

REMOTE WORKING DURING COVID-19 OUTBREAK: WORKERS' WELL-BEING AND PRODUCTIVITY

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Abstract: At the beginning of 2020 the outbreak of COVID-19 imposed social distancing and the transition to Remote Working (RW) all over the world. We investigate the multifaceted implication of this massive change exploiting data collected by a large Italian public administration on its employees' satisfaction and perceptions towards RW. The analysis is developed along three perspectives: general attitude toward RW; the impact of RW on productivity; the implications of RW on work-life balance, with a focus on gender differences. Results show that respondents have a positive attitude towards RW and would like to continue to adopt this working arrangement once the pandemic is over, the most of them expressing preference for a hybrid model, with RW combined to office work. Moreover, despite respondents largely report an increase in their productivity under RW, results show that for the period under investigation RW did not affect productivity. Finally, our results contain implications in terms of personal well-being differences among genders: the overlap of domestic and working spaces induced by RW seems to leave workers, especially women, struggling to reconcile between professional and personal needs.

Keywords: remote working, telework, gender, public administration, Italy.

J.E.L. Classification: J28; D13; H38.

1. Introduction

The spread of the COVID-19 pandemic overturned the lives of millions of individuals. The need to adopt containment measures forced people to maintain social distancing and dramatically impacted their way of living and working all over the world.

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Italy was the first European country to be hit by COVID-19. In response to the health emergency, the Italian government implemented severe restrictions to travel and social interactions, which have also implied a rapid transition to remote working (RW), both in the private and public sectors. This type of work organization was introduced into Italian legislation¹ only a few years before the outbreak of the COVID-19 pandemic and its initial diffusion throughout the Italian labour market was quite limited. Subsequently, the COVID-19 pandemic caused a profound upheaval in work organization. The shock was particularly intense for the Italian public sector, in which this work arrangement was practically a novelty. In order to protect public health, RW became the «standard» working arrangement for public employees, with the exception of a limited number of employees for whom it was not feasible (e.g. public transport workers, police and hospital employees).

As RW will probably remain after the pandemic, it is important to investigate its impacts on employees and organizations by addressing the following questions: How has this transition been perceived by workers? Did the widespread adoption of RW have a positive impact on workers' well-being, satisfaction and productivity? If RW had a positive impact, have the improvements in work-life balance been equally distributed among genders? Answering these questions can help in understanding how to make this change effective both in terms of individual needs and productivity implications.

In this paper, we exploit the results of a survey conducted by the Italian Social Security Administration (INPS), one of the largest organizations in the Italian public administration², in order to collect information about its employees' satisfaction and perceptions of RW. Data in the survey was obtained from employees located all over the country which shed light on general attitudes towards RW and its consequences for work-life balance. In order to inspect how variations in RW usage correlate to productivity variations, we also use data on a productivity index at territorial unit level (429 units).

The survey was conducted in July 2020, at the end of the first lockdown experienced by the country. Our results show that, despite some critical elements (i.e. lack of social interactions), respondents expressed a positive attitude towards RW and would like to continue to use this work arrangement, though not exclusively. In particular, young employees appreciated working

¹ Law n. 81/2017 titled «Measures for protecting self-employment and favouring flexible arrangements in time and places for subordinate work» introduces in Chapter II the concept of «agile work» that is defined as a tool to increase competitiveness and improve work-life balance for employees.

² This public administration covers the entire country, with approximately 27,000 employees distributed over more than 400 agencies.

remotely, while managers appeared to be more sceptical. We also find that attitudes towards RW were quite similar among genders; however, a low level of collaboration in housework by family members boosted a negative perception of RW, especially for women. As regards the relationship between RW and performance, consistently with findings emerging from other studies, we show that workers reported an increase in their productivity. To test how employees' perceptions correlate with effective performance, we complement survey information with data on performance at local production unit level. This allows us to overcome the limits that typically affect analysis based on self-reported measures of performance. We find that the relationship between RW and productivity is weak and not statistically significant.

These results add to the literature examining RW diffusion during the pandemic and how this sharp organizational change has been perceived by workers. In addition, thanks to data on productivity, we provide an analysis of the relationship between perceived and effective productivity and on the relationship between variations in RW usage and variations in effective performance that, to the best of our knowledge, has not yet been investigated.

The remainder of the paper is organised as follows: Section 2 contextualizes the topic and discusses the literature on the impact of RW on workers' perceptions. Section 3 presents the survey and the data used for our analysis. Section 4 discusses the results along three dimensions: general attitudes towards RW, the impact on performance and the implications on employees' personal sphere. Section 5 concludes.

2. *RW, workers' experience and well-being*

According to Eurofound and the International Labour Office (2017), two main elements influenced the spread of RW across countries in the pre-COVID era: countries' economic structure and technological development. To these factors one should add work culture, since flexible working arrangements involve aspects that go beyond technical dimensions, such as work relationships, control and trust, as well as managerial skills in work coordination and organization.

As regards the advantages and disadvantages perceived by workers, the existing literature shows that they depend on individual and family situations, the degree of autonomy in working tasks as well as the way in which RW is implemented. Typically, workers involved in flexible work arrangements report an improvement in their wellbeing and a decrease in their levels of stress. These positive effects are at least partially due to the reduction in commuting time, which has been reallocated to personal or work activities, with a positive

impact on motivation. Some experimental evidence also suggests that flexible arrangements have a positive impact on productivity at the firm level, for instance, the findings of Bloom *et al.* (2015) which show a positive relationship between working from home and productivity for workers involved in routine-based tasks in a Chinese call centre. Angelici and Profeta (2020) find evidence of a causal and positive impact of eliminating constraints on time and place of work for one day a week on the wellbeing and productivity of workers.

Nevertheless, RW can also come with some costs. Working from home is often associated with a sense of isolation (Bloom *et al.*, 2015) and to the expansion of working hours (Eurofound and the International Labour Office, 2017). The potential for an easier balancing of working and private life can result in a blurring of boundaries, with an overlap of spheres normally avoided when work activity is limited to firm premises (Eurofound and the International Labour Office, 2017). In line with these assumptions, Song and Gao (2018) report that working from home is associated with a reduction of subjective wellbeing, since both men and women experience greater stress.

The tension between the elements that positively affect productivity and those that have detrimental effects suggests that there may exist an optimal level of RW that depends on a number of job and individual characteristics (OECD, 2020).

The advantages of RW are often discussed from a gender perspective and, especially in public debates, RW is depicted as a tool favouring the reconciliation of public and private roles, thus increasing women's participation in the labour market. Evidence suggests that women, especially those with young children, generally value working from home and prefer to avoid irregular work schedules (Mas and Pallais, 2017); they associate RW with a boost to their quality of life, since it allows them to manage paid work and their role of primary caregiver in their family (Hilbrecht *et al.*, 2008). However, where the within-family distribution of domestic work follows traditional roles, this approach can produce ambiguous effects; on the one hand, the higher flexibility provided by RW arrangements can help women to manage domestic and work duties; on the other hand, spending more time at home might contribute to a consolidation of traditional roles. Moreover, the unequal intra-household distribution of responsibility and tasks might lead women to experiment with personal life intrusions into work when working from home (Di Tecco *et al.*, 2021).

It is worthwhile noticing that it is difficult to apply evidence provided by the pre COVID-19 literature to the situation that has characterized the pandemic outbreak: relevant to the perception of advantages and disadvantages of working from home which might have been influenced by the awareness that this working arrangement was one of the main tools for protecting

against the risk of contagion. Moreover, for most workers, it was the first opportunity to experience some flexibility in their working activity and time schedule, which may have induced a positive attitude despite the existence of the pandemic emergency. At the same time, some problems may have been exacerbated because of the peculiar situation; evidence collected during the COVID-19 outbreak shows a sharp expansion of daily working time (DeFilippis *et al.*, 2020), increased intra-household conflicts and workloads for working parents (Eurofound, 2020). According to recent studies, lockdown limitations created a challenging environment, especially for women (Arnztz *et al.*, 2020), with increased levels of psychological distress and augmented provisioning of childcare duties (Zamarro and Prados, 2021). In relation to couples and intra-household division of labour, a number of papers show that, during the pandemic, an unequal share of additional housework and childcare activities was imposed on women, irrespective of their working arrangements with respect to their partners (Del Boca *et al.*, 2020; Farré *et al.*, 2020). All of these issues are likely to have played a role in shaping workers' perceptions of the transition to RW and in differentiating these perceptions according to gender and household duties.

The present paper contributes to this strand of literature by analysing RW in the Italian context. We add to the few contributions that have provided evidence on RW in Italy during the pandemic with the aim of understanding the characteristics of workers involved in RW and on the determinants of its expansion (Depalo and Giorgi, 2021; Basso and Formai, 2021; Giuzio and Rizzica, 2021). With respect to this literature, our analysis focuses on the public sector and investigates workers' perceptions and productivity. The focus on the public sector is relevant for several reasons. First, because of the relatively scarce diffusion of this work arrangement among public employees, evidence on its determinants and effects in this setting is scant. Compared to Cellini *et al.* (2021), who provide information on public workers' perceptions of RW in public research organizations, our work provides evidence relevant to a large public organization whose tasks and mission reflect the standard activities and work models characterizing most public administrations in the country. Second, RW requires new forms of coordination and control and opportunistic behaviour might represent a serious challenge, given the reduced possibility of direct control outside workplace premises. While Giuzio and Rizzica (2021) show that during the pandemic, in some public administrations, the proportion of employees in RW may have been higher than the proportion of activities which were technically feasible of being accomplished from home, with possible consequences for productivity, our study digs deeper into this issue by analysing the relationship between RW and productivity, using an objective measure.

3. *Data and methods*

To investigate the impact of the widespread implementation of RW during the pandemic outbreak we exploit a dataset collected by the INPS, a large public administration, which, every year, following a specific law prescription³, disseminates a survey to its employees to collect information on their levels of satisfaction and to elicit their opinions with respect to several work dimensions. In 2020, the standard questionnaire was complemented with a number of new questions aimed at collecting information about RW.

As with other public institutions in Italy, the INPS had to rapidly reorganize its activities, processes and interactions with users due to the outbreak of the COVID-19 pandemic. Despite the fact that RW was not completely new to employees and managers, the containment measures necessitated a sudden implementation of this working arrangement with a level of intensity and diffusion that had never before been experienced.

