



Riccardo Crescenzi

Mara Giua

Davide Rigo

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The exaggerated triumph of work from home: the workplace is not dead and (for most of us) is here to stay

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Many analysts argue that working from home (WFH) is now a permanent feature of our economies and the workplace as we knew it before COVID is dead. Some even predict the decline of the city centre, the end of crowded commuter trains, and the loss of innovation clusters. However, using novel and previously unexplored population data, Riccardo Crescenzi, Mara Giua, and Davide Rigo found that the diffusion of WFH was possibly exaggerated due to many studies' strong assumptions of technology adoption and focus on big cities, which overlooks the practical barriers to WFH adoption for the less dynamic segments of the economy. They write that smaller companies and "poor" regions remain the big losers of the digital revolution.

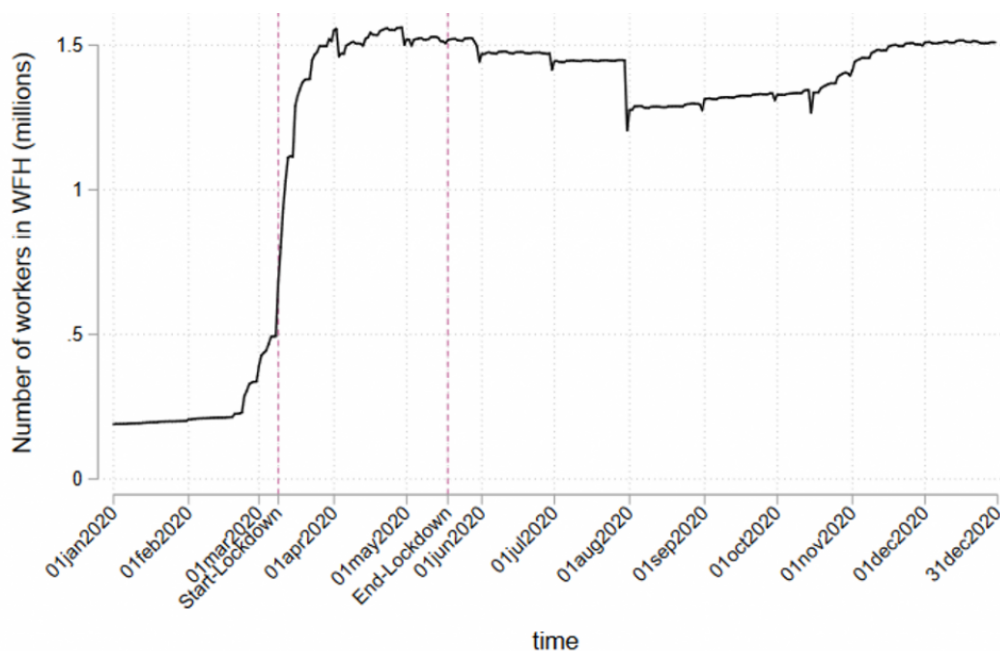
From the early days of COVID-19, throughout the resulting lockdowns, and continuing into the present, working from home (WFH) became a necessity for many firms and workers. While the transition to remote working is expected to have an enormous impact on our economies, experts are yet to reach a consensus on the magnitude of this change. The discord is in large part due to a lack of comprehensive and reliable data on WFH adoption.

The rise in homeworking due to COVID-19 disrupted the need for geographical proximity between workers and firms. As a result, teleworking was presented as a catalyst for the collective reorganisation of work, potentially pushing firms and workers to relocate away from expensive cities. Currently, the clustering of workers and firms is a strong contributor to urbanisation and the rise of knowledge-intensive economic structures. Yet following behavioural change from lockdowns and the faith in the benefits of teleworking, some commentators depicted this digitalisation as a force for inclusion and driver of re-balancing regional disparities within countries. The starting point to answer these crucial questions about modern economies is to quantify the importance of WFH and its diffusion across firms and regions.

From surveys to the entire population of workers

Using unique population data on the universe of Italian workers, we show that only 12% of workers were able to work from home at the peak of the pandemic in 2020, while existing estimates projected a staggering 24%-49% range. This simple comparison suggests that existing measures – widely used in academic and policy studies – systematically overestimate the share of jobs that can be undertaken remotely by at least 50%. This contrasts with the aggregate size. Figure 1 shows that during the first lockdown in Italy (March-May 2020), around 1.5 million employees worked remotely, up from only 200 thousand pre-pandemic.

