

PRELIMINARY DRAFT – DO NOT QUOTE OR CIRCULATE

Preserving History or Hindering Progress: The Effect of Historic Districts on Local Housing Markets in New York City¹

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Abstract

Since Brooklyn Heights was designated as New York City's first landmarked neighborhood in 1965, the Landmarks Preservation Commission has designated 120 historic neighborhoods in the city. Although proponents of historic districts often argue that such preservation raises property values and the quality of life in the neighborhood (and the city), evidence about the effect historic districts have on the price of residential property is limited, and there is virtually no evidence on how designation affects the quality or quantity of housing in the district and surrounding neighborhoods. In part, the lack of evidence stems from the difficulty of identifying the effect of designation separate from the pre-existing differences between properties within a historic district and those outside. This paper exploits variation in the timing of historic district designations in New York City to identify the effects preservation policies have on residential property markets. We combine an extensive dataset of residential transactions during the 35-year period between 1974 and 2009 with data from the Landmarks Preservation Commission on the location of the city's historic districts and the timing of the designations. We also use a unique dataset of building permits to study impacts the designations had on renovation activity. We find that designation raises property values modestly within historic districts for the boroughs outside Manhattan, and that the effects wear off over time. In Manhattan, designation has a significant negative effect on property values within the district. We find little spillover effect on adjacent properties located

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immediately outside of the district. Finally, we find a modest reduction in renovation activity, beginning about ten years after designation.

Introduction

In 1965, the New York City Landmarks Preservation Commission was created to formalize the channels through which historic properties were protected and preserved in New York City (Wood 2008). That same year, the Commission designated Brooklyn Heights as the city's first landmarked neighborhood, and has since designated 120 historic neighborhoods in the city. These districts range from the Upper East Side Historic District, encompassing more than 50 blocks (or parts thereof) on the east side of Central Park, to the recently-designated Perry Avenue Historic District, an agglomeration of just nine single-family homes in the Bronx.

The preservation of historic neighborhoods has been the subject of substantial controversy in New York City and in other cities around the country. Preservation advocates argue that the value of historic characteristics will not be adequately taken into account in the market-driven process of urban development, as individual owners will not internalize the full benefit to society of historic preservation (Mourato & Mazzanti 2002). Those benefits include, advocates assert, increased livability, decreased homogenization of neighborhoods and increased economic activity for the city as whole as the unique districts attract tourism, art and culture (Rypkema 2005), as well as the expression and transmission of society's values and heritage (Mason 2002; Stipe 1971) and increased community organization and cohesion (Rose 1981). Further, proponents worry that the political process may be stacked against historic, aesthetic, or cultural considerations (Verrey & Henley 1991). Critics contend, however, that preservation policies unfairly restrict owners' rights, limit the supply of housing, drive the cost of housing beyond the reach of many residents, and freeze a city's ability to grow and adapt (Glaeser 2010).

As in other cities nationwide, the designation of a historic district in New York City restricts the changes property owners can make to their buildings. Individual property owners are required to obtain approval from the Landmarks Preservation Commission before making most changes to the exterior of their property. If property owners and prospective buyers view these restrictions in historic districts as particularly onerous, the designation of a historic district could drive down property values. Similarly, if the restrictions discourage needed repairs or otherwise result in disinvestment in the housing or neighborhood, the designation might reduce property values. On the other hand, the designation of a historic district should ensure that the characteristics of local buildings are preserved and minimize the risk that new development and investment will undermine the distinctive or historic character of the area. That protection from change and uncertainty could make historic neighborhoods more desirable to current residents and prospective buyers. The designation of a district also may increase demand by conferring a special status on properties in the district. Given the restrictions on supply, such an increase in demand will likely drive up the value of homes inside districts.

This paper evaluates how historic district designation affects the market for residential properties in New York City. We begin with a description of the historic districts in New York City, providing a basic overview of the number and characteristics of historic districts in the city. We then describe the process through which the Landmarks Preservation Commission designates historic neighborhoods and outline the restrictions placed on property owners that might affect residential property values. In the second section, we review existing studies of the impact of historic designation processes on housing markets, highlighting the challenge of isolating the actual effect of the historic designation (rather than, for instance, the price premium associated with the

historic character of residential properties and neighborhoods). In the third section, we describe our unique datasets of both residential property transactions and alteration permits in New York City, which span from 1974 to 2009 and from 1990 to 2009 respectively. We also explain our difference-in-difference regression models, which compare the values of residential properties inside a historic district to those of comparable properties just beyond the district boundaries, before and after the designation. We run similar models for building improvements. We summarize results in the fourth section, and then offer conclusions in the final section. In brief, we find that designation raises property values modestly within historic districts for the boroughs outside Manhattan, but has a negative effect for properties in districts in Manhattan. We find no impacts on property values just outside the boundaries of districts. Finally, we find modest evidence of reduced investment in buildings, but only after ten years. It appears that historic districts are neither providing the large boon to property values that proponents claim nor dramatically restricting investment, as critics often charge.

Preserving Historic Neighborhoods in New York City

The Landmarks Preservation Commission and the Districts it has Designated

The creation of the Landmarks Preservation Commission (LPC) in 1965 followed several decades of activism in New York City to preserve historically valuable landmarks and neighborhoods (Wood 2008). Threats to the neighborhood of Brooklyn Heights from the construction of the Brooklyn-Queens Expressway, along with the demolition of the Beaux Arts Penn Station, galvanized the creation of the Commission. In late 1965, the Commission designated Brooklyn Heights as the city's first historic district. Within five years, the Commission designated fourteen additional historic neighborhoods across the city, including Greenwich Village in Manhattan, Cobble Hill in Brooklyn, and Mott Haven in the Bronx. Between 1965 and 2009 – the final year of data available at the time of writing – the LPC designated exactly one hundred historic neighborhoods in New York City, and approved thirteen extensions to the original boundaries of historic districts. In the two and one half years since our study period ended, the LPC has designated another 20 districts.

As Table 1 shows, the majority of historic districts (60 percent) are located in Manhattan, but the LPC has designated districts in each of the five boroughs. Approximately 20 percent of districts are located in Brooklyn, and slightly less than 10 percent of historic districts are located in Queens. In total, 4.8 percent of residential units in New York City are located within historic districts (11.8 percent of residential units in Manhattan, 4.3 percent of residential units in Brooklyn, and 1.4 percent of residential units in Queens).² Figure 1 shows annual changes in the square footage of property designated within historic districts within Manhattan and the four outer boroughs of New York City. Since 1965, the amount of land included in historic districts has grown faster in the outer boroughs than in Manhattan.

The one hundred historic districts we study range substantially in size and scope. Some of the smallest districts encompass only a handful of lots, while many of the larger districts include scores of blocks encompassing some of the city's most revered

² We derive unit counts from related work on rezonings in New York City (see Been et al., 2011).

neighborhoods. The Sniffen Court Historic District, located on the east side of Manhattan, consists of ten Romanesque Revival stables. The Upper East Side Historic District, on the other hand, includes portions of more than fifty blocks, encompassing much of what is colloquially known as the Upper East Side. To highlight the range of sizes, Table 2 provides basic descriptive statistics on the square footage of historic districts in New York City, including the five largest and five smallest districts in the city. The recent designation of the Perry Avenue Historic District as the city's one-hundredth historic district underscores the City's interest in designating a range of neighborhood types. Located in the Bedford Park neighborhood of the Bronx, the Perry Avenue Historic District includes nine historic homes dating back to the early twentieth century.