The survey was conducted in the summer of 2020 between the 27th of July and the 30th of August, that is, during the so-called «Phase II» of the Government plan to deal with the pandemic. In this period RW, was still the standard work arrangement in the Italian public sector, but the Government was progressively relaxing the restrictions which had been imposed to fight the virus. The section of the questionnaire focusing on RW (see Appendix 1) consisted of a list of closed-ended questions, aimed at detecting employees' attitudes towards this work arrangement, at shedding light on the way in which they organized their activities, on the problems to be solved and on the obstacles (technical, organizational, relational) perceived by workers in executing their activities outside the company premises. Moreover, respondents were asked to express their agreement with a series of statements regarding positive and negative aspects of RW.

In addition, several individual characteristics (such as gender, age, region of work, job qualification, family composition) were self-reported. Even though participation was on a voluntary basis, the response rate was quite high (42% with 11441 respondents), which attests to the employees' willingness to express their opinions about this experience (the response rate in 2019 to the «internal customer experience survey» was around 15%). Response rates were slightly higher in Northern regions; however, it remained quite high in all regions, ranging from 36.9% in Sicily to 51.4% in Veneto. Thus, our data allow us to obtain a picture of opinions and attitudes of a

³ D.lgs. n. 150/2009, art. 19-*bis*.

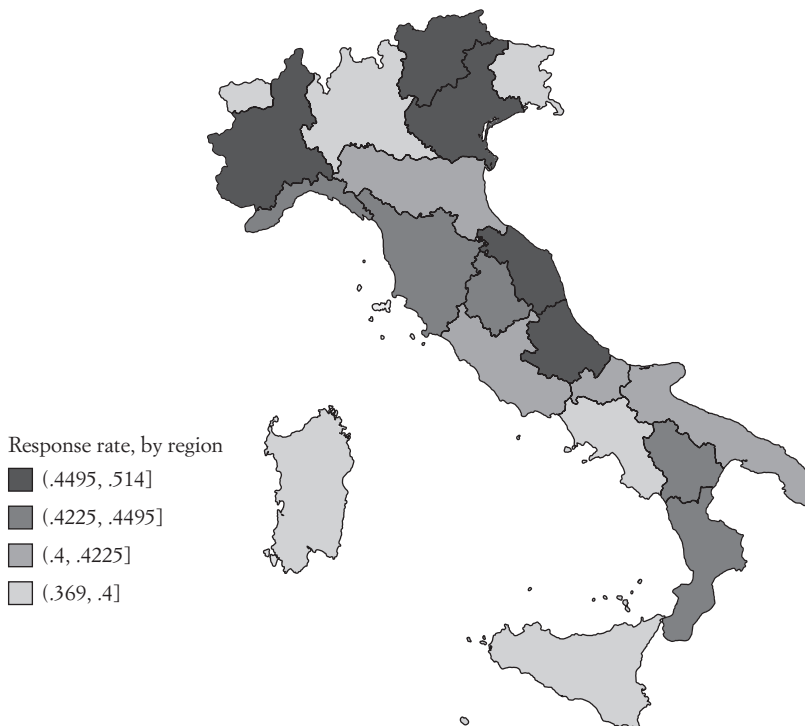


FIG. 1. Response rate, by region.

large number of workers, located in different areas of the country, who experienced the same timing and conditions of transition to RW (Figure 1).

As survey participation was voluntary, the sample of respondents is potentially self-selected⁴. To understand to what extent our sample is different from the universe of the INPS workforce, we compared the two groups with respect to a number of observable characteristics (Altonij *et al.*, 2005). Figure 2 shows that there are no large differences. The female response rate is somewhat higher than that of the male respondents, while Figure 3 signals a slight over-representation of the younger age group in the sample of respondents (workers under the age of 35 are 9% in the sample against 7% in the reference population)⁵.

⁴ T-test on observables (age, qualification and gender) show that differences between respondents and non-respondents are statistically significant.

⁵ In a specular manner, older worker participated less in our sample (48.7% versus 52.3% in the company workforce).

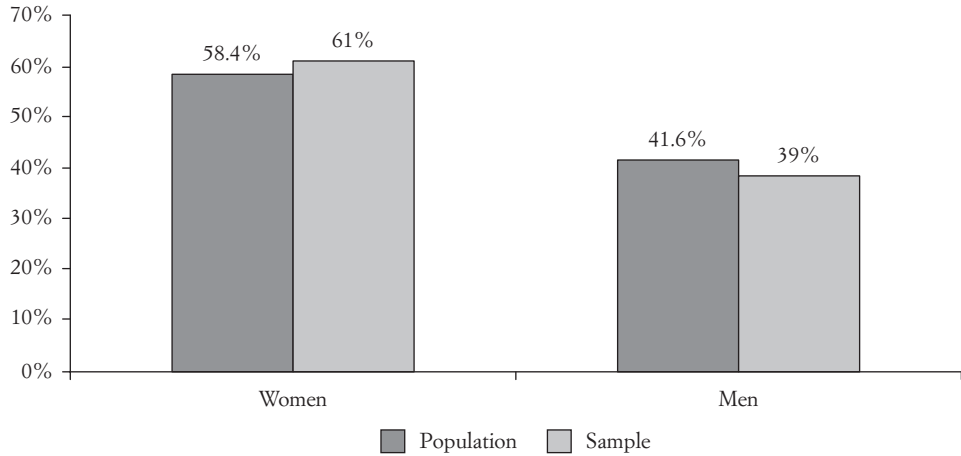


FIG. 2. Sample and population, by gender.

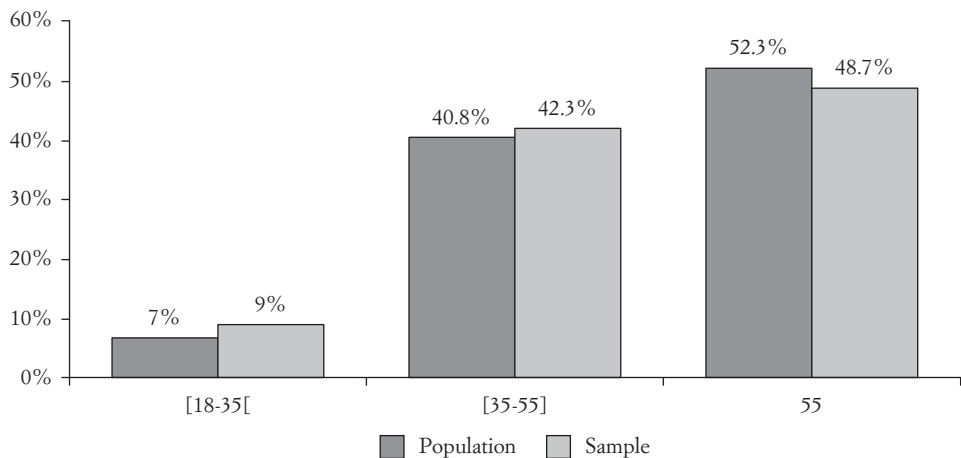


FIG. 3. Sample and population, by age.

The main differences between the two populations are related to job qualifications; interestingly, the participation of team supervisors⁶ in the survey was higher than their relative weight in the company workforce (Figure 4). On the other hand, our sample is adequately capturing the regional artic-

⁶ They are employees with responsibility of coordinating teams and organize the work of other colleagues.

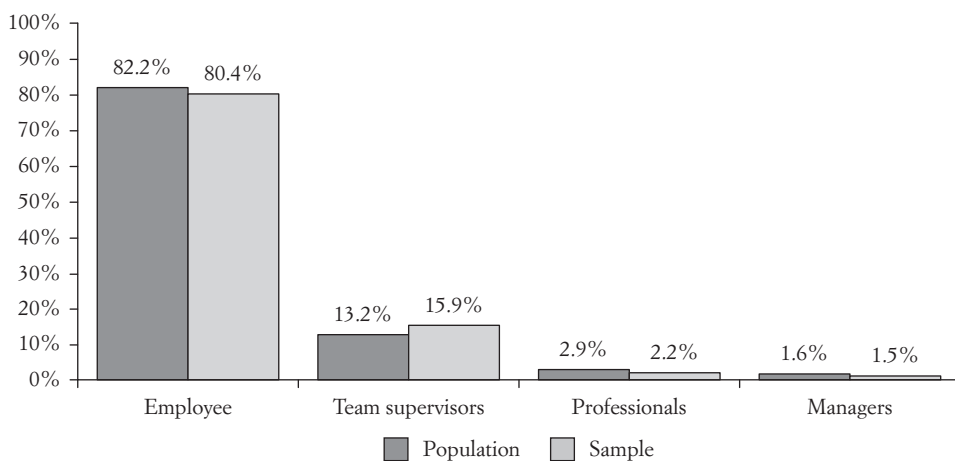


FIG. 4. Sample and population, by qualification.

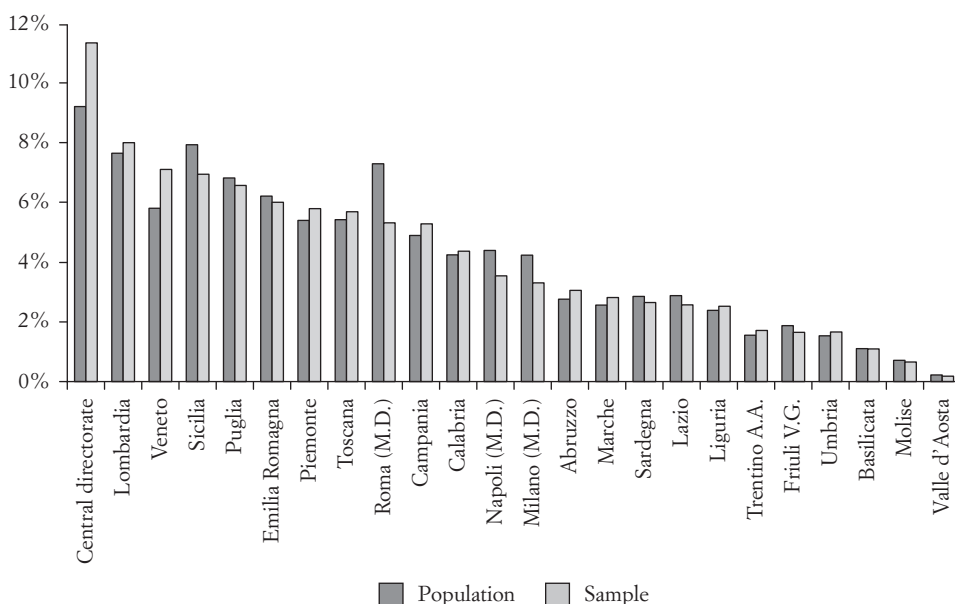


FIG. 5. Sample and population, by region.