Figure 1. Number of workers working from home, January-December 2020, millions



Note: This figure shows the number of jobs done at home during the COVID-19 pandemic (January-December 2020) in Italy. Firms operating in NACE rev. 2 codes 84 and 85 are excluded from this analysis.

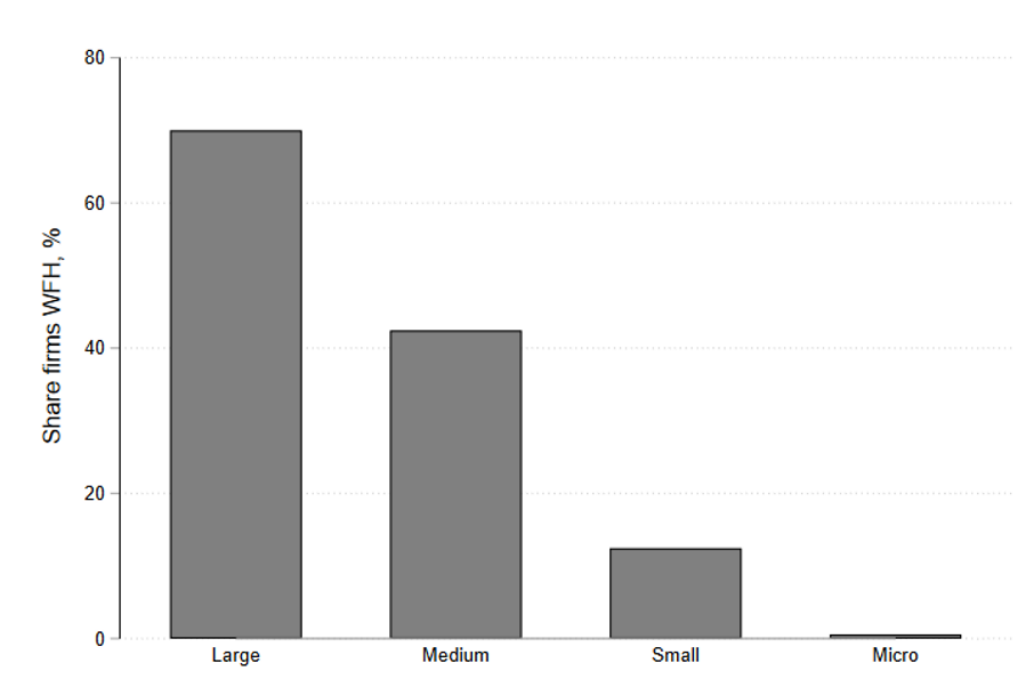
Given the lack of census data covering economies in their entirety (beyond our administrative dataset for Italy), widely used estimates of WFH adoption were forced to rely on strong and often unrealistic assumptions. These failed to provide a complete picture of WFH diffusion and impact on economies. Similarly, while these studies estimate that more than 40% of US employees could work from home, more granular data based on commuting patterns suggest that this share was more likely around 17% in 2021. The discrepancy between ‘potential’ for adoption and ‘actual’ figures – consistent across different countries and industrial systems – suggests that firms’ decisions to rely on WFH – even at the peak of the pandemic – were not automatic. They depended crucially on internal factors (e.g., managerial and organisational capabilities and ICT skills) and external ones (e.g., availability of a fast internet connection between the firm and employees’ homes).

What have we missed so far: firms and their external environment

The granularity of population data linking the universe of employees in remote working with their employers sheds new light on the large differences in WFH adoption across Italian sub-national regions and firms. Larger and more productive firms are more likely to adopt WFH practices. Figure 2 shows that 70% of large firms – those with 250 or more employees – had at least one worker

teleworking during the 2020 lockdown. This figure contrasts with only 1% of micro firms – those with fewer than 10 employees – adopting WFH practices.