The Process of Designating a Historic District

The process of designating a historic district involves several steps, which are described in detail in Appendix A.³ In brief, proposals from community leaders and preservation advocates usually trigger the process, which then involves review of such "requests for evaluation" by a committee that includes the Chair of the LPC and various staff members. That committee can then elect to send a particular proposal on to the full LPC, and if so, the LPC first decides, in a public meeting, whether to "calendar" the proposal. If the proposal is calendared, the LPC then holds a public hearing, at which the LPC staff present the proposal, and property owners and other interested parties are given an opportunity to testify or submit written comments. Should the LPC choose to designate a district, the designation becomes effective immediately, but the LPC must file a "designation report" with the City Council, the City Planning Commission (CPC), and other city agencies for comment. The CPC is required to hold another public hearing on the proposed district, and to file a report on the proposal with the City Council. The City Council then may modify or reject the proposed district by majority vote. The mayor may veto a modification or rejection of the LPC's decision, and only a vote of two thirds of the City Council will over-ride the veto.

The Restrictions Designation Imposes

The designation of a historic district triggers a series of restrictions on building construction and modification that may affect the level of investment and the value of properties in historic districts. The restrictions are described in detail in Appendix B. To summarize, if the owner of a building within a historic district wants to make any repairs or improvements on the building, the owner must secure the same alteration permit from the Department of Buildings (DOB) that would be required for any construction work on a building anywhere in the city that goes beyond "ordinary" repairs and maintenance. But in addition, the owner of property within a historic district must request and receive one of three determinations from the LPC: (1) a "permit for minor work," (2) a "certificate of no effect," or (3) a "certificate of appropriateness." At the extreme, if a

³ The authority for the following description is provided in Appendix A, and includes the N.Y.C. Charter § 3020; N.Y.C. Admin. Code §§ 25-302, 25-303, and 25-313; Rules of the City of New York, Title 63, Landmarks Preservation Commission Rules 1-02, 1-01 (July 2003); NEW YORK CITY LANDMARKS PRESERVATION COMMISSION, *FAQs: The Designation Process*, http://www.nyc.gov/html/lpc/html/faqs/faq_designation.shtml (last visited October 13, 2011); and HISTORIC DISTRICTS COUNCIL, *Preserving Your Historic Neighborhood: New York City Designation Process*, <http://www.hdc.org/preservingnyc.htm> (last visited October 12, 2011).

certificate of appropriateness is required, the owner's request will be the subject of a public hearing, and the LPC will consider how the proposed work will affect the exterior architectural features of the building, and "the relationship between the results of such work and the exterior architectural features of other, neighboring improvements" in the historic district.⁴ In addition to restrictions on the work that the property owner wants to perform, the LPC imposes an affirmative obligation that the owners of property within historic districts maintain and repair "all exterior portions" of the buildings, as well as all interior portions which, if not maintained, may "cause the exterior portions" to "deteriorate, decay or... fall into a state of disrepair."⁵

Predicted Impacts on Residential Property Markets

The introduction of a historic district is likely to shape both the demand and supply of residential properties. On the supply side, the regulatory restrictions that govern historic districts make renovation, demolition, and new construction within historic districts more burdensome (or impossible), as owners are limited in the changes that they can make and are required to get another level of approval before undertaking most investments. Such restrictions may reduce the supply of housing over time, and consequently, in the face of strong demand, the price of housing will rise more than it would in the absence of restrictions.

On the demand side, the designation of a district may confer a special prestige on properties within a district that makes them more desirable than similar properties outside the district.⁶ In addition, the LPC's restrictions on renovation, demolition, and new construction minimize the risk that surrounding properties could be modified in ways deemed unattractive to local property owners and thus provide a level of protection to existing property owners that may make those properties more attractive. On the other hand, the restrictions also limit the freedom of individual property owners to make improvements to their own properties, and therefore may prevent property owners from maximizing the value of their individual property. Because some buyers will be unwilling to submit to those restrictions, historic districts could reduce demand for housing. In addition, if owners are dissuaded from performing maintenance and renovation because of the burden the regulations impose, without rigorous enforcement of the maintenance requirement, the quality of the housing may decline, reducing its desirability. Further, because districts restrict the options that developers have to tear down and rebuild properties, even if designation results in increased prices for the existing housing structures, it may reduce the value of the underlying land.

Notably, designation may affect the value of properties immediately outside the district too. These properties are not bound by any of the regulatory restrictions on building modifications, but may benefit from the reduced risk that new development or renovation that is out of character will occur in the neighboring area. Indeed, it is theoretically possible that designation may lift the prices of properties immediately

⁴ N.Y.C. Admin. Code § 25-307(b)(1).

⁵ *Id.*

⁶ Proponents of historic districts also argue that designation will make the city as a whole more attractive to residents and visitors, and therefore may increase the value of properties in the city overall relative to what they would have been absent the designation. We do not address that claim, because we cannot measure the counterfactual – what would have happened to property values in the city as a whole absent the designation.

outside the districts more than it boosts prices within the district. On the other hand, these properties do not enjoy any of the status associated with being located inside of a historic district, and to the extent that buyers know the boundaries and value the prestige of being within the district, prices immediately outside the district are likely to increase somewhat less than prices inside the district.

Previous Research

We know of no academic studies evaluating the impact historic districts have on investment in repairing, renovating, or replacing the housing stock in the district or in surrounding areas, but a number of previous studies have attempted to measure the effect of local historic district designations on the price of residential property. These studies address a range of cities, including New York City (Treffeisen 2003), and span both the United States and England (Ahlfeldt, Holman & Wendland 2012). Identifying the effect historic district designations have on residential property values is methodologically challenging. First, it is possible – even likely – that the characteristics of properties located in neighborhoods designated as historic differ from properties in other neighborhoods in unmeasured ways. For example, properties located in historic districts could include ornamentation or other architectural features not captured in our hedonic regression analyses. If so, we should be concerned that location within a historic district designation is actually picking up unobserved property characteristics, rather than any effect of designation itself.

Second, and more troubling, the process of selecting neighborhoods for designation is unlikely to be exogenous. For example, residents may put more pressure on officials to designate their neighborhoods as historic districts when their property values are rising. If so, then any association between designation and property value appreciation may simply reflect these underlying trends and not be attributable to the designation itself. Similarly, residents in the most desirable neighborhoods may be especially adept at using the historic preservation processes to protect their neighborhood from the pressures of growth. Or conversely, preservation officials may believe that designating areas that are in need of revitalization as historic districts will help promote investment in those neighborhoods (or will help protect the city's investment in those areas). In both those situations, any association between designation and changes in property values may reflect underlying trends in demand rather than the effects of the designation itself.

Third, designation may be accompanied by a variety of other changes that may affect property values. In many jurisdictions, for example, designation entitles the property owner to tax subsidies or reductions or waivers of fees (Econsult 2010). Those changes may offset or otherwise confound the effects that the designation itself may have on property values.

