

**CHANGES IN THE BUSINESS MODEL PROMPTED BY COVID-19: REMOTE WORKING**

To restrict COVID-19 contagion, measures began to be taken in the second week of March restricting movements by workers and consumers. These restrictions have given rise to changes in working and consumption patterns, accelerating certain trends in the business arena observed in recent years. Also, the legislation on the “new normal” stipulates that workplaces shall adopt measures to “promote remote work when this is possible given the working activity involved”.<sup>1</sup> This box analyses the organisational opportunities opening up in relation to teleworking, which is an option firms have adopted to soften the adverse effects of the current lockdown and to prepare themselves ahead of potential fresh outbreaks in the coming months.

In 2019, according to the Spanish Labour Force Survey (EPA), 8.4% of workers in Spain indicated that they occasionally worked at home and 4.5% did so for half of their working days. These figures mark a slight increase over the past 10 years, since in 2009 they stood at 6% and 3.4%, respectively.

These percentages are lower than those observed in the EU-28. In 2018, the latest year for which uniform information is available, 13.5% of the employed aged 15-64 worked from home in the EU-28 (Eurostat). Chart 1 shows there is much cross-country heterogeneity. Generally, remote working is a deeper-rooted practice in the northern European countries, while in the southern and eastern countries, it is used less frequently. In the Netherlands and Sweden, over 30% of all workers work remotely, whereas this practice is virtually non-existent in Cyprus, Bulgaria and Romania. Spain stands 6 pp below the European average, at 7.5%, and is some distance off the figures for other major countries such as France (20.8%) and Germany (11.6%).

The recent lockdown has galvanised this way of working. According to the Banco de España survey conducted in the first week of April, 80% of the firms consulted stated that remote working was proving an essential tool in tackling the crisis.<sup>2</sup> Furthermore, it has indirectly boosted the use of webinars and videoconferencing, and also the development of specific cybersecurity tools. These offer more powerful solutions in terms of antivirus, firewalls,

backups, VPN, etc., against a background in which both operational and security risks have increased in intensity.

It is still premature to calibrate precisely the scope of these changes and their continuity over time once the pandemic is behind us. That said, two aspects appear to be evident. First, on the information available, there is considerable scope to increase teleworking in Spain. For a measure of the work that can potentially be done at home, we use the methodology proposed in the paper by Dingel and Neiman (2020).<sup>3</sup> At a highly disaggregated level, this paper classifies a job as not being able to be done at home if it meets at least one of the context- or activity-based characteristics identified as difficult to reproduce in the worker’s main residence. Notable among these characteristics are, for example, having to spend the majority of time walking or running, working outdoors every day, conducting machinery inspection work or working directly with the public. This classification is applied to all workers in the Labour Force Survey based on their occupation and compared with the information offered in the same survey as to whether they performed part of their work at home.<sup>4</sup> Based on this characterisation, the proportion of workers in Spain who could work at home would be 30.6%, somewhat down on the estimate in the paper cited for the United States (34%).

Second, the room for improvement is clearly not the same for all sectors and groups (see Chart 2). In particular, there are some sectors currently in which teleworking is practically non-existent and where its potential for growth would be very high, such as transport and storage (a 42 pp potential increase); electricity, gas, steam and air-conditioning supply (+37 pp); general government (+32 pp); wholesale and retail trade (+25 pp); other services (+22 pp); water supply, sewerage, waste management and remediation activities (+22 pp) and manufacturing (+17 pp). At the other end of the scale are sectors such as agriculture, construction, hotels and restaurants, and domestic service, where there is scant possibility of remote working.

The different characteristics of the different types of jobs give rise to differences as regards the possibility different groups

1 See Art. 7 of Royal Decree-Law 21/2020 of 9 June 2020 on urgent prevention, containment and coordination measures to tackle the health crisis caused by COVID-19.

2 See Banco de España (2020). “Business survey on the impact of the COVID-19 crisis”, Box 1, “Reference macroeconomic scenarios for the Spanish economy after COVID-19”. *Economic Bulletin*, 2/2020.

