**Assessing the Economic Outcomes and Equity Implications in Transitioning to Mandatory Flood Buyouts**

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Flood buyout programs are an effective way to protect homeowners from flood risk. These programs involve government agencies purchasing homes from voluntary participants that live in flood prone locations and relocating them out of harms way. With flooding being the most expensive natural disaster in the US and risk increasing due to climate change, several mandatory programs have been implemented (Siders & Gerber-Chavez, 2021). While relocating people from their homes and communities is controversial, the benefits of such programs should not be overlooked. With projections of sea level rise, mandatory buyouts appear to be inevitable in some areas, making it crucial to study their welfare and distributional impacts.

I propose estimating the economic effects of the transition of the Harris County flood buyout program from voluntary to mandatory using a residential sorting model. I will use data on where people live and where they move after participating in a buyout program. Following Bakkensen and Ma (2020), I estimate a utility function that describes household ’s utility from choosing to move to house at time

Let and represent observable and unobservable attributes of a resident’s choice, respectively. is a dummy variable equal to 1 if property *j* is part of a mandatory buyout at time is the mean utility, which can be broken down further by the equation,

1. .

Prior research shows the economic benefits of flood buyout programs using hedonic analysis or contingent valuation methods (Guo et al., 2023; Nelson & Camp, 2020; Ando & Reeser, 2022; Jowers et al., 2023; Schoder; 2024; Holloway & BenDor 2023; Hashida & Dundas, 2023). Furthermore, I can use the sorting model to investigate the consequences of policy reform. It is also the first study I am aware of to estimate the differences in WTP among different groups of residents. Minority groups often receive fewer benefits from environmental amenities compared to high income, white residents, due to historical housing discrimination. The mandatory program targets neighborhoods with residents who are primarily Hispanic or Latino, have low or moderate income, and many have no or mixed citizenship status (Bonnyman, 2024). Welfare estimates produced by economists are crucial for designing policies that minimize this gap and contribute to greater equity. Thus, studying the distributional consequences of buyout programs is a critical issue (Cain et al., 2024; Elliott et al., 2023). While public opinion shows a lack of support for mandatory buyouts (Raikes, et al., 2020), they are a viable option to minimize flood harms.

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