Journal of Agricultural and Applied Economics, 39,1(April 2007):211–221

Does Close Count? School Proximity, School Quality, and Residential Property Values

Kwame Owusu-Edusei, Jr., Molly Espey, and Huiyan Lin

This study jointly estimates the impact of school quality and school proximity on residential property values in Greenville, South Carolina. While quality is found to be capitalized into residential property values, the degree of capitalization depends on school level and proximity to each school for which the house is zoned for attendance. In general, there is positive value associated with closer proximity to schools of all levels, and negative value associated with a significantly longer than average distance to schools. In terms of quality rankings, excellence at the elementary and high school levels has the strongest impact on property values.

Key Words: hedonics, park proximity, school proximity, school quality

JEL Classifications: I21, O18, R21

High-quality education may contribute to the public good through improved economic performance and reduced crime rates, but it also has private value. Although public schools in the United States are tuition free, people "pay" for better-quality public education indirectly through real estate markets, bidding up the price of homes in higher-performing school districts. This, in turn, can have positive repercussions for local government, as property tax collections rise along with property values without need for an increase in tax rates.

Improving teaching and learning was the expressed purpose of South Carolina's Education Accountability Act of 1998. This act required establishment of a performance-based accountability system and provision of annual report cards with performance indicators for all public schools in the state. By providing annual report cards of school performance, the state generates a clear signal to the public, including prospective home buyers, of the level of academic achievement in local schools. There has been no attempt, however, to quantify the impact of this particular signal of school quality on residential property values. This issue is of concern to local governments and school districts dependent on property tax revenues, prospective home buyers, as well as current home owners who may see the value of their homes change as academic performance at local schools change.

This study makes two primary contributions to the literature. First, the hedonic pricing technique is used to estimate the impact of school quality and proximity to schools on residential property values in the city of Greenville, South Carolina. Second, all school levels (elementary, middle, and high school) are analyzed jointly. Many previous

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The authors wish to thank two anonymous reviewers of the *Journal* for their useful comments and insights.

studies have estimated the impact of school performance measures on residential property values, but few have considered the combination of performance and proximity to schools, and none has assessed all school levels—elementary, middle, and high—in one equation. The next section reviews previous hedonic studies of school quality; then the data and model used in this study are discussed. Results of this study support the conclusions of previous research that have found the value of school quality to be capitalized into residential property values, but the results also indicate that these values are influenced by proximity to elementary, middle, and high schools, a factor not previously considered in the empirical research.

Background

The hedonic pricing technique, as applied to housing, is based on the idea that the value of a house is a function of the value of individual attributes that comprise the house, such as square footage, number of bedrooms, number of bathrooms, and proximity to such amenities as schools or parks. The price of a house (P_h) can be written as

$$(1) \quad P_h = f(S_j, N_k, Q_m)$$

where S_j, N_k, and Q_m indicate vectors of structural, neighborhood, and other quality variables, respectively. This equation represents the hedonic, or implicit price, function for housing. The implicit price of any characteristic, for example N_k, a neighborhood variable, can be estimated as

$$(2) \quad \delta P_h/\delta N_k = P_{N_k}(N_k).$$

This partial derivative gives the change in expenditures on housing that is required to obtain a house with one more unit of N_k, ceteris paribus. If the value of the partial derivative is positive, then the attribute is an amenity; if the value is negative then the attribute is a disamenity such as air pollution or airport noise.

Many prior studies that specifically analyze the relationship between school quality and residential property values have been conducted, using many different measures of quality. The earliest studies used expenditures or expenditures per pupil (Oates; Edel and Sclar; Gustely; Sonstelie and Portney), while others used the pupil-to-teacher ratio (Grether and Mieszkowski; Harrison and Rubinfeld). Rosen and Fullerton suggested that the use of a measure of output such as proficiency test scores, rather than an input such as expenditures, would better reflect school quality.

