

Moved to Opportunity: The Long-Run Effect of Public Housing Demolition on Labor Market Outcomes of Children

Eric Chyn
University of Virginia

2017 Policy Summit on Housing, Human Capital, and Inequality
Federal Reserve Bank of Cleveland

June 23, 2017

How does growing up in a disadvantaged neighborhood affect child outcomes?

- ▶ Motivation:
 - ▶ 20 million children live in high-poverty areas (Bishaw, 2014)
 - ▶ \$40 billion spent on housing programs which affect exposure to neighborhood poverty (OMB, 2016)
 - ▶ Project-based public housing
 - ▶ Section-8 housing vouchers

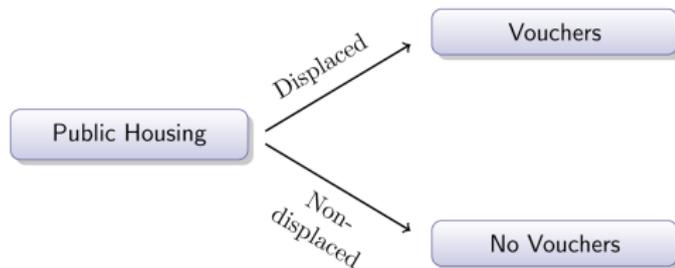
Overview of This Paper

Overview of This Paper

- ▶ Provide new evidence on long-run neighborhood effects for children by studying public housing demolitions in Chicago

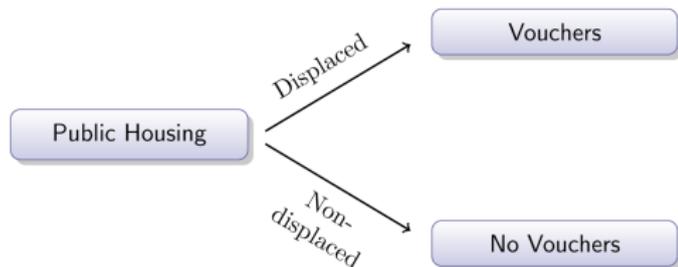
Overview of This Paper

- ▶ Provide new evidence on long-run neighborhood effects for children by studying public housing demolitions in Chicago



Overview of This Paper

- ▶ Provide new evidence on long-run neighborhood effects for children by studying public housing demolitions in Chicago



- ▶ Identification: Displacement unrelated to resident characteristics (Jacob, 2004)

Preview of Results

Preview of Results

- ▶ Children displaced due to public housing demolition:

Preview of Results

- ▶ Children displaced due to public housing demolition:
 - ▶ Move to areas with lower poverty and less crime

Preview of Results

- ▶ Children displaced due to public housing demolition:
 - ▶ Move to areas with lower poverty and less crime
 - ▶ Have notably better labor market outcomes in adulthood:
 - ▶ More likely to work
 - ▶ Higher earnings

Preview of Results

- ▶ Children displaced due to public housing demolition:
 - ▶ Move to areas with lower poverty and less crime
 - ▶ Have notably better labor market outcomes in adulthood:
 - ▶ More likely to work
 - ▶ Higher earnings
 - ▶ Have fewer arrests for violent crime

Preview of Results

- ▶ Children displaced due to public housing demolition:
 - ▶ Move to areas with lower poverty and less crime
 - ▶ Have notably better labor market outcomes in adulthood:
 - ▶ More likely to work
 - ▶ Higher earnings
 - ▶ Have fewer arrests for violent crime
- ▶ Suggests large benefits of voucher-based relocation for children living in high-rise public housing

Background: Public Housing in Chicago

Background: Public Housing in Chicago

► Overview:

1. Third largest public housing system during the 1990s
2. Average household income: \$7,000
3. 20% of units have more than 5 people
4. Nearly all residents are African-American

Background: Public Housing Demolition in Chicago

Background: Public Housing Demolition in Chicago

- ▶ Reaction to serious management and infrastructure problems
 - ▶ Buildings built during the 50s and 60s cheaply
 - ▶ Few believed the Chicago Housing Authority (CHA) could deal with maintenance issues

Background: Public Housing Demolition in Chicago

- ▶ Reaction to serious management and infrastructure problems
 - ▶ Buildings built during the 50s and 60s cheaply
 - ▶ Few believed the Chicago Housing Authority (CHA) could deal with maintenance issues
- ▶ Local politicians proposed demolition and expanding voucher assistance
 - ▶ Limited funding for demolition \Rightarrow selection of buildings based on specific maintenance issues (Jacob, 2004)
 - ▶ Initial demolitions motivated by specific crises
 - ▶ Ex. Pipes burst in Robert Taylor high-rise buildings

