Fifth Draft

The Effect of Historic Designation on the Value of Single-Family Homes in Tacoma

Second Full Draft

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Contents

1 Abstract

There has been years of research investigating the relationship between historic designation and property value. Looking at single-family homes and multi-family homes economists have found evidence of both positive and negative correlation between historic designation and property value. In Tacoma, a 2007 study compared the rates of property value appreciation between a historic district and a comparison neighborhood finding that homes in the North Slope Historic District appreciate at a rate of 2.2% greater than the comparison neighborhood. This study builds on the work of Beyers and Dadswell by using a hedonic regression model, accounting for the different levels (local, state, and national) and types (district or landmark) of historic designation. We find there to be, in general an increase in property value associated with historic designation when one does not account for the different levels and types of designation. When we examine designation at the different levels and types we find there to be a positive relationship between property value and a single family home being located in a Washington State historic district; a positive relationship between a property being listed as a Tacoma Landmark and property value; and a reduction in property value of single-family homes associated with listing as a landmark on the National Registry.

2 Introduction

Ann Cummingham purchased George Washington's home, Mount Vernon, in 1853 with the express purpose of conserving the property for future generations. She marked the beginning of a historic preservation movement in the United States (Rypkema, 2011). Since then, the reasons for and practices of historic preservation have shifted. Fifty years after Cummingham began work at Mt. Vernon, the passage of the Federal Antiquates Act of 1906, brought United States Federal Government into a new role in protecting antiquities and historic sites on Federal lands. This act gave the President the authority to declare any area on federal property as a National Monument, prohibiting excavation and leaving

the land open to preservation (Rypkema, 2011). In the 1930s, Charleston, South Carolina and the State of Louisiana both independently took steps to create historic districts through zoning. This shifted preservation's focus away from preserving individual landmarks and historic sites (such and Mt. Vernon) to actively shaping the way those landscapes impact visitors and locals alike (Ryburg-Webster 2014). The systems that started in South Carolina and Louisiana were the model for the National Historic Preservation Act (NHPA) of 1966, laying out the modern framework through which historic preservation is carried out today.

One of the most important facets of the NHPA has been the creation of the National Register of Historic Places. Recognition on the National Register allows the property owner access to certain tax incentives that are meant to promote preservation and conservation of income generating historic buildings. Since the passage of the NHPA, more state and local governments have followed the lead of Charleston by creating local registers that allow property owners access to a variety of state and local incentives directed at the promotion of restoration and preservation activities (Leichenko 2000). These local registries allow for the preservation of locally historic structures that may or may not be eligible for listing on the National Register. It should be noted though, inclusion on a State, Local, or the National registries does not preclude a property from being designated on another register. In many cases a locally significant structure may be on that city's or state's register of historic structure though not on the National Register though there are examples of nationally recognized structures that on not locally listed.

Tacoma is a city that was born out of the actions of large railroad companies in the later half of the nineteenth century. In 1887, fourteen years after the decision was made to have the western terminus of the Northern Pacific Railroad be in Tacoma, the rail line between St. Paul and the west coast was completed. This marked the start of a decades long upward trajectory of the newly incorporated city (Hunt, 1916). In the decade that the railroad finally made it over the Cascades, the population of Tacoma grew at an astronomical rate, nearly doubling five times between 1880 and 1890 (Hunt, 1916). Indeed, many of the houses

that now comprise the North Slope Historic District were built during this time of rapid growth (City of Tacoma, 2011). In 1974, more than a century after the Northern Pacific Railroad decided to end the northern version of the transcontinental railroad in Tacoma, the city established the Tacoma Register of Historic Places, codifying the ideas of historic preservation.