Subsequent research focused on estimating which school performance measures were capitalized into property values (Hayes and Taylor; Brasington; Haurin and Brasington). Downs and Zabel also found school level variables to have a significantly stronger influence on housing values than district level data. Figlio and Lucas used data from before and after the introduction of report cards (categorical quality measures, A–F) and found evidence that assigned letter grades had large impacts on the value of houses in Florida. Clapp, Nanda, and Ross measured the effect of test scores on house prices using panel data. Their results show that school quality capitalization effects are smaller when fixed effects dummies are used to control for omitted neighborhood characteristics. Black and Bayer both attempt to control for neighborhood characteristics by examining housing close to school zone boundaries.

Dills used district level data from Texas to examine the aspects of school quality capitalization. Her results indicate that levels of proficiency test scores are capitalized into housing values, but changes in test scores are not related to changes in levels of aggregate house value. She also finds that the relation between school quality and house values disappears when a fixed effects panel is estimated. Ries and Somerville find that changes in school quality affect house prices, but only for changes in secondary school quality. In a study of 310 school districts for 77,000 house transactions in 2000 in Ohio, Brasington and Haurin conclude that households value average proficiency test scores and expenditures of the school district in which they intend to live. Only Kane, Staiger, and

Samms attempt to account for both school quality, using categorical rankings, and proximity of houses to schools. However, they found no evidence that categorical ratings impact house values. Furthermore, their analysis is limited to elementary schools, with fixed effects included for middle and high school impacts.

This study focuses on a single measure of school quality (categorical rankings) for each level of education (elementary, middle, and high) in the metropolitan area of the Greenville school district, as well as proximity to each school. The city of Greenville is located at the foot of the Blue Ridge Mountains, just off Interstate 85 between Atlanta, Georgia and Charlotte, North Carolina. Greenville is one of the largest and fastest growing metropolitan areas of South Carolina. While the community recognizes the value of quality primary and secondary education, its contribution to property values and the tax base has not previously been quantified, nor has the value of school proximity to housing been estimated.

Data

This study includes data for 3,732 single family homes sold between 1994 and 2000 as recorded by the Greenville County property assessment office. Structural variables include the number of bathrooms,[1] house square footage, lot size,[2] whether or not the house has air conditioning, whether or not the house includes a garage, and a housing quality variable (condition), measured on a scale of 0 to 100, that accounts for both the condition and age of the house. Qualitative dummy variables are also constructed for the year sold to account for otherwise unaccounted temporal changes. A seasonal dummy variable is also included to account for all sales occurring between April and September, the peak of the residential sales market. Housing sales prices are adjusted for inflation using a monthly consumer price index.

The study area is primarily metropolitan, with all houses within close proximity to downtown Greenville, with employment and shopping fairly evenly distributed throughout. Neighborhood variance is accounted for through three census block variables derived from the U.S. Census 1997 update: housing density measured as the number of housing units per square mile, median housing price, and average household size. Summary statistics for housing characteristics are shown in Table 1.

As indicated in the review of previous literature, there is no consensus on what measure is the best indicator of school quality. Furthermore, models using singular measures can be subject to omitted variables bias, with each measure capturing a different aspect of the school but none giving a holistic assessment of the schools' performance. The categorical quality rankings used in this study are based on several continuous measures (some of which have been used in previous studies) and are arguably a more reliable measure of relative performance and achievements of schools in Greenville, South Carolina. These school ratings are assigned by the state and vary by grade level. For schools that include only kindergarten through second grade, the rating is based on student attendance, pupil-to-teacher ratios, parent involvement, and early childhood accreditation and professional development. For elementary and middle schools with grades 3 through 8, the rating is based on student performance on the state standardized test, the Palmetto Achievement Challenge Test. Finally, for high schools, the rating is based on the percentage of tenth graders and seniors passing the High School Assessment Program, the percentage of se-

[1] Since the number of bedrooms and the number of bathrooms are highly correlated, and use of bathrooms produces a better fit, only the number of bathrooms is included.

[2] Specific lot sizes for properties smaller than one acre are not available. Categorical dummy variables for lot sizes greater than one acre are used to account for the impact of these larger lots relative to lots smaller than one acre.

