Historic Preservation, Property Values, and Tax Rates: A Municipal-level Analysis in New Jersey

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ABSTRACT: The effect of historic district designation on housing values is from a theoretical perspective rather ambiguous. Nonetheless, empirical evidence to date, while by no means conclusive, has overwhelmingly favored this special status for older towns and neighborhoods. In fact, the evidence tends to point out that more stringent ordinances and standards may even be more beneficial to home values. Interestingly, however, the effect of preservation efforts on tax rates has not been investigated. In this paper, we discuss from a theoretical perspective the direction tax rates might take in the face of preservation efforts. Using data for New Jersey municipalities from 1990 and 2005, we then test to see measure how communities that have preservation commissions have performed during the period in terms of the change in both property values and tax rates. New Jersey is an ideal testing ground since the state is among the most developed states in the union and has a relatively large share of residential structures that are over a century old. Also outside of its certified local governments, the types of local ordinances guiding preservation efforts vary quite widely as does their enforcement. We find that as ordinances and enforcement of historic preservation become more stringent across New Jersey municipalities, it has a greater positive effect on both home values ***and*** tax rates.

1. Introduction

America's current economic downturn has adversely impacted almost every corner of the country. The crunch is felt at the national, state, and local levels. The state of New Jersey is no exception. Beleaguered by dismal employment growth, a weakening dollar, a declining housing market, soaring oil prices, and escalating commodity costs, New Jersey has had to entertain raising taxes and cutting services to balance the state budget. In this time of increasing economic uncertainty, government officials across the U.S. are in need of sound strategies to avoid budget shortfalls and maintain quality of life. The designation of historic districts is one approach that states, such as New Jersey, have increasingly embraced to foster economic development.

Various programs have been established to promote historic preservation. One notable example is the National Park Service's National Register of Historic Places, which designates properties of national historic significance as National Historic Landmarks. Of New Jersey's 566 municipalities, 35 contain landmarks listed on the National Register. Another program established by the National Park

Service promotes the creation of Certified Local Governments. The Certified Local Government (CLG) program is a joint venture between federal, state, and local entities aimed at supporting the historic preservation activities of eligible municipalities. While CLGs may not necessarily be included in the National Register, their historic resources are protected by state or local ordinances. Once certified, municipalities gain access to valuable resources, including federal funding. The state of New Jersey is home to 43 of the 1,644 CLGs established throughout the country.

Because the state's economic outlook is quite sobering, it is particularly important to ascertain whether historic preservation is an effective tool of economic revitalization. A preponderance of the literature cites a positive association between historic preservation activity and increased housing prices. This could be good news for municipalities seeking to boost property tax revenues through increased land values. However, absent from the literature is an analysis of preservation's impact on municipal tax bases and property tax rates. Extending the empirical examination of historic preservation to include tax bases and tax rates can reveal a great deal. For instance, if municipalities are able to expand their tax bases due to preservation-related house appreciation, essential public services may be provided with lower tax rates.

On the other hand, skeptics often cite that historic designation is likely to diminish house values when excessive preservation regulations make the costs associated with structural improvements prohibitive. In such cases, local preservation stipulations exacerbate housing stock deterioration. To compensate for revenues lost through a depressed tax base, officials may be forced to raise tax rates. Thus, the fiscal impact of historic preservation can be either positive or negative. In this period of budget shortfalls and economic uncertainty, it is immensely important to gain clarity about the true effects of preservation expenditures.

This paper analyzes the impact of historic designation on changes in municipal-level house prices, tax bases, and tax rates in New Jersey. For the purpose of this study, we designed a composite index to reflect each municipality's extent of historic preservation. This was necessary due to the lack of available information on preservation expenditures at the local level in New Jersey. Our municipal-level index accounts for: the presence of a National Historic Landmark, the designation of a municipality as a certified local government, the enactment of a local protective ordinance, and the local power to influence preservation decisions.

Because most New Jersey municipalities possess relatively mature housing stocks, the ground is fertile for preservation throughout the state. In fact, historic preservation receives substantial support from state and local institutions in New Jersey and is recognized as a key economic development strategy. Due to the prestige associated with historic designation and the strong, but reasonable

protective regulations in New Jersey, we expect that higher municipal preservation ratings will be correlated with increased house prices and tax bases.