The listing of a property or building on the Tacoma Register comes after a four to six month process. This process includes showing that the building or property meet the two threshold requirements of being 50 years old or older at the time of nomination as well as the property must retain sufficient original context such that it "is able to convey its historical, cultural, or architectural significance" (Tacoma Culture, 2014a). In addition to showing that these two threshold criteria are satisfied, a property that seeks listing on the Tacoma Register must satisfy one of the six landmark criteria. The landmark criteria are summarized in Table 1. With a property's inclusion on the local register, any alterations to the structure

Table 1: Summary of Landmark Criteria

1.) A property is associated with events that have made a significant contribution to the broad patterns of our history
2.) A property is associated with the lives of persons significant in our past
3.) A property embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction
4.) A property has yielded or may be likely to yield, information important in prehistory or history
5.) A property is part of, adjacent to, or related to an existing or proposed historic district, square, park, or other distinctive area which should be redeveloped or preserved according to a plan based on a historic, cultural, or architectural motif
6.) Owing to a property's unique location or singular physical characteristics, represents an established and familiar visual feature of the neighborhood or City

Source: Tacoma Culture, 2014

are subject to a design review by the Landmarks Commission to ensure that the historic nature of the Landmark (or property if in a historic district) is maintained. Once a project is approved by the Commission the property may qualify for the City of Tacoma's Special Tax Valuation Program. This program offers tax incentives, in the form of reduced property taxes, in the hopes of spurring conservation and preservation (Tacoma Culture, 2014).

The years of continuing activity in this area, has spurred interest in determining the

economic effects of historic designation. There is little debate as to whether or not there is an economic impact from historic designation. However, there is disagreement about what the effect of designation truly is.

Historic designation is often cited as a vehicle that helps drive urban development and economic growth (Clousen 2001, Wonjo 1991). In examining property values in nine Texas cities by using appraised values from county tax assessor data, Leichenko et al (2000) found that historical designation increased property values by five per cent to twenty per cent in seven of those nine cities. In the two cities where no positive relationship was found, the results were inconclusive. A decade earlier, Ford (1989), studying the effect of historic district designation in Baltimore, Maryland, found a positive connection between homes found in historic districts and higher transaction prices. In 2011, these results were again confirmed in Baton Rouge, Louisiana where it was found that historic designation was associated with an increase of between 5 percent and 8 percent in the average property value (Zahirovic-Herbert, 2011). The majority consensus is that historic designation effects property value in a positive manner; Clousen (2001), Leichenko (2000), Ford 1989, (Zahirovic-Herbert) 2011, all found a positive relationship between designation and property value. There is evidence to the contrary though.

When looking at historic districts in Philadelphia it was found that local historic designation of small multi-family apartment buildings experienced a 24 per cent reduction in price (Asabere 1994). It is argued that this outcome was due to the limitations that property owners often face when a property is designated as historic. The idea being that because the landlord cannot renovate a building at will (such as replace single pane plate glass windows with modern insulated windows) the value of the property falls.

In addition to the negative relationship that Asabere found, additional research has been conducted looking into the unintentional effects of designation. Glaeser looked at demographic data from New York City and found that historic preservation leads to gentrification and a loss of racial diversity in historic neighborhoods (2010). In the context of a large city

the limitations imposed by designation, such as restricting the property owner's ability to substantially renovate or demolish, can lead to the true value of the land not being fully realized. Glaeser cites a series of instances in New York City were a developer wanted to build a tower of some height within a historic distric but the Landmarks Preservation Commission stepped in and the plans were killed. Glaeser argues that the combination of the property rights restrictions and the increase in property value that comes along with historic districting serves to prevent land being used to its full capability.

A variety of techniques, of which difference-in-differences and hedonic models are two examples, are used when investigating the relationship between historic designation and property value. Both of these examples allow multiple regression techniques and common statistical practices when testing hypotheses. A difference-in-difference approach seeks to examine the change in property value relative to a like neighborhood. This type of study is hinged on the premise that any difference in price between the two comparison neighborhoods is due purely to the historic designation of the study area. The hedonic model on the other hand seeks to describe the cost of a good, in this case real estate, as a function of the quantity of certain item specific characteristics. Here, the crux is that the price of a property is described by the number of bathrooms, bedrooms ,and other characteristics.

Using sales data, Beyers and Dadswell conducted a 2007 study that looked into the effects of historic preservation efforts in a number of cities across Washington State. In Tacoma, they examined the differences between the price of single-family homes in the North Slope historic district and the University of Puget Sound area. This difference-in-difference study found that homes located in historic districts appreciated at a rate of 8.8 percent annually while homes in the comparison neighborhood appreciated at a rate of 7.2 percent (Beyers, 2007). The difference-in-difference evaluation, allows for the conclusion that any difference between rates of appreciation can be attributed to the positive externality of historic designation. This straight forward approach neglects the presence of any other possible explanatory factors, an example of which the discrepancy in the populations that live in the North Slope district

and the University of Puget Sound area.