[3] Eligibility for LIFE Scholarships is based on grade point average and SAT scores.

Table 1. Descriptive Statistics for Non-School Variables

Variable	Mean	SD	Minimum	Maximum
Structural				
Condition	80.15	13.27	5	100
Bathrooms	1.68	0.77	0.5	7
Square footage	1,442	613	240	6,276
Air conditioning	0.44	0.50	0	1
Garage	0.11	0.31	0	1
Acres 1–4	0.04	0.19	0	1
Acres > 4	0.02	0.14	0	1
Temporal				
April–September sales	0.56	0.50	0	1
1995	0.14	0.34	0	1
1996	0.16	0.37	0	1
1997	0.16	0.37	0	1
1998	0.17	0.37	0	1
1999	0.16	0.36	0	1
2000	0.06	0.24	0	1
Neighborhood				
Median home value	98,405	50,149	30,000	258,929
Housing density (units/mi^2)	1,425	655	133	3,875
Average household size	2.20	0.33	1.09	3.05
Proximity				
Parks				
SB Park < 100 ft	0.005	0.07	0	1
SB Park 100–600 ft	0.04	0.21	0	1
SA Park < 3,200 ft	0.29	0.46	0	1
MB park < 450 ft	0.04	0.20	0	1
MB park 450–600 ft	0.02	0.14	0	1
MA Park < 1,600 ft	0.02	0.13	0	1
Golf course				
Within 300 ft	0.006	0.07	0	1
300–1,320 feet	0.03	0.17	0	1

Note: SB is small basic, SA is small aesthetic, MB is medium basic, and MA is medium aesthetic.

niors eligible for the state's Legislative Incentives for Future Excellence (LIFE) Scholarships to four-year institutions,[3] and the graduation rate.

Each school is rated on its absolute performance as measured against the target achievement level (2010 goal) of performance. Performance is categorized as Excellent, Good, Average, Below Average, or Unsatisfactory. This study utilizes the first publicly released ratings covering the academic year 2000–2001. Among the elementary schools in this study area, six were rated Excellent, three Good, 10 Average, and five were Below Average during this first year. Among the middle schools in the area, none were ranked Excellent, three Good, four Average, two Below Average, and two Unsatisfactory. Among high schools, three were rated as Excellent, two Good, and two Below Average. Table 2 shows the distribution of houses by school quality for each level of school.

This research expands upon an earlier study that focused on the value of park proximity in the city of Greenville (Espey and Owusu-Edusei). Parks were classified into four categories based on size and amenities available: small basic (SB), small aesthetic

Table 2. Distribution of Houses by School Quality

School Quality	Number of Houses	Percentage of Houses
Elementary School		
Unsatisfactory	0	0.0
Below Average	81	2.2
Average	1,073	28.8
Good	1,355	36.3
Excellent	1,223	32.8
Middle School		
Unsatisfactory	43	1 2
Below Average	90	2 4
Average	1,954	52.4
Good	1,645	44.1
Excellent	0	0.0
High School		
Unsatisfactory	0	0.0
Below Average	71	1.9
Average	0	0.0
Good	501	13.4
Excellent	3,160	84.7

Table 3. Distribution of Houses by School Proximity

School Proximity	Number of Houses	Percentage of Houses
Elementary		
Less than 800 ft	430	11 5
Between 800 and 10,780 ft	2,925	78.4
Farther than 10,780 ft	377	10.1
Middle		
Less than 800 ft	54	1.4
Between 800 and 11,631 ft	3,174	85.1
Farther than 11,631 ft	504	13.5
High		
Less than 800 ft	22	0.6
Between 800 and 1,600 ft	152	4.0
Between 1,600 and 15,295 ft	2,845	76.0
Between 15,295 and 20,394 ft	578	15.5
More than 20,394 ft	135	3.6

(SA), medium basic (MB), and medium aesthetic (MA). Small basic parks had some playground equipment in a sandy area and a small area of grass. Small aesthetic parks had some playground equipment, more trees and grass, and generally appeared better maintained. The medium basic parks had baseball fields but did not appear well maintained. The medium aesthetic parks had a range of recreational amenities, including ball fields, Frisbee golf, tennis courts, and natural trails. All appeared well maintained with both developed recreational areas and natural areas available.

