The Impact of LIHTC Program on Local Schools in Texas

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Why should we care?

- A policy intervention of housing market may create new externalities, good or bad, in the receiving neighborhoods.
- School quality is an important indicator of neighborhood quality, and the impact of building low-income multifamily units on local school is at the center of the debate.

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LIHTC program

- Part of Tax Reform Act of 1986
- The largest federal subsidy program that produced approximately 2.5 million rental units nationally and 200,000 units in Texas since the inception
- Successfully operated program with 95% occupancy rate and 0.1% foreclosure rate. The return to the program is modest, but positive and stable
- Expensive initially however has became more cost-effective as private and public partners gain experience
- Facing challenges to sustain the recovery from the recession

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Previous studies

- LIHTC has increasingly helped deconcentrate low-income renters by providing access to low-poverty neighborhoods (McClure 2006; Rengert 2006; Lopez & Di 2009).
- Some evidence show that LIHTC tenants do not necessarily access to good-quality schools even they locate in low poverty area (Deng 2007).
- Assisted housing in general had no negative impact and sometimes a positive impact on neighborhood. (Galster 2002, Nguyen 2005, Ezzet-Loftrom & Murdoch 2007, Deng 2009, Edmiston 2010).
- None have looked at the direct relationship between the assisted housing projects and quality of hosting schools.

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Potential pathways of LIHTC affecting academic achievement

- Immediate effects:
  - Minority achievement gap
  - Better family situations
  - LIHTC families are relatively higher performers
- Longer term effects:
  - Peer effects (Within socio-economic group only? Benefit from diversity? Regress to the norm?)
  - Response of teachers, school administrators and parents

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Methodology—Panel analysis of local schools

- Identify elementary schools closest to LIHTC projects within the same school district. For each campus, calculate the number of LIHTC units nearby, performance measures with accountability ratings and standardized test passing rates over time.
- Use first-differenced ordered Probit model to estimate the relationship between changes in school performance and addition of nearby LIHTC units controlling for school and neighborhood characteristics and pre-existing performance trends.

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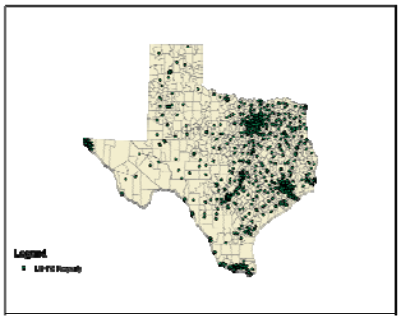
Distribution of LIHTC projects in Texas



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TDHCA LIHTC data

(1,970 observations)

Variable	Description	Mean	Std. Dev.	Min	Max
UNITS	Number of Units	106.67	91.65	1	826
LOW_UNITS	Number of Low Income Units	101.45	88.73	1	826
REHAB	Acquisition/Rehabilitation Project	.363	0.481	0	1
NEW	New Construction Project	.637	0.481	0	1
PIS_YEAR	Year Placed in Service	1997.7	6.85	1985	2008

SOURCE: Texas Department of Housing and Community Affairs LIHTC database.

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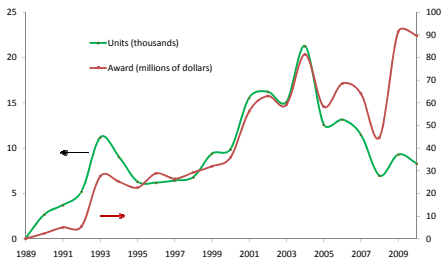
LIHTC awarded and units built in Texas



SOURCE: Texas Department of Housing and Community Affairs LIHTC database.

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TX public elementary schools 2008-09

(4,045 obs)

Variable	Description	Mean	Min	Max
RATING	TEA Academic Rating	2.9	1	4
STRATIO	Ratio of Students to Teachers	14.7	7	31.5
NSTUDENTS	Number of Students	551.7	44	1564
PWHITE	% of Students White	35	0	98.4
PBLACK	% of Students Black	13.3	0	100
PHISPANIC	% of Students Hispanic	48.4	0	100
PLOWSES	% of Students Economically Disadvantaged	61.7	0	100
PLEP	% of Students Limited English Proficiency	22.5	0	95.1

