

Home Prices and the Economic Value of Public School Calendars:

A Wake County Case Study

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Year Round Calendars and Home Prices and Homeowner Perceptions

- Homeowners may have a preference or distaste for year-round calendars
 - perceived academic effects?
 - flexible vacation times?
 - home and work life disruptions?
- How strong is the perception?
 - Does an implicit price emerge for this attribute?
 - If so, how large is the implicit price?

Wake Single-family homes between February 1, 2006 and January 31, 2010 (express in 2010 dollars)

Calendar Type	Sample Averages
Year Round	\$273,557
Traditional	\$276,233

Research Questions

The largest increase in YRS use occurred in 2007 when the school system mandated 22 existing schools convert to YRS calendars and ordered all new schools to open on the YRS calendar.

Is there evidence to suggest households wanting to move to a home with a traditional calendar would have to pay a premium (**other things equal**)?

Findings

Is there evidence to suggest households wanting to move to a home with a traditional calendar would have to pay a premium during the sample period (**other things equal**)?

- ✓ **Yes; we find traditional calendar premium was 1.5 to 2.0 percent.**
- ✓ **For the average home in the sample, this is about \$4,100 to \$5,500.**

Data

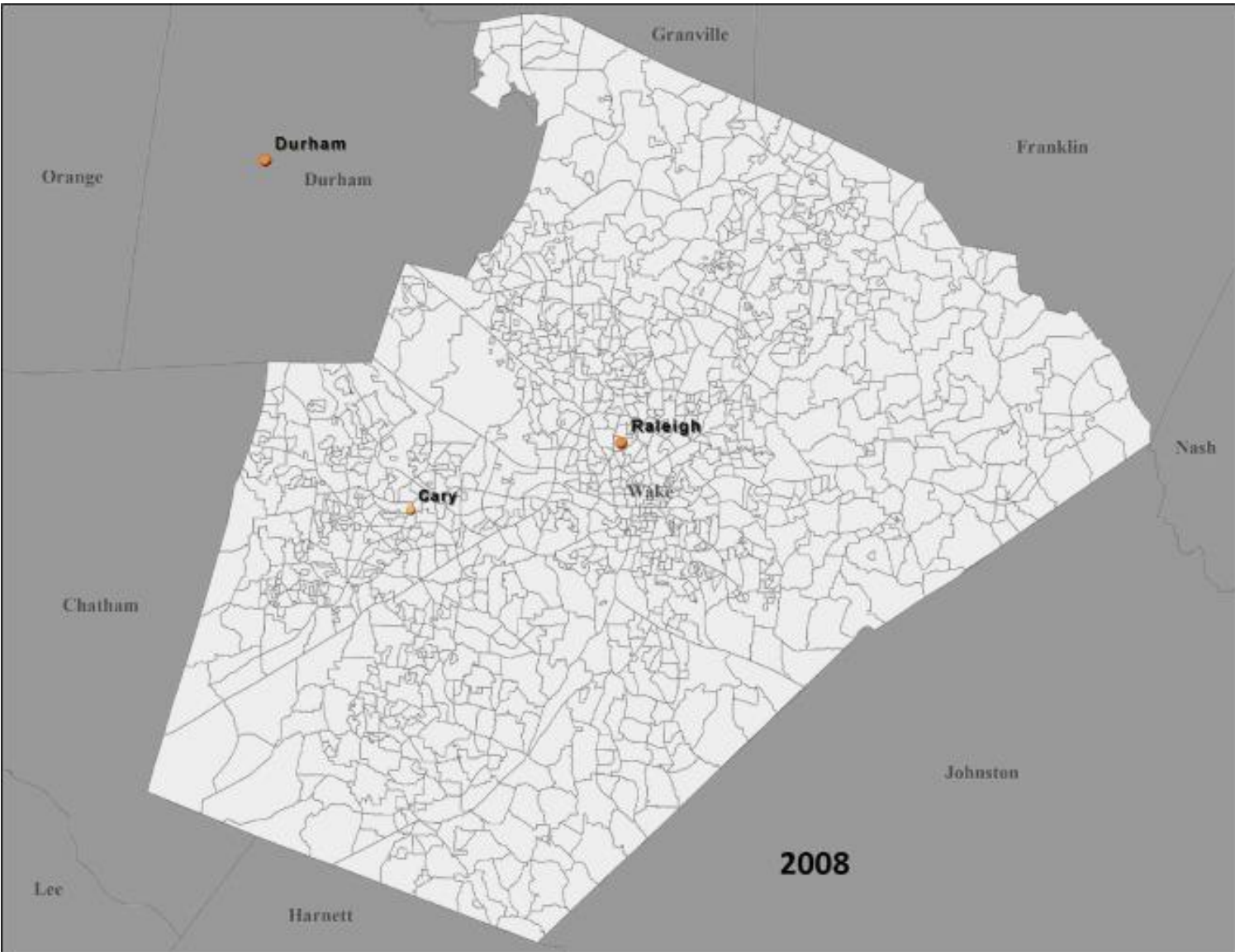
Wake County– Qualified single property sales of single-family homes

