

To Mask or Not to Mask

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Abstract

Some governments implement mandatory mask policies partly based on the scientific studies that show mask-wearing helps “flatten the curve” (reduces the outbreak pace such that the health care system can handle). However, these studies unable to tell when and why people would comply and wear masks. I endogenize individuals’ mask-wearing decision in a model in which selfish individuals know that masks protect others more. The result shows their decisions exhibit inter-dependence that the choices depend not only scientifically on the filtration efficiencies of masks to and from the wearers but also economically on how many others are infected and whether they wear masks too, as well as how many people are inevitably “bumping” into others in non-trivial ways. Without relying on behavioral assumptions and ad hoc differences, the model offers a rational explanation of the polar opposite cases among equally crowded cities: some in which almost everyone wears masks, but few do so in others. Comparing social and private incentives, the model identifies the scenarios wherein mandatory mask policies benefit society and wherein people comply with such policies. It highlights how economics differs from science in calculating the effectiveness of mask-wearing in containing the virus.