
THE POTENTIAL FOR NATURAL DISASTER INSURANCE IN BANGLADESH

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Abstract

This is a conceptual paper to study the potential for natural disaster insurance in Bangladesh. The study reviews selected literature on the topic and the success of micro-insurance in reducing environmental risk—made weakness depends to a large extent on the target population's willingness and ability to pay for the insurance scheme. Therefore, it is important to know how the target clients want the insurance scheme to be designed and how much they are willing to pay for the desired features. To have the potential factors for natural disaster insurance, the existence of informal insurance arrangements is also described at the end of this paper.

Keywords: Insurance system in Bangladesh, Natural disaster in Bangladesh, Income and Expenditure in Bangladesh.

1. Introduction

Climate change has increased the risk of natural disasters all over the world. The people of low-income countries are mostly disposed to these risks. Bangladesh is one of the poorest and most natural disaster-prone countries in the world. The country is situated in the Ganges-Brahmaputra delta, which is one of the three mega deltas, expected to be among the regions toughest hit by the predicted effects of climate change (IDRAB, 2011). So, this study aims to find the potential for natural disaster insurance in Bangladesh through the literature review. Moreover, the study mostly focuses on natural disaster micro-insurance for the poor people in Bangladesh. There is a big research gap which will be discussed on literature review.

2. Problem Statement

Approximately 75% of the total population of 140 million people live in the rural areas, earning on average US\$1,300 per family in a year (Bangladesh Bureau of Statistics, 2010). Half of this population relies on nature-dependent income sources such as agriculture, forestry, and fisheries for their livelihoods (Bangladesh Bureau of Statistics, 2005). Once hydro-meteorological hazards such as floods, storm surge, and coastal cyclones cause asset loss, crop damage, unemployment,

disease, and fatalities in every 5 to 10 years (Dasgupta et al., 2011). The increased rate and scale of natural disasters caused by climate change over the past few decades have intensified the income risks facing the rural households whose livelihoods depend on natural resources. Poorer households are considered more helpless to these shocks as they are more exposed to risks and have a lower capacity to adapt to changing climate (Brouwer et al., 2007).

3. Importance of the study

The success of micro-insurance in reducing environmental risk-made weakness depends to a large extent on the target population's willingness and ability to pay for the insurance scheme. Therefore, it is important to know how the target clients want the insurance scheme to be designed and how much they are willing to pay for the desired features. This is no simple matter given the lack of "insurance culture" in traditional Bangladeshi society (Siegel & Canagarajah, 2001).

4. Literature Review

Educated and urban people in Bangladesh are familiar with health and life insurance policies, the practice of buying nonlife insurance schemes to cover property or livelihood risks is limited in both rural and urban societies. In addition, people are familiar to receiving financial returns for the schemes they purchase. Most health and life insurance policies offered in Bangladesh work like a bond. They have a face value and a maturity period.

Insurance clients pay a yearly premium and receive financial return at regular intervals during the life of the policy. The face value of the policy is returned after the policy reaches its maturity date. Given this long tradition of a financial return-based model of insurance to cover life and health risks, a standard weather insurance model that offers compensation only when damage is caused by a natural disaster and no return otherwise is unlikely to attract a large number of buyers (Akter et al., 2011). This attribute is one of the major obstacles to weather-micro-insurance take-up in Bangladesh, yet to date it has received very little empirical attention. There is a research gap.

Apart from this feature, the low affordability of insurance premiums tends to limit insurance participation (Akter & Fatema, 2011). Most of the people who refused to participate in the hypothetical insurance program referred to "limited financial income" as a primary reason for nonparticipation.

Relatively wealthier households with large areas of farmland were willing and able to pay the offered insurance premium (Akter et al., 2009). The average willingness to pay an insurance premium was substantially lower than the damage. The mean willingness to pay a premium for crop insurance was estimated at Taka 42 (US\$0.6) per household per week (Akter et al., 2009). This amount was 2% of the average weekly income of the sampled farm households and 30% of their annual crop damage cost. Comparing the mean household willingness to pay with the expected indemnity and insurance delivery costs, Akter et al. (2011) showed that a standard stand-alone crop insurance scheme is likely to suffer 25% to 50% loss each year.

Recently, several alternative insurance models have been developed to resolve the affordability issue. The interlinked credit and insurance market are one such model (Carter, Cheng, & Sarris, 2011). Under the interlinked credit insurance arrangement, farmers borrow money at a higher

interest rate that includes a weather insurance premium. If a natural disaster occurs, then the farmers repay only a fraction of the loan, and the rest is paid by the insurer to the bank. This model reduces the risk of weather-driven default for borrowers and thus helps induce agricultural productivity as farmers can use credit to switch to a higher-risk, higher-yield farming technology (Akter & Fatema, 2011).

5 Conclusion and Recommendation

To have the potential factors for natural disaster insurance, the existence of informal insurance arrangements needs careful consideration while designing the formal insurance contract. There is substantial evidence in the social vulnerability literature suggesting that rural households cope with weather risks through neighborhood network-based informal support systems (Brouwer et al., 2007). Although a natural disaster is a region-wide covariate shock, it may contain significant individual components at local level (Dercon & Krishnan, 2000). This is due to the income and wealth differences across rural households.

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