We, in fact, find that the preservation rating has a significant, positive effect on the change in house prices between 1990 and 2005. Furthermore, the preservation rating exerts a significant, positive effect on the 1990-2005 tax base changes. Using an instrumental variables approach, we find that preservation-intensive municipalities tend to impose somewhat higher tax rates. However, this finding is tempered by the counterbalancing effect of significantly higher house price increases and tax base expansions. Our analysis leads us to conclude that New Jersey municipalities can greatly benefit from engaging in increased historic preservation activities as a strategy for community revitalization.

2. Background

2.1 House Prices and Historic Preservation

Much of the literature addresses the question of whether historic preservation increases or decreases the value of designated properties and areas. Researchers have employed a variety of empirical methods to determine the effect of historic preservation on house prices. A preponderance of the literature identifies positive externalities associated with historic preservation.

Economic impact studies are widely conducted to understand how historic preservation investments affect regional economies. For instance, using an input-output model to capture regional multiplier effects, New Jersey's *Economic Impact of Historic Preservation* report concluded that as a result of $123 million spent on preservation statewide in 1994, 2,316 new jobs were created, $81 million in additional income was generated, and $15 million in state and local taxes were collected (Listokin & Lahr, 1997).

To assess the public's general preferences for historic preservation, contingent valuation studies survey consumers' willingness to pay (WTP) for preservation activities. These assessments gauge whether historic preservation is publicly perceived as an amenity. One example of this approach is found in Chambers, Chambers, and Whitehead (1996). They surveyed residents in Missouri about their willingness to pay for the rehabilitation of Ste. Genevieve Academy, which is one of the oldest school buildings west of the Mississippi River. Almost 40 percent of respondents reported positive WTP, which indicates that they identified this particular preservation project as a benefit to the public.

Thus, historic preservation can be considered an amenity for which a value can be assessed. Regression-based hedonic price models achieve this type of valuation.

Hedonic price models treat houses as products that vary in value - based on their unique attributes (Lutzenhiser and Netusil, 2001; Schultz and King, 2001; Irwin, 2002; Noonan, 2007). By analyzing the relationship between multiple control variables and the valuation of landmarked buildings and/or districts, hedonic pricing models can ascertain the merit of preservation activities. Because hedonic models are developed based on the premise that the value associated with preservation is capitalized into house prices, these studies incorporate historical market transaction data.

Numerous studies have utilized hedonic pricing models to determine marginal price effects. The majority of these studies have determined that properties which fall under the umbrella of historic designation have higher selling prices than the prices of properties unaffiliated with designation (Asabere and Huffman, 1994; Clark and Herrin, 1997; Coulson and Leichenko, 2001; Coulson and Lahr, 2005; Noonan, 2007). On the other hand, a small number of these hedonic pricing studies have generated negative or mixed results (Schaeffer and Millerick, 1991; Asabere *et al.*, 1994). The most commonly cited cause of negative or mixed price effects is the stringency of historic preservation regulations. For instance, Schaeffer and Millerick (1991) found mixed effects of designation in Chicago due to the negative impacts associated with locally-designated properties and the positive impacts related to nationally-designated properties. While national regulations were quite reasonable, they found local regulations to be overly restrictive. Asabere, Huffman, and Mehdian (1994) found, in their study of preservation in Philadelphia, that excessive local regulatory stipulations led to comparably lower selling prices of preservation-controlled multiunit properties.

2.2 Tax Rates, Tax Bases, and Historic Preservation

Although the impact of historic preservation on house prices has garnered considerable attention, the impact of preservation on municipal tax rates and tax bases is practically ignored in the literature. However, several studies establish a theory for understanding the dynamics of tax rates and bases. Their findings highlight the intertwining relationships between tax rates and tax bases.

Ladd and Bradbury (1988) analyze the simultaneous relationship between the tax rates and tax bases of 86 large U.S. cities. They hypothesize that because firms and households prefer lower tax payments, higher property taxes will reduce the size of local tax bases. The logic is that cities with higher property taxes experience a reduction in their residential and commercial activities. This should ultimately have the effect of reduced property values. They also suggest that property values may decline because high tax rates are capitalized into lower property values.

