

1. Title: Searching for the peak. Google Trends and the monitoring of the Covid-19 outbreak in Italy

2. Authors and affiliations and contact emails: Paolo Brunori, University of Florence - paolo.brunori@unifi.it and Giuliano Resce, SOSE spa, Italian Ministry of Economy and Finance. giuliano.resce@uniroma3.it

3. Abstract

One of the difficulties faced by policy makers during the Covid-19 outbreak in Italy was the monitoring of the virus' diffusion. Due to changing criteria and insufficient resources to test all suspected cases, the number of "confirmed infected" cases rapidly proved to be unreliably reported by official statistics. This limited the ability of epidemiologic models to predict the evolution of the infectious disease. This paper explores the possibility of using information obtained from Google Trends to supplement official statistics in order to predict when the number of deaths due to Covid-19 will peak in Italy. We estimate and regularize a panel model with regional and time fixed effects. Our preferred specification shows a positive and significant correlation between Google searches for commonly reported Covid-19 symptoms and deaths recorded. The analysis suggests that the social distancing measures implemented in early March in Italy were effective in slowing down the spread of the virus.

4. Data description

The data come from two sources:

- number of deaths for Covid-19 published by the Italian Ministero della Salute and are available at: <https://github.com/pcm-dpc/COVID-19> the version used is the one published March 28.

- number of Google queries can be downloaded from Google Trends at: <https://trends.google.it/trends>

5. JEL codes for the project: I18, D83, C10.

6. Key-words: Covid-19, Google Trends, Lasso.

7. Working paper versione: http://www.unicaldine.it/research/BR_2020.pdf