

PARTICULATE MATTER AND THE SHARE OF ARTISAN ENTERPRISES UNABLE TO SWITCH TO SMART WORKING ARE ASSOCIATED WITH A HIGHER NUMBER OF COVID-19 CASES IN ITALY. THE LOCKDOWN REDUCED THE NUMBER OF NEW CASES AND WILL START REDUCING DEATHS SOON.

The novel coronavirus has been travelling long distances, from Wuhan, China, to Milan, Italy. However, it travelled shorter distances less easily, like from Northern Italy to Southern Italy, despite the intense movement of people by cars, trains, and air. This working paper by Leonardo Becchetti (University of Rome Tor Vergata), Gianluigi Conzo, (University of Rome Tor Vergata), Pierluigi Conzo (University of Turin and Collegio Carlo Alberto), and Francesco Salustri (University of Oxford) aims to investigate the puzzle around the spread of the virus and pave the way for further research on the topic. The working paper focuses on daily new COVID-19 cases and deaths in all Italian provinces, and tests the impact of four potential factors, namely lockdown, pollution, age structure, weather, and human activity, on the diffusion across Italian regions.

The results suggest that the diffusion of COVID-19 in Italy was eased by poor air quality (measured by particulate matter) and late lockdown decisions. These factors are significantly associated with a lower number of new cases. Regrettably, the effects are more severe in those provinces where the share of artisan enterprises is higher. This finding can be explained by the obstacles faced by artisans in stopping their activities because of lower resilience and higher risk of negative consequences. Also, artisan enterprises may be slower at transferring their activities online, if not unable to. This must not be interpreted as a negative result. Artisans and small businessmen and businesswomen who daringly fight to keep their enterprises alive are heroes just like physicians and health professionals. Like the latter, therefore, they deserve to be protected. Last but not least, the authors test whether the presence of Chinese citizens at the local level is linked to a higher number of cases, without finding any empirical evidence in support of a correlation.

Overall, the results show that a prolonged past exposition to particular matter is significantly associated with a higher number of new Covid-19 cases and a higher number of deaths. This is consistent with the findings of researchers from Harvard University in relation to the United States and with the clinical literature, including research preceding the current pandemic, on hospital admissions due to lung diseases and particulate matters.

In a single month, the most (in Lombardy) and the least (in Sardinia) polluted provinces show, on average, a difference of 1200 new Covid-19 cases and 600 deaths, with a double mortality rate in the most polluted ones.

Undoubtedly these preliminary results will have to be confirmed by further research on the effects of the concurring factors above. Despite their preliminary stage, the findings of this working paper have important policy implications. Almost all particulate matter (94%) depends on human activity: over a half (57%) on greenhouse gas emissions and the rest (37%) on transportation, energy, and agricultural and industrial production. It is therefore of the outmost importance to re-start the economy by investing on the idea of “resilient wellbeing”. New technologies can help us achieve that through investments supporting the country’s economic development, employment levels, the environment, the health system, and a better work-life balance.

Link to the working paper: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3572548