Note: M.D. means «Metropolitan Directorate».

ulation of the company, despite a higher participation rate among employees working in the Central Directorate located in Rome⁷ (Figure 5).

⁷ It is worth noting that the workforce in Central Directorate has a different composition with respect to the one in other territorial units. Central Directorate shows a higher propor-

Moreover, despite the fact that the public sector is made up of entities that are very different from each other, it is worth mentioning that the sample of employees considered in our analysis is representative of the population of public employees in the country. In terms of gender composition, according to *Agenzia per la Rappresentanza Negoziata delle Pubbliche Amministrazioni*⁸ (ARAN), women account for 58% of the total workforce⁹ slightly lower than in our sample (61%). Major differences appear with respect to age, since the INPS workforce is, on average, older when compared to the rest of the public sector: the share of workers aged 55 years old or older in the public sector is 36%, while it is around 49% in our sample. Conversely, employees in the age class 35-54 years amount to 54% in the public sector, while this percentage falls to 42% in our sample. When compared to other similar public organizations (so-called «Funzioni Centrali»), the age composition of our sample comes out substantially similar, where 54% of workers is 55 years old or older.

All in all, differences between the sample used in our analysis and the universe of Italian public sector employees are limited. Nonetheless, generalization of results deriving from the survey to the whole universe of Italian public sector employees should be taken with caution.

4. *RW before and during the pandemic*

At the end of 2019, the diffusion of RW in Italy was negligible¹⁰. Altogether, Italy was lagging behind compared with other European countries: according to Eurostat data, only 3.6% of Italian employees were involved in RW arrangements, a small proportion compared to the average of countries in the Euro area (6%) or countries such as Finland and the Netherlands (14%)¹¹.

As regard the Italian public sector, flexible work arrangements were only marginally adopted: according to Giuzio and Rizzica (2021), in 2019,

tion of managers (6.4%), professionals (5.4%) and team supervisors (26.9%), with the proportion of clerks falling to 61.3%. In line with these figures, among respondents located in the Rome headquarters, the proportion of managers is equal to 5%; professionals account for 5.4%; the proportion of team supervisor is 32.8% while that of clerks is 56.81%.

⁸ More information available at <https://www.aranagenzia.it/statistiche-e-pubblicazioni/dati-statistici.html>.

⁹ 54% when considering only public institutions of the same subgroup («Funzioni centrali»).

¹⁰ Osservatorio Smart Working POLIMI (Osservatorio Smart Working POLIMI, 2020) estimated the number of remote workers to be around 570,000 individuals out of 18 million employees; structured agreements for RW were defined in 58% of large firms involved in their survey, but the number declines to 12% for small firms and 16% for Public Administrations.

¹¹ <https://ec.europa.eu/eurostat/data/database>.

TAB. 1. *Question: «Have you ever teleworked before pandemic emergency?»; results by respondent qualification*

	Employees	Team supervisors	Professionals	Managers	Total
No	88.42	84.55	82.74	83.53	87.61
Yes	11.58	15.45	17.26	16.47	12.39
Total	100.00	100.00	100.00	100.00	100.00

the rate of RW in Public Administration was around 1%, (2.36% including health and education sectors), without relevant geographical differences. In the second quarter of 2020 this percentage jumped to 30.09% (32.83% including health and education sectors) with a difference of more than 10 percentage points between Centre (37.60%) and North (32.53%) with respect to the South of Italy (21.93%).

Hence, it is not surprising that, for most of the survey respondents, this had been their first experience of RW: only 12.39% of them report to have worked remotely before the pandemic emergency. Consistently with the results of other surveys (Milasi *et al.*, 2021), this incidence gets lower when moving down the internal hierarchy of administrations (Table 1).

A very high percentage (over 90%) of respondents stated that they had the opportunity to work from home using a high-speed internet connection, while the availability of hardware equipment appeared to be more problematic: more than 48% of individuals had to use their own personal computers or other personal tools. Nonetheless, a large proportion of respondents could perform their working activity completely by RW (Table 2). A negligible quota (below 2%) of respondents, had to adapt their duties or were assigned to new activities because of technical barriers, showing a higher RW feasibility than that suggested by pre-COVID-19 adoption.

For what concerns work relationships and internal/external communication, participants reported that these aspects were not problematic in their experience. Thanks to virtual meetings and online interactions, they had the possibility of connecting with colleagues, stakeholders and other Public Administrators, without major problems, so that, in more than 70% of cases, they claim that the quality of these relationships was unchanged or even improved. At the same time, respondents seemed to be aware that reducing the time spent in office could have some negative consequences: RW constitutes a barrier for collaboration among colleagues for approximately 29% of respondents; more than 18% of clerks feared that the new organizational arrangement might hinder career opportunities for those working remotely.

TAB. 2. *Activities carried out during RW*

	%
I was able to carry out all activities I was used to carry out in the office	78.3
I was able to carry out only part of activities I usually carry out in the office	19.8
I had to carry out different activities, since my work is not feasible in remote working	1.9

4.1. *Employees' attitudes toward RW*

As regards employees' attitudes toward RW, a large majority of employees (around 80%) stated that this working arrangement should be implemented beyond the application of containment measures; on the other hand, only 9% of respondents associated a radically negative feeling toward RW, defining it as a bad memory to be left behind once the pandemic was over.

Consistently, most of workers showed a high propensity toward RW: when asked about their preferences for future applications of RW arrangements, 53.9% of respondents selected the option «I would continue to work from remote for several days a week», while 29.7% would prefer to work exclusively from remote. These proportions, however, vary according to the age and qualification of respondents, as shown in Figures 6 and 7. Younger individuals expressed a greater preference for RW. On the other hand, the higher the qualification level the lower the propensity to using RW, implying that non-executives showed a more positive attitude towards RW, while managers seemed to be more sceptical and preferred mainly intermediate solutions, such as partial or occasional RW.

To investigate the elements that affected attitudes towards RW and to better inspect how they interacted, we measure the propensity to RW creating a dummy variable equal to 1 if respondent stated that in the next year he/she would be willing to work remotely either exclusively or for several days a week or equal to 0, otherwise. Then, we use this as a dependent variable in a linear probability model that includes, as regressors, worker characteristics (age, gender, qualification, place of work, home-office distance), the context in which RW took place (house size, number of cohabitants, availability of a room dedicated to RW, availability of additional hardware such as printers, screens etc.) as well as a number of household characteristics (presence of children aged 10 or younger, presence of elderly cohabitants, low level of collaboration in domestic works). Standard errors are robust to heteroscedasticity¹². Results are reported Table 3. In column (1) we report re-

¹² We included weights based on the population of INPS workforce at 31st July 2020. Results are similar in terms of magnitude and significance of coefficients also using data without weights.

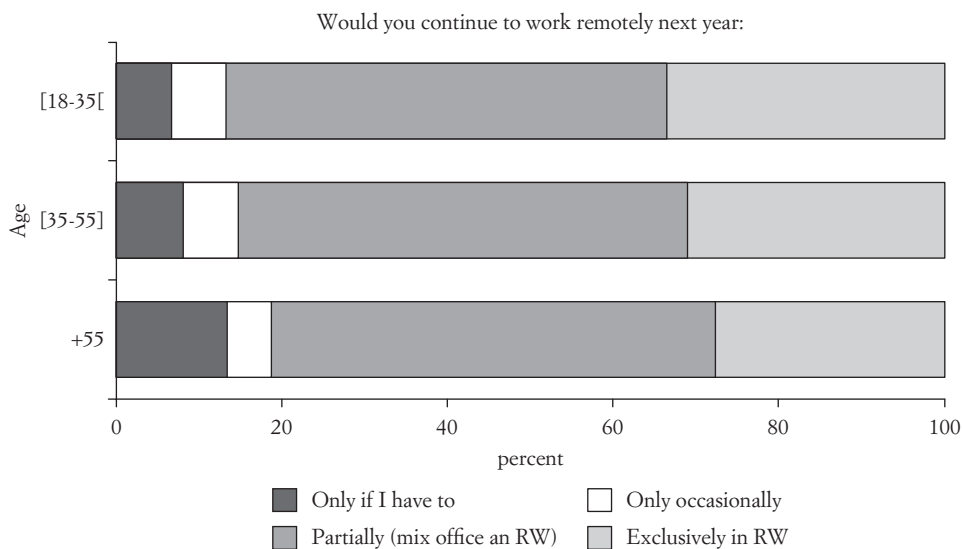


FIG. 6. «Would you continue to RW next year?»; results by age.