3 See I. J. Dingel and B. Neiman (2020). “How many jobs can be done at home?”, NBER Working Paper No 26948.

4 See details in B. Anghel, A. Lacuesta and M. Cozzolino (2020). “Teleworking in Spain”, Analytical Articles, *Economic Bulletin* 2/2020, Banco de España.

**CHANGES IN THE BUSINESS MODEL PROMPTED BY COVID-19: REMOTE WORKING (cont'd)**

of workers have of benefiting from remote working. Thus, for example, only 21.5% of the under-24s could telework, compared with 43.5% of the over-65s. This is so because, as experience is accumulated, workers usually spend less on physical tasks and more on planning and supervisory tasks which can more readily be done from home.<sup>5</sup>

By level of educational attainment, the estimate of the potential number of remote workers shows that, among

the highest qualified, the total number of people working from home could increase to 51%. Conversely, among the group of workers with a lower educational level, only 16.7% could do so.

Different studies show the repercussions of remote working on firms' profits and workers' attitudes. For instance, Bloom et al. (2015) analysed the productivity-related results of a Chinese travel agency which, randomly,

Chart 1  
PERCENTAGE OF EMPLOYED AGED 15-64 TELEWORKING (2018)

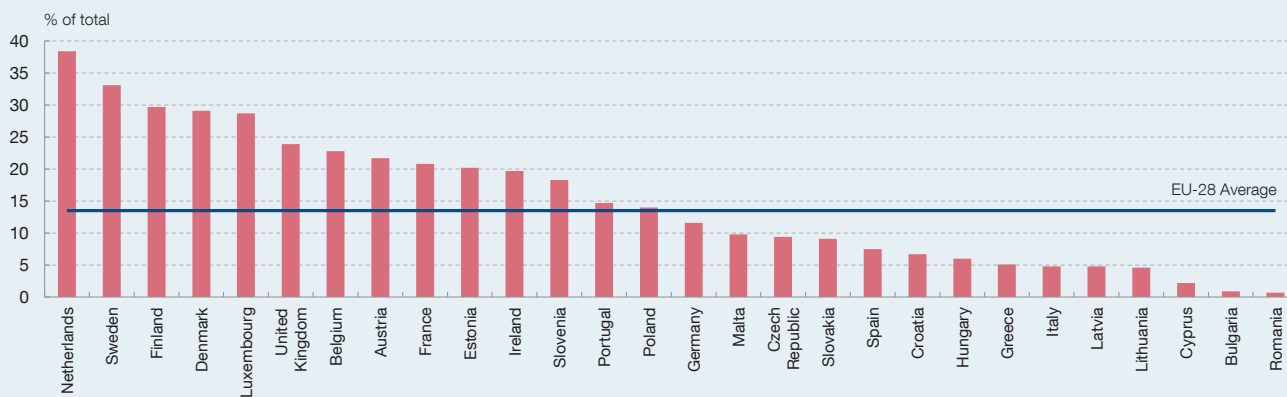
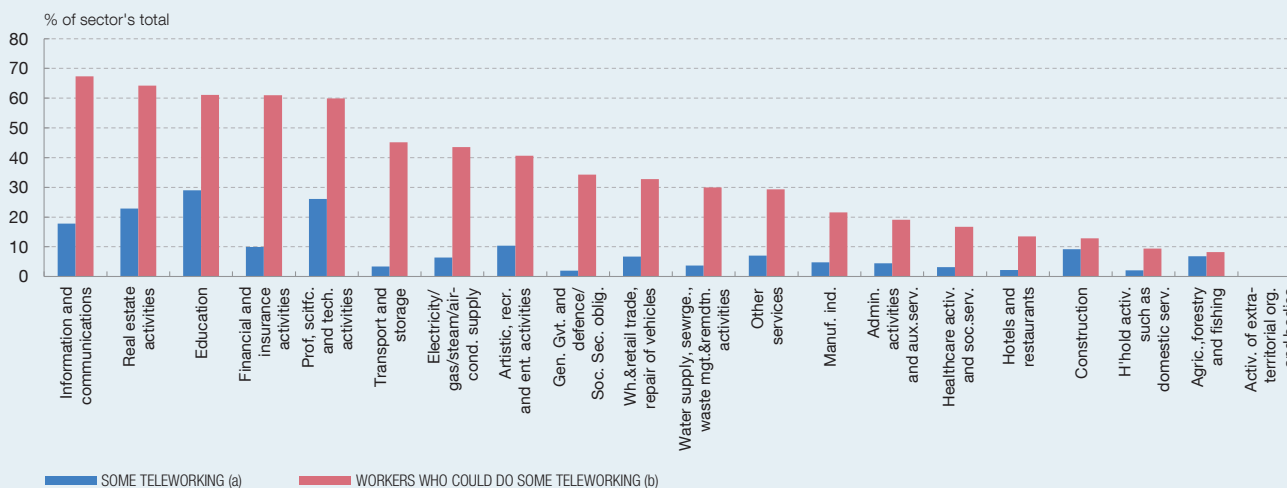


