THE ECONOMICS OF COVID-19

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THE ECONOMICS OF COVID-19

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PREFACE

Quoting from the UN's Framework for the Immediate Socio-Economic Response to the COVID 19 Crisis: 'The COVID-19 pandemic is far more than a health crisis: it is affecting societies and economies at their core. […] Development trajectories in the long-term will be affected by the choices countries make now and the support they receive'. The global health crisis, exacerbated by the COVID-19 outbreak, has challenged all sectors of society, including health, economics, finance and social inequality. The threats and complexities from the COVID-19 pandemic shock are the subject of this book. Obviously, one cannot cover all economic and health aspects of this pandemic in one book. A lot of research is carried out globally on the effects of this virus. Enclosed are selected contributions of the effects of this pandemic covering macroeconomics, computable general equilibrium models, financial markets, the reduction in seismic noise due to the slowdown in traffic and economic activities caused by the spread of the virus, and the rapid surge in the digital transformation of production and consumption. Also included are health studies proposing to improve the traditional epidemic models, the effects of the pandemic on mental health, as well as on Minority Ethnic Groups (MEG) in the UK. The book concludes with a study that discusses the challenges and the limitations faced during the COVID-19 pandemic by the Lombardy region in Italy which was a hot spot for the virus.

Billio, Casarin and Corradin study the effects of the COVID-19 pandemic on a number of macroeconomic variables for the US and the EU, using a factor model. The authors extract a set of instability measures and perform a macroeconomic scenario analysis to better understand the factors associated with economic instability.

Roson and Van der Vorst survey the recent and rapidly expanding literature that analyses the economic impacts of the COVID-19 pandemic by means of Computable General Equilibrium models. They review recent contributions in this field, specifically looking at advantages and disadvantages of the proposed technique within the COVID context.

Massacci discusses several methodological challenges that could arise when analysing data on financial markets in periods of high economic and financial turbulence, such as the COVID-19 pandemic. The author discusses the high nonlinearity in asset returns and proposes possible approaches to properly account for such nonlinearity.

The COVID-19 pandemic exacerbated the need for policy makers to obtain accurate and timely economic data to monitor the state of the economy. Recent advances in information technology allowed the collection, storage and analysis of several new sources of information related to human behaviour and activity that could be used as proxies for economic conditions. Tiozzo Pezzoli and Tosetti explore the use of seismic data to predict variations in Gross Domestic Product for a set of States in the US over the period 2015–2021. The authors show a remarkable reduction in seismic noise due to the slowdown in traffic and economic activities during the coronavirus economic crisis.

Tabaghdehi explores the structure of the digital supply and digital consumption and the opportunities and challenges in promoting the economy, given the rapid surge in the digital transformation of production and consumption since the COVID-19 outbreak.

A number of chapters in this book focus on the health and healthcare aspects of the pandemic as well as on the statistical modelling of the spread of the virus. Among these, Arbia, Nardelli and Ghiringhelli study how to improve traditional epidemic models by proposing a stochastic version of SIR (Susceptible, Infectious or Recovered) models. In line with the specific features of the current COVID pandemic, the authors propose to augment the usual categories of individuals considered in SIR models with additional categories of hospitalised and critical care patients.

Rienzo reviews the literature on the effect of the COVID-19 pandemic on mental health, with a special focus on the differences observed across various demographic groups. The author points out the high degree of heterogeneity within demographic groups, with women, younger people and poorer households being more affected.

Madia, Nicodemo and Redding present a summary of existing evidence on the effects of the COVID-19 pandemic on Minority Ethnic Groups (MEGs) in the UK. The authors show a deterioration in the mental health of MEG, and in particular MEG women. They also observe a higher probability for certain ethnic groups to contract the infection and die, as well as a lag in receiving their first dose of the vaccine.

Finally, Angelici, Berta and Vittadini discuss the challenges and the limitations faced during the COVID-19 pandemic by the Lombardy region (Italy), one of the most heavily affected regions by the virus worldwide. The excess mortality in the Lombardy region indicates that the region did not manage the spread of the virus in an effective way. Surprisingly, when examining non-COVID patients, their results show that the healthcare system was able to guarantee the same level of quality in treatment as that provided in pre-COVID periods, particularly for those pathologies requiring treatments that could not be deferred in time or a strong continuity of care.

We hope these sample of contributions spur much needed research in the effects of COVID on the global economy, the health and financial sectors as well as development and growth and economic inequality, to mention a few.

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