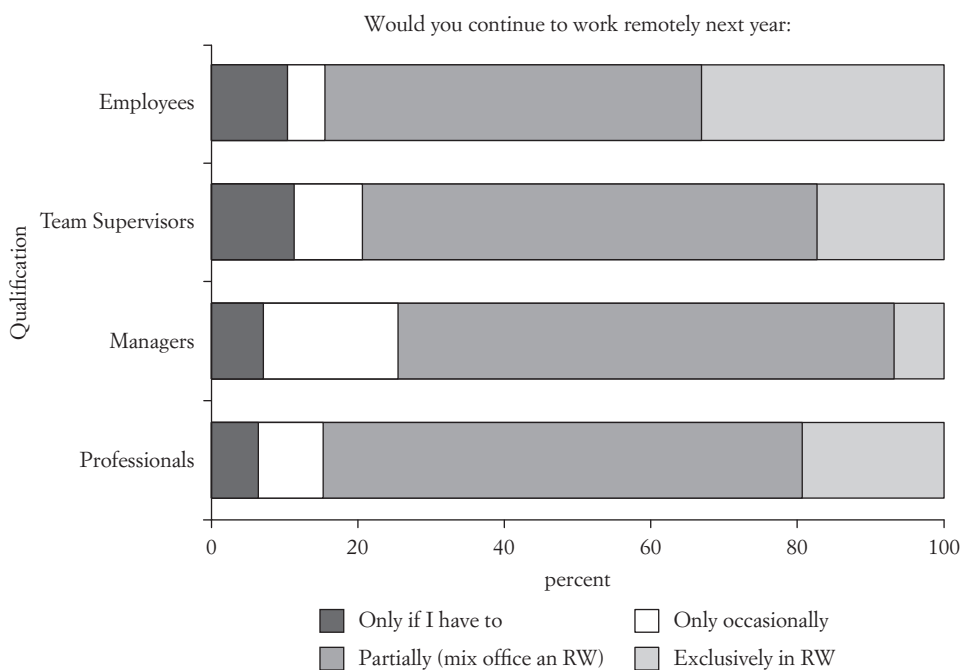


FIG. 7. «Would you continue to RW next year?»; results by professional qualification.

sults from our preferred specification, while in columns (2) and (3) we look at heterogeneity by adding some interaction terms.

As regards demographic characteristics, we find that older workers were less inclined to RW, while there were not significant gender differences. On the other hand, the interaction term $\text{Women} \times \text{Age} > 55$ is positive and statistically significant at the 10% level suggesting that being a woman mildly reduced the aversion towards RW that is associated with age. The presence of children tended to increase the propensity to RW, suggesting that parents appreciated this work arrangement. With the aim of investigating whether the impact of children in the household was differentiated for men and women, we have added an interaction term $\text{Children (age} < 10) \times \text{Women}$ (not reported), which turned out to be not statistically significant.

We also find that home-office distance and material context (availability of a dedicated room, adequate hardware equipment) played a primary role in increasing the attitude towards RW, while living alone reduced the willingness to continue RW. Our estimates also show that individuals with managerial responsibilities were less inclined to use RW arrangements compared to non-executives, probably because this increased control and coordination costs (dummy variables for Managers and Team Supervisors are negative and highly statistical significant). In column (2), we investigate whether men and women at different levels of the hierarchical ladder responded differently, adding interaction terms between gender and type of qualification. Except for professionals, we do not find differential effects according to gender. On the other hand, as shown in column (3), in which we investigate whether age increased hostility towards RW according to the position held on the hierarchical ladder, we find that non-executive workers of older age were less favourable to RW, probably because they faced greater difficulties in using new digital applications and devices (e.g. for virtual meetings etc.)¹³.

¹³ Similar results are found also when we run separate regressions for men and women (not reported and available upon request).

TAB. 3. *Determinants of RW Propensity. OLS regressions*

	(1)	(2)	(3)
	Propensity to RW	Propensity to RW	Propensity to RW
Age>55	-0.047*** (0.012)	-0.032*** (0.007)	-0.029*** (0.008)
Woman	-0.018 (0.014)	-0.008 (0.013)	-0.005 (0.013)
Woman × Age > 55	0.024* (0.014)		
Children (age < 10)	0.049*** (0.010)	0.049*** (0.010)	0.049*** (0.010)
<i>Qualification refer. Category Clerk</i>			
Team supervisor	-0.060*** (0.011)	-0.061*** (0.016)	-0.039*** (0.015)
Manager	-0.147*** (0.039)	-0.132** (0.053)	-0.208*** (0.054)
Professional	-0.033 (0.028)	-0.086** (0.043)	-0.012 (0.041)
<i>Distance (home-office) refer. category less than 5 km</i>			
5 to 10 km	0.026*** (0.010)	0.026*** (0.010)	0.026*** (0.010)
11 to 50 km	0.064*** (0.009)	0.063*** (0.009)	0.064*** (0.009)
more than 50 km	0.109*** (0.012)	0.110*** (0.012)	0.110*** (0.012)
<i>Work and family conditions</i>			
Hardware	0.040*** (0.012)	0.040*** (0.012)	0.039*** (0.012)
Dedicated room for RW	0.122*** (0.008)	0.123*** (0.008)	0.123*** (0.008)
Living alone	-0.083*** (0.015)	-0.083*** (0.015)	-0.082*** (0.015)
Low collaboration	0.011 (0.012)	0.011 (0.012)	0.011 (0.012)
Low collaboration × Woman	0.013 (0.016)	0.013 (0.016)	0.013 (0.016)
<i>Qualification and Gender</i>			
Woman × Team supervisor		-0.007 (0.022)	
Woman × Manager		-0.044 (0.077)	
Woman × Professional		0.108** (0.053)	
<i>Qualification and Age</i>			
Team supervisor × Age55			-0.066*** (0.019)
Manager × 55+			0.108 (0.074)
Professional × 55+			-0.059 (0.053)
Constant	0.734*** (0.019)	0.727*** (0.019)	0.723*** (0.018)
Observations	11,441	11,441	11,441
Adjusted R ²	0.050	0.050	0.050

Notes: Standard errors in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Data are weighted with the number of individuals employed in INPS at 31st July 2020. The variable «propensity to RW» is a dummy variable that is equal to 1 if the respondent states he/she would be willing to RW in the future, all week or several days a week. All the regressors reported in Table 3 are dummy variables. In each regression we also control for: dummy variables for the presence of cohabitants, a dummy variable for the presence of elderly cohabitants, dummy variables for type of unit (General headquarter, Territorial unit, Regional headquarter and Local branch as reference category), a dummy variable for respondents located in southern regions, a dummy variable equal to one if respondent states his home is 100 square meters or smaller. «Hardware» is a dummy equal to one if the respondent declared he/she used external hardware and zero otherwise. «Dedicated room to RW» is a dummy variable equal to one if respondent declared he/she had a room dedicated exclusively to RW, zero otherwise. «Low collaboration» is a dummy variable equal to one if respondent state the collaboration in housework's by family members is equal to 50% or lower, zero otherwise.

4.2. *RW impact on perceived and effective performance*

As regards productivity and performance, consistently with results found in other surveys on RW, a high percentage of workers (over 93 %) responded as agreeing or strongly agreeing with the idea that the flexibility in work arrangement could boost the performance of the whole company. Respondents tended to attribute to RW a positive (42%) or neutral impact (47%) on the effectiveness of their work.

However, individuals' perceptions could have been biased, and that could have resulted in a divergence between workers' evaluations and «real» performance. Nonetheless, testing whether individual evaluations effectively corresponded to productivity dynamics requires the availability of objective measures of work performance, which is typically quite limited. We are able to inspect this issue by accessing the data on performance collected by the administration for productivity monitoring and compensation. In order to monitor and organize its activity, the INPS elaborates a measure of performance at territorial unit level (429 units): the productivity measure starts from a score assigned to each activity, which is based on the average time needed for its completion; thanks to this procedure, different activities are made comparable and aggregated. The total amount of activities (measured in time) carried out by workers in each territorial unit, provides the total «value» produced by them. This score is then divided by the total working time, net of absences of workers belonging to each unit¹⁴. This allows for calculating an index of performance, proxying efficiency in the usage of time and human resources that is compared to a specific target value for each period of interest (4 terms per year, March, June, September and December)¹⁵.

Our data set provides information on this performance index starting from September 2019 to September 2020. To analyse the relationship between effective and perceived performance we plot the increase in the performance index – September 2020 with respect to September 2019 – at the regional level against the percentage of respondents who stated that they agreed or strongly agreed with the idea that RW increased their productivity, weighted by the number of workers in each unit¹⁶.

¹⁴ For each worker and for each day in RW, working hours are fixed to the contractual daily working time.

¹⁵ Additional information is available at <https://www.inps.it/amministrazione-trasparente/performance/sistema-di-misurazione-e-valutazione-della-performance>.

¹⁶ We are not able to perform this analysis at territorial unit level as the survey inquiring on individual perceptions only provides information of the region of work.

As shown in Figure 8, a higher incidence of individuals reporting an increase in productivity did not reflect a better effective performance of the regional unit. It is worth noting that a large majority of regional units met (and also exceeded) the target value for the period showing a good performance of the administration during the pandemic. However, the weak relationship among the two dimensions supports the idea that individual perceptions could have been biased (positively or negatively).

One possible explanation of this result could be related to the strategic behaviour of respondents who may have wanted to emphasize the positive impact of RW on their productivity in order to lobby for continuing this work arrangement. Another relevant element relates to the fact that, due to the massive and sudden adoption of RW, coordination and communication costs may have increased and, even if this circumstance is misperceived at the individual level (especially for employees without decision-making responsibilities), it reflected on the level of productivity of the regional unit as a whole.

Additionally, to better inspect the relationship between productivity and RW, we restrict our analysis to 2020 and estimate a fixed effect model considering as outcome variable the index of performance measured at each territorial unit (namely, its deviation from the target value for the period of interest) in March, June and September and as independent variable the monthly percentage of RW over the total work (net of absences) of the workers in each territorial unit¹⁷. As shown in Table 4, once we control for time and production unit fixed effects, we find that variations in performance were independent from variations in RW. These results however have to be taken with caution as RW in the period we consider in our analysis was intensively used leading to limited variability across units. In addition, we are only partially dealing with endogeneity issues deriving from the fact that RW usage was not random. In fact, controlling for unit fixed effects allows us to deal with time invariant unit unobservable features that might have affected the use of RW, but does not permit us to rule out the impact of time varying unit specific factors.

¹⁷ Again, it is worth mentioning that due to the impressive amount of activities connected to the pandemic, the vast majority of territorial units met or exceeded the target value over the period considered; moreover, in compliance with emergency measures to stem the spread of COVID-19, most of the activities were developed with a high percentage of RW.

