Do Extreme Weather Events Impact the Frequency of Loan Take-up by Bangladeshi Households in Vulnerable Communities? An Analysis with Count Data Models.

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Abstract

This paper analyzes whether facing extreme weather events increases the probability of households taking up multiple loans. We test four separate models: (a) Poisson model, (b) Negative Binomial model, (c) Hurdle model and (d) Zero inflated Poisson model. The Zero inflated Poisson model was the most appropriate model to use for the data because of the presence of overdispersion and as well as a very high percentage (about 68%) of zero observations and the fact that the zero observations were both "structural" and due to "sampling". We see that households that face extreme weather events, households that own agricultural or non agricultural enterprises, households with members suffering from chronic illness and those who have faced sudden illness or death of an earning member are all significantly likely to make up multiple loans as predicted by each of the models separately.

JEL Classification Codes: Q50, Q54

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