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Humans Against Virus or Humans Against Humans: A Game Theory Approach to the COVID-19 Pandemic

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Abstract
Externalities and private information are key characteristics of an epidemic like the Covid-19 pan-demic. We study the welfare costs stemming from the incomplete information environment that these characteristics foster. We develop a framework that embeds a game theory approach into a macro SIR model to analyze the role of information in determining the extent of the health-economy trade-off of a pandemic. We apply the model to the Covid-19 epidemic in the US and find that the costs of keeping health information private are between USD 5:9 trillion and USD 6:7 trillion. We then find an optimal policy of disclosure and divulgation that, combined with testing and containment measures, can improve welfare. Since it is private information about individuals' health what produces the greatest welfare losses, finding ways to make such information known as precisely as possible, would result in significantly fewer deaths and significantly higher economic activity.

Fuente: https://www.banrep.gov.co/en/humans-against-virus-or-humans-against-humans-game-theory-approach-covid-19-pandemic