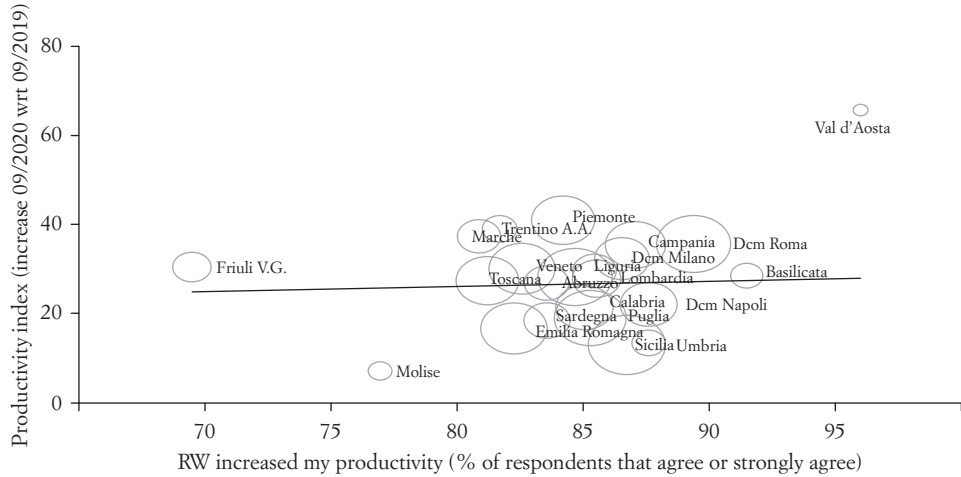


FIG. 8. Self-reported productivity and performance.

TAB. 4. *RW and performance: Territorial unit fixed effect models*

	(1)	(2)
	FE	FE
	Performance index (% above the target)	Performance index (% above the target)
Remote Working (month %)	-0.118	
June	16.782*** (3.558)	13.567** (5.838)
September	2.679 (1.774)	2.335 (4.506)
Remote Working (quarter %)		-0.006 (0.069)
Constant	14.643*** (3.861)	8.124*** (1.338)
Observations	1285	1285
Adjusted R^2	0.181	0.174

Notes: Robust standard errors in parenthesis. Data clustered at the regional level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

The dependent variable is the deviation of performance index with respect to target value. The independent variable «Remote Working» measures the monthly (quarterly) usage of Remote Working (%) for each territorial unit. June and September are time dummies (reference category March).

4.3. Interaction between personal and professional spheres

Another relevant issue is the interaction between personal and professional spheres. What is the impact of RW in terms of work-life balance? To

investigate this issue, we used the following question asking employees to express their agreement with two groups of statements regarding RW. The first group was stressing advantages connected to RW («I have more time to dedicate to myself and my family»; «Better work-life balance»; «It increased my satisfaction and motivation»; «Increase in productivity»; «It allowed me to better organize my day»; «It increased my free time»), while the second group was focused on possible disadvantages («It is difficult to conciliate work and family needs»; «It increased the work-related stress»; «It blurred the lines between private life and work»; «It made me feel alone»). Respondents could choose among the following options: «Strongly disagree = 1; Disagree = 2; I don't know = 3; Agree = 4; Strongly agree = 5».

We find that despite the difficult context in which RW was applied, an important proportion of employees appreciated RW since it allowed an easier working-life balance (around 44%) or a reduction of work-related stress (13%). Conversely, 33% of respondents indicated a reduction in personal well-being because RW made unwinding more difficult and about 10% remarked that an increase in their working time was caused by RW.

Again, age plays a role in explaining this heterogeneity, since younger workers seemed more capable to adapt to this work arrangement (among younger workers the percentage of employees' that related RW to better work-life balance rises to 53%).

Interestingly, despite gender not showing any significant differences in the propensity to RW (see Table 3), Figure 9 and Figure 10 do show a systematic difference among women and men. In general, statements about the advantages received greater agreement than those about disadvantages, nonetheless, the quota of men that stated that they agreed or strongly agreed with each advantage (disadvantage) enlisted in the questionnaire was higher (lower) than the percentage observed among women, suggesting that women may have encountered more obstacles in carrying out their activities remotely.

How can this difference be explained? It may be related to the interaction between increased care duties brought by COVID-19 containment measures (e.g. additional childcare because of school closures), and inequalities in intra-households' distribution of tasks and family care responsibilities. In contexts with gendered cultural models, women, including working women, were the main caregivers in the family and often held most of the responsibility deriving from housework. Unsurprisingly, under these conditions, if RW corresponds to working from home, balancing professional, family and individual needs could have been very challenging, resulting in a detrimental effect on personal well-being.

To test this hypothesis, we used a Principal Component Analysis to build synthetic indicators of RW advantages and disadvantages perceived by re-

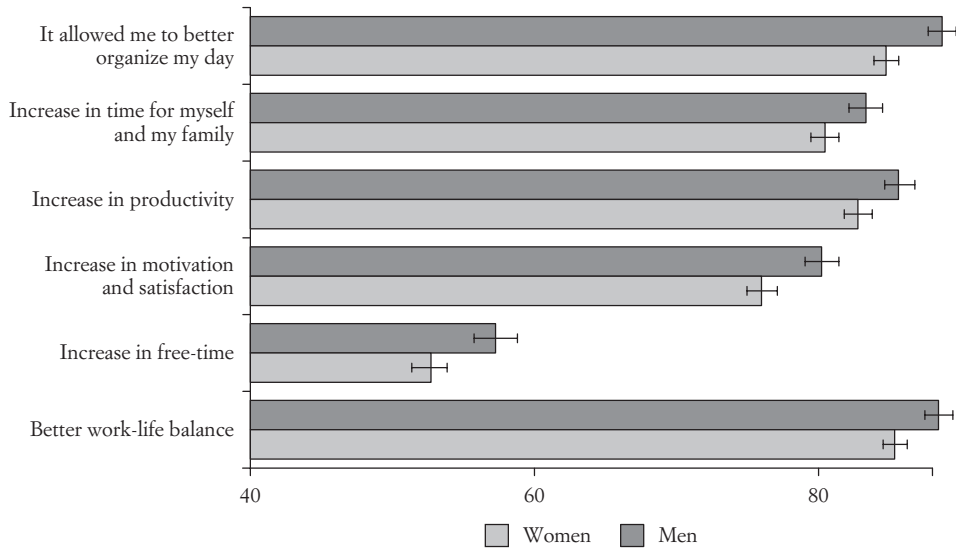


FIG. 9. Advantages associated to RW; results by gender.

spondents, based on the statements of the questionnaire¹⁸. We then used these indicators as dependent variables in a multiple regression model aimed at investigating the relationship between worker perceptions of RW and the (stated) level of collaboration of family members in the accomplishment of domestic tasks. Standard errors were robust to heteroscedasticity. We included weights based on the population of the INPS workforce at 31st July 2020¹⁹. As shown in Table 5, column (1) disadvantages of RW were felt more strongly by women, but that difference from results for men decreased as collaboration of family members increased. The interaction terms between the dummy variable «Woman» and the variable indicating a low level of collaboration is positive and statistically significant for RW disadvantages, while it is negative for RW advantages but not statistically significant at conventional levels (column (2))²⁰.

¹⁸ Based on the questions already mentioned, we create an index of Advantages and an index for Disadvantages based on the prediction of the score of the first component of a Principal Component Analysis. For the index Advantages, the first component explains 60.2% of total variance; for Disadvantages, the variance explained by the first component is 63.9%.

¹⁹ We obtain qualitatively the same results when we run our regressions without weights.

²⁰ To test these results, we use the questions about positive and negative aspects jointly to perform a PCA. The first component obtained explains 52% of variance; all the variables related to negative aspects of RW show a component loading with a negative sign. Hence, the first component can be interpreted as a synthetic index of global satisfaction. This was

TAB. 5. Gender differences in perceived advantages and disadvantages of RW. OLS regressions

	(1)	(2)
	Disadvantages (synthetic indicator)	Advantages (synthetic indicator)
Age > 55	0.205*** (0.031)	-0.320*** (0.037)
Woman	0.186*** (0.054)	-0.099 (0.065)
<i>Qualification refer. Category Clerk</i>		
Team supervisor	0.349*** (0.041)	-0.501*** (0.052)
Manager	0.583*** (0.122)	-0.500*** (0.156)
Professional	-0.129 (0.110)	-0.087 (0.127)
<i>Distance (home-office) refer. category less than 5 km</i>		
5 to 10 km	-0.111*** (0.039)	0.148*** (0.047)
11 to 50 km	-0.264*** (0.036)	0.437*** (0.043)
more than 50 km	-0.624*** (0.058)	0.851*** (0.064)
<i>Work and family conditions</i>		
Hardware	0.021 (0.056)	0.006 (0.065)
Dedicated room for RW	-0.865*** (0.033)	0.879*** (0.041)
Living alone	0.182*** (0.062)	-0.287*** (0.077)
Children (age < 10)	-0.037 (0.044)	0.227*** (0.053)
Low collaboration	0.126** (0.049)	0.022 (0.057)
Low collaboration × Woman	0.124* (0.068)	-0.125 (0.081)
Southern region	-0.059* (0.032)	0.254*** (0.036)
Observations	11441	11441
Adjusted R ²	0.113	0.102

Notes: Standard errors in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Data are weighted with the number of individuals employed in INPS at 31st July 2020. All the regressors reported in Table 5 are dummy variables. The variable «advantages» is an index created using the score of the first component of a Principal Component Analysis based on the rate of agreement assigned by respondent to the following questions related to RW: «I have more time to dedicate to myself and my family»; «Better work-life balance»; «It increased my satisfaction and motivation»; «Increase in productivity»; «It allowed me to better organize my day»; «It increased my free time». The variable «Disadvantages» is an index created using the score of the first component of a Principal Component Analysis based on the rate of agreement assigned by respondent to the following questions: «It is difficult to conciliate work and family needs»; «It increased the work-related stress»; «It blurred the lines between private life and work»; «It made me feel alone». In each regression we also control for: dummy variables for the presence of cohabitants, a dummy variable for the presence of elderly cohabitants, dummy variables for type of unit (General headquarter, Territorial unit, Regional headquarter and Local branch as reference category), a dummy variable for respondents located in southern regions, a dummy variable equal to one if respondent states his home is 100 square meters or smaller. «Hardware» is a dummy equal to one if the respondent declared he/she used external hardware and zero otherwise. «Dedicated room to RW» is a dummy variable equal to one if respondent declared he/she had a room dedicated exclusively to RW, zero otherwise. «Low collaboration» is a dummy variable equal to one if respondent state the collaboration in housework's by family members is equal to 50% or lower, zero otherwise.

