

1165-91-104

Hamed Amini and **Andreea Minca*** (acm299@cornell.edu). *Cohort Effects, Voluntary Social Distancing and Life Insurance Purchases during a Pandemic.*

We consider a heterogeneous SIR epidemic model, calibrated to the current COVID-19 pandemic characteristics. We study the equilibrium of the voluntary social distancing decisions across a network of individuals subject to the epidemic risk. We quantify the absolute and relative utility gaps across age cohorts. We further introduce life insurance in the model, which serves to mitigate the loss in the severe individual outcomes. We find that in most cases, insurance decreases the risk of contagion in the network because more individuals can be incentivized to self-isolate. On the other hand, in the case when the insurer does not have sufficient information on the self-isolation strategy of the individual, insurance can introduce a moral hazard. We find that when premiums cannot be sufficiently differentiated, individuals may choose not to socially distance. This illustrates the importance of disclosing self-isolation strategies to the insurer, or inferring these strategies for the various types. (Received January 14, 2021)