SOURCE: Texas Education Agency Academic Excellence Indicator System

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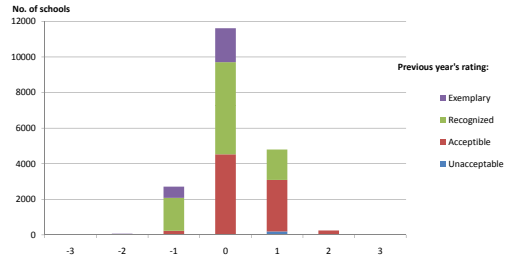
Distribution of changes in rating from the previous year

(19,433 Texas public elementary schools, 2004-09)



SOURCE: Texas Education Agency Academic Excellence Indicator System

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Impact of LIHTC on School Rating Change (I)

Different types of projects

Variables	All	New projects	Rehab projects
$\Delta LIHTC$	-0.0984	-0.299	-0.0249
	(0.182)	(0.192)	(0.271)
$\Delta UNITS$	**0.000867***	**0.00133****	**0.0000832**
	(0.000507)	(0.000613)	(0.00104)
$\Delta UNITS_{-1}$	-0.000755*	-0.000950**	0.000131
	(0.000399)	(0.000450)	(0.000865)
Observations	12,936	12,936	12,936

Standard errors in parenthesis

* significant at 10 percent; ** significant at 5 percent *** significant at 1 percent

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Impact of LIHTC on School Rating Change (II)

Different types of neighborhoods

Variables	Lower income	Higher income	Higher minority	Lower minority
Δ*LIHTC*	0.136	-0.265	0.0181	-0.458
	(0.294)	(0.233)	(0.213)	(0.350)
Δ*UNITS*	**0.000320**	**0.00137****	**0.000593**	**0.00164***
	(0.000742)	(0.000697)	(0.000598)	(0.000973)
$\Delta UNITS_{-1}$	-0.000595	-0.000858	-0.000797*	-0.000560
	(0.000614)	(0.000525)	(0.000473)	(0.000753)
Observations	4,073	8,863	6,644	6,292

Standard errors in parenthesis
* significant at 10 percent; ** significant at 5 percent *** significant at 1 percent

Lower (higher) income neighborhood: block group median income ≤(>) 80% county median income in 2000
Lower (higher) minority neighborhood: block group share of non-Hispanic white ≤(>) 60% in 2000.

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Impact of LIHTC on School Rating Change (III)

Different types of projects and neighborhoods

Sample	Explanatory variables		
All units	Δ*LIHTC*	Δ*UNITS*	$\Delta UNITS_{-1}$
All areas		+*	–*
Lower minority		+*	
Higher minority			–*
Higher income		+**	
Lower income			
New units			
All areas		+**	–**
Lower minority	-*		
Higher minority			–**
Higher income		+*	
Lower income			
Rehab units			
All areas			
Lower minority			
Higher minority			
Higher income			
Lower income			

* significant at 10 percent; ** significant at 5 percent *** significant at 1 percent
Significance based on robust standard errors

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Impact of LIHTC on TAKS passing rate

Different types of projects and neighborhoods

Sample	Explanatory variables								
	Δ*LIHTC*			Δ*UNITS*			$\Delta UNITS_{-1}$		
All units	R	M	S	R	M	S	R	M	S
All areas				+*					–**
Lower minority		+*							
Higher minority				+*			–*		-*
Higher income									
Lower income						+*			–**
New units	R	M	S	R	M	S	R	M	S
All areas						+*	–**		–***
Lower minority									
Higher minority						+**	–***		–***
Higher income				+**			-*		-*
Lower income						+*	-**		-**
Rehab units	R	M	S	R	M	S	R	M	S
All areas				+**	+*				
Lower minority	+***	+***	+***	-***	+***	+**		-***	
Higher minority				+*					
Higher income									
Lower income	-***	-**	-**	+***	+***	+***			

* significant at 10 percent; ** significant at 5 percent *** significant at 1 percent
Significance based on robust standard errors

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Conclusion

- There is little evidence for overall adverse effects from LIHTC on accountability ratings of local schools. The Results using standardized test performance are similar. There is no influence of elderly units.
- The positive contemporaneous effect exceeds the negative one-year lingering effect. The positive effect are likely to be driven by motivated parents moving into higher-income and lower-minority areas. But new students tend to "converge" to the norm after a year.
- The negative effects mostly happen in higher-minority areas, leading cautions about the program adding more stress to already distressed neighborhoods.

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