The study presented here builds off of the work of Beyers and Dadswell by as examining the impact of historic designation on the value of single-family residences in Tacoma, Washington by following a methodology similar to Coulson (2001). Using data from the Pierce County Tax Assessors office detailing the characteristics of single-family dwellings in Tacoma as well as their appraised value a hedonic price model is built to investigate this relationship. Section 3 contains a detailed description of the data used, Section 4 describes the model used to produce regression estimates and our hypotheses are included at the end of this section. These regression estimates are examined in Section 5. The conclusions and implications of our study in located in Section 6.

3   The Data

The relationship between historic designation and the value of single-family homes in Tacoma is examined in this paper. The initial data sample in this study consists of all single-family homes located within Tacoma, Washington. It was gathered from three sources; the Pierce County Tax Assessors Office using records from 2012, the 2012 American Community Survey five year estimates, and the Tacoma Office of Historic Preservation.

Initially every single-family home in Tacoma as listed in the 2012 Pierce County Tax Assessor data. This sample was arrived at by combining data tables from the aforementioned sources and cross referencing each data entry by the unique parcel number that the county assigns to each tax parcel. Any records that were incomplete were removed from the sample. This process resulted in a sample of 52,896 complete observations each representing a single-family home in Tacoma, Washington.

A complete observation consists of data for each of the control and explanatory variables outlined in Table 2 in addition to the assessed total value of the parcel. The descriptive statistics for the variables in Table 2 can be found in Table 3. The control variables are

present in our data and regressions because it is well known certain housing characteristics impact the price and assessed value of that parcel. For example the square footage (*HundredSqFeet*) of a home logically impacts the value of the property. The inclusion of many of the variables is done to help control for assessed value variation due to differences in things such as age of the building, number of bathrooms, ect.

Table 2: Definitions of Variables

Variable Name	Variable Definitions
Housing Characteristics	
Acres	The total acreage of the parcel
Citycenter	Distance from city center
YearsSinceBuilt	The number of years since the building was built
HundredSqFeet	Square footage of the house in hundreds
Bedrooms	Number of bedrooms
Bathrooms	Number of bathrooms
ForcedAir	Presence of forced air heating and ventilation
NoView	Binary indicator variable where 1 is if there is no view
NoWaterFront	Binary indicator variable where 1 is if there is no water front
Owner	Building is owner occupied
Fireplaces	The number of fireplaces in a home
Quality	A series of binary indicator variables denoting the quality of the building
Census Tract Control	
IncomeThousands	Medium household income of households in a given census tract in thousands of dollars
PercentOwner	The percentage of homes that are owner occupied in a given census tract
PercentWhite	The percentage of the population of a given census tract that is white
Historic Designation	
TacomaProp	Designated as a local historic structure
TacomaDist	Located in a local historic district
WashProp	Designated at a Washington historic property
Washdist	Located in a Washington State historic district
NatProp	On the National Register of Historic Places
Nationaldist	Located in a national historic district
DistAndProp	Located in a historic district and individually listed as historic structure
DistNotProp	Located in a historic district but not individually listed as historic structure
Response Variable	
lnValue2012	The natural log transform of *Value2012*

Included in the housing characteristics control variables in a series of binary response variables that denote the quality of the property and improvements that resided on a given tax parcel. Low, Low Plus, Fair, Fair Plus, Average, Average Plus, Good, Good Plus, Very Good, Very Good Plus, and Excellent are the eleven levels to which the Assessor's office labels the quality of the land and structures. We include only account for homes with quality rates of Average, Average Plus, Good, Good Plus, Very Good, Very Good Plus in

our data set as these six categories cover roughly half of our sample.

Another binary response variable that is included is *NoView*. This variable that takes a value of one if there is no view and a value of zero otherwise. If a property has any view, perhaps sitting on the front porch you can see Puget Sound or Mount Rainer, the Pierce County Tax Assessor assigns a quality measure of either Limited Minus, Limited, Limited Plus, Average, or Good. The lack of a view, indicated by *NoView*, is include because the wide variability of the quality measure of a given view. In addition to controlling for a number of the housing characteristics that differ from home to home and may impact the value of a property, we also include demographic data about the neighborhoods that a given parcel is located in.

