Introduction to the Special Issue on COVID Economics

Victor Aguirregabiria
University of Toronto

Siwan Anderson
University of British Columbia

Hashmat Khan
Carleton University

THE RAPID SPREAD of the novel coronavirus in early 2020 and the consequent global impact of the COVID-19 pandemic are unprecedented in living memory. By late June 2021, there were close to 180 million cases worldwide and nearly 4 million deaths, with many countries, including Canada, experiencing multiple waves of the pandemic.

Subsequent to World Health Organization's declaration of the pandemic on March 11, 2020, governments and public health authorities immediately entered into a state of emergency. They responded by taking extreme actions to slow and contain the spread of the coronavirus with devastating effects on the economy worldwide. The close nexus between the health consequences of the pandemic, and the functioning of the economy has drawn a tremendous research effort from the economics community. Recognizing the diversity of this research, with different perspectives, methodological approaches and far-reaching consequences, we initiated an open call for a special CJE issue on COVID economics in May 2020. We received 87 submissions that underwent the usual peer review process, resulting in the eventual selection of the 21 papers gathered together for this volume.

The set of papers falls into four core themes: (i) household finances and government programs to alleviate the financial impact of COVID-19, (ii) heterogeneous impacts of COVID-19 across individuals, industries, occupations and regions, (iii) macroeconomic policy during and after COVID-19 and (iv) economic epidemiological models.

The first group of articles in this volume analyzes **household finances and government programs to alleviate the negative financial impact of COVID-19**. Allen, Clark, Li and Vincent (2022) study the effectiveness of debt-relief programs that allow households to delay mortgage and credit card payments. Using a rich dataset from the Canadian credit bureau, they find that enrolment into this program has been very limited and that most

individuals were unaware of the program. MacGee, Pugh and See (2022) use a heterogeneous agents model to study changes to Canadian households' debt and unplanned savings. The model is calibrated from a representative household cross-section and incorporates government income replacement programs. They find that such policies only partially replace lost income for the unemployed, which generates a rise in borrowing among lower-income groups but substantial increases in savings for upper-income groups. Ho, Morin, Paarsch and Huyhn (2022) use data from a consumer credit reporting agency to study Canadians' use of credit cards and home equity lines of credit (HELOCs) during COVID-19. They find a dramatic and widespread reduction in credit usage. Kim, Koh and Zhang (2022) analyze household consumption responses to COVID-19 in Singapore. They find that a substantial amount of the reduction in consumption spending is associated with risk avoidance due to the increase in economic uncertainty. Madeira (2022) studies changes in household credit default risk in Chile during both the COVID-19 pandemic and the Chilean *Social Explosion* in October 2019. While default risk increased substantially during the Social Explosion across all income groups, it fell during the COVID-19 pandemic. The different responses appear because of specific debt relief policies targeted at households during the pandemic.

The second group of articles in this volume speaks to the vastly **heterogeneous impacts of COVID-19 across individuals, industries, occupations and regions**. Baylis, Beauregard, Connolly, Fortin, Green, Gutiérrez-Cubillos, Gyetvay, Haeck, Molnár, Simard-Duplain, Siu, teNyenhuis and Warman (2022) use the Vancouver School of Economics COVID Risk/Reward Assessment Tool to study individual heterogeneity in COVID-related risks in Canada. They find a positive correlation between viral and employment loss risks, where both risks have disproportionately affected women, less-educated individuals and recent immigrants. Béland, Brodeur, Mikola and Wright (2022) consider heterogeneous effects by occupation tasks in terms of the degree of isolation from potential contagion. Canadian workers more severely affected by COVID-19 were those directly exposed to the disease and who work in proximity to co-workers compared with essential workers and those who can work remotely. The authors also find significantly worse mental health outcomes among workers most affected by the pandemic. Beauregard, Connolly, Haeck and Molnár (2022) exploit geographical variation in primary school re-openings to estimate the impact on parental employment and hours worked in Canada. Positive effects are strongest for single mothers but are also present for both mothers and fathers in dual-parent households. Slade (2022) estimates a time-series forecasting model to quantify post-lockdown losses from the first wave of the pandemic. Significant variation is found across industries and provinces in Canada. The economic burden was largest in Quebec and Ontario, where COVID-19 caseloads were highest. Also in this group are the Atlantic provinces, with low COVID-19 caseload numbers but a large reliance on tourism. Morales, Bonilla-Mejía, Pulido, Flórez,