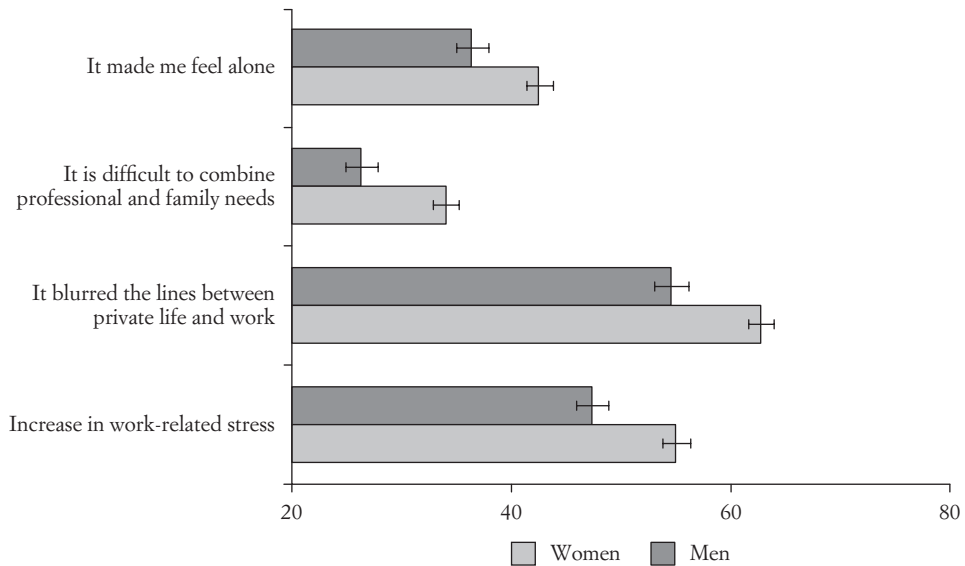


FIG. 10. Disadvantages associated to RW; results by gender.

Similar results are found when we run separate regressions for men and women (not shown) where «Low collaboration» positively correlates with perceived Disadvantages both for men and women but the magnitude of the coefficient is larger for women (0.242, $p < 0.01$) than for men (0.139, $p < 0.01$). These regressions show, instead, that the presence of children aged 10 or less had a positive impact on the perception of Advantages only for female respondents (the regression coefficient is equal to 0.297, $p < 0.01$ for women and 0.133 for men but it is not statistically significant at the conventional level). However, in a pooled regression in which we add among regressors an interaction term between the dummy variable «Woman» with «Children < 10», we find that it attracts a statistically non-significant coefficient.

included as a dependent variable in an OLS regression with the same specification of Model 2 in Table 4. We then compared the results. Regression coefficients obtained with this new analysis are substantially similar in terms of sign and statistical significance as the one obtained in Model 2, except for variables «Woman» (-0.193 , $p\text{-value} < 0.05$) and «Woman-Low collaboration» (-0.173 , $p\text{-value} < 0.10$). «Low collaboration» is not statistically significant at the conventional level. Consistently with previous findings, RW experience appears to be more problematic for female respondents. These results are available on request.

5. Conclusion

The adoption of emergency measures to curtail the spread of COVID-19 during 2020 had a serious impact on the lives of many individuals across the world. In particular, the need to implement social distancing measures induced an unprecedented level of diffusion of RW also in many contexts, such as that of the Italian public sector, where it had been marginally adopted in the pre-COVID-19 era. This led to a substantial change in working arrangements, work-life balance and organization of work. We shed light on workers' perceptions about this issue by analysing the data collected by an important Italian public administration to monitor satisfaction levels of its employees. More specifically, we investigated the general attitude of workers towards RW during the pandemic period, the relationship between RW and work performance and finally, the impact of RW in the personal sphere.

Results show that employees positively evaluated RW and largely preferred hybrid schemes that mixed work from office and work from remote locations; younger employees seemed to particularly appreciate RW and to better adapt to this work arrangement. Concerning work performance, we are able shed light on its relationship with RW by using a measure of productivity collected by the administration at the territorial unit level to monitor its institutional activity. Despite workers generally indicating that RW increased their productivity, our finding is that RW did not significantly affect productivity in the period under consideration. Finally, we find that women felt the disadvantages of RW relatively stronger than men did and that low collaboration of family members in carrying out family duties might have a role in that respect.

Thus, flexible work arrangements such as RW can have several positive implications for workers, and this can boost individual well-being with a better work-life balance; however, the possibility to fully exploit this potential may be hindered by an unequal distribution of family duties, and this aspect should be properly taken into account to avoid permitting flexible work arrangements to become a new source of gender inequality.

Appendix 1

A1. List of questions

- The distance between home and my workplace is
 - Less than 5 km
 - 5 to 10 km
 - More than 10 km
 - More than 50 km

- Travelling from home and the workplace takes, on average,
 - Less than 15 minutes
 - More than 15 minutes and less than 30 minutes
 - More than 30 minutes and less than 1 hour
 - One to two hours
 - More than two hours
- I usually go to work
 - On foot, by bike or using micro mobility devices
 - By motorcycle or scooter
 - By car
 - By public transports
 - I use both public transports and my own private vehicle
- During COVID-19 pandemic I worked remotely
 - Performing the same activities I used to carry out in the office
 - Performing activities that were partially different from the ones I used to carry out in the office
 - Performing new activities related to the pandemic emergency
 - I could work only sporadically, occasionally and with several difficulties
- Have you ever worked remotely in INPS before the pandemic emergency? (smart working, remote working, *lavoro satellitare*)?
 - Yes
 - No
- During pandemic emergency
 - I carried out my work totally in remote working
 - I occasionally worked in office, to pick up documents or to perform particular activities
 - I worked in office one or more days a week to execute non-deferable activities that could not be undertaken outside the office
 - I worked exclusively in office
- During remote working from home
 - I could use a room dedicate to remote working
 - I had to share the available space with other people
 - I had to look for a suitable space according to the family needs
 - I benefited from the hospitality of friends or family members who had adequate spaces for remote working
- During remote working I could organize my working time
 - Following the same working hours I used to have in office
 - Executing the same number of hours but with a different distribution over the day
 - Managing autonomously the number of hours and their distribution over the day, based on the tasks I was assigned to
 - Concentrating most of the activities in certain days of the week
- During remote working, the working hours needed to execute my daily tasks
 - Substantially decreased
 - Slightly decreased
 - Rather unchanged
 - Slightly increased
 - Substantially increased

- To perform my activity in remote working I mostly used (*multiple options*)
 - Personal computer
 - Notebook
 - Notebook with an additional screen and other external hardware
 - Smartphone or tablet
- To perform my activity in remote working I mainly used (*multiple options*)
 - Devices (computer, smartphone) provided by the Institute
 - VPN web connection
 - VDI connection
 - My own notebook and devices
 - I used only the phone, since I do not have an Internet connection available
- During remote working I connected to the Internet
 - Via optical fiber
 - Via ADSL, Internet key USB o Wi-Fi mobile devices
 - Through my own smartphone
 - Using my own smartphone as a wi-fi router to connect other devices
 - I did not connect to the Internet, I worked off-line
- In order to carry out my work from home (*multiple options*)
 - I received a specific training
 - I received instructions about the priority activities to be carried on
 - In absence of specific instructions, I autonomously decided which priority to assign to work activities
 - I attended frequent virtual meetings with colleagues
 - I received worklists or batch of paperwork
- Organizational and technological conditions during remote working allowed me
 - To execute all the activities I usually carried out in office
 - To execute only some of the activities I usually carried out in office
 - To execute different activities since my work cannot be performed in remote working
- The effectiveness of my work during remote working
 - Improved with respect to the level I reached while I worked in office
 - Was at the same level as the one I reached while I worked in office
 - Partially worsened with respect to the level I reached while I worked in office
 - Considerably worsened with respect to the level I reached while I worked in office
- With the tools and resources received for remote working,
 - I had to work more hours and without time limits to obtain results comparable to those previously obtained
 - Production performance is more or less the same, but with the frustrating feeling that is not possible to unwind
 - Production performance is more or less the same, but is less stressful with respect to working in office
 - I achieved a better work-life balance, with positive effects on my well-being and my productivity
- Working remotely, the relationship with my supervisor is
 - Deteriorated, because it is difficult to communicate without talking face to face
 - Deteriorated, because phone or web calls are more intrusive and take place without time limits
 - Unchanged, thanks to frequent and effective web meetings

- Weakened and I had to take greater responsibilities in operative tasks
- Improved, turning into a relationship of utmost trust in my autonomy
- The remote working pandemic experience
 - Will change irreversibly my way of working
 - Will be a bad memory once we get back to normal
 - Will be an incentive to consider remote working as an opportunity for the future
 - Will be a privilege for few
- If I had the opportunity, I would continue to remote working next year
 - Exclusively and full time, as during the emergency period
 - Partially, alternating work from office and work from home
 - Occasionally, working from home only once a week
 - Only if I have to, but in general I would prefer to work in office
- During remote working
 - I think I would be able to organize my activities with full autonomy
 - I think it is appropriate to have specific assignment by my supervisor
- I think remote working may harm relationships with colleagues especially with respect to (select *two options*)
 - Harmony
 - Cooperation
 - Trust
 - Understanding
 - Friendship
 - No effect
- The relationship with my supervisor, during remote working
 - Definitely worsened
 - Worsened
 - Remained unchanged
 - Improved
 - Definitely improved
- Based on my experience, the worst effect of remote working is related to
 - The impossibility to exchange ideas with colleagues face to face
 - The lack of interaction with customers
 - The worsening of individual psychological conditions
 - Sedentary lifestyle
 - None of the above
- Based on my experience, the best effect of remote working is related to
 - Higher concentration and focusing on work tasks
 - Better work-life balance
 - Increase in work well-being in general
 - Increase in productivity in general
 - None of the above
- The Interaction with other institutions (e.g.: *Agenzia delle Entrate, MEF, AgID, Banca d'Italia, Aran, INAIL* etc.) during remote working:
 - Definitely deteriorated
 - Deteriorated
 - Remained unchanged

