

Fighting Foreclosures

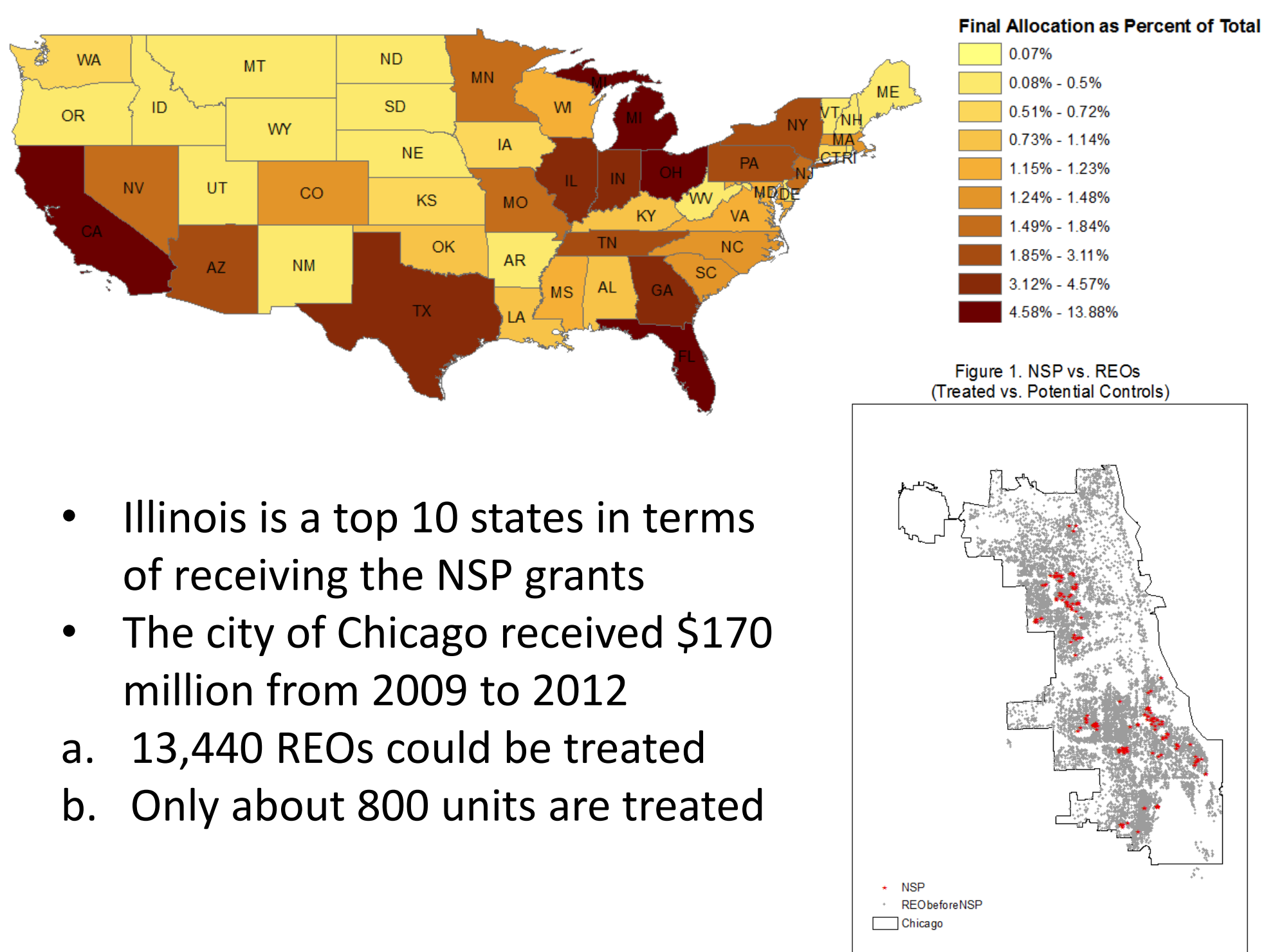
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Introduction

Foreclosed properties spread negative impacts to their neighbors through changing the neighborhood characteristics. The federal government established the Neighborhood Stabilization Program (NSP) to absorb these spillover effects through selectively purchasing and rehabilitating foreclosed properties. This study evaluates the program effects in terms of elevating nearby property values as a result of the environment improvements.

NSP Allocation by States (2008)



- Illinois is a top 10 states in terms of receiving the NSP grants
- The city of Chicago received \$170 million from 2009 to 2012
 - 13,440 REOs could be treated
 - Only about 800 units are treated

Results

- NSP generates positive effects on nearby property values
- These effects are prevalent since the rehabilitation program starts.
- Elevating nearby property values by 15.8%

Table 1. Effect of NSP Grants on the Neighboring Housing Sale Prices Treated: <0.1 mile vs. Control: 0.2-0.25 mile

	(1) Acquire	(2) Start	(3) End
Treatment*time (δ)	0.071 (0.090)	0.158** (0.072)	0.186*** (0.065)
Observations	3,258	3,258	3,258
R-squared	0.685	0.685	0.686
Tract*Year FE	YES	YES	YES