Census tracts, and not neighborhood boundaries, are used because tracts are relatively stable over time, they are well defined, and data is readably available. In the majority of instances, the 56 census tracts that Tacoma are entirely within city boundaries. However seven of these census tracts are only partially within the city limits. Therefore these tracts are excluded because they only contain a handful of homes in Tacoma. For each of the 49 census tracts included information about, the median household income measured in thousands of 2012 dollars (*IncomeThousands*), the percent of total housing that is owner occupied (*PercentOwner*), and the percentage of the population that identifies as white (*PercentWhite*) are all include in the regressions. Medium income and the percentage of owner occupied housing units are include because they may indicate the overall quality of a neighborhood. In addition to *PercentOwner*, a binary variable, *Owner*, is included for a similar reason. A property is more likely to be maintained to a higher level when the owner lives in that home. A structure located in a lower quality neighborhood may have a depressed value and so we seek to control for this effect with the inclusion of tract data. *PercentWhite* is included in regressions to control for any racial discrimination that may be preset. A home in a predominately white neighborhood may see higher property values reflecting racial disparities that may be present.

The explanatory variables are the Historic Designation variables also defined in Table 2. We separate historic designation into eight dummy variables. Eight indicator variables are included in different regression to allow us to look at the differences between inclusion in a historic district, (*TacomaDist, WashDist, NationalDist*) andor individual listing of a property (*TacomaProp, WashProp, NatProp*) in relation to any impact on property value. *TacomaDist* is a binary indicatory variable that assumes a value of one if the property resides in a historic district that is on the Tacoma Registry and zero otherwise. Similarly *WashDist* and *NationalDist* are also dummy variables that take on a value of one if the property is with in a historic district that is listed on the Washington Heritage Registry or the National Registry of Historic Places respectively. In Tacoma, a historic district that is on the state registry is also listed on the national registry and so in many of the regression either *WashDist* or *NationalDist* will be omitted because of strong collinearity. The variables *TacomaProp, WashProp, NatProp* indicate if a property is registered as a historic landmark on the Tacoma Registry, Washington Registry, or National Registry.

A log transform of the 2012 assessed value (*Value2012*) of the property by the Pierce County Tax Assessor is used as the response variable in this study, *lnValue2012*. Using the assessed value of properties as provided by the Pierce County Tax Assessor's office allows for a much larger sample. Were we to use sales data as Beyers (2007) did, our sample size would be significantly smaller seeing how infrequently historic homes are sold. This assumption has some limitations, one of which is that the assessed value is dependent upon the models developed by the Pierce County Tax Assessor's office. Any bias that may exist in the assessed values of parcels will be incorporated into the regressions.

In looking at Table 3 a few things are noticed. Interesting to note that the closest single family home to the city center, defined as the intersection of South 9th and Pacific Street, is a little over four tenths of a mile away. While the furthest observation is around eight and one half miles from the city center. The former observation is found in what might be called the downtown neighborhood (census tract 61601) and the later property is located near the

Table 3: Descriptive Statistics for Control Variables

Variable	Obs	Mean	Std. Dev.	Min	Max
Housing Characteristics					
Acres	52896	.1732062	.1310521	.018	6.05
CityCenter	52896	3.984937	1.400049	.443586	8.452004
YearsSinceBuilt	52896	62.40668	31.30147	0	139
HundredSqFeet	52896	14.13151	5.626453	2.28	77.08
Bedrooms	52896	3.004651	.8560087	0	13
Bathrooms	52896	1.557096	.648476	0	12
ForcedAirHAVC	33912				
NoView	48589				
NoWaterFront	52856				
Owner	29352				
Fireplaces	52896	.7024728	.5629906	0	7
AvgQuality	19375				
AvgPlusQuality	3134				
GoodQuality	1228				
GoodPlusQuality	677				
VGoodQuality	120				
VGoodPlusQuality	26				
Census Tract Information					
PercentWhite	52896	66.43906	15.08537	33.71475	89.42505
PercentOwner	52896	61.78695	15.31387	.5692599	100
IncomeThousands	52896	56.56798	17.36728	18.553	144.063
Historic Designation					
Historic	1115				
TacomaDist	763				
WashDist	1004				
NationalDist	1004				
AnyDist	1063				
TacomaProp	65				
WashProp	24				
NatProp	22				
AnyProp	65				
DistAndProp	13				
DistNotProp	1050				
Independent Variable					
Value2012	52896	$188,361.50	$93,728.22	$6,800	$ 2,400,700

