0.023)	(0.028)	(0.030)
Observations	2358	2505	2043	2162	2358	2116	2358	11373	7373	2358	2358

Table A10: The Effect of the RTO Mandate on Objective and Subjective Health and Well-Being Outcomes – Robustness Checks

Notes: These are linear regressions. Standard errors in parentheses are clustered at the individual level. The table displays the estimated  $\alpha_2$  coefficients from Equation (1). All the regressions include survey wave and individual fixed-effects as well as time-varying characteristics (monthly net household income categories, a dummy for being married and a dummy for having at least one child in the household). Column (1) reproduces the benchmark results from Figure 2. The sample in column (2) only includes workers who switched from the private to public sector or vice-versa, while the sample in column (3) excludes all those who switched sector. The sample in column (4) excludes Wave 7. The treatment effects in column (5) are estimated using the method in de Chaisemartin and D'Hautfoeuille (2020). Column (6) excludes workers in key sectors with low pre-treatment rates of WFH (healthcare, security, cleaning, and transport). Column (7) includes respondents' vaccination status as an additional control. Column (8) shows the triple DiD results from Equation (3), and column (9) uses private-sector workers in France, Germany, Spain and Sweden as the control group. Columns (10) and (11) respectively use cross-sectional and IPW weights to account for attrition. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% levels respectively.

Table A11: The Effect of the RTO Mandate on Alternative Objective and Subjective Health and Well-Being Outcomes – Robustness Checks

Table AII: The Effect o	I the RIO Ma		5	cuve and Su	bjecuve Hea	Ith and well-	U		siness Check		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Sum of conditions	0.026	0.019	0.051	0.045	0.101	0.040	0.021	-0.048	0.054	0.035	0.044
	(0.065)	(0.062)	(0.071)	(0.071)	(0.117)	(0.071)	(0.065)	(0.060)	(0.057)	(0.074)	(0.074)
At least one condition	-0.021	-0.020	-0.033	-0.028	0.026	-0.006	-0.019	-0.035	-0.007	-0.004	-0.011
	(0.030)	(0.029)	(0.034)	(0.032)	(0.047)	(0.032)	(0.030)	(0.026)	(0.024)	(0.035)	(0.034)
Sum of all objective conditions	-0.011	-0.037	0.045	-0.017	$0.231^{*}$	0.018	-0.017	-0.086	-0.016	0.005	-0.017
-	(0.066)	(0.064)	(0.073)	(0.072)	(0.128)	(0.072)	(0.067)	(0.063)	(0.060)	(0.083)	(0.074)
At least one objective condition	0.017	0.009	0.030	0.011	0.073	0.027	0.018	-0.003	0.016	0.029	0.009
-	(0.034)	(0.032)	(0.039)	(0.036)	(0.048)	(0.037)	(0.034)	(0.028)	(0.027)	(0.039)	(0.038)