Controlling for local demographic characteristics, non-property taxes, and the level of spending on public services, Ladd and Bradbury model the impact of municipal property tax magnitude on the size of municipal tax bases. They find that on average, a 10 percent increase in a city's property tax rate decreases the property tax base by 1.5 percent. Because higher tax rates tend to generate lower tax bases, Ladd and Bradbury assert that the association between tax rates and tax bases is endogenous.

Brett and Pinske (2000) assess the determinants of municipal business tax rates in the province of British Columbia. They believe that tax rates should reflect residents' specific demands for public services and the dynamics of intraregional tax rate competition. The first assertion implies that if municipalities are to balance their budgets, more populous cities must require higher tax rates to provide more extensive public services. The second assertion is grounded in the theme of capital mobility. Because households and firms seek to minimize their costs, they will likely choose to locate within municipalities that provide the best services achievable with the lowest tax rates possible. Implicit in this analysis is that government officials attempt to expand their tax bases in order to keep tax rates low.

To analyze the relationship between tax rates and tax bases, Brett and Pinske develop a simultaneous equation model. They account for municipal characteristics and cumulative property tax rates (i.e. imposed by local and regional taxing districts) as functions of the tax base. They model the tax rate as a function of local municipal characteristics, the tax base, non-property tax rates, and the percentage of senior residents (i.e. a proxy for public service demands).

Like Ladd and Bradbury, Brett and Pinske find an endogenous relationship between property tax bases and tax rates. They determine that although higher tax rates may adversely affect tax bases, a municipality with a large tax base may be able to balance its budget with a lower tax rate.

To test the second assertion (the interdependence of tax rates across neighboring municipalities), Brett and Pinske model the local tax rate as a function of local characteristics and the weighted average of neighboring tax rates. They find little evidence of excessive tax rate competition among neighboring jurisdictions.

Both of these studies illuminate the endogenous relationship between tax rates and tax bases. This correlation should not be ignored. Therefore, our empirical analysis of the effect of historic preservation in New Jersey's municipalities will directly address this association.

3. Empirical Method & Data

3.1 Methodology

As prescribed by the literature, we measure the effects of historic preservation within New Jersey municipalities using a hedonic price model. As mentioned above, hedonic price models treat houses as products that vary in price based on their unique attributes. The size of municipal-level tax bases are also influenced by many of the same characteristics that determine house prices (Vandergrift & Lahr, 2008). Each attribute is associated with a marginal implicit price. The cumulative effect of these attributes is reflected in a municipality's average house price and tax base. The basic hedonic regression is captured in the following model:

(1) $Price_i = f(Attributes_i)$

(2) $Base_i = f(Attributes_i)$,

where the dependent variables $Price_i$ and $Base_i$ are, respectively, the average house price and the tax base (total value of taxable property) in the *i*th New Jersey municipality and $Attributes_i$ is a vector for various value-sensitive characteristics.

In this study, we are most interested in understanding the changes in municipal-level house prices and tax bases over a period of time as a result of preservation activities. We are best able to control for unobservable factors by basing our model on an extended timeframe (Noonan, 2007). In this case, the period of study is between 1990 and 2005. Furthermore, a semi-log linear form is used in our ordinary least squares regression to explain differences in housing prices (Asabere and Huffman, 1994). The equations are as followed:

(3) $Ln(Price\ Ratio_i) = f(Housing_i + Location_i + Land_i + Preservation_i + Tax_i)$

(4) $Ln(Base\ Ratio_i) = f(Housing_i + Location_i + Land_i + Preservation_i + Tax_i)$,

where the dependent variables $Ln(Price\ Ratio_i)$ and $Ln(Base\ Ratio_i)$ represent the natural logarithms of changes in municipal-level average house prices and tax bases between 1990 and 2005. Independent variables included in the equations are measures of attributes derived from the initial year. $Housing_i$ is a vector for 1990 housing characteristics (e.g. percentage of attached single-family units and average number of rooms per unit) in municipality *i*, $Location_i$ is a vector for the attractiveness of the municipality in 1990 (e.g. distance from New York City and Philadelphia, percentage of homes built before 1960, and percentage of seasonal housing) in municipality *i, and* $Land_i$ is a vector for land use variables in 1990 (e.g. percentage of undeveloped land) in municipality *i*, and $Preservation_i$ is a composite index designed to reflect the extent of historic preservation in municipality *i*. As previously stated, house prices and tax bases are likely impacted

by tax rates. Therefore, we factor tax rates into the hedonic residential pricing model. Tax_i is the 1990 equalized tax rate per $100 of property value in municipality *i*.