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Robustness Check

- Different matching schemes are used to generate neighborhoods with similarities as the treated neighborhoods.
- The same difference-in-differences approach as the base model are applied on the matched sample of neighborhoods
- Results are robust in all spatial Placebo models

Table 2. Difference-in-differences Coefficient Estimates for Placebo Location

	(1) NN	(2) NN_Replacement	(3) KNN (k=2)	(4) Mahalanobis
Treatment*time	-0.027 (0.056)	-0.065 (0.061)	-0.060 (0.061)	0.046 (0.059)
Observations	4,677	4,591	4,601	4,000
R-squared	0.772	0.776	0.773	0.786
Tract*Year FE	YES	YES	YES	YES

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Method

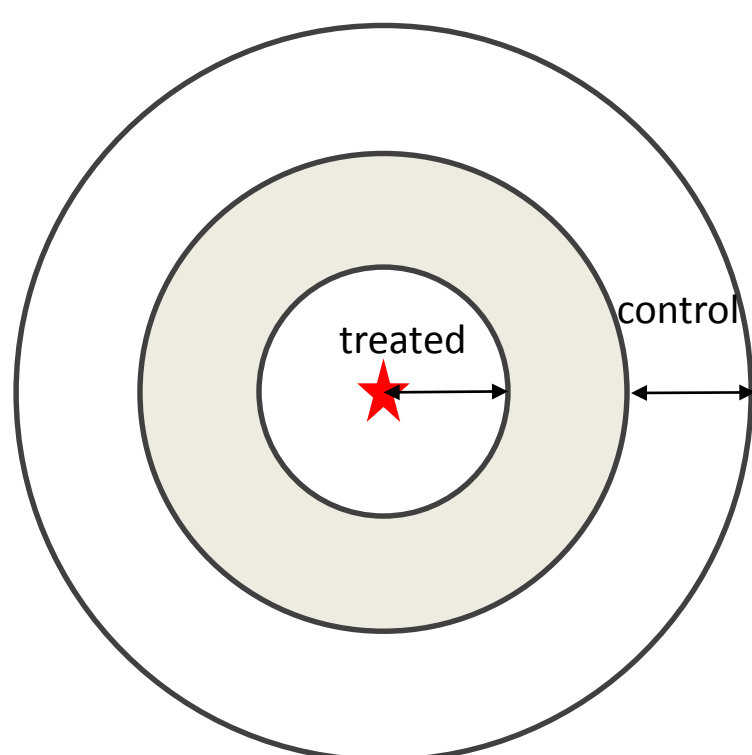
Randomness is likely violated in observational studies. The quantification of the counterfactual is the key to identify the causal effects of the program.

Difference-in-Differences Model

$$\log(\text{SalePrice}_i) = x_i' \beta + \theta_1 \text{dnsp}_i + \theta_2 \text{dt}_i + \delta \text{dnsp}_i \cdot \text{dt}_i + \varepsilon_i$$

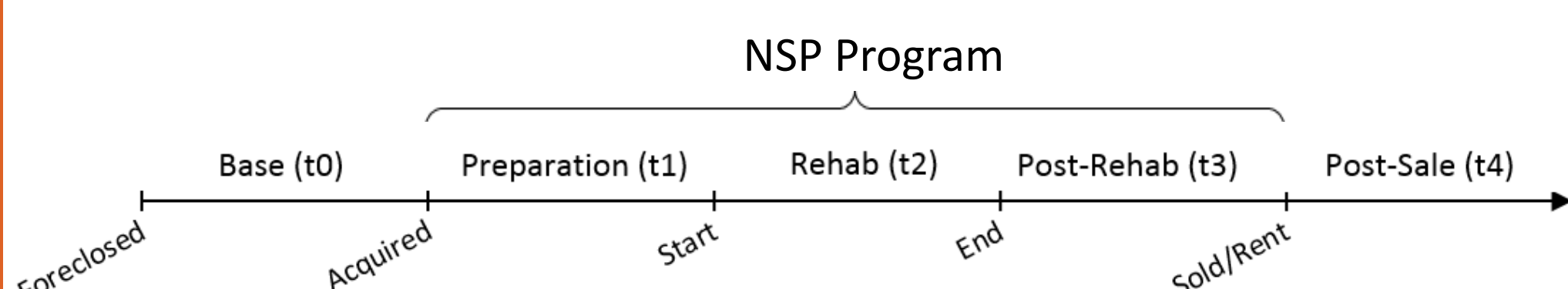
- x_i - housing characteristics
- dnsp_i - treatment dummy ($\text{dnsp}_i=1$ if nearby NSP recipient)
- dt_i - time dummy, relative to the start time of the treatment

Treatment vs. Control



Treated area:
close to the NSP treatment
Control area:
further away from the NSP treatment

Periods of Evaluation



Conclusions

This study identified some positive effects NSP has achieved in terms of elevating nearby property values. These preliminary results are robust to different definition of neighborhoods. Spatial Placebo model provide more confirmation to the these positive effects. This is one of the first few studies evaluating the NSP program. The analytical approach provided here is reproducible for studies on other areas for evaluating the NSP.

Next steps

- Heterogeneity in the program effects: Single families vs multi-families allocation; clustered vs scattered grants allocation
- Program effects on sales, neighborhood changes such as crime and vacancy rates.



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