- Improved
- My activity does not involve interactions with these subjects
- The interaction with stakeholders (e.g.: Fiscal assistance centres, professional associations, producer associations etc.) during remote working:
 - Definitely deteriorated
 - Deteriorated
 - Remained unchanged
 - Improved
 - My activity does not involve interactions with these subjects
- During the period of remote working I dedicated the time potentially saved from work for
 - Family and friends
 - Personal care and relax
 - Volunteering and social action
 - Hobby/sport
 - Other
- In your opinion, which of these elements is the most important in order to make remote working more consistent with employees needs and expectations and for the general improvement of INPS?
 - Arrangements for remote working should be on voluntary basis
 - Equal opportunities of professional development and training for remote workers and non-remote workers
 - Adequate initiatives to reduce the sense of isolation and to preserve relationships among individuals
 - Improvement of the level of involvement of employees in the definition of goals and sharing information
 - «Smart» work organization, based on specific objectives and a higher degree of flexibility
- Based on your experience of remote working during the emergency period, express your agreement as regards the following positive aspects («*Strongly disagree*»; «*Disagree*»; «*Agree*»; «*Strongly agree*»; «*I don't know*»).
 - Work is more customer-oriented and its importance is more evident
 - More time available for myself and my family
 - Increase in trust and sense of responsibility
 - Autonomy in organization of work leads to better results
 - I learned how to use new tools, technology and applications
 - Web call platforms could be useful to interact with customers
 - Agile working lead by emergency measures is nowadays an irreversible process involving society as a whole
 - Higher flexibility in work arrangements is an advantage also for INPS as a whole
 - Thanks to remote working I could strongly reduce transport costs in the medium-long run
- Based on your experience of remote working during emergency period, express your agreement with respect to the following negative aspects
 - It is hard to maintain social relationships with colleagues
 - Increase in control
 - It is not clear what to do, how to do it and the general goals
 - It is difficult to balance personal and family needs
 - Some workers are overloaded while others act as free-riders
 - It is hard to work because of connectivity problems

- In case of a widespread adoption of remote working, express the relevance of the following advantages
 - Increase in the sense of responsibility of employees
 - Reduction in control with higher relevance of results
 - My daily work is more evident
 - Reduction in absenteeism
 - Reduction in time spent for commuting
 - Better work life balance
 - Increase in motivation and satisfaction
 - Reduction in traffic level and CO2 emissions
 - Increase in cooperation among employees
 - Increase in digital and technological skills
- Rate how close the following aspects describe your remote working experience
 - Increase in productivity
 - Improve in team-work ability
 - Better organization of day-time
 - Increase in free-time
 - More result-oriented work and control over work activity
 - Increase in work-related stress
 - Negative effects on social interactions with colleagues
 - Blurred lines between private life and work
 - Solitude feelings
 - Additional work to support of my colleagues facing difficulties
 - More freedom in work related decisions
 - No support from my supervisor in facing work-related challenges
 - Reduction in harassments
 - Despite remote working I am still victim of harassment and mobbing
- Number of cohabitants
 - Zero
 - One
 - Two
 - Three
 - More than three
- Home dimension in squared meters
 - Less than 50
 - Between 50 and 100
 - Between 100 and 150
 - Between 150 and 200
 - More than 200
- Number of cohabiting children, by age class:
 - *3 years old or younger*
 - 0
 - 1
 - 2
 - 3
 - 4 or more
 - *3-5 years old (kindergarten)*
 - 0
 - 1
 - 2

- 3
- 4 or more
- 6-10 years old (*primary school*)
- 0
- 1
- 2
- 3
- 4 or more
- 11-14 years old (*lower secondary school*)
- 0
- 1
- 2
- 3
- 4 or more
- 14-18 years old (*high school*)
- 0
- 1
- 2
- 3
- 4 or more
- 19 years old or older
- 0
- 1
- 2
- 3
- 4 or more
- Cohabitants with special needs:
- Elderly cohabitants
- 0
- 1
- 2
- 3
- 4 or more
- Cohabitants in need of special care/assistance
- 0
- 1
- 2
- 3
- 4 or more

- During the lockdown, your partner worked in remote working or in workplace,
 - I live alone
 - He/she doesn't work
 - He/she worked in remote working
 - He/she worked in office
 - Both in remote working and office
- As regards domestic work, which is the degree of collaboration among family members?
 - 0-25%
 - 26%-50%
 - 51%-75%
 - 76%-100%

Appendix

A1. List of questions (Italian)

- Rispetto alla mia sede di lavoro, la mia abitazione è distante
 - meno di cinque chilometri
 - da cinque a dieci chilometri
 - più di dieci chilometri
 - più di cinquanta chilometri
- Per recarmi nella mia Sede di lavoro impiego mediamente
 - meno di 15 minuti
 - da 15 minuti a meno di mezz'ora
 - da trenta minuti a un'ora
 - da un'ora a due ore
 - oltre due ore
- Prevalentemente, per raggiungere la mia sede di lavoro
 - vado a piedi, in bicicletta o utilizzo un mezzo di micromobilità elettrica
 - utilizzo uno scooter o una moto
 - utilizzo l'automobile
 - utilizzo i mezzi pubblici
 - devo utilizzare sia il trasporto pubblico sia un mio mezzo privato
- Durante l'emergenza Covid-19
 - sto continuando da remoto la mia attività lavorativa dedicandomi alle stesse attività che svolgevo in ufficio
 - dedicandomi ad attività parzialmente diverse da quelle che svolgevo in ufficio
 - dedicandomi ad attività completamente nuove, collegate alla fase emergenziale
 - solo in modo sporadico, occasionale e tra mille difficoltà
- Prima dell'emergenza epidemiologica, avevi già fatto esperienza in Istituto di qualche forma di lavoro da remoto (smartworking, telelavoro, lavoro satellitare)?
 - SI
 - NO
- Durante la fase emergenziale
 - ho svolto la mia attività interamente da casa
 - ho fatto rientri occasionali in ufficio per recuperare materiale o eseguire alcune attività
 - sono rientrato in ufficio con frequenza di uno o più giorni alla settimana per attività indifferibili da rendere in presenza
 - ho comunque svolto la mia attività interamente in ufficio
- Nell'organizzare il mio lavoro da casa
 - ho potuto utilizzare una stanza solo per me
 - ho condiviso gli spazi disponibili con altre persone impegnate nel lavoro o nello studio
 - ho cercato di volta in volta lo spazio più adatto per lavorare, a seconda delle necessità familiari
 - ho beneficiato dell'ospitalità di amici o familiari che disponevano di spazi adeguati
- Durante il periodo di smart working
 - ho potuto gestire il mio tempo di lavoro allineandomi agli stessi orari che svolgevo in ufficio
 - svolgendo lo stesso numero di ore, ma con diversa distribuzione nell'arco della giornata
 - decidendo autonomamente quante ore e in quale momento della giornata, in relazione agli obiettivi che mi erano assegnati

- concentrando l'attività in orari molto diversi da quelli d'ufficio
- concentrando l'attività in alcuni giorni della settimana
- Durante il periodo di smart working, le ore di lavoro necessarie per i miei impegni di lavoro quotidiane
 - sono sostanzialmente diminuite
 - sono leggermente diminuite
 - sono rimaste sostanzialmente invariate
 - sono leggermente aumentate
 - sono aumentate di molto
- Per eseguire le mie attività in smart working ho utilizzato principalmente (*sono consentite più opzioni*)
 - il computer fisso
 - un notebook
 - il notebook collegato a un monitor più grande e/o altre periferiche esterne
 - smartphone o tablet
- Per eseguire le mie attività in smart working ho utilizzato (*sono consentite più opzioni*)
 - i dispositivi tecnologici (computer, smartphone) che mi ha fornito l'Istituto
 - la connessione VPN web
 - la connessione VDI
 - il notebook o altri dispositivi di mia proprietà
 - semplicemente il telefono, perché non possiedo una connessione internet
- Durante l'attività in smart working, mi sono connesso a Internet
 - tramite fibra ottica
 - tramite ADSL, chiavetta USB o dispositivo wifi portatile
 - direttamente dal mio smartphone
 - utilizzando lo smartphone come router wifi per un altro dispositivo
 - in nessun modo, ho lavorato solo off line
- Per lavorare da casa (*sono consentite più opzioni*)
 - ho ricevuto una formazione specifica
 - ho ricevuto indicazioni sulle attività da portare avanti con priorità
 - in assenza di indicazioni specifiche, ho valutato in autonomia quali fossero le priorità
 - ho partecipato con frequenza a riunioni virtuali con i miei colleghi
 - ho ricevuto liste di lavorazione o lotti di pratiche
- Le condizioni organizzative e tecnologiche dello smart working mi hanno consentito
 - di eseguire tutte le attività di cui mi occupo abitualmente in ufficio
 - di eseguire solo una parte delle attività di cui mi occupo abitualmente in ufficio
 - di eseguire solamente attività diverse o sussidiarie, in quanto il mio lavoro abituale non è gestibile da remoto
- L'efficacia del mio lavoro in smart working
 - è migliorata rispetto al servizio che riuscivo a rendere in ufficio
 - si è assestata sugli stessi livelli di servizio che assicuravo in ufficio
 - è parzialmente peggiorata rispetto al servizio che riuscivo a rendere in ufficio
 - è decisamente peggiorata rispetto al servizio che riuscivo a rendere in ufficio
- Con gli strumenti e le risorse ricevute per lo smartworking,
 - ho dovuto lavorare molto più tempo e senza limiti di orario per ottenere risultati paragonabili a quelli di prima