Linear distance from each house to the nearest park was calculated in ArcView. An iterative procedure was used to determine significant ranges of park proximity. First, a boundary beyond which parks had no significant influence on price was determined for each park type. Then within that range, the differential influence of various ranges was estimated, producing six different park proximity dummy variables. Proximity to a golf course in the study area was estimated in the same manner, producing two significant proximity dummy variables. Summary statistics for these variables are also shown in Table 1.

Linear distance from each house to each school type, elementary, middle, and high, was also calculated. Since not every house is near a park but every house is zoned for each level of school, the calculation of the value of school proximity was conducted somewhat differently from the value of park proximity by measuring proximity relative to the average. Hence boundaries for analysis were initially set by determining distances less than and greater than the mean distance from each school type that had a significantly different impact on housing values relative to the average distance. Then within these ranges, an iterative process was used to determine if there were finer proximity gradations of significance. These proximity variables are shown in Table 3, along with the number of houses falling in each range.

Model and Empirical Results

The hedonic price of houses in Greenville is estimated as

$$(3) \quad P_t = f(S_t, T_t, N_t, R_t, Q_t),$$

where P_t is the log of the sales price of a given house, S_t is a vector of structural housing characteristics, T_t is a vector of temporal characteristics, N_t is a vector of neighborhood characteristics, R_t is a vector of park, golf course, and school proximity variables, and Q_t is a vector of elementary, middle, and high school quality ratings.

Since the school ratings did not begin until 2001, covering the 2000–2001 school year, this analysis assumes that those ratings are indicative of the perception of buyers of houses in the study area prior to that time and that those perceptions did not change over the time period of the study, 1994 to 2000. For comparison, the model is estimated using both the full 1994–2000 data set of 3,732 observations and the truncated 1998–2000 data set of 1,452 observations, with the proximity variables generated as described above using the full data set. Both of these data sets are used to estimate the model with and without the school proximity variables to illustrate the influence of school proximity on the estimates of the value of school quality. For further comparison, and to illustrate the robustness of the school proximity coefficient estimates, each data set is also used to estimate the model without the school quality variables.

Results are shown in Table 4.[4] Coefficients estimates for continuous variables indicate the percentage change in the dependent variable housing price. For dummy variables, the percentage change in the dependent variable in a semi–log model is equal to $e^{\beta} - 1$, where β is the coefficient estimate for that dummy variable.

Structural and neighborhood coefficient estimates are of the expected sign and generally consistent across models. Thus, bathrooms, square footage, air conditioning, presence of a garage, more acreage, and better general condition of the house all contribute positively to housing value, while an increase in housing density and average household size in the neighborhood have a negative impact.

The park and golf course proximity coefficient estimates are also of the expected sign and consistent within each time period. Very close proximity to the basic parks has a negative influence on property values, but proximity otherwise has a positive impact. The distance over which parks impact housing values varies from 600 feet for the basic parks to 3,200 feet (0.6 miles) for the small aesthetic parks. Variance between the full time series results and the truncated time series results in terms of the size of these impacts may be related to changes in park facilities and maintenance over time, particularly for the aesthetic parks that appear to have a more positive impact on property values in the later time period.

The school proximity coefficient estimates suggest there is a positive value associated with proximate location to schools and a negative value associated with greater than average distance from schools. High schools are the exception to this, with very close proximity generating a negative impact on housing value. This, however, is not surprising, as high schools tend to have more nighttime activities and night lights that would be expected to have a negative impact on surrounding residential properties. Location within 800 feet, about 0.15 miles, of elementary schools is estimated to produce housing values from about 8% to 13% higher than houses located 800 feet to about two miles away, while houses located more than two miles from an elementary school have values about 10% less. Location within 800 feet of a middle school could increase housing values as much as 12% relative to houses 800 feet to about 2.2 miles away, while location further than 2.2 miles negatively impacts housing prices by about 18%.