Most efforts to evaluate the impact of historic district designations⁷ on property

⁷ Because our focus is on historic districts, we do not discuss the studies that examine the effect that designating an individual property as a landmark has on surrounding property values. Studies that measure the effect of individual property designations and proximity to designated landmarks include: Asabere et al. 1994; Coulson & Liechenko 2001; Noonan 2007; Narwald, Sandy & Tu 2008; Ahlfeldt and Maennig 2010. Some studies fail to distinguish between properties designated as historic and those located in historic districts. For example, Leichenko et al. (2001) include historic status as a feature in their hedonic analysis, but they neglect to separate historic properties from non-historic properties located in historic districts.

values use standard hedonic price regression, controlling for basic structural attributes of a property and neighborhood characteristics (Ford 1989; Liechenko, Coulson & Listokin 2001; Coulson and Lahr 2005; Noonan 2007; Rickman 2009). Randall Mason (2005) reviewed the literature on the impact of historic district designations, and along with Donovan Rypkema and Caroline Cheong, updated the literature review in 2011. They found that hedonic analyses of historic districts generally support the hypothesis that location within a historic district is associated with a premium on property values. Noonan (2007) studies a sample of Chicago home sales and reports that properties located in designated historic districts sell at a 3 percent premium – slightly smaller than the premium for individually designated properties. Coulson and Lahr (2005) found that location within a historic district in Memphis was associated with a premium in appraised values of between 14 and 23 percent after controlling for other observable characteristics of properties (Coulson and Lahr 2005). Examining some Brooklyn neighborhoods between 1974 and 2002, Treffeisen (2003) reports higher mean sales prices within historic districts.

Given data limitations, these studies are unable to do much to address concerns about the endogeneity of the designation process, or unobserved differences between properties inside districts and those outside. A few studies control for architectural features to evaluate whether baseline differences between properties inside and outside historic districts explain their variation in the sales price. For example, Asabere et al. (1989) estimate the impact of more than a dozen architectural styles (e.g., Colonial, Cape, Greek Revival, Victorian) on the price of residential property in Newburyport, MA. When they omit controls for the architectural features of property, they report that location within a historic district is positively associated with prices. However, the inclusion of controls for architectural characteristics renders the historic district variable insignificant. Their findings suggest that it is the unique architectural features of properties located within historic districts that account for their higher sales price, rather than their inclusion within a historic district.

Noonan and Krupka (2011), studying residential property sales in Chicago, find the opposite. When they include in their analysis a measure of historical value and integrity derived from the Chicago Historical Resources Survey, they report that the price effect of historic district designation grows more positive than it was without the controls (Noonan and Krupka 2011).

Simply including a measure of historical value fails to fully address concerns about unmeasured differences between properties inside and outside of districts, however. These studies generally rely on cross-sectional data, and if they have longitudinal data, they do not have access to prices of properties in districts *before* designation. A few recent studies, use longitudinal data to attempt to address the endogeneity of designation, and do not find a positive effect on property values. Noonan and Krupka (2011), for example, instrument historic district designations using a set of demand variables, including census tract-level homeownership rates in earlier decades, and measures of the historic characteristics of nearby properties. While their simple OLS estimates suggest a positive association between designation and prices, the instrumented models reveal significant negative effects of designation. These findings challenge previous research

Finally, while we look at the designation of local historic districts, others focus on federally-designated historic districts or registries (Asabere and Huffman 1991; Asabere et al. 1994; Schaeffer and Millerick 1991; Liechenko, Coulson and Listokin 2001; Coulson and Lahr 2005).

while highlighting sensitivities to modeling assumptions and efforts to address concerns about endogeneity (Noonan and Krupka 2011).

Most recently, Ahlfeldt, Holman and Wendland (2012) study the effect of historic conservation areas in England and attempt to distinguish between the “heritage” effect of the historic character and features of the buildings themselves and the “policy” effect of designation as a historic conservation area. They use a difference-in-difference analysis, comparing the rise in property sales prices inside newly designated conservation areas to the rise in similar locations that did not change their designation status. Controlling for a wide range of characteristics of the property, neighborhood, and nearby amenities, they find that prices are generally higher within conservation areas, but that designation itself fails to lead to any statistically significant boost in values. Of course, rules governing historic districts in England differ from those governing districts in the United States.

Our paper extends previous research in several ways. First, our dataset contains far more property sales transactions than earlier studies, relying on more than one million residential property sales over a 35-year period in New York City. Second, with access to longitudinal data, we are able to estimate a difference-in-difference regression model to weed out pre-existing differences between properties located in historic districts and those outside, similar to Ahlfeldt et al. (2012). Third, we are able to study the long-run impacts of designation, given that we can observe property sales and construction, alteration, and demolition activity in many cases decades after designation. Fourth, unlike most previous research, we study how the designation of historic districts affects the sales prices of properties that are located just outside a district (and how designation affects the supply of housing just outside the district).⁸ Fifth, the large number and variety of historic districts in New York City and the long time-span of our data allows us to study heterogeneity in impacts across different contexts and market conditions. Finally, and perhaps most critically, we study the impact historic district designation has on owners’ investments in the housing through repairs or renovations, thus provide a fuller account of how districts shape local housing markets.

Data and Methods

Data

We combine several administrative datasets to estimate the impact of historic district designations on the sales price of residential properties in New York City. First, we use a dataset of all residential property transactions in the city between 1974 and 2009. We limit these observations to arms-length transactions. Second, we merge the residential property transactions data with annual cross-sections of the Real Property Assessment Database (RPAD), an administrative data set gathered for the purpose of assessing property taxes. RPAD contains such property characteristics as lot size, building age, square footage and building classification. We match each transaction to property characteristics from the closest available year in RPAD.⁹ Table 3 provides descriptive characteristics for the structural characteristics included in our analysis.

⁸ Noonan and Krupka (2011) come the closest to studying such border effects. They examine whether property values rise with the proportion of properties in block-group that are in a historic district. We are able to measure such border effects more precisely, using GIS.

⁹ The earliest available year of RPAD is 1990. As a result, property characteristics for residential sales before 1990 are matched to property characteristics in the 1990 version of RPAD. But most of the characteristics are relatively fixed and should not change much over time.

Although RPAD includes many characteristics of individual residential properties, it does not indicate whether a property is located within a historic district. For that information, we rely on the Primary Land Use Tax Lot Output (PLUTO) data. The PLUTO dataset includes one record for each tax lot in New York City, excluding condominiums. It includes an indicator identifying whether the lot is located within a historic district, allowing us to differentiate residential property transactions that occur within and outside of historic districts. Because PLUTO includes the name of the historic district, we are able to match historic districts to their date of designation using administrative data from the Landmarks Preservation Commission. Thus, we can identify whether residential property transactions within a district occur before or after the designation of the historic district.

As for our analysis of building improvements, we rely on building alteration permit data from the New York City Department of Buildings (DOB), which indicate the tax lot of the building and the date the permit was approved.¹⁰ Our analysis covers permits issued between 1990 and 2009. Although owners can legally make modest changes to properties without a permit, any substantial renovation work requires a permit. We match permits to the PLUTO dataset so we can identify, for each property, the census tract in which it is located and whether it is located within the boundaries of a historic district. We then create a longitudinal dataset of all properties within census tracts that contain at least one lot that was located within a historic district by the end of 2009. (Historic district boundaries rarely align with those of census tracts.) In this way, we can study alteration permitting activity over time for buildings just inside and outside historic district boundaries, before and after designation. Table 4 describes the sample we use for our analysis of alteration permits. In total, we follow just over 45,000 properties citywide from 1990 through 2009, about half of which were located in a historic district as of 2009. At least one alteration permit was issued during our study period for just over 7,500 of these properties, or 17 percent of our sample.¹¹ Alteration permits were issued for a slightly larger share of the properties located in historic districts. Figure 2 tracks the number of properties in our sample receiving alteration permits each year. Although these are simply raw numbers, the trend is suggestive; the number of properties receiving alteration permits rose more rapidly outside of historic districts.

