

## Task 3.5

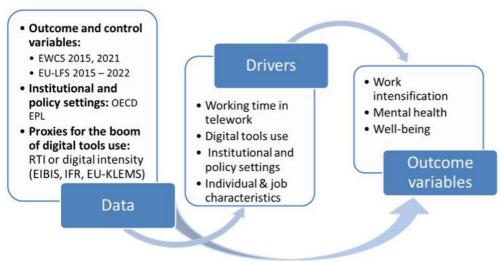
# Consequences of the expansion of work from home and digital tools use on teleworkers' work intensification, mental health and wellbeing

#### Task leader: LISER; Contributor: IBS

#### 1. Task description

The COVID-19 pandemic has caused a surge in work from home. We plan to investigate the role played by institutional and policy settings and the boom of digital tools use on the intensification of work from home and teleworkers' mental health and wellbeing before, during, and after 2020. We will use data from EWCS, LFS, IFR, EU-KLEMS, EIBIS, O\*NET as well as the Employment Protection Legislation (EPL) indexes from the OECD to capture the impact of institutional settings. We will pay attention to the heterogeneity of the effects depending on demographic characteristics, e.g., gender and age.

#### Figure 1. Overview of Task 3.5



Challenge: how to analyse the situation before, during, and after 2020



# 2. Background / Setting

The COVID-19 pandemic has led to widespread experimentation with telework. Adrjan et al. (2021) and Aksoy et al. (2022) underline that telework has become a popular choice among employees and companies. While employees have shown a preference for this work arrangement, and companies are ramping up their telework offerings, the impact of telework on employees' working time, mental health and well-being remain a topic of debate in the literature.

### 3. State-of-the-art

Most of the existing evidence on the effects of telework on employees' work intensification, mental health and well-being was conducted during the pre-pandemic or pandemic periods, with limited post-pandemic evidence available.

Literature on the impact of telework on mental health or well-being has produced mixed results. Some studies underline that several moderators help to explain this heterogeneity. Ferrara et al. (2022), Lunde et al. (2022), Oakman et al. (2020) meta-analyses highlight that both the work and private spheres influence teleworker's mental health and well-being. For instance, in the work sphere, less time pressure, fewer meetings, better participation in decision-making, and greater autonomy (Maruyama et al., 2009; Rubin et al., 2020; Sardeshmukh et al., 2012; Vander Elst et al., 2017) improve teleworker's mental health and well-being. A reasonable used of digital tools during worktime and after regular work hours that prevents information overload appears necessary for teleworkers to feel well (Martin, Hauret, et al., 2022; Martin, Pénard, et al., 2022). In the private sphere, a reduced commuting time and a good work-life balance is necessary in promoting positive mental health and well-being (Barrero et al., 2021; Bertoni et al., 2021; Deole et al., 2023). The national context, as for example the pandemic control rules, also influences teleworkers' mental health (Bertoni et al., 2021).

Regarding teleworkers' work intensification generally measured via the number of hours worked, no consensus emerges. Some authors indeed, conclude that, on average, employees work the same number of hours while teleworking or on site, while other find a decrease or an increase when at home (Giménez-Nadal & Velilla, 2020; Kifor et al., 2021; Pabilonia & Vernon, 2022).

Differences between gender, age groups and teleworkers with or without children are underlined (Bertoni et al., 2021; Deole et al., 2023; Martin, Hauret, et al., 2022). Differences between countries due to



institutional and policy settings as well as cultural factors may appear as it influences the level of autonomy in the workplace and the opportunity to telework for each occupation due to differences in the trust and delegating authority of employers and managers (Milasi et al., 2020).

### 4. Advancement compared to the state of the art

We will provide (one of) the first analyses assessing in an EU-wide setting, how the work sphere, the private sphere, the institutional, policy settings and cultural country variation and socio-demographic differences relate to teleworkers' working time, mental health and well-being remain a topic of debate in the literature.

Our analysis will be among the first to evaluate, on a European-wide scale, the relationship, before, during, and after 2020, between teleworkers' working time, mental health, and well-being, and drivers coming from both the work environment and the private environment as well as country and socio-demographic differences. The role played by institutional and policy settings and the boom of digital tools use will be central in our analyses. We will pay attention to the heterogeneity of the effects depending on demographic characteristics, e.g., gender and age.

#### 5. Research to be done

For this task, we will use individual survey data collected in EWCS, LFS complemented by IFR, EU-KLEMS, EIBIS, O\*NET to capture the intensity of digital tools use across occupations and firms characteristics (business sector and size). We will use Employment Protection Legislation (EPL) indexes from the OECD to capture the institutional and policy settings.

# 6. Methodology

We will use statistical descriptive analysis to describe differences in teleworkers' work intensification, mental health and well-being across occupations, sectors, and countries.

We will use regression analysis to identify the relationship between teleworkers' work intensification, mental health and well-being and drivers that comes from the work sphere, the private sphere, country and socio-demographic differences.