southwest boundary of Tacoma and University Place (census tract 72309). The range in the size of the homes in Tacoma ranges from 228 to 7,708 square feet with an average home size of 1,413 square feet. 24,569 of the 52,896 observations have quality ratings of Average or higher. Only thirty homes have a waterfront though this is separated between salt water and fresh water. Similarly 4,307 of the observations have some view. The average value of a single-family home in 2012 in Tacoma is $ 188,361.50, with a minimum of $6,800 and a maximum of $2.4 million. This wide range in the value of homes in Tacoma that mirrors the wide range in median neighborhood income (*IncomeThousands*) and distance from the city center (*CityCenter*). The oldest home in our study was built in 1873 and so is 139 years old in this data set while the youngest buildings were built in 2012. For these homes *YearsSinceBuilt* assumes a value of zero.

4   The Model

We employ a hedonic model in analyzing the impact of historic designation of the assessed property value of single-family residences. This type of model is used to establish a composite price measure based of the value derived from the quantity of each component characteristic (Court 1939). The general from is,

$$Price = \beta_0 + \sum_{k=1}^{K} \beta_k X_k + \epsilon, \tag{1}$$

where X_k denotes the quantity of the kth characteristic of a given good and $Price$ is the final price of that good. In Court's original model (1939), he sought to determine the relative importance of characteristics of automobiles and the effect of those characteristics on the value of a car. Though his original work was examining the automobile industry in the mid-1930's, his work has been extended to other industries, one of which is housing.

This iteration of Court's work follows Coulson's lead by applying a hedonic model to the housing market in Tacoma. We will be using a semilog form of the hedonic model defined

as,

$$\ln(Value) = \beta_0 + \sum_{k=1}^{K} \beta_k X_k + \epsilon. \tag{2}$$

where $Value$ is the assessed value of the parcel, X_k is the k-th housing characteristic and β_k is the coefficient of the k-th housing characteristic. Our regressions seek to estimate the β_k's. In utilizing a semilog model as outlined above, interpretation of the β's is relativity straight forward since they represent semielasticites when we have a linear model. For example, a coefficient of .005 on *HundredsSqFeet* would be interpreted as a increase of one hundred square foot is associated with an increase in assessed value of approximately 0.5 percent.

As Coulson (2000) points out, one of the most important aspects of a hedonic study is to control for covariance of variables. There can be little doubt that there is strong correlation between historic designation and the age of buildings seeing as the age is one of the threshold criteria for designation as a historic landmark is the age of the structure. Similarly, the size of the plot is assuredly correlated with the square footage of the home, just as the number of bedrooms, bathrooms and garages affect the total square footage. A number of regressions are run to see if a particular level (whether city, state, or national) of historic designation has an impact on the assessed value of homes.

These regressions allow us to test the alternative hypothesis: there is a positive relationship between historic designation and the assessed property value. The null hypothesis of this study is: there is no effect on property value of single-family homes due to historic designation.

5 Regression Results

A series of five regressions are run. Detailed results are found in Table 6 in the Appendix while the coefficients and the associated t-ratios of the explanatory variables are repeated here in Table 4.

