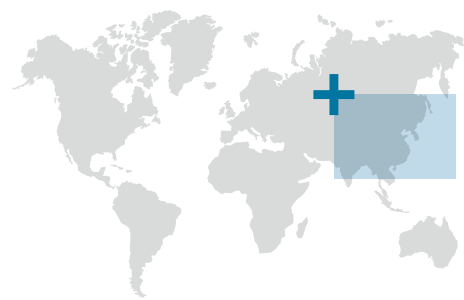


INFOCUS: INNOVATION & TECHNOLOGY



SUBJECT

The high transaction costs of serving low-income clients in developing and emerging market economies demand innovative approaches and technological advancements. Challenges that inflate operational costs include data collection, processing and management, premium payment mechanisms as well as claims verification and settlement. Index insurance products, mobile payment devices or more accurate weather and agricultural-yield information based on satellite data are examples of innovative approaches that can help overcome these challenges.

CHALLENGES IN CHINA

Since 2003, the Chinese government has promoted agricultural insurance. After a few years, China became the world's second-largest market for agricultural insurance, largely driven by the substantial subsidy support from the government, covering 50 to 80 percent of premiums.

All efforts were focused on promoting multiple peril crop insurance (MPCI). The administrative and financial burden of reaching out to over 300 million farmers in China, however, presented a challenge to the expansion of agricultural insurance. The Chinese insurance market lacked the capacity and knowledge to develop innovative product types with a low operational cost that can be marketed to smallholder farmers. The major challenges for Chinese insurers were:

- How to identify business opportunities for innovative insurance solutions in a systematic and transparent way?
- How to assess the preconditions, for example in terms of data availability that need be in place?
- How to capture the demand and product preferences from farmers?
- How to analyse the willingness and ability to pay for insurance?
- How to tailor products and processes to suit the needs of farmers?

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SOLUTIONS

Developing a hybrid insurance product

As index insurance was a new topic to the insurance partner, China Life P&C, the project helped design a systematic approach to product development that factored in the particularities of index insurance:

Identifying risk protection needs. In partnership with the Chinese Meteorological Administration (CMA), the project conducted a risk exposure analysis at the national level that was subsequently broken down into provinces and counties. For the major weather risks (excessive rainfall/flooding, drought, typhoons, snow/frost, and hail) the project identified “risk hotspots” based on the population affected by natural hazards, the loss occurrences, as well as GDP and development factors. To showcase this approach, the project partners selected cash crop farmers in the Longyan prefecture in the Fujian province.

Assessment of data availability. CMA analysed the density of weather stations in the pilot province of Fujian and the availability of weather data for the last 50 years. The project also supported the development of a Geographical Information System (GIS) that provided production and loss data for each of the 68 counties.

Household analysis. During several field trips to Fujian, farmers were interviewed on their risk perception, their historical yields and losses, their understanding of insurance, and their demand for insurance. Based on these focus group discussions (FGD), a household survey with over 400 farmers was conducted to analyse income, production and costs, risk exposure, and financial awareness. Farmers were mostly aware of the benefits of insurance and were willing to buy coverage if premium rates were between 2 to 3 percent. The preferred level of coverage was the production cost only (or about 60 percent of output value).

Real-time product structuring. Based on the information from the household survey and the expert opinion of agronomists, the project developed product prototypes. An option-pricing tool (‘GIZ China Weather Insurance Calculator’) was developed and used during field visits to demonstrate various product options for parameters such as frequency of payouts, average size of payouts, basis risk, coverage of perils, premium levels etc. The final insurance product was designed based on the feedback from farmers and value chain actors.

Ability-to-pay (ATP) analysis. To determine appropriate premium levels the data from the household surveys was used to model the influence of weather factors on farmers’ income and to calculate the optimal risk protection strategy for both individual farmers and the farming population as a whole. The simulation also included options for premium subsidies. The estimated positive welfare effects from premium subsidies on farmers’ income were used to convince the local government to provide fiscal support for the insurance scheme.

Product design. The analysis brought out that the two highest priorities for farmers were low premium levels and a high correlation between production loss and payout, particularly for severe weather events. To cater to these demands China Life P&C decided to develop a hybrid product to keep administrative cost low (through the due to index insurance element) while at the same time allowing for individual loss adjustments after catastrophic events.





LESSONS LEARNED

Very often projects determine the geographical scope or insured crops based on political factors. But better risk management and customer orientation can be achieved if the geographical location and value chains are selected through a systematic and transparent process based on sound data. In China, this selection process started by looking at the national risk exposure and then subsequently breaking down the risks until identifying suitable value chains at the local level.

Lack of data is a serious constraint for the development of insurance. For example, in the case of the GIS system in Fujian loss data was available for only 35.8 percent of weather events. Additional measures thus had to be undertaken to add to the database, for example through the household survey and crop growth models developed by agronomists. But all these activities come at a cost that may make insurance companies shy away from entering this market segment.

Successful cooperation with insurers requires both senior-management backing and commitment from operational staff. Capturing feedback from insurance staff that have frequent customer interactions, such as branch staff, is important to ensure client needs are appropriately reflected in the product. Local staff not only help design processes that are easy to understand for farmers, but also limit the possibility of fraud.

When an insurer ventures into agricultural insurance, gross written premium (GWP) from this product segment will be very low at the beginning compared to established types of insurance, e.g. motor insurance. This limits the willingness of insurers to assign sufficient human resources. In China, the core product development team consisted of only two people. This severely limits the opportunity to transfer knowledge to the company and bears the risk of the know-how being lost if the few key people involved leave the company.

OUTCOME

The project partners jointly developed a product for cash crop farmers in the Longyan prefecture in the Fujian province. The product protected farmers against the two most important risks: flooding/precipitation and low temperature. The products were designed as a combination of indemnity and index-based insurance. For all weather events below the exit point, the payout was defined by the index payout scheme. Each farmer was assigned to one of the seven manual weather stations in the project area which was monitored by the local meteorological administration. Once the index reached the exit point, the payout was determined by loss adjustments carried out by China Life P&C.

In 2012, China Life P&C Insurance Company sold the product to 1,066 cash crop farmers with 1,400 hectares of land. Until the end of the project, the premium volume increased by 210%. The product failed to expand to other regions. One major reason for this failure lies in the political environment: the Chinese government has channelled large subsidy contributions, mainly focused on multi-peril crop insurance (MPCI) that left little space to alternative product models.





Name of programme:

Insurance Instruments for Adaptation to Climate Change (IIACC)

Duration:

October 2008 – February 2014

Programme area:

China

Pilot region:

Fujian

Cooperation partner:

China Insurance Regulatory Commission (CIRC)

Local partner:

China Meteorological Administration (CMA) and China Life P&C Insurance Company

Target group:

Cash crop farmers

Contact person:

Advancing Climate Risk Insurance plus

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