As mentioned earlier, cities that impose heavier tax burdens are often perceived as less attractive for capital investment - and less economic activity generally translates into a lower tax base. Furthermore, while the tax rate burden often influences the size of the tax base, decisions about the tax rate often rely upon the size of the tax base. Smaller tax bases typically require higher tax rates to deliver public services. Therefore, neither the tax base nor the tax rate is determined exogenously. Rather, they interact simultaneously and are determined jointly. We take our model a step further than prior studies by using instrumental variables in a two-stage least squares regression model to disrupt this pattern of simultaneity. The first stage of this model is specified as:

$$(5)\ Tax\ Rate_i = f(Housing_i + Location_i + Land_i + Preservation_i + Tax_i + Instruments_i),$$

where $Tax\ Rate_i$ is the equalized tax rate per $100 of property value in municipality i and $Instruments_i$ is a vector for variables used to predict the tax rate. The instruments used to predict the tax rate include: the percentage of each municipality's population that is of school age, the percentage of each municipality's population that is elderly, and the rate of change in each municipality's average house price between 1990 and 2005. These instruments reflect each municipality's demands for public services. Higher percentages of youth and elderly residents indicate that higher tax rates will be required to meet the high costs of education and social services. Lower percentages of youth and elderly residents are likely associated with lower tax rates. Likewise, increases in house values reflect bigger tax bases and suggest that tax rates may be lowered. On the other hand, if house values drop, tax rates may have to increase to meet budgetary requirements. These interactions are revealed in the second stages of the instrumented models for house price ratios and tax base ratios.

3.2 Data

Data on mean house sale prices by municipality in 1990 and 2005 were collected from the New Jersey Department of the Treasury. Of the 566 New Jersey cities, house price data for one municipality (Audubon Park Borough in Camden County) was not reported in 1990 or 2005. The New Jersey Department of Environmental Protection supplied information on the percentage of undeveloped land and data for the commute between each municipality to New York City and Philadelphia. Information regarding municipal-level historic preservation activities was attained from the Historic Preservation Office of the New Jersey Department of Environmental Protection. Data on median rooms per housing unit, seasonal housing units, number of housing units built before 1960, school age population,

and elderly population were extracted from the U.S. Census Bureau. We retrieved municipal-level figures for tax rates and tax bases from the New Jersey Department of Community Affairs. Summary statistics for the model's dependent and independent variables are reported in Table 1.

INSERT TABLE 1

4. Results

4.1 House Price Changes

The municipal-level average house price in New Jersey rose from $182,344 in 1990 to $247,134 in 2005 (a 36 percent increase). There is a wide variation of average house prices across the state's 566 municipalities. In 1990, while the highest-priced municipality's average house price was just over $1 million (Rockleigh Borough, Bergen County), the lowest-priced municipality had an average house price of $24,440 (Camden, Camden County). The range in average house prices expanded in 2005 as most high-growth municipalities continued to command higher prices while many other municipalities experienced price declines.

With respect to housing characteristics higher levels of amenities should be captured in house prices. Because larger homes are typically valued more than smaller homes, we expect to find a positive relationship between municipalities' median number of rooms per unit (*Rooms*) in 1990 and increases in municipal house prices between 1990 and 2005. On the other hand, we anticipate that the number of multifamily housing units as a percentage of total housing units (*Attached*) will be associated with lower municipal house prices due to the perceived drawbacks of attached housing.

