Industry, Age, and Unemployment Risk During a Pandemic Recession

James Graham (RBNZ, University of Sydney)

joint work with Murat Ozbilgin (RBNZ)

Abstract

We model the macroeconomic and distributional effects of a pandemic shock, with an application to New Zealand. To do this we build a heterogeneous agents model featuring: overlapping generations of households, labour search, employment risk, and multiple industries. The calibrated model captures important cross-sectional features of the data that are important for understanding the effects of the pandemic shock: the higher concentration of young workers, higher unemployment risk, and lower wages in the service sector. The pandemic shock is heavily concentrated in the services, which disproportionately raises unemployment risk for youth who can least afford to insure against it. We use the model to study the effects of the various fiscal responses to the pandemic, including wage subsidies, lump-sum transfers, and higher unemployment benefits. We find that conditional wage subsidies are effective at minimizing employment losses, especially among young households. However, lump-sum transfers and higher unemployment benefits better stabilize consumption fluctuations and thus tend to be welfare-improving relative to wage subsidies.