The first regression was run to establish that the control variables outlined in Table 2

Table 4: Coefficient estimates of historic indicator variables, dependent variable ln($Value2012$)

	Regression 2		Regression 3		Regression 4		Regression 5	
	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio	Coef.	t-ratio
Historic	.1253368	25.58**						
AnyDist			.1288521	25.70**				
AnyProp			.0080485	0.44				
DistAndProp					.0339973	2.23**		
DistNotProp					.0973416	6.18**		
TacomaDist							.0159774	1.44
WashDist							.1103	10.81**
NationalDist							0 (omitted)	
TacomaProp							.0407351	2.30**
WashProp							.1648261	1.38
NationalProp							-.2691788	-2.20**
R^2 =	0.8511		0.8511		0.8511		0.8508	

n = 52896

** = Significant at 5% level

* = Significant at 10% level

are significant contributing factors to property value. The results of this first regression can be found the Appendix as Table 5. Since our sample suffers from heteroskedasticity, the standard errors are corrected in the same way as Coulson & Leichenko (2001) by computing them from a consistent covariance matrix developed by White. This was done using built in methods within STATA statistical software.

The second regression added the general indicator variable, *Historic*, denoting if a building is located in either a historic district or listed as an individual historic property. Recall *Historic* does not distinguish between the level of designation (local, state or national) or the type of designation (property or district), where it takes a value of one if a home meets either criteria (district or landmark). The coefficient is positive. The interpretation of the coefficient of 0.1253358 is that if a single-family home is listed as historic, there is an expected increase of 12.35% in the property value or about $23.601.70 on average. Since *Historic* is significant at the five per cent level, there is statistically significant evidence to reject the null hypothesis and conclude that there is a positive relationship between the value of single family homes in Tacoma and designation as historic in general.

Because of the undifferentiated character of *Historic* the third regression replaced the undifferentiated variable *Historic* with two variables that separate the historic housing stock into two sub-groups; the properties that are located in any historic district (*AnyDist*) and the properties that are individually listed (*AnyProp*). It is important to note that 13 of the 65 of the individually listed properties are also located in a historic district. Looking at the coefficients of these two historic variables in the Regression 3, the sign of each is expected and inline with the conclusion reached from Regression 2. However, with this initial level of differentiation, only being in a district seems to result in a significant increase in property value while being listed as a historic may have a positive impact on the property value though it is insignificant. Continuing in this direction, Regression 4 replaces *AnyDist* and *AnyProp* with *DistAndProp* and *DistNotProp* in an effort to see if there is any added impact of being in a district and being listed as a property.

In the fourth regression, we again include two historic indicator variables. We differentiate between properties that are in a historic district but not listed as an individually historic building (*DistNotProp*) and properties that are in a historic district and listed as individually historic, (*DistAndProp*). By only including historic homes that are in a historic district the additional affect of individual listing can be examined. The sample of homes that are in a historic district and listed as a historic landmark property is small with only thirteen homes falling into this category. The results of this regressing indicate that both variables are statistically significant at the five per cent level. Their signs are both positive with *DistNotProp* being associated with an increase of 9.73% in property value and *DistAndProp* is associated with an increase of about 3.40% in property value. The size of these coefficients indicates that having a property listed in a district has a larger magnitude impact on property value compared to the additional impact on property value of being listed as a landmark. Perhaps reflecting diminishing marginal returns, the act of being listed as a landmark given a property is already with in a district there is a smaller magnitude increase in property value. In Regressions 2 thru 4, we did not look at the level of designation, whether local, state or national. Since in these regressions we see a significant correlation between property designation and property value a fifth regression is run that separates the two historic indicator variables into six, defined by the level of historic designation.

The fifth regression contains the most detailed break down of historic designation. Included in this regression are the variables of *TacomaDist*, *WashDist*, *NationalDist*, *Tacoma*, *Wash,* and *National*. These six variables delineate the level and type of designation, whether state, local, or national and if the property is a landmark or not or within a historic district. We cannot differentiate between the effect residing in a state district has versus a national district because state and national historic districts are identical in the vast majority of case. Therefore *NationalDist* is omitted from the regression calculations in an effort to reduce issues of multicollinearity. The results of Regression 5 show a positive correlation between *TacomaDist* and the value of a single-family home though the t-ratio indicates that it is

not a significant relationship. When looking at *WashDist* we see a coefficient of .1103 that is statistically significant at the five percent level. There is enough statistically significant evidence to support the claim that there is a strong positive relationship between a home being located in a historic district and the property value of that home.

When looking at landmark designation, we again see that there is a positive correlation between *Tacoma* and *Wash* (with coefficients of .0407351 and .1648261 respectively) and property value though the later is not significant. This indicates that being listed as a Tacoma Landmark is a associated with an increase in property value of about 4.07% or roughly $7,666.31 on average. The negative coefficient of -.2691788 on *National* indicates a negative correlation between being listed as a national historic landmark and property value.

