

Coordinated response needed to fight coronavirus pandemic

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Just like you can't treat a termite infestation by fumigating only one room in a house, you can't control the coronavirus pandemic by targeting interventions to a specific region or country, says Stanford scholar

Matthew Jackson.

Instead, managing the crisis requires a comprehensive and coordinated response between states within the U.S. and across countries and continents, otherwise, the problem will continue to surge at a greater cost to the [global economy](#) and [public health](#), said Jackson, the William D. Eberle Professor of Economics in Stanford's School of Humanities of Sciences.

Here, Jackson, whose scholarship examines [disease contagion](#) and production networks, as well as financial contagion—the spread of economic crises across regions—and [systemic risk](#), describes how the [coronavirus](#) pandemic demonstrates how each of these areas are central and intertwined. In an era of global networks, addressing the outbreak requires a proactive response that considers these distinct and dependent areas.

Jackson recently authored "[The Human Network: How Your Social Position Determines Your Power, Beliefs, and Behaviors.](#)"

According to your research, what response to the coronavirus pandemic would be least disruptive to human networks, particularly economic ones?

Locking areas down is a blunt instrument. It slows the virus down locally, but our research and common sense makes clear that, given the lack of coordination, it is not likely to be successful for long and will end up being extremely costly. One reason that we have been forced to react this way is our inability to test for the virus widely and preemptively. Even if it costs a few hundred dollars to test every person, that would be a tiny amount compared to the tens of thousands of dollars per capita in economic losses that we are likely facing on the road we are going down

now.

Knowing exactly where cases are erupting and dealing with them quickly would be so much more cost-effective and less disruptive. A combination of basic social distancing, and blanket testing with fast reactions, would involve the least disruption. In the meanwhile, as we devote all necessary resources to make tests more widely available, and push hard on developing a vaccine, we need to coordinate internationally on our containment strategies.

The response to the coronavirus pandemic has varied between countries, states, and even counties. As a scholar of networks, talk about the risks of uncoordinated efforts across networks.

This lack of coordination may end up being very costly for the world. The difficulty is that while one area is slowing the virus down and getting it under control, it is growing somewhere else. Once it is under control in the first area, it can return from another area. An analogy is trying to get rid of termites in a house. There is a reason they fumigate a whole house all at once, even if only a few parts of it show large infestations. If you just fumigate one room, by the time you clear it all out, the termites will likely be multiplying in other rooms. Once you reopen the first room, the termites will return from the other rooms where they have been growing. You could keep fumigating rooms forever.

The lack of coordination between states within the U.S. and across countries and continents in efforts to slow this virus means that we are dealing with things one room at a time—being reactive and not proactive. It is impossible to completely seal borders—both physically and economically. Thus, without coordination within and across

countries we will end up endlessly reacting to resurgences of the virus.

In a globalized, connected economy, how does a global pandemic affect international supply chains? How can these impacts be mitigated?

A big challenge that we face on the economic side is lost production. That can never be recovered. This makes the current situation much more dangerous and potentially longer-lasting than the financial crisis of just over a decade ago. Our heavily networked economy means that lost production in one area can quickly halt production elsewhere. Steering wheels not being produced in Asia can disrupt a car production line in the U.S. The losses in production also feedback through the financial networks of banks that have loans out to a spectrum of vulnerable companies. The combination of banks' exposure and the uncertainty of how long this might last lead banks to be extremely cautious in offering credit to companies when it is needed most.

All of this involves three networks interacting: disease, production and finance. Minimizing the damage requires a similar combination of policies: better coordinating disease containment to minimize lost production, identifying critical links in production chains and ensuring that they don't break and cause cascading failures of companies, and stepping in to fill the gap in lending caused by the growing credit freeze. The last part is already being implemented around the world, but the first two are not. We cannot avoid lost production in fighting this virus, but we can better coordinate, anticipate and manage it.

Provided by Stanford University

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