Our location characteristics serve as proxies for the desirability of a municipality's geographical position in the state. Municipalities in closer proximity to New York City (*NYC Dist*) should generate higher house prices due to the abundance of employment, cultural, and social opportunities available in the city. However, the relatively high population densities that are prevalent along the corridor that connects New York City to Philadelphia is affiliated with disamenities such as lower school quality and higher traffic congestion. Thus, we expect that municipalities located directly along the corridor (*NycPhl*) will have lower housing values than cities positioned farther away. Because older housing units are generally less valuable than newer housing units, we predict that municipalities with higher proportions of units constructed before 1960 (*Pre-1960*) will have lower average prices. It could, however, be possible that municipalities with higher proportions of units constructed before 1960 may be another proxy for distance to

larger cities since many metropolitan areas provide the aforementioned amenities. If this is the case, the relationship between house prices and older homes may be positive. The final location characteristic captures the recreational amenities associated with access to New Jersey's beaches. We believe that greater percentages of seasonal housing units (*Seasonal*) in 1990 will be associated with larger house price increases.

The land use variable (*Undeveloped*) represents the percentage of undeveloped land within municipalities. Since the percentage of developed land reflects an area's general demand for land, cities with high rates of undeveloped land are assumed to be less desirable. Lack of intensive land use will likely be reflected in lower house prices because the land is not as valuable as areas with higher levels of development. Land that is intentionally undeveloped to provide open space (an amenity) is excluded from this figure.

We are also interested in identifying is the relationship between house prices and the composite index designed to reflect the extent of historic preservation in each municipality (*Preservation*). We anticipate that house prices will increase (all else constant) with larger historic preservation ratings. However, although positive externalities should be generated through designation-related building restorations, there is a possibility that overly stringent preservation regulations may actually discourage investments in older properties and districts due to prohibitive costs. If regulations were restrictive, house price changes and historic preservation ratings would exhibit a negative relationship. This, however, does not seem to be the case in New Jersey.

We also took this basic analysis a step further by including instruments for municipal property tax rates to serve as proxies for the required intensity of public services. The percentage of school-age residents, the percentage of elderly residents, and the log of the house price ratio serve as instruments in this equation. We find that the instruments are significant ($F(13, 551) = 67.09$, $p < 0.00$), the partial R^2 of the instruments is 0.54, and the model is not overidentified (Sargan Statistic=21.1, p=0.00).

INSERT TABLE 2

As stated earlier, New Jersey's home prices increased an average of 35.53 percent across the state's jurisdictions between 1990 and 2005. The results listed in Table 2 estimate the influence of the aforementioned variables on the change in house price. It is significant to note that municipalities with higher initial house prices in 1990 experienced much lower appreciation rates than other municipalities over the following 15 years.

A scale of zero to six was used to estimate the extent of historic preservation activity in the state's municipalities. Based on this measure, the state's municipal-level preservation average was 0.4. Higher historic preservation ratings had a positive effect on house price increases between 1990 and 2005, but this effect was only significant in the two-stage specification. When tax rate is modeled as endogenous to the system, a one-point increase in the preservation rating is associated with a 2.7 percent increase in the house price ratio.

As expected, the median number of rooms (*Rooms*) per municipality in 1990 had a consistently positive and significant effect on the house price ratio. Each additional room is associated with a 15 percent increase in the house price ratio. On the other hand, multifamily housing (*Attached*) had a significant, but negative relationship with the house price ratio. A percentage-point increase in attached housing is related to a 0.71 percent decrease in the house price ratio.

While greater distance from New York City corresponds with a 1.5 percent decline in the house price ratio, a one percentage point increase in seasonal housing is associated with a 0.7 percent increase in the house price changes. A one percent increase in a municipality's housing constructed prior to 1960 is related to a 0.003 percent decline in the house price ratio. And although not significant, for each mile a municipality is positioned closer to the New York City – Philadelphia corridor, the house price ratio decreases 0.56 percent. The land use variable for the percentage of undeveloped land within a city also comes in negative and insignificant.

The instruments chosen to represent tax rates all achieved statistical significance. However, while the percentage of elderly residents had the expected effect of increasing the tax rate ratio by 0.17 percent, the percentage of school-aged residents was actually associated with a 0.29 percent decrease in the tax rate ratio. Moreover, a one percent increase in the house price ratio is correlated with a 16 percent decline in the tax rate ratio. This proves that municipalities with higher house prices are able to balance their budgets with lower tax rates.