Hermida, Pulido-Mahecha and Lasso-Valderrama (2022) evaluate the effects on employment—at the extensive and intensive margins—of sector-specific mobility restrictions in Colombia. The authors exploit both the temporal and sectoral variations in lockdown policies and find that sector-specific restrictions account for one quarter of the total job loss (extensive margin). In contrast, the effect of these restrictions on hours worked (intensive margin) is negligible.

The third group of papers in this volume deals **with macroeconomic policy during and after COVID-19**. Gomme (2022) studies the effects of alternative policy responses to deal with the increase in government debt associated to COVID-related public expenditure. A general equilibrium macroeconomic model is calibrated to the US and shows that reducing debt through capital income tax hikes is the least desirable option in terms of economic welfare. Moran, Stevanovic and Touré (2022) construct a measure of macroeconomic uncertainty in Canada—before and during COVID-19 pandemic—and include it in a structural VAR model to calculate the economic impact of uncertainty shocks. They demonstrate how these uncertainty shocks lead to severe economic downturns, lower inflation and persistent accommodating measures from monetary policy. Cotton, Kashi, Lloyd-Ellis, Tremblay and Crowley (2022) develop a methodology that exploits high-frequency data to track and quantify the economic impacts of lockdown and re-opening policies by Canadian provinces. The flexibility of the model enables regional governments to compare forecasts under different recovery policies. Gallipoli and Makridis (2022) propose an algorithm for predicting high-frequency output dynamics as a function of employment across industries and locations. The method is used to examine GDP dynamics in Canada during the pandemic and shows that information technology intensive industries have been relatively less affected. Diewert and Fox (2022) study the impact on the construction of the Consumer Price Index (CPI) from the increase in product stockouts due to the COVID-19 pandemic. They show that the current advice from national statistical offices to deal with this unprecedented problem generates a downward bias in the CPI and an upward bias in real consumption. Establishing a continuous consumer expenditure survey could deal with this measurement problem.

The fourth group of papers in this volume contributes to the growing field of **economic epidemiological models**. Casares, Gomme and Khan (2022) propose a model of interactions between epidemiology and socioeconomic choices and calibrate it to study the efficacy of the public policy response to the COVID-19 pandemic in Ontario. Model simulations predict that health policies are more effective in the long term and should be used in conjunction with restrictions on social activity in the short term. Chopra, Devereux and Lahiri (2022) develop a macro-pandemic model of virus diffusion and its economic impact where individuals can select into working from home or in the market and where occupations differ in the ease of substitution between market and home work and in the risk of infection. The model is calibrated to British

Columbian data and used to examine the implications of shutting down different industries. Diez de los Rios (2022) also proposes a macroeconomic dynamic equilibrium model to study the interaction between the pandemic and economic decisions. The model takes into account that some infected individuals are asymptomatic and undiagnosed. Çenesiz and Guimarães (2022) use an economic model in which social distancing reduces contagion to study the impact on epidemiological dynamics and economic activity of the hypothesis of waning immunity. Djogbenou, Gourieroux, Jasiak and Rilstone (2022) develop a dynamic microeconometric model for COVID-19 patients' transitions into different stages of medical care. They estimate this model using individual patient data from Ontario during the first months of the pandemic. Papanastasiou, Ruffle and Zheng (2022) build a model of social distancing to analyze determinants of compliance. Using novel data on Ontarians' self-stated mobility choices, they can compare the consequences of actual and counterfactual regulations with different punishment mechanisms.