- **Geography:** Wake County
- **Years:** February 1, 2006 and January 31, 2010.
- **Source:**
 - Wake County Revenue Department Real Estate property data files
- Information on physical location, structural characteristics of the home (e.g., square footage, number of baths, year built), date of sale, and transaction prices are included.
- Final sample of **54,989 unique sales** transactions over the four years.

Example: Housing Attributes

Square Feet (Heated Area)	
Mean:	2,189
Standard Deviation	968

Wake County– Spatial Data for Node and Elementary School Assignment



Breakdown of homes in sample by school and node assignment changes

February 1, 2006 and January 31, 2010

Category	#	Percent
Constant node & constant school	37,295	67.8
Different node & constant school	5,991	10.9
Constant node & different school	9,074	16.5
Different node & different school	2,629	4.8
Total	54,989	100.0

Wake County– School Characteristics

- Geography: Wake County
- Years: 2006/2007-2010/2011
School Calendar Years
- Source:
 - WCPSS
- School Calendar Assignment
- Reading Achievement
- Demographic Composition
- Percent Campus Crowding

Example: School Attributes

Percent Campus Crowding	
Mean:	95
Standard Deviation	15

Model

Main Regression Model

$$\ln(\text{price}_{ijsct}) = \beta_0 + \beta_1 YRS_{st} + \mathbf{S}_{st} \beta_2 + \mathbf{X}_{ijsct} \beta_3 + \alpha_j \\ + \phi_t + \varphi_c + \lambda_s + \varepsilon_{ijsct}.$$

With

- YRS_{st} = year round school status of school s in year t
- \mathbf{X}_{ijsct} other common characteristics of the home, including square feet, number of baths, age, age squared and a dummy indicator for a brick exterior.
- observable school s attributes
- \mathbf{S}_{st} = other observable school s attributes
- ε_{ijsct} = error term
- If $\beta_1 > 0$ (premium for year round schools); if $\beta_1 < 0$ (penalty for year round schools)

Results

Main Regression Model Results

Table 4				
Variable	Model 1	Model 2	Model 3	Model 4
<i>YRS</i>	<i>-6.0%</i>	<i>-5.5%</i>	<i>-1.5%</i>	<i>-1.7%</i>
Controls				
Other Observed School Attributes	No	Yes	Yes	Yes
School FE	No	No	No	Yes
Assignment Node FE	No	No	Yes	Yes
Reading Achievement	Yes	Yes	Yes	Yes
Housing	Yes	Yes	Yes	Yes
Month	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
Municipality FE	Yes	Yes	Yes	Yes

Discussion

- Is this a big number?
- Can we generalize?
 - One time shock
 - Persistence
- Beware of Secondary Effects

Thank you! Questions

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