Methods

To identify the impact historic district designation has on prices, our basic approach is to compare prices of properties in historic districts to prices of comparable properties that are outside the boundaries of a district, but still located in the same neighborhood (census tract). Then we examine whether the magnitude of this difference changes after the formal designation of the historic district – and changes in ways that aren't captured by broader neighborhood trends in prices. This approach weeds out any systematic, baseline differences between the properties chosen for designation and other properties around the city. It also allows us to disentangle the specific effects of the historic designation from the many other changes occurring across neighborhoods in the city.

¹⁰ We do not consider permits for building demolitions or for new construction projects.

¹¹ Of the properties in our sample that received an alteration permit, approximately 20 percent received a permit in multiple years.

We estimate a hedonic regression of the price of residential property using the following model:

$$\ln P_{icdt} = \alpha + \beta X_i + \delta W_c + \gamma I_{dt} + \theta HD_{it} + \varepsilon_{it}$$

where $\ln P_{icdt}$ is the log of the sales price per unit of property i in census tract c , in community district d , and in quarter t ; X_i is a vector of property-related characteristics, including the building age, square footage, the number of buildings on the lot, and a series of building classification dummies (described in Table 3); W_c are a series of Census Tract fixed effects; I_{dt} are a series of dummy variables indicating the quarter and community district of the sale, which allow us to control for trends in prices within the community district;¹² and HD_{it} is our vector of historic district variables. The coefficients to be estimated are α , β , δ , γ , θ , λ , and ρ , and ε is an error term.

Within the vector HD , we include the variable *HistoricDistrictEver* which is a dummy variable that takes a value of “1” if the sale is located within the boundary of an area that is or will be designated as a historic district. This variable captures baseline, unmeasured differences between properties located within historic districts and comparable properties outside of them. We also include the variable *HistoricDistrictPost*, which takes a value of “1” if the sale took place inside a historic district after the district was designated by the LPC. This coefficient captures the impact of designation. Note that because we have sales in our dataset that predate designation by up to 40 years, we also include a dummy variable for sales that take place more than ten years prior to designation, as we think those sales are too distant to meaningfully capture baseline, pre-designation conditions. With this variable included, the counterfactual becomes the price level in the ten years prior to designation, and the coefficient on the *HistoricDistrictPost* variable can be interpreted as the average difference in prices within a district after designation and prices ten years before.

In some models, the vector HD also includes a series of dummy variables to indicate whether the property is within 250 feet of the boundary of a historic district. The variable *BufferEver* takes the value of “1” if the property is within 250 feet of a historic district boundary, either before or after designation. (Note that 250 feet is about the length of one north/south block on Manhattan’s gridded streets.) As with the variables for historic districts, this variable captures baseline differences in the sales prices of properties located within buffer zones and comparable properties beyond those zones. Likewise, the variable *BufferPost* takes the value of “1” if the property sale took place within the buffer zone *after* the district was designated by the LPC.

Finally, the vector HD includes two continuous variables to allow the effect of the designation of historic districts to vary over time. The variable *TimePost* equals the number of years after the designation of a historic district that the sale took place, while the variable *TimePostSQ* is the square of the number of years after the designation that a sale took place. The *TimePost* variable is coded “0” for sales that took place before the designation of a historic district, and for properties outside the boundaries of a historic district. In the models that include buffer zone variables, the vector HD also includes continuous variables *TimePostBuffer* and *TimePostBufferSQ* that allow the spillover effects into the adjacent buffer zones to vary over time.

¹² There are 59 community districts in New York City.

It is possible of course that people may hear about the potential designation in advance, and that any effects on prices are thus capitalized into property values in advance of the actual designation. Thus, we also estimate models that test whether the simple placement of a district on the calendar of the Landmarks Preservation Commission (calendar essentially is a public announcement that the LPC is seriously considering granting landmark status to a district) is associated with an increase in prices. Specifically, *HistoricDistrictPost_Calendar*, takes a value of “1” if the sale took place after the district was placed on the calendar of the Landmarks Preservation Commission.¹³

To estimate impacts on housing supply, we estimate a difference-in-difference model that tests whether the amount of investment in properties (as proxied by the issuance of alteration permits) within a district changes after designation relative to investment in properties that are just outside the district but still in the same neighborhood. Specifically, we estimate the following equation:

$$P_{ict} = \alpha + \beta + \gamma HD_{it} + \delta_c W_c + \rho_{dt} I_{dt} + \varepsilon_{it},$$

where P is a dummy variable indicating whether property i received a building permit in year t , X_i is a vector of property-related characteristics, as described above, HD_{bt} is a vector of Historic District variables indicating whether the property is inside of a historic district area in year t ; W_c is a set of block fixed effects; and I_{dt} is a vector of dummy variables indicating the year and community district in which the property is located, which enables us to control for community district-specific trends in building activity.

Results

The results of the first hedonic regression model, which looks at historic districts in all five boroughs of the city, are reported in Table 5. The model in the first column omits any *TimePost* variables. In this simple specification, the coefficient on *HistoricDistrictPost* can be interpreted as the average effect of designation over the entire post-designation period. The model in the second column includes *TimePost* and *TimePostSQ* variables, allowing the impact to vary over time. In the second column, the coefficient on *HistoricDistrictPost* can be interpreted as the change in property values that occurs immediately after designation.

The coefficients on the structural variables have expected signs. Sales price per unit is significantly higher for single-family, detached homes (omitted category) than for two-family homes and larger apartment buildings. In addition, sales prices are higher when building and lot space is larger and when buildings include garages. The one counter-intuitive result is the coefficient on the pre-war building dummy variable, which is negative, counter to what many assume is a premium placed on pre-war buildings in New York City. This result only holds when the historic district variables are included however, suggesting the historic district variables may be capturing the premium usually associated with pre-war buildings.

¹³ Results will be included in future drafts.

After controlling for other structural characteristics, properties located in areas that are or will become historic districts sell for 33 percent more than comparable properties outside those districts. This is consistent with the presence of property and community characteristics, including historic ornamentation or architectural styles, which make properties in historic neighborhoods more desirable, even absent designation.

The coefficient on *HistoricDistrictPost* in column 1 suggests that designation itself also has an added, positive effect on prices of properties within a district. On average, the designation of a historic district generates a 1.9 percent boost in sales prices relative to comparable properties outside the district but still in the same neighborhood.

When *TimePost* variables are added, the coefficient on *HistoricDistrictPost* falls in magnitude and loses significance. Our results, in other words, suggest that designation has no immediate effect on property values. But the coefficients on the *TimePost* and *TimePostSQ* variables in column 2 suggest that designation leads to increases in value over time, with the positive impact of historic districting rising to about 4 percent after 10 years, but then declining and falling to zero after about 25 years. (Given that only a limited number of districts have been designated for more than 25 years in New York City, these long-term impacts should be taken as more tentative.)

To better understand how any designation effect evolves over time, we also estimate a more flexible model that includes a categorical indicator for each year since the district was designated. These coefficients are plotted in Figure 3, together with the trends generated from the regression coefficients in Table 5 (column 2). Figure 3 shows that following the designation of a historic district, property values within the district rise quickly, relative to similar properties. Again, prices peak after about ten years, before declining over the remaining years.

Table 6 shows these same models for Manhattan, and figure 4 plots the coefficients for the Manhattan-only models. The baseline differences in price between properties in historic districts and those outside the district but in the same neighborhood are almost identical between Manhattan and the other boroughs. For properties in Manhattan, however, the fact of designation, measured by the coefficient on *HistoricDistrictPost*, appears to have a negative effect on property values.