6   Implications and Conclusions

In many ways the results of this study are inline with the findings of similar studies. We first see that in general, historic designation in Tacoma seems to have a positive impact on single-family homes though when designation is broken down into more detailed levels the conclusions that can be reached are more nuanced. The statistical significance of *Historic* and the magnitude of the coefficient, is what is to be expected. This conclusion is similar to the literature. In the 2001 Texas study the seven cites that showed statistically significant increases in property value due to designation ranged from 4.9% on the low end to 20.1% on the high end (Leichenko 2001). The findings presented here are in the middle of this range with a single-family home in Tacoma experience an increase in value of roughly 12% when designated as historic at some level.

Furthermore, historic districts in particular (recall that this is the most common level of designation in Tacoma and in many other municipalities) may serve as a stand in for other characteristics not captured in this study. And so it is not a surprise that residing in a Washington State Historic District is associated with an increase in property value. These historic

neighborhoods have a high level of homogeneity in their age and appearance. This lends itself well to a certain 'feel' that some people may value more than others. Furthermore in Tacoma, historic districts often have a higher than average medium income and are typically more home owners than renters. The populations have a higher percentage that is white and have more quality views of water and mountains as compared to the none historic district or neighborhood. In addition historic buildings and districts often have higher level of upkeep than neighborhoods that lack historic amenities do not have. However, the insignificance of being in a Tacoma Historic District indicates that there is no effect on property value from being in a local historic district.

In Tacoma, the level to which individual property rights are restricted pertains in large part to the exterior and the expectation to maintain that standard of historic authenticity that may, as Asabere points out, negatively impact the value of properties. Contrary to Asabere we see that at the local level, where property restrictions are the highest, positive correlation between Tacoma landmark designation and property value and no statically significant correlation between Tacoma Historic District designation and property value.

At a more detailed breakdown of the impact of historic designation the picture is cloudy. There are mixed effects on property value between the individual listing of properties on the National Registry and the Tacoma Registry. The positive impact associated with local landmark designation is to be expected and is inline with previous studies. The negative relationship between listing on the National Registry and property value is curious and could be a result of single-family homes generally not being income generating properties in the district in Tacoma. The National Park Service, IRS and Department of Interior allow access to the Rehabilitation Tax credits to income generating properties - this includes rental properties. Though in Tacoma most historic district are owner occupied and so these homes would not be eligible for the national tax credits (National Park Service 2012). In this case, listing as a National Landmark results in some property rights restrictions without allowing access to tax incentives at the national level.

Historic structures and district allow communities to maintain connections to their unique histories. These histories often form the foundations of a community's character and feel. Historic designations allow for a framework and structure in which to maintain these historic amenities. In Tacoma, local designation has been around since 1973 where landmark designation is associated with an increase in property value of single-family homes. A property in a state historic district experiences an increase in property value. Both of these findings are in line with the 2007 study by Beyers and Dadswell.

A number of economists have sought to show that the designation of buildings as historic is a way to remedy an externality - that historic buildings and architectural beauty is a public good to which access can not be limited and so left to a free market investment in historic structure is not at the optimal level (Ahfeldt and Holman, 2015). And similarly that historic designation is a way to promote economic development and community investment (Leichenko 2001). Designation's impact on property value is the mechanism in which this eternality is remedied and community investment is spurred. In Tacoma sign and magnitude of historic designation's impact is determined by the level to which a property is designated and the type of designation a property receives. More investigation should be done when looking the level of investment that results from this increase in property value.

