Insurance and Propagation in Village Networks *

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Abstract

In village economies, insurance networks are key to smoothing shocks, while production networks can propagate them. The interplay of these networks is crucial. We show that a significant health expenditure shock to one household propagates to other linked households via supply-chain and labor networks. Imperfectly insured households adjust production decisions—cutting input spending and reducing labor hiring—affecting households with whom they trade inputs and labor. Household businesses proximate to shocked households in the supply chain network experience reduced local sales, and those proximate in the labor network experience a lower probability of working locally. As a result, indirectly shocked households' earnings and consumption fall. These declines persist over several years because networks are rigid: households appear unable to form new linkages when existing links experience negative shocks. Propagation is a function of access to insurance networks: well-insured households do not cut spending when hit by shocks, leading to minimal propagation. A simple back-of-the-envelope exercise suggests that the total magnitude of indirect effects may be larger than the direct effects and that social (village-level) gains from expanding safety nets such as health insurance may be substantially higher than private (household-level) gains.

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