

Epidemic prevention and control in the DSGE model

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Abstract:

The ongoing epidemic of COVID-19 raises numerous questions concerning the shape and range of state interventions, that are aimed at reduction of the number of infections and deaths. The lockdowns, which became the most popular response worldwide, are assessed as being an outdated and economically inefficient way to fight the disease. However, in the absence of efficient cures and vaccines they lack viable alternatives.

In this paper we assess the economic consequences of epidemic prevention and control schemes that were introduced in order to respond to the COVID-19 outburst. The analyses report the results of epidemic simulations obtained with the agent-based modeling methods under different response schemes and use them in order to provide conditional forecasts of standard economic variables. The forecasts are obtained from the DSGE model. The outcomes of these analyses are further compared with an empirical evidence obtained using panel data models.