#### 7. Data sources

• Data at the employee level:



- European Working Conditions Survey (2015, 2021)
- Labour Force Survey (2019, 2020, 2021)
- Data at the occupational level:
  - O\*NET: Occupational Information Network
- Data at the firm\*sector\*country level:
  - o EIBIS: European Investment Bank Investment Survey
  - o IFR: International Federation of Robotics
  - EU-KLEMS: capital, labour, energy, materials and service data
- Data at the country level:
  - Employment Protection Legislation (EPL) indexes from the OECD

# References

- Adrjan, P., Ciminelli, G., Judes, A., Koelle, M., Schwellnus, C., & Sinclair, T. (2021). Will it stay or will it go? Analysing developments in telework during COVID-19 using online job postings data. OECD Productivity Working Papers, 21(30).
- Aksoy, C. G., Barrero, J. M., Bloom, N., Davis, S. J., Dolls, M., & Zarate, P. (2022). Working from home around the world. *NBER Working Paper No 30446*. https://doi.org/10.2139/ssrn.4219442
- Barrero, J. M., Bloom, N., & Davis, S. J. (2021). Why working from home will stick. *NBER Working Paper No 28731*, 1–68. https://doi.org/10.3386/w28731
- Bertoni, M., Cavapozzi, D., Pasini, G., & Pavese, C. (2021). Remote working and mental health during the first wave of Covid-19 pandemic. *IZA Discussion Paper No 14773*.
- Deole, S. S., Deter, M., & Huang, Y. (2023). Home sweet home: Working from home and employee performance during the COVID-19 pandemic in the UK. *Labour Economics*, 80(September 2021), 102295. https://doi.org/10.1016/j.labeco.2022.102295
- Ferrara, B., Pansini, M., De Vincenzi, C., Buonomo, I., & Benevene, P. (2022). Investigating the role of remote working on employees' performance and well-being: An evidence-based systematic review. *International Journal of Environmental Research and Public Health*, 19(19). https://doi.org/10.3390/ijerph191912373
- Giménez-Nadal, J. I., & Velilla, J. (2020). *Home-based work, time endowments, and subjective well-being: Gender differences in the United Kingdom. 104937.*



- Kifor, C. V., Nicolaescu, S. S., Florea, A., Savescu, R. F., Receu, I., Tirlea, A. V., & Danut, R. E. (2021). Workforce analytics in teleworking. *IEEE Access*, 9, 156451–156464. https://doi.org/10.1109/ACCESS.2021.3129248
- Lunde, L. K., Fløvik, L., Christensen, J. O., Johannessen, H. A., Finne, L. B., Jørgensen, I. L., Mohr, B., & Vleeshouwers, J. (2022). The relationship between telework from home and employee health: a systematic review. *BMC Public Health*, 22(1), 1–14. https://doi.org/10.1186/s12889-021-12481-2
- Martin, L., Hauret, L., & Fuhrer, C. (2022). Digitally transformed home office impacts on job satisfaction, job stress and job productivity. COVID-19 findings. *Plos One*, 17(3), e0265131. https://doi.org/10.1371/journal.pone.0265131
- Martin, L., Pénard, T., & Poussing, N. (2022). Are employees happier when staying connected with their companies outside working hours? *Social Science Computer Review*, 40(4), 1035–1053. https://doi.org/10.1177/08944393211061273
- Maruyama, T., Hopkinson, P. G., & James, P. W. (2009). A multivariate analysis of work-life balance outcomes from a large-scale telework programme. *New Technology, Work and Employment, 24*(1), 76–88. https://doi.org/10.1111/j.1468-005X.2008.00219.x
- Milasi, S., González-Vázquez, I., & Fernández-Macías, E. (2020). Telework in the EU before and after the COVID-19: where we were, where we head to. *Science for Policy Briefs, European Commission, JRC*.
- Oakman, J., Kinsman, N., Stuckey, R., Graham, M., & Weale, V. (2020). A rapid review of mental and physical health effects of working at home: how do we optimise health? *BMC Public Health*, *20*(1), 1–13. https://doi.org/10.1186/s12889-020-09875-z
- Pabilonia, S. W., & Vernon, V. (2022). Telework, wages, and time use in the United States. *Review of Economics of the Household*, 20(3), 687–734. https://doi.org/10.1007/s11150-022-09601-1
- Rubin, O., Nikolaeva, A., Nello-Deakin, S., & te Brömmelstroet, M. (2020). What can we learn from the Covid-19 pandemic about how people experience working from home and commuting? *Centre for Urban Studies, University of Amsterdam*, 1–9.
- Sardeshmukh, S. R., Sharma, D., & Golden, T. D. (2012). Impact of telework on exhaustion and job engagement: A job demands and job resources model. *New Technology, Work and Employment*, 27(3), 193–207. https://doi.org/10.1111/j.1468-005X.2012.00284.x
- Vander Elst, T., Verhoogen, R., Sercu, M., Van Den Broeck, A., Baillien, E., & Godderis, L. (2017). Not extent of telecommuting, but job characteristics as proximal predictors of work-related well-being. *Journal of Occupational and Environmental Medicine*, 59(10), e180–e186. https://doi.org/10.1097/JOM.00000000001132