1. Title:
The Trade-Offs Between Economy and Health: An Assessment of COVID-19 Policies in Japan

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3. Abstract:
The goal of this project is to assess the macroeconomic consequence of Japanese economic and health policies in the ongoing COVID-19 pandemic. Based on Eichenbaum-Rebelo-Trabandt (2020)’s pandemic macro model, we (i) distinguish tested/non-tested patients, (ii) consider people’s perception bias about the actual and observed number of COVID-19 infection, and (iii) incorporate new channels of infection between workers and consumers. The model parameters are carefully calibrated by patient-level infection data in Novel Corona Virus 2019 Dataset, Japanese social contacts survey in epidemiological research, and Japanese time-use data. On top of that, we forecast the economic and health outcomes and evaluate economic welfares of the current policies such as voluntary quarantine of 80% activities, expansion of COVID-19 testing availability, and compensation for business closures. We also solve the welfare-maximizing policy problem among a broader set of alternative policy instruments. Our finding suggests the importance of providing more accurate information of the COVID-19 spreads by an expansion of testing.

4. Data description


Japanese social contacts survey provided by epidemiologists
Survey on Time Use and Leisure Activities (Japan)
Family Income and Expenditure Survey (Japan)
Labor Force Survey (Japan)

5. JEL codes
E32, E62, I18, H84,H12

6. Keywords:
Japanese Economy, COVID-19, Macroeconomic Policies, Quarantine