**COVID-19 Misperception and Macroeconomy: Hamano et al. (2020)**

The model incorporates misperceptions about the true state of infection into a standard macro model with micro-founded SIR infection dynamics à la Eichenbaum et al. (2020). Individuals may perceive the pandemic as being more or less severe than the actual situation. Government has access to accurate information, and can force lockdowns or levy optimal consumption tax to contain the spread of the pandemic. The model also studies impacts when the medical system reaches maximum capacity on the pandemic evolution and the economy.

SIR block: The model features standard micro-founded SIR infection dynamics whist allows for misperception in number of infected cases perceived by the susceptible.

Economic model: The macro model comprises representative households, competitive firms and the government. Households supplies labors, and cannot save. Firms are subject to linear single-factor production technology. The government collects consumption tax from households to finance its lump sum transfers.