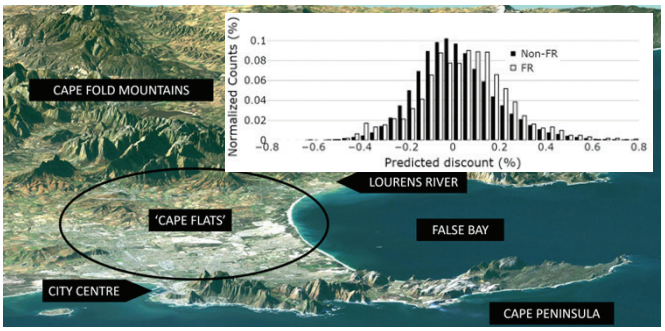
Impact of Flood Hazard on Property Prices

In many rapidly growing cities in the Developing South, an increasing proportion of households live in areas prone to flooding. In this paper's case study of Cape Town (South Africa), the impact of rapid formal and informal urban development on flood risk is amplified by pre-existing economic vulnerabilities. Mitigating the impact of flood risk on households presents an allocative problem for a fiscally constrained city government facing pressing economic, infrastructural, and social challenges. Cape Town is a rapidly growing, low density, middle-income city of 4.7 million inhabitants, sprawled across a broad plain connecting a mountainous Cape Peninsula to the mainland. It has a warm Mediterranean climate, with mild, moderately wet winters and dry, warm summers. Annual winter storms and heavy rains, steep mountainous slopes and long coastlines renders much of Cape Town at risk of flooding. Winter sees a succession of South Atlantic cold fronts buffeting the city with intense rainfall and strong winds, bringing widespread fluvial and pluvial flooding. The frequency and intensity of extreme weather events in Cape Town are changing and likely to increase, resulting in increased flood risk.

The brief – commissioned by the Lincoln Institute of Land Policy - entailed the preparation of a publication-quality case study report on the impact of flood hazard in Cape Town on observed property prices. PDG quantified this effect by means of a hedonic price modelling exercise, and applied the estimated tax increment to Somerset West, Cape Town. The resultant municipal tax increment was contrasted against flood mitigation projects proposed by the City. Claus and David presented the findings to an international research community at a research seminar hosted by Lincoln Institute in Cambridge, Massachusetts. The practical objective of this study was to draw on observed



property market data in order to arrive at a 'rule-of-thumb' which local governments in data-poor, resource-constrained contexts may apply in order to appraise in situ capital projects aimed at reducing flood risk in formally developed, low-density residential suburbs. Due to the limitations described above, the findings of this study are not applicable to the appraisal of flood mitigation projects associated with greenfield development or brownfield intensification.

From a policy perspective, the findings do suggest that the empirical estimation of property discounts associated with flood risk may not itself be sufficient to justify large-scale flood mitigation projects in low-density residential suburbs. Factors other than property tax increments may need to be considered as part of future project appraisals.

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LISP PROJECT:

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