Finally, when treating the tax rate as external to the system, a 1 percent increase in the tax rate ratio is associated with a 3.3 percent decline in average house prices. However, the instrumented version of the house price ratio model illustrates that a 1 percent increase in the tax rate ratio is correlated with a 6 percent decline in house prices between 1990 and 2005. Although both specifications attained statistical significance, the instrumented version presents a more accurate depiction of the magnitude to which higher house prices are reflected in tax rates.

4.2 Tax Base Changes

Between 1990 and 2005, New Jersey's average municipal tax base per acre increased 94 percent from $236,419 to $458,766, respectively (see Table 1). Cliffside Park Borough's (Bergen County) tax base of $2,414,695 per acre was the largest in 1990 while Walpack Township's (Sussex County) tax base of $174 per acre was the lowest. In 2005, Longport Borough's (Atlantic County) tax base of $6,263,433 ranked highest while Walpack Township's tax base of $151 remained the lowest in the state. Vandegrift and Lahr's (2008) geospatial analysis revealed that municipal tax bases tend to be highest near New York City, Philadelphia, and along the Atlantic coastline. In fact, the highest-ranked municipalities in 1990 (Cliffside Park Borough) and 2005 (Longport Borough) are located along the New Jersey shore.

It can be assumed that municipalities with higher house prices will also have larger tax bases. Thus, we expect that the relationships between tax bases and our amenity variables will mirror the relationships previously identified between house prices and the amenity variables. The only distinction is that we do not include housing characteristics in our tax base equation. The results of the tax base and tax rate regressions are reported in Table 3. Once again, the first model estimates results on the log of the tax base change with the municipal-level tax rate included exogenously; the second model details the results of the first-stage tax rate change equation; and the third model results on the log tax base change are derived by including the tax rate as an instrumented endogenous variable. The instruments are significant ($F(11, 553) = 52.92$, $p < 0.00$), the partial R^2 of the instruments is 0.49, and the model is not overidentified (Sargan Statistic=9.5, p=0.01).

INSERT TABLE 3

We find that the relationships between amenities and tax base changes follow the same patterns as illuminated with amenities and house price changes, but to varying degrees. All variables in the tax base model came in as significant, with the exception of the New York City – Philadelphia corridor. As anticipated, municipalities with higher initial tax bases in 1990 experienced much slower tax base growth over the period.

Greater intensities of historic preservation efforts exerted a positive influence on municipal tax bases. In the second stage regression, the preservation variable exhibited significance at the 99 percent level. Each additional point municipalities earned in their historic preservation ratings was associated with a 6.1 percent increase in tax base.

Closer proximity, by miles, to New York City was associated with a 2.5 percent increase in the tax base ratio, while the tax bases of municipalities located one mile closer to the congested New York City – Philadelphia corridor experienced a

negative change of 1.4 percent. Every one percentage point increase in seasonal housing is correlated with a 1.7 percent increase in the tax base ratio. However, higher percentages of housing constructed prior to 1960 and higher proportions of undeveloped land are associated with negative tax base changes of 0.4 and 2.5 percent, respectively.

The instruments in the tax base model exhibited patterns similar to those in the house price model. A one-percent increase of elderly residents increased the tax rate 0.2 percent. A one-percent increase in school-aged residents was associated with a 0.01 decrease in the tax rate ratio. The tax rate ratio declined 15 percent for every one percent increase in the house price ratio.

When the tax rate is assumed to be exogenous to the system, a 1 percent increase in the tax rate ratio is associated with a 2.7 percent reduction in the tax base. By instead, including the tax rate as endogenous, the tax base decrease is much larger. In this case, a 1 percent increase in the municipal property tax ratio is correlated with a 4.4 percent decline in tax base over the 15 year period. Treatment of the tax rate as endogenous produces an improvement to the model because it controls for the influence that a larger tax base might have on reducing the tax rate.

5. Conclusion

The most common justification for federal, state, and local designation of historic properties and districts is community revitalization. Historic preservation is typically pursued based on the assumption that such activities generate aesthetic, economic, and cultural benefits to the public.

Municipalities can potentially benefit from supporting designation through local regulations if the stipulations serve as positive indicators of long-term community quality - which induce current property-owners to invest in improvements and encourage potential property-owners to purchase and rehabilitate. If this is the case, historic preservation serves as a value-enhancing tool that contributes to local economic development.