Figure 2. Share of firms adopting WFH, by size



Notes: This figure shows the share of firms adopting WFH practices during the COVID-19 pandemic by size. Firms' size is measured based on the number of employees: Micro denotes firms with fewer than 10 employees, Small denotes firms with 10 or more and fewer than 50 employees, Medium denotes firms with 50 or more and fewer than 250 employees and Large denotes firms with 250 or more employees. Firms operating in NACE rev. 2 codes 84 and 85 are excluded from this analysis. Firms' number of employees are sourced from Orbis by Bureau Van Dijk and are based on information for the year 2019.

Turning attention to the locations of firms that allow their employees to work from home, the economic divide becomes even more apparent. While in Lazio (the region of Rome) and Lombardy (Milan) more than 21% of employees could work from home during the lockdown, in Calabria, Molise, Puglia, and Sicily (less advanced regions in Southern Italy) only 2% of workers worked from home. The different industrial composition of these regions certainly plays a key role – with northern regions characterised by a higher share of knowledge intensive industries. But, even after accounting for these sectoral differences (as done below in Figure 3), our research shows that the gap between potential measures of WFH and the reality remains staggering. The lack of local economic dynamism and the weaker technological capabilities call into question the idea that WFH can be an opportunity for all places and that it can create a more level playing field for our economies.

Similar regional patterns can be observed, for example, for the US. Using representative survey data, researchers have shown that **only 14%** of the US population lives in a sub-national region where the share of remote work is greater than 25%. Similarly to Italy, while WFH is more common in large US cities, most peripheral regions have low shares of WFH adoption. Therefore, fundamental geographical imbalances seem to be a general (but mostly understudied and underdocumented) WFH feature in advanced economies.

Figure 3. Potential vs actual WFH shares, by NUTS-2 regions



Note: This figure reports the ratio between the share of jobs done from home during the COVID-19 pandemic (March-May 2020) and the share of jobs that could potentially be done at home across NUTS-2 regions (based on [Dingel and Neiman, 2020](#)). Firms operating in NACE rev. 2 codes 84 and 85 are excluded from this analysis.

Why does this matter?

This novel evidence has a number of relevant implications. *First*, this is very telling about the true costs of social distancing measures and about the role of public policy in mitigating these costs. Contrary to recent studies, we show that in aggregate – and especially for weaker local economies and firms – WFH can play only a minor role in mitigating the economic impacts of pandemic-related social distancing measures. Only in a few high-skilled intensive industries is the share of workers working from home higher than 50%. In addition, low-productivity and small firms are shown to be less able to take advantage of WFH to mitigate lockdown effects on output.

Second, a more granular and comprehensive understanding of WFH calls for more cautious predictions of the death of the city. It also calls for better informed decisions in terms of design and planning of urban infrastructure, transport, and planning. The traditional physical workplace and its associated commuting patterns might remain a reality for many more firms, employees, and cities than anticipated. This will be the reality unless appropriate policies are put in place to facilitate the digital transition. Finally, our evidence calls for special attention in labour market policies to the inclusion of weaker categories of workers and firms.

While the lack of census data for the UK makes it difficult to draw direct comparisons, these novel findings have important implications for the UK economy. [ONS statistics](#) show that more than half

of businesses in the information and communications industry use or intend to use increased homeworking as part of a permanent business model. Yet, this model is the case for only 20% of businesses in the manufacturing sector. Such sectoral heterogeneity, not dissimilar to Italy or the USA, is coupled with two further factors. One being a large population of smaller firms (SMEs) that still account for approximately 60% of total UK employment and another being significant regional imbalances in innovation and adoption of new technologies. All these factors, based on the experience of other advanced economies, are important to reveal the potentially divisive effects of WFH in the UK. The effects may be along sectoral, territorial, and firm-size lines. This evidence should offer the opportunity for timely corrective measures in order to support an inclusive transition to the digital economy.



Notes:

- This blog post is based on *How many jobs can be done at home? Not as many as you think!*, Paper No. 37
Geography and Environment Discussion Paper Serie (LSE)
- The post represents the views of its author(s), not the position of LSE Business Review or the London School of Economics.
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About the author



Riccardo Crescenzi

Riccardo Crescenzi is a Professor of Economic Geography at LSE's Department of Geography and Environment.



Mara Giua

Mara Giua is an Associate Professor in the Department of Economics, Roma Tre University.



Davide Rigo

Davide Rigo is Leverhulme Early Career Fellow at LSE's Department of Geography and Environment.