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亞太經濟與管理研究所
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Asia-Pacific Academy of Economics and Management

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Equilibrium Social Activity during an Epidemic



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<https://umac.zoom.us/j/95971158438?pwd=bmtkeDZBcWc2cDlzL0dCU3dXVnBodz09>

Abstract

During an infectious-disease epidemic, people make choices that impact transmission, trading off the risk of infection with the social-economic benefits of activity. In this paper, we investigate how the qualitative features of an epidemic's Nash-equilibrium trajectory depend on the nature of the economic benefits that people get from activity. If such benefits do not depend on how many others are active ("non-social benefits"), as usually modeled, then there is a unique equilibrium trajectory, the epidemic eventually reaches a steady state, and agents born into the steady state have zero lifetime welfare. On the other hand, if the benefit of activity increases as others are more active ("social benefits") and the disease is sufficiently severe, then there are always multiple equilibrium trajectories, including some that never settle into a steady state and that Pareto dominate any given equilibrium steady state. Moreover, a wider range of diseases can be beneficially eradicated if agents are able to coordinate on an oscillating pattern of collective activity.

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All are welcome