Sum of all subjective conditions	0.043	0.054	0.038	0.072	-0.033	0.042	0.040	-0.001	0.088	0.045	0.074
-	(0.078)	(0.075)	(0.085)	(0.084)	(0.122)	(0.084)	(0.077)	(0.071)	(0.068)	(0.084)	(0.087)
At least one subjective condition	0.030	0.036	0.053	0.035	-0.041	0.027	0.030	0.012	$0.060^{*}$	0.031	0.027
·	(0.037)	(0.036)	(0.039)	(0.038)	(0.054)	(0.041)	(0.037)	(0.034)	(0.031)	(0.039)	(0.040)
PCA Factor 1: Subjective mental health	-0.032	-0.028	-0.002	-0.051	-0.028	-0.043	-0.027	-0.076	-0.046	-0.028	-0.041
-	(0.077)	(0.077)	(0.086)	(0.080)	(0.134)	(0.083)	(0.077)	(0.066)	(0.063)	(0.084)	(0.083)
PCA Factor 2: Subjective well-being	0.092	0.093	0.043	0.137	-0.006	0.104	0.081	0.081	0.172**	0.098	0.139
	(0.083)	(0.082)	(0.093)	(0.093)	(0.127)	(0.092)	(0.083)	(0.074)	(0.072)	(0.090)	(0.092)
PCA Factor 3: Phobias, stress, anxiety, and	-0.059	-0.101	-0.044	-0.114	0.203	-0.078	-0.057	-0.131**	-0.098*	-0.074	-0.111
panic disorder	(0.076)	(0.076)	(0.078)	(0.083)	(0.128)	(0.078)	(0.076)	(0.064)	(0.056)	(0.094)	(0.090)
PCA Factor 4: Somatisation and PTSD	0.057	0.069	0.120	0.155	0.137	0.094	0.045	0.030	0.074	0.063	0.093
	(0.086)	(0.091)	(0.095)	(0.097)	(0.135)	(0.097)	(0.087)	(0.071)	(0.067)	(0.096)	(0.095)
PCA Factor 5: Dependence and	0.049	0.058	0.092	0.088	0.102	0.078	0.055	-0.028	-0.044	0.078	0.060
food-related issues	(0.076)	(0.075)	(0.080)	(0.087)	(0.121)	(0.085)	(0.076)	(0.065)	(0.061)	(0.085)	(0.089)
Depression (PHQ9 score)	-0.018	-0.039	-0.027	-0.016	-0.084	-0.045	-0.016	-0.037	0.041	-0.001	-0.003
	(0.070)	(0.069)	(0.080)	(0.080)	(0.114)	(0.074)	(0.071)	(0.066)	(0.062)	(0.080)	(0.089)
Anxiety (GAD7 score)	0.117*	0.072	0.108	0.150*	0.137	0.132*	0.114*	0.030	0.119**	0.133*	0.133
	(0.067)	(0.068)	(0.076)	(0.079)	(0.108)	(0.070)	(0.068)	(0.064)	(0.060)	(0.074)	(0.086)
Stress (PSS score)	0.038	0.029	0.040	0.065	-0.139	0.079	0.034	0.032	0.062	0.044	0.081
	(0.066)	(0.063)	(0.076)	(0.074)	(0.097)	(0.070)	(0.066)	(0.062)	(0.058)	(0.069)	(0.070)
Life Satisfaction (0-10)	-0.015	-0.015	-0.033	-0.017	-0.019	-0.018	-0.007	-0.043	-0.139**	-0.032	-0.037
	(0.079)	(0.077)	(0.088)	(0.088)	(0.107)	(0.086)	(0.079)	(0.074)	(0.068)	(0.087)	(0.090)
Worthwhile (0-10)	-0.064	-0.080	-0.050	-0.064	0.014	-0.080	-0.056	-0.107	-0.170**	-0.067	-0.077
× /	(0.080)	(0.078)	(0.090)	(0.088)	(0.123)	(0.088)	(0.080)	(0.072)	(0.067)	(0.088)	(0.088)
Loneliness (UCLA score)	0.001	0.009	0.013	0.038	-0.062	0.035	-0.004	-0.012	0.053	0.013	0.011
×	(0.061)	(0.058)	(0.070)	(0.068)	(0.085)	(0.068)	(0.061)	(0.057)	(0.053)	(0.066)	(0.068)
Observations	2358	2505	2043	2162	2358	2116	2358	11373	7373	2358	2358