Table 7 shows the coefficients of a model that includes variables to identify spillover effects into a 250-foot buffer of historic districts. The coefficients on the historic district variables change only slightly, suggesting that results are not particularly sensitive to the inclusion (or exclusion) of buffer properties in the comparison group. The results also show that properties bordering historic districts sell for 8.4 or 8.7 percent more than comparable properties further from the district, both before and after designation. The actual designation of a historic district, however, does not appear to have a significant impact on the average value of these bordering properties. When we allow impacts to vary over time, we see an initially modest, negative hit to prices, but it quickly diminishes over time and reaches zero after about 6 years.

In summary, we find that the designation of districts on average delivers a modest boost to property values citywide, but these effects diminish over time. In Manhattan, we find a negative effect, perhaps because the hit to land values outweighs the boost to structure values in that borough, given that land values comprise such a large share of total property values (Ellen and Gedal 2012). Or perhaps the market in Manhattan places a lower premium on minimizing the risk of neighboring development. We find no evidence of any price effects for properties just outside the boundaries of historic districts, perhaps because these properties enjoy neither the same boost to prestige nor the

same certainty about the future of neighboring properties that properties in historic districts do.

To understand the causal mechanisms that might drive the effects historic designation has on property values, and to understand the implications of those effects, we also need to consider the effects that designation has on the supply of housing. By definition, historic districts will see little new construction except on land that was vacant at the time of designation. But it is hard to estimate how much new construction would have taken place in those neighborhoods if they had not been designated. Using the buffer zones immediately surrounding the districts as a comparison might bias the estimate, because those areas might have higher rates of new construction than they would absent the designation as property owners immediately outside the designated seek to take advantage of their location near the district. Further, as Table [xx] shows, the small number of permits for new construction granted in historic districts would make any analysis of differences between districts and the appropriate comparison group methodologically challenging.

We are able to gain some insight into the effects that designation might have on investments owners make in properties located within historic districts, however, by examining permits issued for alterations. Table 8 shows regression coefficients from our linear probability models of permitting activity, where the dependent variable is simply whether or not a property received an alteration permit in a given year.¹⁴ The simple model shows no effect of designation on average. But when we look out over a longer time period, we see a more nuanced story, with a slight positive bump in permitting activity at first, followed by a notable decline starting about 10 years after designation. Figure 5 plots the coefficients and shows this pattern clearly.¹⁵ Note the substantial run-up in permitting activity immediately before designation, suggesting that owners may have been rushing to get work done before designation or to invest in improvements based on expectations of future price appreciation. Because the designation process generally is a long one, property owners have some time in which they can get necessary work down without incurring the added cost and delay designation will impose. Figure 6 shows the coefficients for the permit model estimated for Manhattan only and shows an even sharper discontinuity and stronger evidence of a pre-designation spike in improvements. The impacts appear to be quite similar, however, in Manhattan and in the rest of the city.

Conclusion

Previous literature evaluating the link between historic districts and residential property markets has focused almost exclusively on prices. We examine the impacts designation may have on housing investment as well as on prices. For our analysis of prices, our unique, longitudinal dataset and enormous sample, which contains every

¹⁴ In future drafts, we will experiment with logit regressions and count regressions that regress the number of permits issued in a year on a property.

¹⁵ Note that we see a greater discontinuity at the time of designation here than in Figure 2 because any permits issued in the year a historic district is designated are treated as occurring in year 0. Thus, there is a full year between year -1 and year +1 in the permit graph; by contrast, there is only one day between year -1 and year +1 in the pricing graph.

residential property sale in New York City since the mid-1970s, enables us to arrive at clearer estimates of how the designation of a historic district affects property values over time than previous studies have provided. By exploiting variation in the timing of historic district designations, we are able to identify the impact of designation policies separate from the effect of being located in an attractive, historic neighborhood that will receive a designation in the future.

In brief, we find that designation results in a 1.9 percentage point short-run boost in the premium enjoyed by properties located within a district, but this premium declines slowly over time. The premium also applies only for properties located in boroughs other than Manhattan. While properties in historic districts in Manhattan are more valuable than comparable Manhattan properties outside historic districts, those properties appear to experience a decline in values as the result of the *designation* of the historic district. Notably, the act of designating historic districts appears to offer no boost to the value of properties immediately outside the historic district.

The price analysis offers just one piece of the wider puzzle about the impact that historic designations have on urban neighborhoods. Our analysis of supply-side changes offers a broader understanding of the potential implications of historic district designations. We find little impact on housing renovation activity in the short-run, but after about ten years, we see a reduction in renovation investments.

The preservation of historic districts has stirred controversy in cities across the country. While preservation advocates argue that market-driven processes fail to account for the value historic properties provide for neighborhoods and society as a whole, critics contend that the preservation process unfairly and inefficiently limits the development of individual properties within districts, ultimately reducing the supply of housing. Our findings speak directly to these debates, taking into consideration changes in permitting activity and transaction prices that result from the designation of historic districts. We find that designation has a more modest impact on local housing markets than many assume, and that this effect varies across the boroughs of New York City. However, our finding that there is a decline in investments in the repair and renovation of buildings within historic districts over the long-run suggest some potential grounds for concern. As policymakers consider whether and how to preserve historic neighborhoods, our analysis underscores the need to consider the long-term impact historic designations have on both the demand for, and investment in, housing within the districts.

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Table 1: Historic Districts by Borough, 1965 - 2012

	Number (%) of Historic Districts	% of All Historic Districts
Manhattan	73	57.5%
Brooklyn	29	22.8%
Bronx	12	9.5%
Queens	10	7.9%
Staten Island	3	2.4%

Table 2: Descriptive Statistics on Historic Districts in New York City, 1965-2009

	Square Footage (Thousands)
Smallest Historic Districts	
Hardenbergh / Rhinelanders	8.64
Sniffen Court	9.95
East 17th Street/Irving Place	22.19
Henderson Place	24.10
Weehawken Street	25.27
Largest Historic Districts	
Brooklyn Heights	4582.02
Greenwich Village	6317.50
Fort Totten	6389.92
Douglaston	6760.22
Upper West Side/Central Park West	7512.44
Mean	945.57

Notes: The list of the smallest districts excludes two extensions which, if counted, would rank among the smallest. The list of the largest districts excludes two large districts – Governors Island and NYC Farm Colony-Seaview Hospital – because they are not residential neighborhoods. The mean excludes Governors Island and NYC Farm Colony-Seaview Hospital, as well.

Table 3: Descriptive Statistics of Structural Characteristics of Residential Properties in our Dataset, 1965-2009

Historic District Status	
Historic District Ever	2.98%
Historic District Post	2.20%
Buffer Ever	2.55%
Buffer Post	2.02%
Building Class	
Single-family detached	24.15%
Single-family attached	14.30%
Two-family home	28.91%
Three-family home	6.97%
Four-family home	2.00%
Five/six-family home	1.76%
More than six families, no elevator	1.97%
Walk-up, units not specified	0.97%
Elevator apt bldg, coop	0.18%
Elevator apt bldg, not coop	0.69%
Loft building	0.04%
Condominium, single-family attached	0.52%
Condominium, walk-up apartments	3.07%
Condominium, elevator building	11.98%
Condominium, miscellaneous	0.05%
Multi-use, single family with store	0.50%
Multi-use, two-family with store	1.12%
Multi-use, three-family with store	0.24%
Multi-use, four or more family with store	0.58%
Other Structural Characteristics	
Corner Lot	8.58%
Irregular Lot	10.03%
Garage	33.32%
Altered	2.72%
Pre-War	57.41%
Log Square Feet (Mean)	6.68
Age (Mean)	64.82

Notes: The means for TimePost and TimePostBuffer are conditional on residential sales being located in a historic district or buffer zone *after* the designation of the district.