Figure 1: Demolition at Stateway Gardens



Data Construction Overview

Data Construction Overview

1. Demolition sample:

- ▶ CHA data on building addresses
 - ▶ Jacob (2004) sample of buildings ($N = 54$)
- ▶ Social assistance (TANF/AFDC, Foodstamps, Medicaid) files
- ▶ 5,250 displaced (treated) and non-displaced (control) children

Data Construction Overview

1. Demolition sample:

- ▶ CHA data on building addresses
 - ▶ Jacob (2004) sample of buildings ($N = 54$)
- ▶ Social assistance (TANF/AFDC, Foodstamps, Medicaid) files
- ▶ 5,250 displaced (treated) and non-displaced (control) children

2. Link this sample to administrative data on outcomes:

- ▶ Quarterly earnings from unemployment insurance records
- ▶ Arrest records from the Illinois State Police

Estimating Equation

- ▶ Reduced form:

$$Y_{it} = \alpha + \beta D_{b(i)} + X_i' \theta + \psi_{p(i)} + \delta_t + \epsilon_{it}$$

where i is an individual; t indexes years; b is a building and p is a project.

- ▶ D is an indicator equal to 1 if i lived in a demolished building
- ▶ $\psi_{p(i)}$ and δ_t are project and year fixed effects, respectively
- ▶ **Key:** Identification comes from within project comparison

Threats to Identification

Threats to Identification

Displaced and Non-displaced Adults Prior to Demolition

	Adults	
	Control Mean	Diff: Treated-Control, Within Estimate
Demographics		
Age	28.851	0.810** [0.312]
Male (=1)	0.128	-0.001 [0.011]
Past Arrests		
Violent	0.185	-0.017 [0.032]
Property	0.156	0.016 [0.020]
Drugs	0.166	0.031 [0.022]
Other	0.230	-0.018 [0.028]
Labor Market Activity		
Employed (=1)	0.173	-0.006 [0.016]
Earnings (Rank)	1,493.75	-45.91 [193.358]
N (Individuals)		4,331

Where did households relocate?

Relocation Effects on Neighborhood Quality Measured After 3 Years

	Control Mean	Difference: Treated- Control, Within Estimate
HH Has Addr. (=1)	0.777	0.010 [0.020]
<i>Restricted to HH with Addr.</i>		
% Black	94.897	-2.563** [1.125]
% Below Poverty Line	64.208	-12.929** [2.531]
% on Public Assistance	57.153	-18.365** [2.164]
Violent Crime per 10,000K	68.855	-23.426** [4.371]
N (Households with Address)		2,162

Relocation Effects on Adult Outcomes of Children

Long-Run Effects of Demolition: Labor Market Activity

	Panel Model Results	
	(1)	(2)
	Control Mean	Difference: Treated-Control, Within Estimate
Employed (=1)	0.419	0.040*** [0.014]
Employed Full Time (=1)	0.099	0.013** [0.006]
Earnings	\$3,713.00	\$602.27*** [153.915]
Earnings (> 0)	\$8,856.91	\$587.56** [222.595]
N (Obs.)		35,382
N (Individuals)		5,246

Relocation Effects on Adult Outcomes of Children (continued)

Long-Run Effects of Demolition: Crime

	Panel Model Results	
	(1)	(2)
	Control Mean	Difference: Treated-Control, Within Estimate
Total Arrests	0.362	-0.035 [0.024]
Violent Arrests	0.072	-0.010** [0.004]
Property Arrests	0.034	0.006* [0.003]
Drug Arrests	0.103	-0.005 [0.011]
Other Arrests	0.154	-0.025** [0.011]
N (Obs.)		56,629
N (Individuals)		5,250

Comparing Demolition Results to the Literature

- ▶ Relocation due to demolition has positive long-run effects
 - ▶ Effects detectable for both younger and older children (Chetty et al., 2016)
 - ▶ Results differ from:
 - ▶ Final MTO evaluation (Sanbonmatsu et al., 2011)
 - ▶ Public housing in Canada (Oreopolous, 2003)
- ▶ Possible explanations for heterogeneity:
 - ▶ Differences in sample:
 - ▶ Chicago versus public housing in other cities
 - ▶ Volunteer versus non-volunteer households
 - ▶ Differences in treatment:
 - ▶ Demolition may have larger impact on social ties

Summary and Conclusion

- ▶ Contributions:
 - ▶ Demolition analysis provides additional evidence on the effects on neighborhoods on long-run child outcomes
 - ▶ Policy Implications: Sheds light on debate over the merits of expanding voucher programs
 - ▶ Back-of-the-envelope lifetime earnings gains = \$45,000 (present value)
 - ▶ Reduction in violent crime