

Seismic risk and real estate prices: an analysis of revealed and stated preferences in Lisbon (Portugal)

Summary

The capital city of Portugal, Lisbon, has a history of suffering from seismic events. Despite the known risk, there has been a recent upsurge in real estate prices in Lisbon, and investors and residents continue to buy properties at increasing prices despite their vulnerability to seismic activity.

The market seems to be unconcerned with the potential consequences of an earthquake and most residential properties lack seismic insurance coverage. This study aims to answer three research questions: (1) Do market values reflect a preference for properties less vulnerable to earthquakes? (2) How do residents and investors in Lisbon perceive risk? (3) Does their risk perception affect their willingness to pay for property?

The study used both implicit methods, through the construction of regression models on real property transaction data (FGLS, PooledOLS, Fixed-Effects, MARS, and XGBoost), and explicit methods based on surveys (Contingent Valuation Methods).

The results confirm the initial expectations that the market is oblivious to risk but show that the perception and action towards risk vary across socioeconomic groups, depending on various factors such as age, marital status, and household income. Based on the results, several public policies to address seismic risk mitigation are recommended.

Keywords

Property valuation, real estate market, risk assessment, seismic risk, econometrics.



PhD student

João Diogo Fragoso Januário

PhD program

Civil Engineering (IST, University of Lisbon)

Supervisor

Carlos Oliveira Cruz (CERIS, IST, University of Lisbon)

Co-supervisors

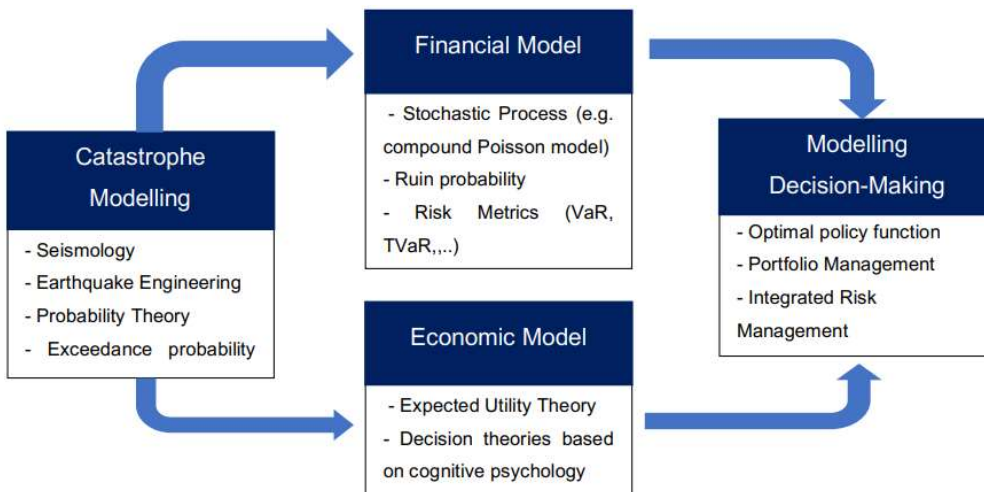
Vitor Faria e Sousa (CERIS, IST, University of Lisbon) and Humberto Varum (FEUP, University of Porto)

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Modelling decision-making. Adapted from Goda (2014).