Table 4: Sample of Lots Used in Alteration Permit Analysis

Alteration Permit Issued 1990-2009?	In an HD as of 2009?		Total
	No	Yes	
No	21,186	16,416	37,602
Yes	3,880	3,707	7,587
Total	25,066	20,123	45,189
% of lots for which 1+ permit issued	15%	18%	17%

Table 5: Regression of Log of Price Per Unit on Property Characteristics, 1974-2009

	Measure of impact	
	Average effect (no cap)	Impact can vary with time (no cap)
	1	2
NobsUsed	1,081,712	1,081,712
AdjRsq	0.802	0.802
HistoricDistrictEver	0.3251 **	0.3304 **
HistoricDistrictPost	0.0189 *	0.0053
TimePost		0.0058 **
TimePostSQ		-0.0002 **
PRECEDED designation by 10+ yrs	-0.1377 **	-0.1374 **
Log(Lot area)	0.1429 **	0.1429 **
Log(Square footage)	0.0572 **	0.0572 **
Corner =1	0.0447 **	0.0446 **
Irregular =1	0.0003	0.0004
Garage = 1	0.0448 **	0.0448 **
Altered =1	0.1578 **	0.1577 **
Number of buildings	-0.0062 **	-0.0062 **
Building age	-0.0043 **	-0.0043 **
Building age ²	1.5E-05 **	1.5E-05 **
Pre-War	-0.0559 **	-0.0560 **
Lot area is missing	1.4462 **	1.4457 **
Single-family attached	-0.0585 **	-0.0585 **
Two-family home	-0.5582 **	-0.5582 **
Three-family home	-0.8499 **	-0.8498 **
Four-family home	-1.1690 **	-1.1688 **
Five/six-family home	-1.5589 **	-1.5587 **
More than six families, no elevator	-2.0181 **	-2.0181 **
Walk-up, units not specified	-1.9520 **	-1.9527 **
Elevator apt bldg, coop	-2.1679 **	-2.1687 **
Elevator apt bldg, not coop	-2.2154 **	-2.2153 **
Loft building	-1.1356 **	-1.1348 **
Condominium, single-family attached	-0.8182 **	-0.8189 **
Condominium, walk-up apartments	-0.9270 **	-0.9267 **
Condominium, elevator building	-1.0298 **	-1.0312 **
Condominium, miscellaneous	-0.6856 **	-0.6820 **
Multi-use, single family with store	0.0064	0.0065
Multi-use, two-family with store	-0.5900 **	-0.5899 **
Multi-use, three-family with store	-0.9388 **	-0.9388 **
Multi-use, four or more family with store;	-1.1780 **	-1.1778 **
Sale occurred 42+ years after designation	-0.1135 **	0.0229

Notes:

** p<0.01, * p<0.05

Models include census tract fixed effects and community district*year fixed effects.

Table 6: Regression of Log of Price Per Unit on Property Characteristics, Manhattan Only, 1974-2009 (Selected Coefficients)

	Measure of impact	
	Average effect over 10 years following designation	Impact can vary with time (no cap)
	1	2
NobsUsed	122,375	122,375
AdjRsq	0.732	0.732
HistoricDistrictEver	0.3187 **	0.3219 **
HistoricDistrictPost	-0.0446 **	-0.0724 **
TimePost	.	0.0044
TimePostSQ	.	-0.0002 **
PRECEDED designation by 10+ yrs	-0.1221 **	-0.1196 **

Notes:

** p<0.01, * p<0.05

Includes full set of property level control variables included in Table 4 as well as census tract fixed effects and community district*year fixed effects.

Table 7: Regression of Price Per Unit on Property Characteristics, Including Buffer Variables, 1974-2009 (selected coefficients)

	Measure of impact	
	Average effect (no cap)	Impact can vary with time (no cap)
	1	2
NobsUsed	1,081,712	1,081,712
AdjRsq	0.802	0.802
HistoricDistrictEver	0.3550 **	0.3614 **
HistoricDistrictPost	0.0234 **	0.0045
TimePost		0.0067 **
TimePostSQ		-0.0003 **
PRECEDED designation by 10+ yrs	-0.1481 **	-0.1477 **
<i>Buffer variables</i>		
BufferEver	0.0839 **	0.0868 **
BufferPost	-0.0083	-0.0262 *
BufferTimePost		0.0044 **
BufferTimePostSQ		-0.0001 **
Buffer PRECEDED designation by 10+ yrs	-0.1154 **	-0.1136 **

Notes:

** p<0.01, * p<0.05

Includes full set of property level control variables included in Table 4 as well as census tract fixed effects and community district*year fixed effects.

Table 8: Alteration Permit Regressions, 1990-2009

	Measure of impact	
	Average effect (no cap)	Impact can vary with time (no cap)
	1	2
NobsUsed	903,780	903,780
AdjRsq	0.013	0.013
HistoricDistrictEver	-0.0007	-0.0003
HistoricDistrictPost	-0.0008	0.0025 **
TimePost		-0.0003 **
TimePostSQ		6.2E-06 **
PRECEDED designation by 10+ yrs	-0.0021 *	-0.0021 *

Notes:

** p<0.01, * p<0.05

Includes full set of property level control variables and census tract fixed effects and community district*year fixed effects.

Figure 1: Land Area (in Square Feet) Dedicated to Historic Districts, by Borough (1965-2009)

