Federal Housing Finance Agency

Damage vs. Risk Perception: Why Do House Prices Recover After Hurricanes?

Discussion

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Summary

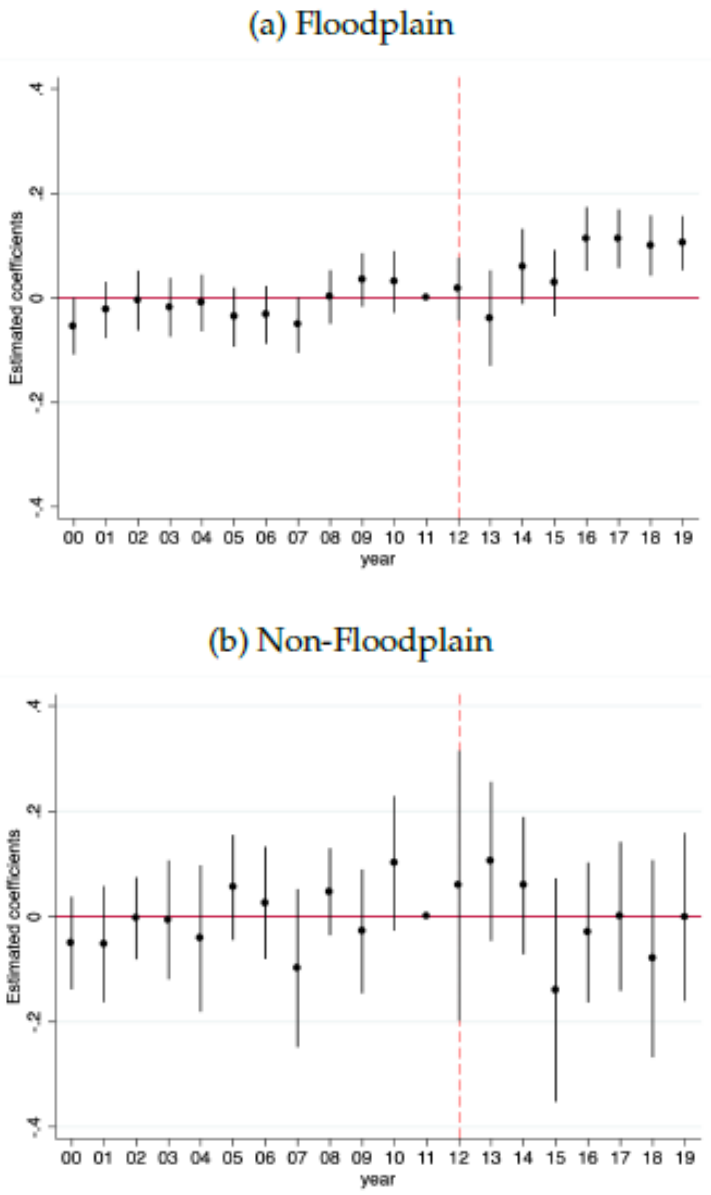
Thesis:

- Hurricane Sandy damages cause initial price decline, but these prices eventually recover
- Construction spending improves damaged homes, causing long-term price premium
- No evidence of risk updating after Sandy

Results:

- Price effects from Sandy only impacted homes in floodplains with differences by damage level
- Damaged homes spend more on renovations/rebuilding after Sandy

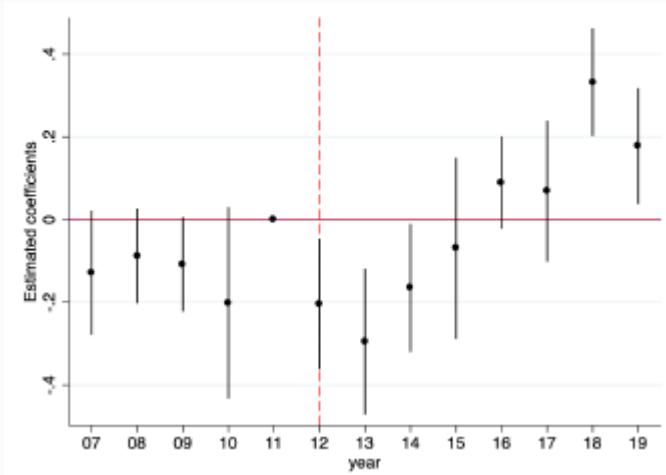
Figure 2: Event Study, Effects of Hurricane Sandy on Prices of Damaged Properties.



