Title: “Adoption of Telework and E-learning During COVID-19 Lockdown”

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Abstract: This paper studies: a) the impact of COVID-19 lockdown measures on the adoption of teleworking and e-learning, and; b) its socioeconomic determinants. Using real-time data on Google search Trends aggregated at the province level in Italy, I study how different provinces reacted to the implementation of local and national confinement rules. More specifically, I estimate the province-specific changes in telework and e-learning related searches, before and after lockdown. To measure the lockdown, I use two different alternatives: the dates of the published law-decrees announcing the quarantine measures, and, as robustness, the Mobility Reports published by Google. Then, I provide evidence on which socioeconomic characteristics of each province determine the different levels and speeds of adjustment. The contributions of this paper are threefold: 1) To quickly identify the magnitude and sources of adoption inequalities should be useful for policymakers to tackle the most urgent problems in terms of productivity and knowledge acquisition, which are crucial to mitigate the next economic crisis; 2) To provide benchmarks for future comparisons with representative and established surveys that include telework and e-learning measures; 3) To explain how the Mobility Reports by Google can provide additional relevant information in research related to COVID-19.

Data description: For the moment, the project includes the use of three data sources, all of them aggregated at the province level (20 provinces in Italy). Google Location evolution is collected from the COVID-19 Community Mobility Reports, published online. To transform the graphs into data series I then use the Engauge Digitizer software. Google Trends scraping was collected during the same period as the mobility reports are available for Italy, for consistency. For robustness, I also collect analogous data in previous years, to account for the possible existence of previous trends. The data on socio-economic indicators is collected from Istat (L'Istituto nazionale di statistica) website.

JEL codes: C81, D63, I24, J24, J81

Keywords: Telework, E-learning, COVID-19, Google Trends, Mobility Reports

Paper to be available here. Code available under request.