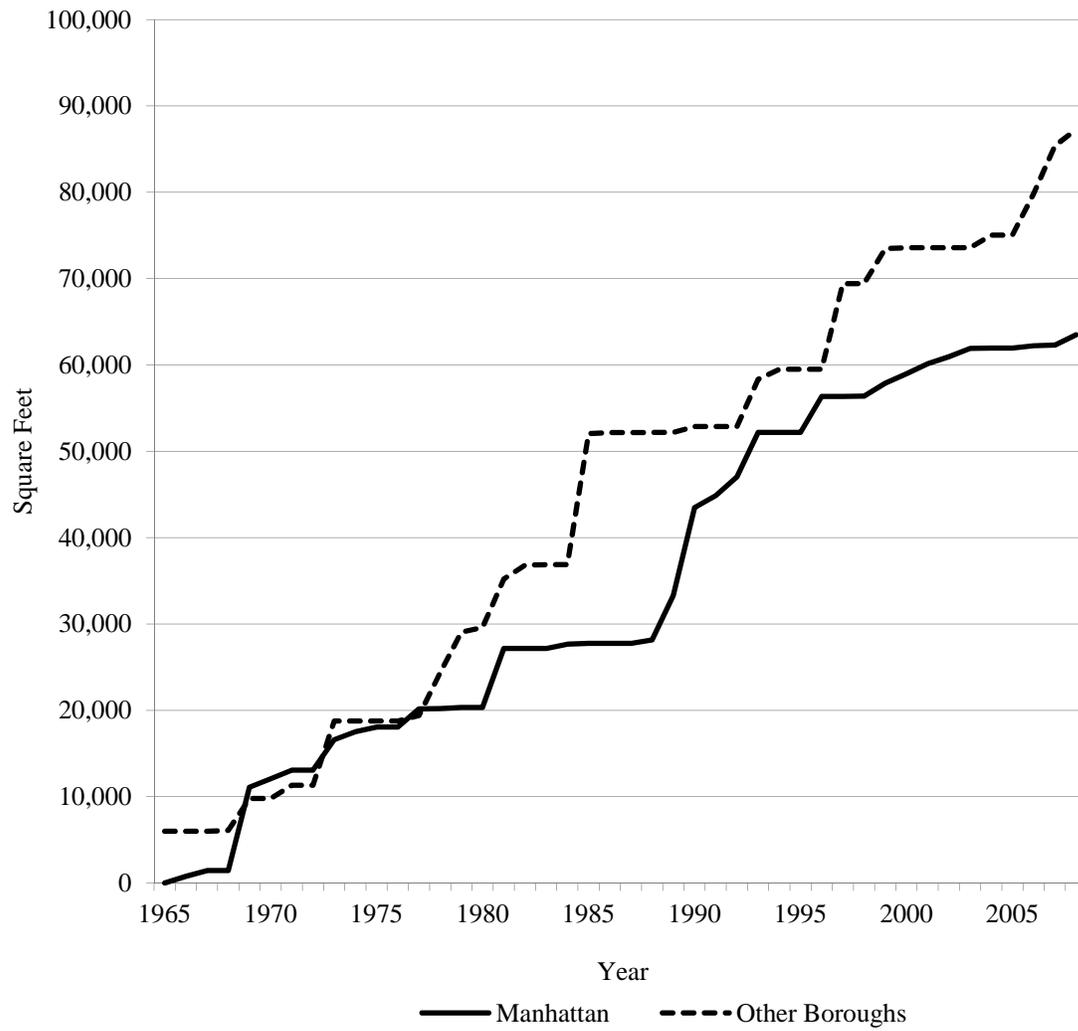
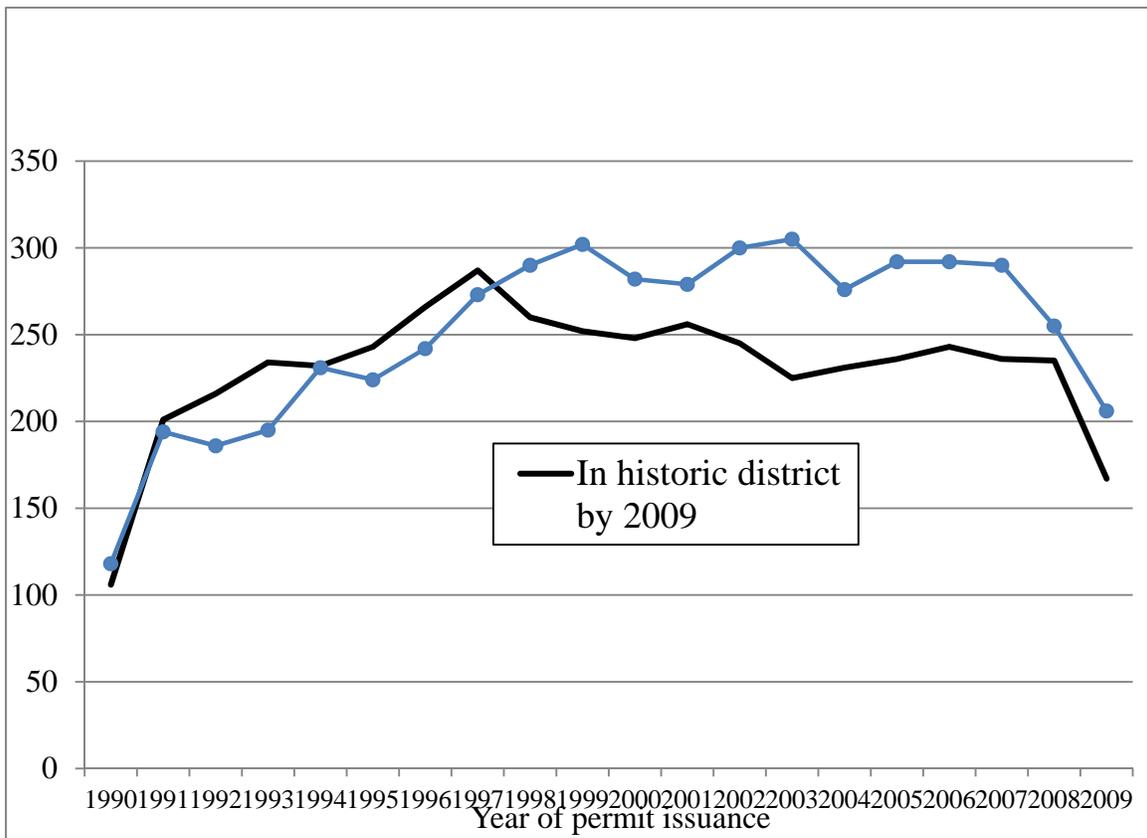


Figure 2: Number of Properties Issued Alteration Permits, by Year: Properties inside and outside historic districts by 2009



Note: Sample restricted to parcels in tracts with at least one property inside a historic district by 2009.

Figure 3: Regression-Adjusted Price Patterns, Before and After Designation

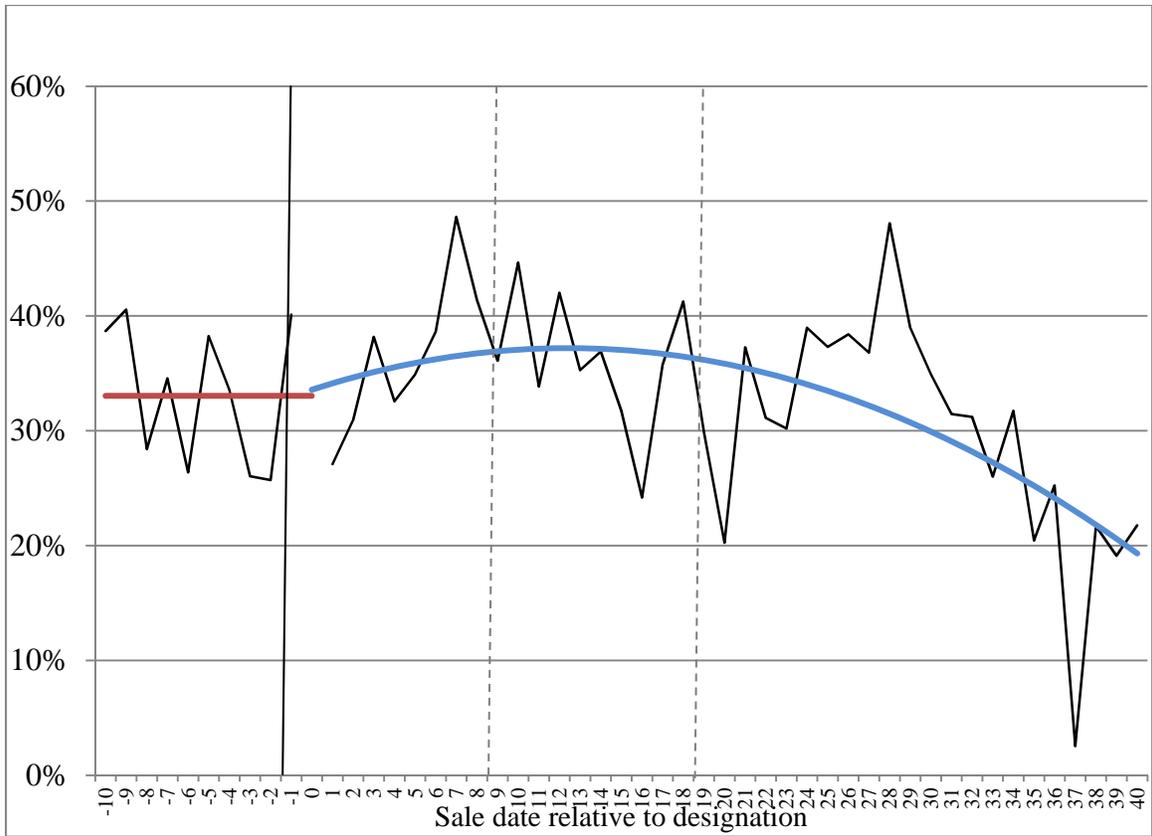


Figure 4: Regression-Adjusted Price Patterns, Before and After Historic District Designation: Manhattan Only