Chart 2  
PERCENTAGE OF WORKERS TELEWORKING: OBSERVED AND POTENTIAL



**SOURCES:** Eurostat (Labour Force Survey, 2018) and INE (EPA, microdata of the annual sub-sample for the year 2019).

- a The EPA definition of teleworking is used, in the question: "Did you work at home in the past 4 weeks (possibility envisaged in labour agreement)". The reply options are: "For over half the days you worked", "Occasionally" or "Not at all".
- b The methodology of Dingel and Neiman (2020) is used.

5 See B. Anghel and A. Lacuesta (2020). "Ageing, productivity and employment status", Analytical Articles, Banco de España 1/2020.

**CHANGES IN THE BUSINESS MODEL PROMPTED BY COVID-19: REMOTE WORKING** (cont'd)

assigned teleworking to a group of voluntary teleoperators for nine months.<sup>6</sup> In that period, productivity increased by 13%, with more hours worked and more calls attended to per minute. Further, there are studies indicating that this increase in productivity may depend on the type of tasks being performed. There is a positive increase for creative work, but it may be negative for urgent and complex tasks (Battiston et al. (2017) and Dutcher (2012)).<sup>7</sup> This negative effect on productivity may be compounded in a situation like the present in which remote working has been imposed by circumstances, without workers having had the opportunity to invest appropriately beforehand in home equipment or in training (Morikawa (2020)).<sup>8</sup> The paper by Bloom et al. (2015) also shows that workers feel satisfied at the possibility of remote working.

Generally, the findings of different surveys show that remote workers usually value in particular the flexibility of

being able to distribute their working day accordingly, to perform their tasks in different places and to be able to avoid commuting to the workplace. However, set against this, remote workers usually list as negative aspects a lack of communication with co-workers, the feeling of working alone and greater difficulty in switching off from work.<sup>9</sup> Some analyses have also highlighted disadvantages for workers' health arising from teleworking, such as a greater propensity to suffer stress or depression.<sup>10</sup> In this respect, some authors advocate promoting remote working, but not on a continuous basis; rather, employees should alternate between working at home and being physically present in the workplace. Lastly, there are analyses suggesting that teleworking may become a good option for lengthening employees' working lives, since this timetable flexibility is something people close to retirement age particularly value (see Hudomiet et al. (2019)).<sup>11</sup>

- 
- 6 See N. Bloom, J. Liang, J. Roberts and Z. J. Ying (2015). "Does working from home work? Evidence from a Chinese experiment", *The Quarterly Journal of Economics*, Oxford University Press, No. 130(1), pp. 165-218.
- 7 See D. Battiston, J. Blanes, I. Vidal, and T. Kirchmaier (2017). "Is distance dead? Face-to-face communication and productivity in teams." *CEPR Discussion Paper*, No. 11924; and E. G. Dutcher (2012). "The effects of telecommuting on productivity: an experimental examination. The role of dull and creative tasks", *Journal of Economic Behavior & Organization*, 84(1), pp. 55-363.
- 8 See M. Morikawa (2020). "COVID-19, teleworking, and productivity", Vox CEPR Policy Portal.
- 9 See *State of remote work 2020*.
- 10 See A. I. Tavares (2017). "Telework and health effects review", *International Journal of Healthcare*, Vol 3. no. 2.
- 11 P. Hudomiet, M. D. Hurd, A. Parker and S. Rohwedder (2019). "The effects of job characteristics on retirement", Working Paper No. 26332, NBER.