While very close proximity to high schools is found to have a negative impact on housing values, only a small fraction of the data set fell

[4] Tests for the presence of heteroskedasticity were not significant.

Table 4. Empirical Results

Variable	1994–2000 (n=3,732)	1994–2000 (n=3,732)	1994–2000 (n=3,732)	1998–2000 (n=1,452)	1998–2000 (n=1,452)	1998–2000 (n=1,452)
Structural						
Condition	0.047*** (14.99)	0.043*** (13.84)	0.049*** (17.01)	0.053*** (8.71)	0.047*** (7.70)	0.55*** (10.24)
Condition squared	−0.00026*** (−12.24)	−0.00023*** (−11.14)	−0.00028*** (−14.41)	−0.00030*** (−7.50)	−0.00027*** (−6.65)	−0.00033*** (−9.20)
Bathrooms	0.209*** (16.05)	0.207*** (16.33)	0.19*** (14.97)	0.197*** (8.94)	0.196*** (9.11)	0.178*** (8.16)
Square footage	0.0009*** (22.67)	0.00088*** (22.68)	0.00093*** (23.67)	0.0009*** (12.59)	0.00088*** (12.48)	0.00095*** (13.25)
Square footage squared	-1.15×10^{-7}*** (−12.96)	-1.09×10^{-7}*** (−12.59)	-1.16×10^{-7}*** (−13.20)	-1.21×10^{-7}*** (−7.41)	-1.14×10^{-7}*** (−7.11)	-1.24×10^{-7}*** (−7.61)
Air conditioning	0.021 (1.39)	0.018 (1.18)	0.019 (1.26)	0.0087 (0.33)	0.007 (0.29)	0.016 (0.60)
Garage	0.049** (2.29)	0.046** (2.19)	0.049** (2.32)	0.032 (0.89)	0.036 (1.02)	0.037 (1.05)
Acres 1–4	0.104*** (3.13)	0.102*** (3.16)	0.117*** (3.55)	0.135*** (2.90)	0.122*** (2.70)	0.122*** (2.64)
Acreage over 4	0.129*** (2.80)	0.122*** (2.71)	0.134*** (2.93)	0.202*** (2.59)	0.204*** (2.68)	0.199** (2.56)
Temporal						
April–Sept sales	0.028** (2.19)	0.025** (2.00)	0.024* (1.92)	0.016 (0.75)	0.011 (0.52)	0.008 (0.39)
1995	0.007 (0.31)	−0.0022 (−0.10)	−0.00033 (−0.01)			
1996	0.059*** (2.59)	0.045** (2.06)	0.042* (1.87)			
1997	0.10*** (4.33)	0.094*** (4.25)	0.097*** (4.33)			
1998	0.158*** (7.01)	0.153*** (6.97)	0.153*** (6.84)			
1999	0.215*** (9.39)	0.217*** (9.74)	0.221*** (9.76)	0.051** (2.19)	0.058*** (2.55)	0.063*** (2.70)
2000	0.207*** (6.85)	0.202*** (6.86)	0.196*** (6.53)	0.036 (1.14)	0.037 (1.21)	0.032 (0.53)
Neighborhood						
median value (1,000s of $)	0.0017*** (9.51)	0.0018*** (9.49)	0.0021*** (11.97)	0.0021*** (6.80)	0.0022*** (6.90)	0.0025*** (8.16)
Housing density (1000 units/mi^2)	−0.105*** (−8.17)	−0.070*** (−5.34)	−0.084*** (−6.68)	−0.085*** (−3.81)	−0.061*** (−2.66)	−0.084*** (−3.83)
Household size	−0.048* (−1.95)	−0.032 (−1.33)	−0.106*** (−4.53)	−0.056 (−1.30)	−0.05 (−1.17)	−0.134*** (−3.21)
Proximity						
Parks:						
SB < 100 ft	−0.268*** (−2.92)	−0.180** (−2.02)	−0.193** (−2.12)	−0.138 (−0.68)	0.023 (0.12)	−0.02 (−0.10)
SB 100–600 ft	0.089*** (2.63)	0.072** (2.15)	0.062* (1.86)	−0.015 (−0.23)	−0.041 (−0.65)	−0.046 (−0.73)