On the other hand, historic designation may very well exert value-detracting effects that contribute to unintended economic deterioration. Local designation may constrain needed property alterations, create delays in decision-making processes, require excessive upkeep, impose unreasonable maintenance costs, and restrict renovations that would support more economically-viable building uses.

Our analysis attempted to ascertain the specific fiscal effects of historic preservation in New Jersey's 566 municipalities between 1990 and 2005. Our results are encouraging. After controlling for various characteristics, we find that historic preservation is positively associated with both increased house prices and expanded tax bases.

Preservation is, however, associated with higher tax rates. In the first stage of the house price model, preservation is related to an increase of 5.3 percent in the tax rate ratio. A tax rate increase of 4.7 percent is correlated to preservation in the tax base model. These adverse effects on tax rates are likely mitigated, as every one-percent increase in municipal-level house prices and tax bases is correlated with tax rate reductions of 16 percent and 15 percent, respectively. Thus, while higher tax rates are associated with lower house prices and tax bases, larger house prices and tax bases effectively decrease tax rates.

When tax rates are included as endogenous variables within the system, a one-point increase in the preservation rating is associated with a 2.7 percent increase in the house price ratio. Using the mean house price across all municipalities of $182,085, this correlation coefficient implies that $4,916 in house price increase that can be expected from a one-point increase in the preservation rating. Likewise, each additional preservation point earned by municipalities was associated with a 6.1 percent increase in tax base. Based on the average municipal tax base per acre ($236,419), historic preservation generated an additional $14,422 to the average tax base.

Our finding that preservation-intensive municipalities tend to impose somewhat higher tax rates is tempered by the fact that preservation-intensive municipalities also demonstrate significantly higher house price and tax base increases. As such, designation regulations do not appear to be excessive in New Jersey. While many municipalities that choose to pursue historic designation may be more likely to provide greater levels of public services to residents, the positive benefits associated with preservation activities work to counterbalance these fiscal burdens. Our analysis leads us to conclude that New Jersey municipalities can greatly benefit from strengthening their engagement in historic preservation as a strategy for community revitalization.

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Table 1. Variable Descriptions and Summary Statistics				
Variable	**Variable Description**	**N**	**Mean**	**Std Deviation**
House Price	*Average price per housing unit in dollars by municipality in 1990*	565	152,035	151,694
House Price Ratio	*Percentage change in average house price by municipality between 1990-2005*	565	1.436195	1.600523
Tax Base	*Total assessed tax base (land and improvements) in dollars per acre by municipality in 1990*	565	236,419	312,417
Tax Base Ratio	*Percentage change in total assessed tax base by municipality between 1990-2005*	565	8.462515	118.1727
Tax Rate	*General property tax rate per $100 of assessed value by municipality in 1990 multiplied by the assessed to market ratio*	565	1.994064	0.6887565
Tax Rate Ratio	*Percentage change in tax rate by municipality between 1990-2005*	565	1.887213	1.12473
Preservation Rating	*Composite index representative of each municipality's intensity of historic preservation*	565	0.339293	1.21213
Nyc Dist	*Distance (in miles) between the municipality and New York City*	565	49.0546	31.00164
NycPhl	*[(Distance to NYC) + (Distance to Philadelphia)]*	565	81.27827	17.52834
Rooms	*Median number of rooms per housing unit by municipality in 1990*	565	6.074647	0.9151673
Pre-1950 Percent	*Percentage of total housing units by municipality built prior to 1950 in 1990*	565	51.60459	20.67868
Seasonal Percent	*Percentage of total housing units by municipality that were seasonal units in 1990*	565	4.357615	12.27812
School Percent	*Percentage of total population between 3-18 years old by municipality in 1990*	565	14.89346	3.197185
Elderly Percent	*Percentage of total population above 65 years old by municipality in 1990*	565	14.10458	6.163423

Table 2. Regressions on the Natural Logs of the House Prices Ratio and Tax Rate Ratio

