Title: Infectious Diseases, Social Distancing and Firm Dynamics

Authors: Andrea Chiavari and Marta Morazzoni, PhD Students

Affiliation: Universitat Pompeu Fabra and Barcelona Graduate School of Economics

Emails: andrea.chiavari@upf.edu and marta.morazzoni@upf.edu


Abstract:

In this project, we study the economic costs and trade-offs associated to the mitigation measures of social distancing intended to counteract the spread of an epidemic disease. To do so, we introduce the SIR model of epidemic progression in an otherwise standard model of firm dynamics, and quantify the losses in total production associated with both the outbreak of the COVID-19 disease in the US, and the mitigation policies introduced by the government. Without the implementation of social distancing, there are significant medium-run costs in terms of output, due to human losses in the labor force caused by the epidemic. On the contrary, social distancing implies huge short-run costs, because it represents a short-lived demand shock in the model. In fact, mitigation policies induce a sharp increase in firms' exit in the short-run, following the drop in firms' demand: this reduces the number of operating firms, and generates sizable output losses. However, we show that fiscal policies that subsidize firms' revenues during the mitigation period - targeted particularly to the firms that are most affected by mitigation policies - can produce important welfare gains when coupled with social distancing measures.

JEL Classification: E13, E20, E32, J11, H0, I10, L25

Keywords: Recession, Firm Performance, Entry and Exit, Policy, Health, Mortality Rates