*Notes:* These are linear regressions. Standard errors in parentheses are clustered at the individual level. The table displays the estimated  $\alpha_2$  coefficients from Equation (1). All the regressions include survey wave and individual fixed-effects as well as time-varying characteristics (monthly net household income categories, a dummy for being married and a dummy for having at least one child in the household). Column (1) reproduces the benchmark results from Figure 2. The sample in column (2) only includes workers who switched from the private to public sector or vice-versa, while the sample in column (3) excludes all those who switched sector. The sample in column (4) excludes Wave 7. The treatment effects in column (5) are estimated using the method in de Chaisemartin and D'Hautfoeuille (2020). Column (6) excludes workers in key sectors with low pre-treatment rates of WFH (healthcare, security, cleaning, and transport). Column (7) includes respondents' vaccination status as an additional control. Column (8) shows the triple DiD results from Equation (3), and column (9) uses private-sector workers in France, Germany, Spain and Sweden as the control group. Columns (10) and (11) respectively use cross-sectional and IPW weights to account for attrition. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% levels respectively.

Tab	Table A12: The Effect of RTO Mandate the Probability to Work from Home and Time Use – Robustness Checks										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Work from home	-0.141***	-0.129***	-0.139***	-0.159***	-0.137*	-0.174***	-0.143***	-0.132***	-0.146***	-0.133***	-0.127
	(0.039)	(0.039)	(0.044)	(0.044)	(0.076)	(0.044)	(0.040)	(0.039)	(0.037)	(0.046)	(0.049)
Daily hours spent in:											
Work	-0.216***	-0.161**	-0.191**	-0.199**	-0.213**	-0.186**	-0.217***	-0.064	-0.083	-0.143	-0.172**
	(0.077)	(0.075)	(0.088)	(0.093)	(0.091)	(0.086)	(0.077)	(0.067)	(0.062)	(0.122)	(0.082)
Childcare	0.022	0.045	0.064	-0.007	-0.145	-0.024	0.020	-0.010	-0.003	0.019	0.033
	(0.080)	(0.077)	(0.087)	(0.084)	(0.127)	(0.086)	(0.080)	(0.063)	(0.051)	(0.086)	(0.089)
Household chores	0.008	0.042	0.006	-0.013	$0.279^{**}$	0.039	0.002	-0.030	-0.021	0.052	0.050
	(0.076)	(0.071)	(0.085)	(0.082)	(0.123)	(0.079)	(0.076)	(0.061)	(0.059)	(0.085)	(0.087)
Leisure	0.031	-0.006	0.049	0.037	0.166	0.011	0.031	-0.012	-0.076	0.029	0.019
	(0.073)	(0.073)	(0.076)	(0.082)	(0.120)	(0.082)	(0.073)	(0.061)	(0.057)	(0.086)	(0.084)
Media	0.009	0.036	0.020	0.016	-0.174	-0.005	0.010	0.015	0.020	0.033	0.040
	(0.097)	(0.093)	(0.114)	(0.106)	(0.186)	(0.111)	(0.099)	(0.070)	(0.066)	(0.108)	(0.099)
Days per week:											
Went outside	0.219**	0.192**	$0.249^{***}$	$0.207^{**}$	0.049	0.215**	0.231***	0.164**	0.094	$0.247^{***}$	$0.184^{*}$
	(0.085)	(0.082)	(0.095)	(0.096)	(0.120)	(0.091)	(0.085)	(0.083)	(0.080)	(0.092)	(0.096)
Physical activity	-0.042	-0.017	-0.035	0.024	-0.103	-0.026	-0.039	-0.067	-0.051	-0.030	-0.037
	(0.074)	(0.070)	(0.078)	(0.082)	(0.132)	(0.083)	(0.074)	(0.068)	(0.064)	(0.081)	(0.085)
Frequence of interactions:											
Less with HH members	0.046	0.047	0.060	0.044	-0.060	0.045	0.047	0.032	0.035	0.038	0.022
	(0.037)	(0.036)	(0.039)	(0.039)	(0.077)	(0.041)	(0.037)	(0.035)	(0.034)	(0.042)	(0.043)
Less with relatives outside	$0.097^{**}$	$0.080^*$	0.083	$0.100^{*}$	0.241***	$0.101^{*}$	$0.098^{**}$	0.101**	0.071	$0.101^{*}$	$0.094^{*}$
of HH	(0.049)	(0.047)	(0.054)	(0.051)	(0.084)	(0.053)	(0.049)	(0.046)	(0.045)	(0.052)	(0.054)
Less with close friends	0.092**	$0.100^{**}$	0.108**	0.092**	0.110	$0.083^{*}$	0.094**	$0.087^{**}$	0.073**	0.092**	0.097**
	(0.042)	(0.041)	(0.044)	(0.045)	(0.070)	(0.045)	(0.042)	(0.038)	(0.036)	(0.045)	(0.049)
More with co-workers	0.057	$0.065^{*}$	0.065	0.034	0.065	$0.075^{*}$	0.055	0.044	0.028	0.061	0.037
	(0.041)	(0.039)	(0.045)	(0.045)	(0.071)	(0.043)	(0.041)	(0.039)	(0.037)	(0.045)	(0.048)
Observations	2358	2505	2043	2162	2358	2116	2358	11373	7373	2358	2358

Notes: These are linear models. Standard errors in parentheses are clustered at the individual level. When not specified, the sample size is equal to the 2,358 Italian workers aged 18-65 in the COME-HERE survey. The table displays the estimated  $\alpha_2$  coefficients from Equation (1). All the regressions include survey wave and individual fixed-effects, as well as timevarying characteristics (monthly net household income categories, a dummy for being married and a dummy for having at least one child in the household). Column (1) reproduces the benchmark results from Table 3. The sample in column (2) includes workers who switched from the private to public sector or vice-versa, while the sample in column (3) excludes all those who switched sector. The sample in column (4) excludes Wave 7. The treatment effects in column (5) are estimated using the method in de Chaisemartin and D'Hautfoeuille (2020). Column (6) excludes workers in key sectors with low pre-treatment rates of WFH (healthcare, security, cleaning, and transport). Column (7) includes respondents' vaccination status as an additional control. Column (8) shows the triple DiD results from Equation (3), and column (9) uses private-sector workers in France, Germany, Spain and Sweden as the control group. Columns (10) and (11) respectively use cross-sectional and IPW weights to account for attrition. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% levels respectively.