Variable	ln(House Price Ratio)	Tax Rate Ratio	ln(House Price Ratio)
House Price	-0.3734183 *	-0.6513166 ***	-0.3791088 ***
	0.0386117	*0.0893261*	*0.0508833*
Preservation	0.0112482	0.0534645 **	0.0273848 **
	0.0108342	*0.0235963*	*0.014308*
NYC Dist	-0.002001	-0.0214694 ***	-0.0147306 ***
	0.0028635	*0.0061981*	*0.0038452*
NYC Dist Squared	0.00000822	0.0000998 *	0.0000799 **
	0.0000267	*0.0000586*	*0.0000356*
NycPhl	-0.010167	-0.0135476	-0.0058912
	0.0062308	*0.0136487*	*0.0082147*
NycPhl Squared	0.0000634	0.0000692	0.000022
	0.0000391	*0.0000857*	*0.0000515*
Seasonal	0.0059273	0.0047248	0.0070697 ***
	0.0014087	*0.0034487*	*0.0018575*
Pre-1960	-0.0022182	-0.0068363 ***	-0.0029476 ***
	0.000789	*0.0017811*	*0.0010406*
Undeveloped	-0.00132 **	0.0001919	-0.0003476
	0.0006435	*0.0014142*	*0.0008499*
Attached	-0.0045914 ***	-0.0133909 ***	-0.0071321 ***
	0.0016893	*0.0036911*	*0.002231*
Rooms	0.1323749 ***	0.2810125 ***	0.1493245 ***
	0.0188328	*0.0433209*	*0.0248373*
Tax Rate	-0.1003357 ***	0.2347559 ***	0.0962138 ***
	0.0274898	*0.0614858*	*0.0379832*
Tax Rate Ratio	-0.3282363 ***		-0.6026997 ***
	0.0132332		*0.0236304*
Constant	5.326779 ***	9.664004 ***	5.666535 ***
	0.5251073	*1.23695*	*0.6922643*
School		-0.0294722 **	
		0.0122573	
Elderly		0.0165057 **	
		0.0065983	
House Price Ratio		-1.622178 ***	
		0.0639328	
R^2	0.6534	0.6567	0.3828
N	565	565	565

****Significance at 0.01 level, **Significance at 0.05 level, * Significance at 0.1 level*

Table 3. Regressions on the Natural Logs of the Tax Base Ratio and Tax Rate Ratio

Variable	ln(Tax Base Ratio)	Tax Rate Ratio	ln(Tax Base Ratio)
Tax Base	-0.6165032 ***	-0.1182539 ***	-0.6395554 ***
	0.0276783	*0.0314793*	*0.0286439*
Preservation	0.0514891 **	0.0479832 **	0.0609232 ***
	0.021467	*0.0245511*	*0.0220514*
NYC Dist	-0.016515 ***	-0.0214959 ***	-0.02481 ***
	0.0055474	*0.006329*	*0.0058523*
NYC Dist Squared	0.0000874 *	0.0001337 **	0.0001434 ***
	0.0000524	*0.0000602*	*0.0000545*
NycPhl	-0.0182892	0.0013076	-0.0141901
	0.0121501	*0.0139487*	*0.0124658*
NycPhl Squared	0.0000775	-0.0000208	0.0000452
	0.0000767	*0.0000881*	*0.0000787*
Seasonal	0.0158466 ***	0.0021746	0.0169029 ***
	0.0027336	*0.0035434*	*0.002808*
Pre-1960	-0.0041198 ***	-0.0059836 ***	-0.0044914 ***
	0.0015681	*0.0018573*	*0.0016117*
Undeveloped	-0.0252153 ***	-0.0035171	-0.0254924 ***
	0.0017199	*0.0019772*	*0.0017647*
Tax Rate	-0.1443403 ***	0.2996217 ***	-0.0382896 ***
	0.046644	*0.0548138*	*0.0519226*
Tax Rate Ratio	-0.2729096 ***		-0.4401828 ***
	0.0265172		*0.0390195*
Constant	11.28336 ***	3.679527 ***	11.77277 ***
	0.6273996	*0.7409939*	*0.6495261*
School		-0.0014393	
		0.0123023	
Elderly		0.0202022 ***	
		0.0069089	
House Price Ratio		-1.470941 ***	
		0.0645757	
R^2	0.5187	0.6185	0.4844
N	566	566	566

****Significance at 0.01 level, **Significance at 0.05 level, * Significance at 0.1 level*