Table 4. (Continued)

Variable	1994–2000 (n=3,732)	1994–2000 (n=3,732)	1994–2000 (n=3,732)	1998–2000 (n=1,452)	1998–2000 (n=1,452)	1998–2000 (n=1,452)
SA < 3,200 ft	0.098*** (5.27)	0.116*** (6.78)	0.154*** (9.59)	0.13*** (4.58)	0.135*** (4.74)	0.168*** (6.26)
MB < 450	−0.098*** (−2.75)	−0.124** (−3.44)	−0.107*** (−2.89)	−0.141** (−2.43)	−0.175*** (−3.00)	−0.152** (−2.55)
MB 450–600 ft	0.098** (2.12)	0.093 (2.03)	0.132*** (2.84)	0.239*** (3.10)	0.202*** (2.61)	0.226*** (2.86)
MA < 1,600	0.237*** (4.07)	0.393*** (6.73)	0.280*** (4.98)	0.330*** (3.20)	0.508*** (4.73)	0.425*** (4.01)
Golf course						
Within 300 ft	0.262*** (3.08)	0.243*** (2.94)	0.217*** (2.58)	0.252* (1.84)	0.0.248* (1.86)	0.214 (1.57)
300–1,320 ft	0.116*** (2.87)	0.091** (2.30)	0.064 (1.60)	0.077 (1.12)	0.068 (1.01)	0.036 (0.53)
Schools:						
Elementary:						
Within 800 ft		0.074*** (3.29)	0.103*** (4.57)		0.11*** (2.93)	0.143*** (3.74)
Past 10,780 ft		−0.091*** (−3.65)	−0.123*** (−5.39)		−0.038 (−0.88)	−0.066* (1.65)
Middle:						
Within 800 ft		0.10* (1.76)	0.002 (0.04)		0.001 (0.01)	−0.11 (−1.21)
Past 11,631 ft		−0.177*** (−6.07)	−0.19*** (−7.07)		−0.165*** (−3.22)	−0.223*** (−5.03)
High:						
Within 800 ft		−0.307*** (−3.52)	−0.278*** (−3.30)		−0.298** (−2.34)	−0.25** (−2.21)
800–1600 ft		0.205*** (5.28)	0.224*** (5.80)		0.184*** (2.84)	0.216*** (3.40)
15,295–20,394 ft		−0.132*** (−5.38)	−0.20*** (−9.59)		−0.187*** (−4.33)	−0.251*** (−7.03)
Past 20,394		−0.243*** (−6.43)	−0.249*** (−6.89)		−0.262*** (−4.13)	−0.224*** (−3.67)
School quality:						
Elementary:						
Below average	−0.178*** (−3.09)	−0.078 (−1.23)		−0.220** (−2.44)	−0.11 (−1.01)	
Good	−0.06** (−2.13)	−0.07** (−2.32)		−0.020 (−0.41)	−0.062 (−1.19)	
Excellent	0.152*** (6.90)	0.12*** (4.66)		0.196*** (5.09)	0.149*** (3.33)	
Middle:						
Unsatisfactory	−0.075 (−1.00)	−0.167** (−2.12)		−0.010 (−0.08)	−0.147 (−0.98)	
Below average	−0.63*** (−11.51)	−0.343*** (−5.32)		−0.742*** (−8.58)	−0.428*** (−4.10)	
Good	−0.145*** (−5.97)	−0.09*** (−3.60)		−0.092** (−2.24)	−0.044 (−1.04)	
High:						
Below average	−0.187*** (−3.24)	−0.072 (−1.24)		−0.092 (−0.93)	−0.036 (−0.36)	
Excellent	0.044* (1.87)	0.097*** (3.78)	0.073*** (3.28)	0.100** (2.41)	0.139*** (3.11)	0.152*** (3.96)