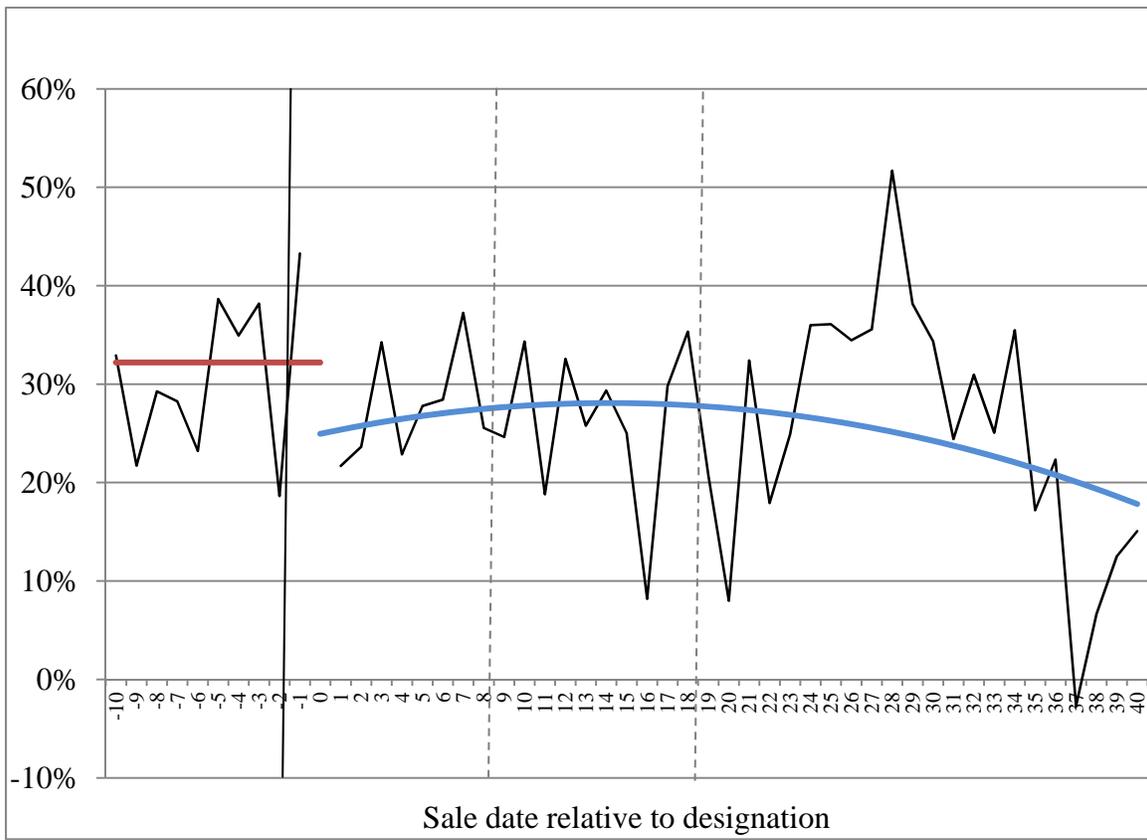


Figure 5: Regression-Adjusted Probability of Receiving an Alteration Permit, Before and After Historic District Designation, 1990-2009

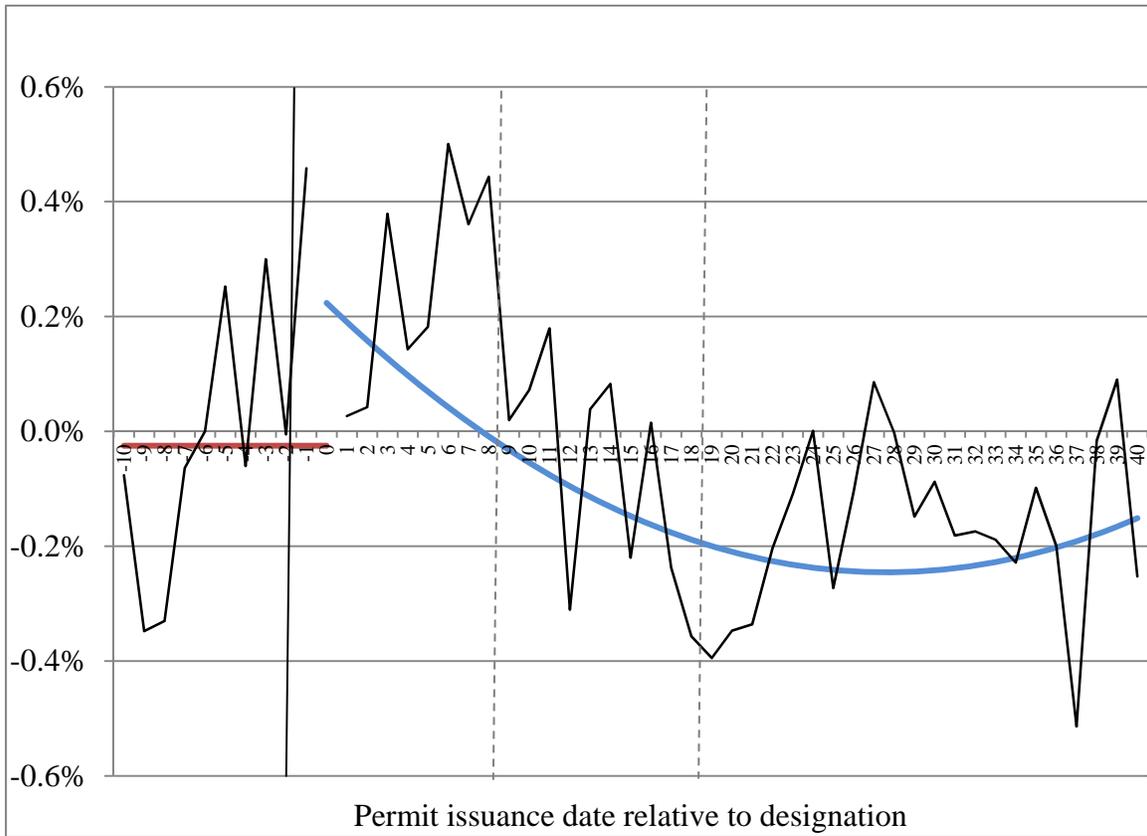


Figure 6: Regression-Adjusted Probability of Receiving an Alteration Permit, Before and After Historic District Designation, 1990-2009, Manhattan Only