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Table 5: Coefficients of Control Variables

	Coef.	Robust Std. Err.	t
Acres	.2925398	.0167607	17.45**
CityCenter	-.0062932	.0006748	-9.33**
YearsSinceBuilt	-.0001078	.0000365	-2.95**
HundredSqFeet	.0217077	.0002718	79.85**
Bedrooms	.0286779	.0010326	27.77**
Bathrooms	.0389165	.0021981	17.70**
ForcedAirHVAC	.0202317	.0014691	13.77**
NoView	-.2061112	.0038148	-54.03**
NoWaterFront	-.322245	.0722079	-4.46**
Owner	.0231277	.0013688	16.90**
Fireplaces	.0595208	.0015232	39.08**
AvgQuality	.1123819	.0018218	61.69**
AvgPlusQuality	.2204542	.0050131	43.98**
GoodQuality	.2827633	.0072658	38.92**
GoodPlusQuality	.324989	.0082254	39.51**
VGoodQuality	.3823211	.021626	17.68**
VGoodPlusQuality	.4920085	.0516381	9.53**
PercentWhite	.0083925	.0000714	117.59**
PercentOwner	-.0023588	.0000732	-32.22**
IncomeThousands	.0030679	.0000857	35.82**
_cons	11.37848	.0725266	156.89**

n = 52896, R^2 = 0.8493

** = Significant at 5% level

Table 6: Coefficient estimates, dependent variable $\ln(Value2012)$

	Regression 2		Regression 3		Regression 4		Regression 5	
	Coef.	t	Coef.	t	Coef.	t	Coef.	t
Acres	.2939651	17.48**	.2940763	17.47**	.2940389	17.47**	.2935541	17.47**
CityCenter	-.0030694	-4.48**	-.0030419	-4.44**	-.0029982	-4.37**	-.0033992	-4.96**
YearsSinceBuilt	-.0001605	-4.39**	-.0001574	-4.30**	-.0001577	-4.31**	-.0001496	-4.09**
HundredSqFeet	.021412	78.92**	.0214137	78.95**	.0214167	79.05**	.0214674	79.17**
Bedrooms	.0287559	27.97**	.0287281	27.94**	.028718	27.95**	.0286568	27.87**
Bathrooms	.0377755	17.26**	.0378561	17.28**	.0378551	17.28**	.0379672	17.33**
ForcedAirHVAC	.0214898	14.72**	.0215502	14.76**	.0215081	14.74**	.0214524	14.69**
NoView	-.208942	-54.89**	-.2092773	-54.97**	-.2092618	-54.97**	-.2092355	-54.86**
NoWaterFront	-.323028	-4.48**	-.3229586	-4.48**	-.3229715	-4.48**	-.3230299	-4.48**
Owner	.0238095	17.51**	.0238293	17.53**	.0238425	17.55**	.0237225	17.44**
Fireplaces	.0577849	37.92**	.0576536	37.82**	.0576645	37.83**	.0579506	38.01**
AvgQuality	.1101521	60.67**	.1101931	60.70**	.110178	60.73**	.1104623	60.81**
AvgPlusQuality	.2158785	43.10**	.2158626	43.10**	.2158291	43.11**	.2166871	43.18**
GoodQuality	.277387	38.38**	.2770964	38.31**	.2770415	38.33**	.281209	38.20**
GoodPlusQuality	.3186196	39.32**	.3183641	39.26**	.318156	39.26**	.3194826	39.13**
VGoodQuality	.3762298	17.16**	.3766874	17.14**	.3762555	17.12**	.3774564	17.26**
VGoodPlusQuality	.4938645	9.80**	.4935263	9.79**	.4934578	9.79**	.4935788	9.76**
PercentWhite	.0082371	114.89**	.0082293	114.71**	.0082261	114.70**	.0082359	114.75**
PercentOwner	-.0020698	-28.43**	-.0020688	-28.42**	-.0020666	-28.40**	-.0020918	-28.66**
IncomeThousands	.0029974	35.18**	.0029999	35.20**	.0029977	35.18**	.0029917	34.96**
Historic	.1253368	25.58**	.1288521	25.70**				
AnyDist			.0080485	0.44				
AnyProp								
DistAndProp					.0339973	2.23**		
DistNotProp					.0973416	6.18**		
TacomaDist							.0159774	1.44
WashDist							.1103	10.81**
NatDist							(omitted)	
TacomaProp							.0407351	2.30**
WashProp							.1648261	1.38
NatProp							-.2691788	-2.20**
_cons	11.37294	156.99**	11.37319	156.97**	11.3732	156.98**	11.37496	156.93**
R² =	.8511		.8511		.8511		.8508	

n = 52896

** = Significant at 5% level

* = Significant at 10% level