- il rendimento produttivo è più o meno lo stesso, ma si ha la sensazione frustrante di non staccare mai la spina
 - il rendimento produttivo è più o meno lo stesso, ma con minore stress rispetto all'ufficio
 - ho potuto conciliare molto meglio i tempi di vita e di lavoro, con effetti positivi sul mio benessere e anche sulla produttività
- Lavorando a distanza, i rapporti con il mio responsabile
 - sono peggiorati, perché è difficile comprendersi senza parlare di persona
 - sono peggiorati, perché adesso le interazioni telefoniche o via webcam sono più invasive e avvengono a tutte le ore
 - sono rimasti immutati, grazie alla frequenza e alla qualità dei nostri meeting virtuali
 - si sono affievoliti e ho dovuto assumermi, per forza di cose, più responsabilità nelle decisioni operative
 - sono migliorati, tramutandosi in un rapporto di massima fiducia nella mia autonomia operativa
- L'esperienza vissuta nel periodo di smart working
 - produrrà dei cambiamenti irreversibili nel mio modo di lavorare
 - sarà solo un brutto ricordo, non appena tornati alla normalità
 - è stata un incentivo a considerare il lavoro agile come opportunità da valutare anche dopo l'emergenza
 - è stata una parentesi interessante, ma in futuro sarà un lusso per pochi
- Se mi venisse offerta la possibilità, accetterei di proseguire lo smart working per tutto il prossimo anno
 - in forma esclusiva e per l'intero orario di lavoro, come nella fase emergenziale
 - in forma parziale, alternando il lavoro in ufficio con alcune giornate da casa
 - in forma occasionale, svolgendo da casa un solo giorno alla settimana
 - solo se costretto, ma in linea di principio preferisco lavorare in ufficio
- Durante lo svolgimento del lavoro in forma agile
 - ritengo di potermi gestire le attività in piena autonomia
 - ritengo opportuno che mi siano assegnati dei compiti precisi dal mio responsabile
- Ritegno che lo smart working pregiudichi gli aspetti relazionali con i colleghi, soprattutto sotto il profilo (*sono consentite due opzioni*)
 - dell'armonia nei rapporti
 - della collaborazione
 - della fiducia
 - della comprensione
 - dell'amicizia
 - ritengo che non abbia pregiudicato gli aspetti relazionali
- La relazione con il tuo responsabile, durante lo smart working,
 - è molto peggiorata
 - è peggiorata
 - è rimasta immutata
 - è migliorata
 - è decisamente migliorata
- Nella mia esperienza, l'effetto più negativo del lavoro agile si è manifestato
 - nell'impossibilità di confrontarmi con i colleghi
 - nella perdita di relazione con gli utenti
 - nel peggioramento del mio stato psicologico

- nello stile di vita sedentario
 - nessuna delle precedenti
- Nella mia esperienza, l'effetto più positivo del lavoro agile potrebbe riassumersi in
 - maggiore facilità a concentrarsi sul lavoro
 - migliore conciliazione tra lavoro e vita privata
 - incremento del benessere lavorativo in generale
 - incremento della produttività in generale
 - nessuna delle precedenti
- La relazione con partner istituzionali (esempio: Agenzia delle Entrate, MEF, AgID, Banca d'Italia, Aran, INAIL ecc.) durante lo smart working
 - è molto peggiorata
 - è peggiorata
 - è rimasta immutata
 - è migliorata
 - nel mio lavoro non ho relazioni con partner istituzionali
- La relazione con Stakeholders (esempio: CAF, Patronati, Ordini professionali, Associazioni di categoria ecc.) durante lo smart working
 - è molto peggiorata
 - è peggiorata
 - è rimasta immutata
 - è migliorata
 - nel mio lavoro non ho relazioni con Stakeholders
- Durante questo periodo di lavoro a distanza sono riuscita/o ad usare l'eventuale tempo guadagnato dedicandolo a relazioni familiari e amicizie
 - cura della persona e riposo
 - impegno sociale e volontariato
 - hobby/sport
 - altro
- Quali tra queste enunciazioni ritieni più importante affinché lo Smart Working possa essere più aderente alle aspettative ed alle esigenze dei dipendenti nonché al miglioramento dell'Istituto?
 - che possa essere svolto su base volontaria con dei rientri concordati
 - che venga garantita pari opportunità di sviluppo professionale ed un accrescimento delle competenze di tutti i lavoratori (smart worker e non)
 - che siano attivate azioni concrete per un maggior controllo del «senso di isolamento» e per la tutela della «relazione umana»
 - che l'ambiente di lavoro virtuale consenta una gestione maggiormente condivisa delle informazioni, migliorando l'attuale livello di coinvolgimento del dipendente rispetto agli obiettivi della struttura
 - che l'organizzazione del lavoro «smart», tarata sul raggiungimento degli obiettivi di progetti specifici, e la maggiore flessibilità di svolgimento della prestazione lavorativa consentano di superare gli «adempimenti»
- Considerando la tua esperienza di smart working nella fase emergenziale, valuta quanto sei d'accordo con i seguenti aspetti positivi (*«Sono fortemente in disaccordo»; «Non sono d'accordo»; «Sono parzialmente d'accordo»; «Sono totalmente d'accordo»; «Non so»*)
 - Il lavoro è più focalizzato sui bisogni degli utenti e se ne percepisce maggiormente l'utilità
 - ho più tempo da dedicare a me e alla mia famiglia

- lavoro in un clima di maggiore fiducia e responsabilizzazione
- organizzando il lavoro in autonomia, si ottengono risultati migliori
- ho imparato a utilizzare nuovi strumenti, tecnologie e applicazioni
- le piattaforme di videoconferenza sarebbero utili anche per interagire con gli utenti
- il lavoro agile, stimolato dall'emergenza, è ormai un processo irreversibile che interessa l'intera società
- una maggiore flessibilità lavorativa è un vantaggio anche per la performance dell'Istituto
- il lavoro da casa mi consente un risparmio rilevante sui costi di trasporto nel medio-lungo periodo

• Considerando la tua esperienza di smart working nella fase emergenziale, valuta quanto sei d'accordo con i seguenti aspetti negativi (*«Sono fortemente in disaccordo»; «Non sono d'accordo»; «Sono parzialmente d'accordo»; «Sono totalmente d'accordo»; «Non so»*)

- non riesco a mantenere delle relazioni sociali con i miei colleghi
- il mio lavoro è sottoposto a un maggiore controllo
- non è chiaro cosa bisogna fare, come procedere e con quali obiettivi
- è troppo difficile conciliare le esigenze familiari con quelle lavorative
- il lavoro ricade su pochi, mentre è chiaro che molti colleghi se ne stanno approfittando
- ci sono troppi limiti dovuti alla qualità delle connessioni internet

• Rispetto a un'idea di introduzione generalizzata dello smart working, valuta quanto ti sembrano rilevanti i seguenti vantaggi (*«Sono fortemente in disaccordo»; «Non sono d'accordo»; «Sono parzialmente d'accordo»; «Sono totalmente d'accordo»; «Non so»*)

- maggiore responsabilizzazione dei dipendenti
- minore controllo quotidiano, a fronte di una maggiore considerazione del risultato effettivamente raggiunto
- maggiore evidenza del lavoro che svolgo quotidianamente
- riduzione dell'assenteismo
- riduzione dei tempi di trasferimento per raggiungere l'ufficio
- migliore bilanciamento tra produttività e benessere lavorativo
- migliore equilibrio tra tempi di vita e di lavoro
- aumento della motivazione e della soddisfazione
- riduzione del traffico e delle emissioni di CO2
- maggiore collaborazione tra i dipendenti
- maggiore familiarità con i dispositivi mobili e le tecnologie digitali

• Nella tua esperienza di lavoro svolto da casa, valuta quanto ti riconosci nei seguenti effetti (*«Sono fortemente in disaccordo»; «Non sono d'accordo»; «Sono parzialmente d'accordo»; «Sono totalmente d'accordo»; «Non so»*)

- ha incrementato la mia produttività
- ha migliorato la mia capacità di lavorare in team
- mi ha consentito di organizzare al meglio la mia giornata
- ha aumentato sensibilmente il mio tempo libero
- il focus del lavoro è diventato il risultato, di conseguenza è aumentato il controllo sulle attività lavorative
- ha aumentato lo stress dovuto alla pressione lavorativa
- ha peggiorato gli aspetti di relazione sociale con i colleghi
- mi ha fatto perdere il confine tra la vita privata e gli impegni lavorativi
- mi ha generato un senso di solitudine
- in caso di difficoltà lavorativa, ho potuto contare sull'aiuto dei miei colleghi
- ho maggiore libertà di scelta nel decidere come svolgere il mio lavoro
- ho fatto affidamento sul mio capo nei momenti più difficili di questa esperienza lavorativa
- sono diminuite le occasioni di molestie personali (sotto forma di parole e/o comportamenti scortesi)

– anche durante il periodo di lavoro da casa sono soggetta/o a prepotenze e scortesie

• Con quante persone vivi in casa

- nessuna
- una
- due
- tre
- più di tre

• In quanti metri quadri

- meno di cinquanta
- tra 50 e 100
- tra 100 e 150
- tra 150 e 200
- oltre 200

• Con quanti figli hai convissuto nel periodo di lockdown, suddivisi per fasce di età:

– *Figli di età inferiore ai 3 anni*

- 0
- 1
- 2
- 3
- 4 o più

– *Figli in età di anni 3-5 (scuola materna)*

- 0
- 1
- 2
- 3
- 4 o più

– *Figli in età di anni 6-10 (scuola primaria)*

- 0
- 1
- 2
- 3
- 4 o più

– *Figli in età di anni 11-14 (scuola media inferiore)*

- 0
- 1
- 2
- 3
- 4 o più

– *Figli in età di anni 14-18 (scuola superiore)*

- 0
- 1
- 2
- 3
- 4 o più

– *Figli di età superiore ai 19 anni*

- 0
- 1
- 2
- 3
- 4 o più

– *Quante sono le persone che necessitano di assistenza suddivisi tra:*

- persone anziane che coabitano con il nucleo familiare
 - 0
 - 1
 - 2
 - 3
 - 4 o più
 - persone che necessitano di assistenza e/o attenzione
 - 0
 - 1
 - 2
 - 3
 - 4 o più
- Nel caso di convivenza, il convivente, coniuge o partner, nel periodo di lockdown ha lavorato in smart working o si recava sul luogo di lavoro?
 - vivo solo/a
 - il convivente non lavora
 - il convivente ha lavorato in smart working da casa
 - il convivente si è recato sul posto di lavoro
 - il convivente ha lavorato sia in smart working che sul posto di lavoro
 - In che misura i componenti del nucleo familiare collaborano alla gestione delle attività relative al lavoro domestico?
 - 0-25%
 - 26%-50%
 - 51%-75%
 - 76%-100%

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