

Preface

This volume collects selected paper presented at the COVER - COVid-19 Empirical Research conference - organized by the Centre of Excellence in Economics and Data Science of the Department of Economics, Management and Quantitative Methods, University of Milan, Italy, October 30th 2020.

In the early of 2020 the Europe was involved in the COVID-19 pandemic. The dramatic world situation has prompted many researchers from different fields to focus on studying the covid-19 pandemic and its economic and social implications. This conference aimed to welcome different points of view by opening an interdisciplinary discussion on the possible developments of the pandemic. Contributions were made in three main areas: social, economic and mathematical-statistical.

The program of the conference included 14 presentations, organized in 3 sessions, by breaking down the three main topics of the conference. The contributors belong to an international panorama. The Universities and Research Centres of Dublin, Germany, Hungary and the United Kingdom were involved. We thank all the contributors whose spent their time in a so particular period and all the organizers of the sessions for inviting renowned speakers.

The keynote speakers were Daniela De Angelis with the contribution "National response to the Covid-19 pandemic: The UK experience", Massimo Galli with the contribution "The SARS-CoV-2 pandemic in Italy", Mark Chaplain and Nicola Bellomo with the contribution "Modeling of a virus pandemic in a globally connected world: A multi-scale active particles approach". We thanks these renowned speakers to open a very interesting debate on the analysis of the pandemic in different countries.

This volume collects 16 manuscripts extracted form the contributions presented at the conference and from free submission and it is structured as follows. The first contribution is the opening by the department head Carlo Fiorio. This paper introduces the problem of COVID-19 from an economic point of view. The other papers can be divided into the three main areas: Social, Economic and Management and Mathematical Statistics.

The exposition of the problem from the social point of view was treated by three contributors. Ballabio et al., highlight how the poverty situation has changed in during this period. Mecatti describes the aims of the FEN-StatS Covid19 WR, a free spontaneous association of statistical experts from

14 European countries. Finally, Negri and Mazzoleni identify some factors of contemporary urban and mobile living, which favored the spread and propagation of COVID-19 in Italy.

The economic and management issues were dealt with by five contributors. Giorgetti and Iorio analyzes the Italian manufacturing sector before and during the pandemic crisis. Iacovone analyses the factors underlying the effective response to the crisis in the Lombardy manufacturing sector. Marsilio and Prenestini investigate the role of the Italian Regional Health Care Services in the governance of Covid-19 emergency and analyse the influence on the response of Health care Organizations in managing the first wave. Pilotti studies the new alliances raised between State, market and people. Rosa et al. highlight the importance of the co-creation of public value and how the lack of integrated territorial networks of care have impacted in the management of the COVID-19 emergency.

In the end, mathematical and statistical models of the phenomenon were provided by the remaining seven contributors. In particular, Bellomo and Outanda focus on conceptual contributions that mathematical sciences can give to modelling virus pandemics over complex interconnected environments. Ferrari et al. present a time-depended model for the spread of COVID- 19 infection at a provincial level in Italy. Gotz et al. consider a statistical model to explain the spread of those variants in Germany on small time scales. Kenett et al. use several models to analyse the mutual effect of the citizen, the policy and decision makers, and the healthcare system. Rios and Gianmoena analyse the dynamics of CoVID-19 lethality at global level. Riviuccio et al. perform a time-frequency analysis of regional emergency calls, CoVID-19-related Twitter data and daily new cases. Finally, Wijaya et al. use a mathematical model to study strategies on the use of the face mask

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Elia Biganzoli
Giancarlo Manzi
Alessandra Micheletti
Federica Nicolussi
Silvia Salini