Subsidies, weather, and financial education promote agricultural insurance adoption

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A University of Maryland-led study shows that subsidies can help people continually purchase insurance, but only if they have the financial literacy to understand the benefits and have the experience of seeing the policy in action. In a new paper published in American Economic Review, researchers conducted the first ever experimental study to look at the impact of subsidies. This paper provides insight into the "insurance puzzle", with implications for policy and educational programs. Credit: Rajesh Ram

A new University of Maryland-led study shows that subsidies can help people continually purchase insurance products, but only if they have the financial literacy to understand the benefits of the policy and have the experience of seeing the benefits in action. In a new paper published in *American Economic Review*, researchers conducted the first ever experimental study to look at the impact of subsidy policies on insurance policy adoption. In the US, most insurance products are highly subsidized by the government, but recent studies on health insurance show that people seem to put very low value on health and agricultural insurance products alike, leading to low adoption. This paper provides insight into this dilemma known as the "insurance puzzle", with implications for insurance subsidy policies and educational programs.

"We know that there is an insurance demand puzzle in both developed and developing countries, in that people put a very low value on insurance so there is low adoption of agricultural and health insurance," says Jing Cai, assistant professor in Agricultural & Resource Economics at UMD. "And in poor countries, agricultural cultivation is their main source of income and they often face a lot of weather challenges where insurance could help recuperate their losses, but even then, insurance adoption is very low. It is puzzling."

Cai wanted to take a closer look at this puzzle. "Governments frequently provide subsidies with new products and technologies so that more people will buy it, try it, and see the benefit of the product with the long term goal that when the subsidy is removed, people will still see the benefit and be willing to purchase the product for the unsubsidized cost. This is why subsidies are a widely used government policy," explains Cai.

The paper is the first to use an experimental design to look at the impact of subsidy policy on insurance demand and purchasing behavior, but also combines subsidy policy with financial education, another commonly used tactic to increase insurance adoption. This combination of tactics is also unique to this paper, examining how these two common practices interact. "The idea behind financial education interventions is to improve trust and provide understanding of the benefits of the product, but these interventions still don't highly improve insurance uptake rates either, just like subsidy programs," says Cai.

In this study, a new insurance product was introduced to rice-producing farmers in rural China. Some of the 130 villages (representing 3500 households) selected randomly received the insurance for free, and others had to pay a subsidized amount. The households were then randomized, with some receiving financial education on the insurance concepts, contracts, and concrete examples of simulated payout scenarios for continually purchasing insurance to show the long term financial benefit.

Similarly to previous studies, the researchers found that subsidies and financial education have small effects on their own. However, when financial education and subsidy policy is combined with an actual payout, there was a significant interaction effect that led to long term insurance purchasing, monitored up to five years after the initial financial education and introduction of the insurance product.

"There is a financial education effect itself, but it is not as great as with the payout effect. People can understand why it is important and beneficial to buy insurance, but they still might not buy it without the subsidy or without the chance to experience the product," says Cai.

Cai continues, "If you purchase insurance and no event happens, you aren't learning the importance of that insurance necessarily, you aren't seeing that benefit. It is only when you purchase insurance and an event happens, then you see how insurance will pay for your loss driven by risks and can compare the income after and before insurance. This is where farmers can really learn something."

Based on the findings, Cai explains that it isn't enough for people to be able to afford the product through a subsidy, or even to see it in action by personally receiving a payout or knowing someone who has, but they need to be able to understand why and how it is beneficial to purchase insurance every single year with financial literacy education. The combination of these three things is what ultimately leads to long term insurance uptake.

"This explains why often subsidy policies do not work in promoting products with technology adoption or insurance that requires complicated learning," says Cai. "In this case, if you provide subsidies without improving people's financial literacy, they aren't going to be able to process the information that they should acquire from the payout experience because they don't have the initial insurance context to make sense of their experience and realize the value of insurance long term."

This finding has clear implications for insurance policies, not just in rural areas, but across all settings where insurance adoption is a problem. "In order to improve insurance uptake, policy makers should think about combining subsidy policies with education programs to improve the chance that people will actually learn from their experiences, which is the original hope of the policy maker."

More information: Jing Cai et al, Subsidy Policies and Insurance Demand, *American Economic Review* (2020). DOI: 10.1257/aer.20190661

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