The Effects of Historic District Designation on Residential Property Values in Mid-sized Texas Cities

By

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Applied Research Project

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Abstract

The purpose of this research is to explore the effects that residential historic district designations have on residential property values in mid-sized Texas cities. A review of the literature indicates that generally historic districts increase the value of properties within the historic district and can increase the property value of homes in close proximity to the historic district. As supported by the literature, three characteristics of historic districts, (1) type of historic designation, (2) proximity to the central business district, and (3) age of the homes, were also examined independently to determine whether they have an effect on residential property values.

This study uses quantitative analysis of aggregate neighborhood data to examine twenty historic districts spread across ten mid-sized cities in Texas. Property data was collected from the National Register of Historic Places, as well as various county tax appraisal offices and city planning departments.

The data reveals that homes in historic districts have higher property values than the city median residential property value; however, there was no increased value observed for homes bordering the historic district. Additionally, the results demonstrate that districts with homes built in 1940 or before have higher property values and districts located 0.2 miles or farther away from the central business district have higher property values. By following the recommendation presented, local governments can maximize the benefits experienced by historic districting.

Chapter 1

Introduction

Historic preservation is "the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property" (NPS 1995). In the United States, historic preservation is accomplished by bestowing a historical designation on an individual property or a district. The federal, state, and local levels of government all have the power to designate historic districts. The federal government focuses most of its historic preservation efforts on individual properties and nationally historic areas such as battlegrounds. The state level supports the mission of the national government and proposes properties for national historic designation. City governments take a different approach to historic preservation.

At the local level, historic preservation focuses on neighborhoods as historic districts. Designation of a district identifies an entire neighborhood as being historically significant, and attaches a historical designation on every home within its boundaries (Coulson and Leichenko 2001). Neighborhoods designated as historic districts are areas that share a unique architectural, cultural or historic quality or characteristic worth preserving (Ford 1989). Historic districting has many benefits, as well as a few consequences.

This study focuses on historic district designation because of its potential ability to increase the tax base for a municipality by affecting the property values of the homes inside the district. The next section reviews the history of historic districting. This is then followed by a discussion of types of historic districts. This chapter is concluded with an exploration of the use of historic districts as an economic development tool.

History of Historic Districting

The use of historic districting began in 1931 with state legislation passed in South Carolina establishing a historical district in Charleston (Gale 1991). The purpose this legislation was to protect entire neighborhoods and areas of historical and architectural importance (Gale 1991). Prior to this legislation, only individual properties that were designated as historic properties by local governments and the federal government designated significant landmarks, such as battlefields, as historic. The problem with only being able to designate individual properties is that those properties in a neighborhood without the historic designation are able to be altered or rebuilt without any standards, resulting in major changes to the significance of the area as a whole. The ability to designate an entire neighborhood as historic allows for protection against this result.

Historic districting was not very popular after its introduction in 1931. Government regulation of private property was not a popular concept with the American people and the economic damage caused by the Great Depression slowed the historic districting movement. Not surprisingly, only a few states adopted some form of historic districting legislation before the 1960's (Gale 1991). However, by the 1960s, the idea of government involvement in markets, including real estate markets, gained wider acceptance.

In 1966, the National Historic Preservation Act was passed. This Act authorized the Secretary of the Interior to create a list of historically significant places that includes sites, buildings and neighborhoods; this list is known as the National Register of Historic Places (Carruthers, Clark & Tealdi 2010). In addition to creating the National Register of Historic Places, the Act also grants the authority to the Secretary of the Interior to bestow a historic

designation on a building or district (Gordon & Vaughn 2012). The National Historic Preservation Act details the regulations and limitations that are placed upon a historic property or district listed on the National Register of Historic Places. Historic districts became very popular following the passage of the National Historic Preservation Act in 1966. Before the National Historic Preservation Act was enacted in 1966 there were approximately 100 local historic district commissions, and as of 2011 there are over 2,300 (Leichenko, Coulson & Listokin 2001, Heintzelman & Altieri 2011). Additionally, there are over 1.4 million buildings on more than 88,000 properties, landmarks and districts listed on the National Register of Historic Places (Noonan & Krupka 2011, NPS 2013).

