Evidence Brief 2:
Meso-insurance and Aggregation*

What are meso-insurance and aggregation

Meso-insurance is insurance created for the meso, typically the firm, level. This differentiates meso-insurance from microinsurance, which has individuals or households as clients (see the **microinsurance** evidence brief), and macro-insurance (see the **sovereign risk pools** and **macro policy solutions** evidence briefs), which is insurance for governments. Generally speaking, there are two different types of meso-insurance available. The first includes all insurance products created specifically for firms, including microfinance institutes and other firms exposed to weather or natural hazard risk, especially firms that can be considered "risk aggregators" or financial intermediaries. The second type is meso-insurance products that aggregate individual level demand, usually for the purposes of increasing access and decreasing transaction costs. Agricultural insurance products targeted at farmer groups or cooperatives are an example of this type of aggregation.

Evidence on meso-insurance and aggregation

Evidence on meso-insurance

In the United States, weather derivatives have been shown to help utilities manage their weather-related risk exposure, leading to higher market valuations, investments, and leverage (Perez-Gonzalez and Yun 2010), although in general older firms are more likely to insure against infrequent events (Collier et al. 2017).

In middle- and low-income countries, the local credit supply often seizes up following extreme weather events due to clients defaulting on their loans (Collier and Babich 2019; Collier, Katchova, and Skees 2011). Theoretical work has demonstrated the potential role of parametric, extreme weather insurance in helping lenders manage these spatially-correlated defaults and resulting credit-supply shocks (Collier 2020; 2015; Collier and Skees 2012; Skees and Barnett 2006). There are some arguments that lender-focused parametric, extreme weather insurance may be more feasible to implement than microinsurance products, especially given concerns over the impact of basis risk on microinsurance clients (GlobalAgRisk 2011; Miranda and Gonzalez-Vega 2011). These are consistent with empirical findings that lenders are much more likely to approve agricultural loans when the loans are insured and the payments go directly to the lenders (Mishra et al. 2019). At the meso level, basis risk concerns can be mediated by the geographical dispersal of the lender or risk aggregator's client portfolio, and regulation, delivery, and education for meso products are likely simpler than for similar microinsurance products. Despite these potential benefits, more evidence on the positive

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impacts of meso-insurance for the low-income users of financial intermediary services is needed to demonstrate the value to donors and governments. (Miranda and Farrin 2012)

Evidence on aggregation

With regards to products that aggregate demand, most evidence is from framed field studies conducted with farmers who were covered under index-based group insurance policies. The studies highlight that farmers often prefer group over individual insurance contracts and a majority of the participants who are offered group insurance purchase insurance within their groups (Vasilaky et al. 2020). The ability to discuss and understand index insurance with peers and/or to negotiate with peers can also contribute to farmers' preference for group contracts (Munro 2017).

Informal insurance is found to be more of a reality at the group level, where different sub-groups insure one another and act as a complete network, even though any two individuals from those sub-groups may not be connected. The more information participants have about one another's assets, the less insurance they contribute to the collective insurance (Takahashi, Barrett, and Ikegami 2018). Informal risk sharing does complement index-insurance due to the presence of basis risk, and groups leaders trained on the benefits of informally insuring idiosyncratic risk within the group had higher levels of uptake (Dercon et al. 2014).

Evidence collected on aggregation also shows how dynamics of group composition, information, and perceptions of peers' assets impact the demand for meso-insurance. Groups of farmers who perceive each other to be more similar in farm size are more likely to purchase in a group, but purchase less insurance on average (Vasilaky et al. 2020). It was found that in the context of perfect information about investment decisions of other group members, farmers covered by group insurance pursue less risky investments—with lower expected returns—than when covered by individual insurance. Also, individuals randomly assigned to less similar groups with regards to farm size purchase more insurance on average (Munro 2017).

Gaps and research needs

Lender-level insurance is not very widespread. In order to understand the value of meso-insurance targeted at lenders, there is a need for more empirical evidence on not only the benefits to lenders, but also to bank clients. Models that allow lenders to pass on the premiums to clients, effectively index-insured loans, should be researched.

With regards to group insurance, greater research is needed on how group selection, the information environment, and the regulation of payout distribution impact group insurance uptake and impacts. Little work has considered how risk preferences vary among group members and the effect this may have on uptake and satisfaction.

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