Effects and Mitigation of Natural Hazards in Retail Networks

Motivation / Background

How to invest in resilience against natural hazards?

Key Question / Hypothesis

1. What are the consequences of natural hazards on sales and inventory in retail networks?

2. How should investments in resilience be made in order to be aligned with the risk profile of organizations?

Relevant Literature


Snoeck (2016), “A stochastic program to evaluate disruption mitigation investments in the supply chain”

Methodology

Expected Contribution

Understanding of the effects of natural hazards in inventory flows and sales over retail networks.

Quantitative model to make investment decisions in resilience based on physical flow of inventory and comprehensive scenarios obtained from POS and emergencies historical data.

Insights on the consequences of risk profiles in future losses based on initial resilience investments

Initial Results

Number of Natural Disasters in Colombia in 2017

Resilience investments reshape economic losses based on your risk profile

Data sources:
486 Stores
10 DCs
5 Categories