		Table	A13: Heterog	5 5				
	Men	Women	Below	Above	No University	University	Without	With
			Median Age	Median Age	Degree	Degree	children	children
Work From Home	-0.057	-0.225***	-0.072	-0.181***	-0.109**	-0.169***	-0.168***	-0.129**
	(0.052)	(0.057)	(0.064)	(0.049)	(0.049)	(0.063)	(0.057)	(0.055)
Anxiety disorder	0.043	-0.055	-0.079*	0.052	0.011	-0.035	0.014	-0.042
	(0.034)	(0.048)	(0.046)	(0.038)	(0.045)	(0.040)	(0.036)	(0.047)
Depressive disorder	-0.026	-0.014	-0.035	-0.010	-0.011	-0.031	-0.016	-0.025
	(0.022)	(0.015)	(0.024)	(0.014)	(0.018)	(0.019)	(0.012)	(0.023)
Somatic symptom and related	-0.012	0.004	0.023	-0.024	-0.001	-0.001	0.013	-0.013
	(0.019)	(0.018)	(0.021)	(0.018)	(0.019)	(0.019)	(0.022)	(0.017)
Post-traumatic disorder	$0.046^{*}$	-0.004	-0.002	0.036	0.024	0.011	0.015	0.032
	(0.026)	(0.019)	(0.016)	(0.023)	(0.019)	(0.027)	(0.016)	(0.026)
Eating disorder	-0.010	0.013	0.000	0.016	-0.001	0.009	0.003	0.011
-	(0.018)	(0.023)	(0.025)	(0.018)	(0.018)	(0.024)	(0.020)	(0.021)
Substance dependence/abuse	0.000	0.004	-0.001	0.004	0.002	-0.003	0.002	-0.001
-	(0.011)	(0.004)	(0.006)	(0.009)	(0.005)	(0.008)	(0.007)	(0.008)
Panic disorder	$0.057^{*}$	-0.043	-0.051	0.060**	0.033	-0.019	-0.027	0.016
	(0.034)	(0.031)	(0.035)	(0.030)	(0.037)	(0.028)	(0.029)	(0.035)
Phobias	-0.004	0.001	-0.011	0.004	0.013	-0.022	-0.004	0.003
	(0.014)	(0.017)	(0.024)	(0.008)	(0.013)	(0.019)	(0.010)	(0.019)
BMI out of normal range	-0.015	0.004	0.073	-0.069*	-0.009	0.001	-0.019	0.011
-	(0.029)	(0.046)	(0.047)	(0.036)	(0.038)	(0.039)	(0.038)	(0.039)
Depression (PHQ9 cutoff)	-0.019	-0.005	-0.008	0.000	0.001	0.002	-0.061*	0.032
• • • • •	(0.040)	(0.035)	(0.038)	(0.035)	(0.035)	(0.039)	(0.036)	(0.038)
Anxiety (GAD7 cutoff)	0.044	-0.033	0.025	-0.018	-0.010	0.033	-0.079**	0.072**
	(0.030)	(0.038)	(0.039)	(0.030)	(0.032)	(0.039)	(0.036)	(0.033)
High Perceived Stress (PSS cutoff)	-0.012	-0.010	0.058	-0.051*	-0.011	-0.002	-0.033	0.009
	(0.032)	(0.039)	(0.042)	(0.030)	(0.035)	(0.035)	(0.039)	(0.034)
Misery	0.048	-0.013	0.038	0.006	0.049	-0.022	-0.024	0.054
-	(0.038)	(0.041)	(0.041)	(0.037)	(0.034)	(0.045)	(0.046)	(0.034)
Worthless	0.067	0.026	0.113**	-0.018	0.035	0.059	0.079*	0.012
	(0.044)	(0.041)	(0.047)	(0.041)	(0.042)	(0.043)	(0.046)	(0.040)
Lonely	0.033	-0.028	0.043	-0.034	-0.050	0.068	-0.003	0.011
-	(0.039)	(0.036)	(0.038)	(0.037)	(0.031)	(0.043)	(0.044)	(0.034)
Observations	1179	1179	1198	1160	1306	1052	1139	1219
N 11 11 1 2 1 1						4		

Table A13: Heterogeneity analysis

*Notes:* These are linear regressions. Standard errors in parentheses are clustered at the individual level. The table displays the estimated  $\alpha_2$  coefficients from Equation (1). All of the regressions include survey wave fixed-effects. The pre-determined characteristics are gender, age, age squared and a dummy for holding a university degree. The time-varying characteristics are monthly net household income categories, a dummy for being married and a dummy for having at least one child in the household. The estimation sample is Italian workers aged 18-65 in the COME-HERE survey. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% levels respectively.