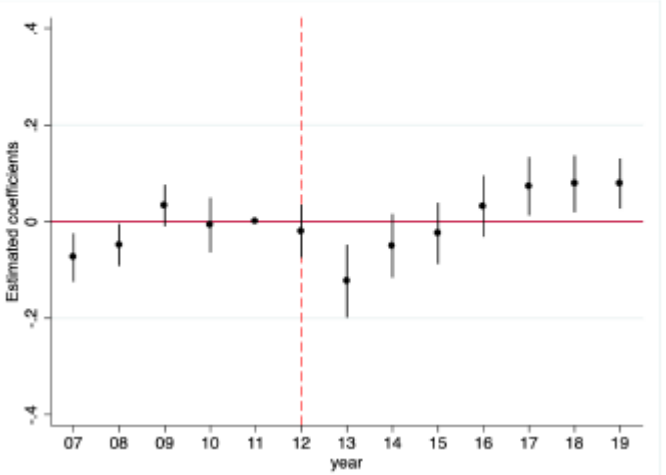
Summary

Figure 3: Event Study, Effects of Hurricane Sandy on Prices of Damaged Properties.

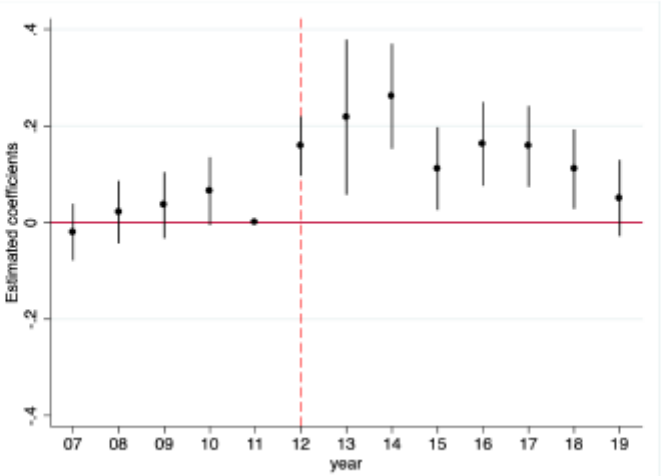
(a) Major vs. Non-Damaged



(b) Minor vs. Non-Damaged



(c) Very Minor vs. Non-Damaged



Contribution

Literature:

- Negative price effects for damaged homes immediately after a natural disaster - Athukorala et al. (2019), Zhang (2016), Zhang and Leonard (2019)
- Evidence of dynamic price path after disasters with some positive effects - Ortega and Taspinar (2018), Muller and Hopkins (2019)
- Other papers use heterogenous treatments - Ortega and Taspinar (2018)
- Using building permits data to study rebuilding efforts after Sandy - McCoy and Zhao (2018)

Le (2023):

- Applying building permits data to explain price premium after Hurricane Sandy
- Longer time horizon after Sandy

Discussion

Construction Spending

Claim: Construction spending explains the entire price premium for damaged homes after Hurricane Sandy

Evidence:

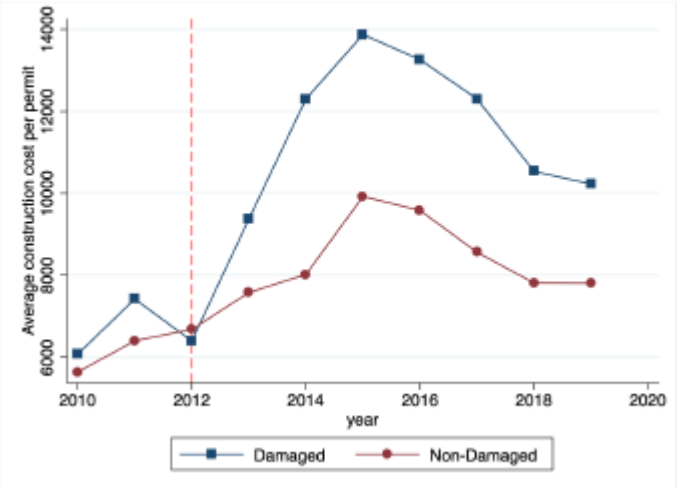
Following Hurricane Sandy…

- Damaged properties followed a dynamic price path
- Renovation spending among damaged properties increased compared to non-damaged properties

Also, risk updating didn't occur because…

- Flood insurance take-up rates didn't change much among damaged properties

(b) Average Spending on Renovation



	(1) spending
damage x postS	10380.834***
	(1274.524)
damage	-2013.736*
	(922.394)
house age	15.132**
	(4.872)

Follow-up

Remaining questions:

- How are damages impacting housing supply/demand?
- How does the pre-Sandy home quality compare to the post-Sandy quality?
- What other evidence is there that risk updating did not occur?

Additional suggestions:

- Comment on possible dynamics that might be lost with an annual frequency
- Parallel trends test – see Roth (2022), Rambachan & Roth (2023)
- Apply methodology outside of floodplains

Figure 7: Share of Properties with Flood Insurance Aggregated by Census Tract