

Editorial

Statistical features and economic impact of Covid-19

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The COVID-19 pandemic has led to an explosion of studies and contributions in many scientific areas, such as engineering, biology, chemistry, medicine, and social and management sciences, among others. In all, the role of statistical methodologies and analysis has been crucial in producing accurate and reliable data and in the analysis of the evolution of the pandemic and its impact on society. As highlighted by several publications, scientific and not, National Statistical Organizations have been at the forefront of understanding the dynamics of the pandemic, providing reliable data, forecasts, and assessing the effects of health policies as well as stringency measures.

While early publications have focused on disease forecasting and modeling later, a plethora of contributions is concerned not only with human science-focused topics but also with the economic and social consequences of the pandemic and containment measures.

This Special Issue has collected papers about diversified topics related to the COVID-19 pandemic. The variety of phenomena investigated in the papers testifies to the vastness of society's spheres affected by the pandemic's consequences.

The article by T.C. Mills *Modelling the link between Covid-19 cases, hospital admissions and deaths in England* (Mills, 2022) is concerned with a topic that has attracted the interest of scholars from several disciplines but also media and public attention: study and forecast the dynamics of the pandemic. More specifically, the author is interested in applying time series models to track the progress of an epidemic and evaluate the effects of policies and interventions. That is accomplished by connecting statistical data related to different and linked aspects, such as the number of deaths, hospital admissions, and the number of infected, to assess whether and how the relationships among those time series change in response to improvements in clinical practices and vaccination plans. Two alternative approaches are used in studying daily UK time series data: balanced growth models and the more traditional autoregressive distributed lag/error correction models.

The two modeling approaches show similar performance and results: a significant decline in hospital admissions and subsequent deaths occurred as the clinical practices improved. Moreover, the author also discussed the pros and cons of the two approaches.

The article *Forecasting Economic Indicators with Robust Factor Models* (Corradin et al., 2022) by F. Corradin, M. Billio, and R. Casarin deals with more methodological aspects. Namely, it discusses the forecast abilities of factor time series models in the presence of outliers. Monthly data ran to an extended period (2001–2021) which includes two economic shocks: the 2008 crisis and the COVID-19 pandemic. The authors study vital economic variables such as labor market variables, imports, exports, industrial production, consumption, sales, and leading indicators of interest rates, among others. More technically, a robust approach for estimating the factor model is applied, and then the Vector Autoregressive (VAR) model is used to predict the factors.

The empirical analysis shows the importance of handling outliers in periods of great shocks to the world's economies through robust estimation that can reduce outliers' influence and produce better forecasts.

Even the contribution titled *COVID-19 and the effect of central bank intervention on exchange rate volatility in developing countries: The case of Uganda* by (Katusiime, 2023) L. Katusiime applies time series methodologies. The study discusses the effects of monetary policies undertaken in a developing country to counter the impact of the COVID-19 pandemic on the economy. The issue dealt with concerns the interventions implemented by the Central Bank of Uganda to limit the volatility of the national currency's exchange rate against the US dollar.

The author applies a GARCH estimation framework on daily data from December 30, 2016, to December 1, 2021. The model includes dummy variables representing specific interventions of the Central Bank of Uganda, such as purchase/sale interventions and the net purchase of foreign currency in the foreign exchange market. The main findings show that the net effect of all actions taken together results in a slight increase in exchange rate volatility while maintaining an almost stable exchange rate level.

Healthcare access as an important element for the EU's socioeconomic development: Greece's residents' opinions during the COVID-19 pandemic (Zavras, 2022) by D. Zavras takes us to Greece with an analysis of healthcare access also relating to the EU role. The author analyses Eurobarometer data for Greece and referred to a period shortly after the containment measures adopted to counter the epidemic.

Assuming that access to healthcare is a significant element fostering socioeconomic development, the author studies on Eurobarometer data how the importance of access to healthcare influence public opinion regarding the direction headed by the EU for economic and societal development. Other potential predictions are sociodemographic characteristics because economic knowledge has a valuable effect on public opinion about many economic issues. Respondents giving importance to quality healthcare as a relevant element of the EU's social and economic development considered that, in general, things in the EU are going in the wrong direction. At the same time, the opinion that decision-making should take place at the EU level for dealing with health issues is positively associated with the outcome variable likely since health outcomes in the European Union are good. In conclusion, the study reaches rather pessimistic results: the disruption to healthcare access caused by the pandemic seems to determine a feeling of discomfort regarding the decline of society in the EU.

Article *The consequences of COVID-19 on older adults: evidence from the SHARE Corona Survey* (Panarello and Tassinari, 2022) by D. Panarello and G. Tassinari investigates the economic

consequences of the pandemic, especially those affecting high-risk groups such as older adults. In detail, the authors examine the impact of COVID-19 on the older European population, focusing on their ability to make ends meet, loss of employment, and financial support received. The authors analyze data from the Corona Survey referred to 2020, which was shortly after the pandemic's beginning.

The paper provides several findings with a descriptive analysis, and estimates an ordinal logit and a logit model for two response variables: the ability to make ends meet and whether employment was lost. The main results show that social networks effectively play a valuable role in helping citizens to cope with adverse economic conditions caused by the pandemic. Moreover, older people are less likely to receive financial support, thus resulting in being less economically vulnerable than we would have expected. The paper also provides a cross countries comparison. In particular, respondents from countries characterized by higher GDP growth, or a lower decline in GDP (in the second quarter of 2020 compared to the previous quarter) are less likely to lose their jobs

Conflict of interest

The author declares no conflicts of interest in this paper.

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