Table 4. (Continued)

Variable	1994–2000 (n=3,732)	1994–2000 (n=3,732)	1994–2000 (n=3,732)	1998–2000 (n=1,452)	1998–2000 (n=1,452)	1998–2000 (n=1,452)
All above average						
Adjusted R-squared	0.706	0.723	0.712	0.682	0.700	0.686

Note: t-ratios are in parentheses. Significance levels ***=0.01, **=0.05, *=0.1
SB is small basic, SA is small aesthetic, MB is medium basic, and MA is medium aesthetic.

into this category, generating an estimated 29% reduction in housing value. Location within 800 to 1,600 feet (0.15 to 0.3 miles) from a high school is estimated to increase housing values by about 25% relative to those houses between 0.3 and three miles away. Being far from the high school to which the house is zoned for attendance is estimated to have a relatively strong negative impact on housing values, reducing price 14% to 19% for houses about three to four miles away and about 25% for houses more than four miles away.

The coefficient estimates for school quality generally have the expected signs, with a negative value for Unsatisfactory and Below Average schools and a positive value for Excellent schools. The exception to this is the negative value for the Good rating for elementary and middle schools. Given that the ratings were not released until after the time period covered by the data in this analysis, it may be that prospective home buyers could not easily differentiate between average and good schools. Excellent and poor schools may be easier to distinguish even without public ratings. The magnitude and significance of nearly all of these school quality impacts were reduced, however, when school proximity was also included in the regression, despite relatively low correlation between quality and proximity.

The quality rating coefficient estimates indicate the impact on housing price for that deviation from Average, assuming the other two school levels are held constant at Average (or Good in the case of high schools since there were no average high schools in the study area). Below-average elementary and high school performance was not statistically significant but was significant for middle school performance. The most consistent impact across models was the positive impact of excellence at the elementary and high school levels, possibly increasing housing prices by as much as 18% relative to average ratings.

Since home buyers may be interested in having an above-average or excellent opportunity for their children at all school levels, two additional models were estimated to determine the impact of having all schools above average. Since none of the middle schools in the study area were rated Excellent, it was not possible to estimate this joint impact. Sixteen and a half percent of the houses were zoned for all above average schools, with nearly all of these excellent at both the elementary and high school levels. Such zoning was estimated to have a positive impact on housing values of 9% to 19%.

Conclusions

Both amenity and disamenity values become capitalized in the value of houses. The hedonic pricing technique is used in this study to determine the impact both proximity to schools and school quality have on residential property values in Greenville, South Carolina. While past studies have included estimation of the impact of various measures of school quality on residential property values, very few have considered the effect of distance between houses and schools. This analysis includes estimation of the effect of school proximity and also analyzes these impacts for all three school levels: elementary, middle, and high school.

The impact of school quality and proximity is not limited to families with school-aged children but extends to residential property owners generally. As has been found in previous studies, school quality has a significant positive impact on residential property values. However, the impact of school proximity appears to be as significant in terms of property values, with close proximity generally making a positive contribution to property values while greater than average distance from schools correlates with significantly lower property values. Further, the impact of proximity was more consistent over time than school quality, perhaps because quality can vary within a school across teachers, grades, and over time. While this research cannot determine whether proximity matters because it means a reduced commute or because it means easy access to recreational facilities, the impact is consistently significant for all school levels and over time.

These findings should be of particular interest in growing communities facing decisions of locating new schools. Educational quality is not the only factor affecting parental and student satisfaction with schooling. While parents are often the most vocal proponents of shorter commutes to schools, other property owners could also benefit through increased property values. Both improved educational quality and prudent choices about school locations could produce rewards for school districts and local communities through increased property tax revenues generated by higher property values.

[Received September 2005, Accepted June 2006.]

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