Table 1.1, below, shows a map of the density of national historic properties per square mile. The properties identified on the map include all properties, districts, landmarks and battlegrounds listed on the 1992 National Register of Historic Places. Due to the settlement patterns of the United States, major cities in the East typically have the oldest developments and have the greatest densities of nationally designated historic properties. In Texas, the highest densities of nationally designated historic properties are near the Dallas–Fort Worth, Austin, and San Antonio areas.

Table 1.1– National Register of Historic Places Property Densities

Properties per Sq.Mile
☐ no properties
☐ 0.001 to 0.003
☐ 0.004 to 0.007
☐ 0.008 to 0.015
☐ 0.016 to 0.030
■ 0.031 to 0.099
■ 0.1 to 16.409
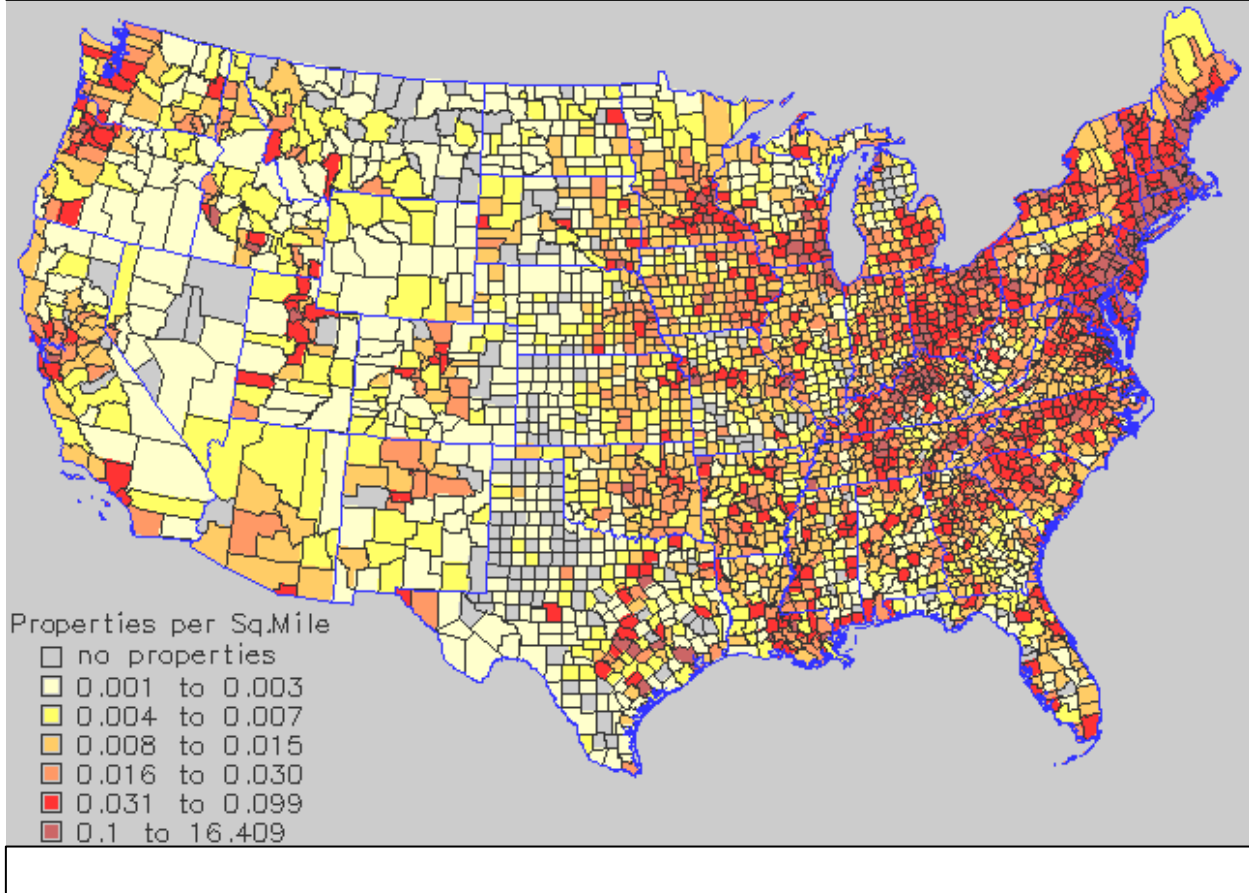
New additions to the National Register of Historic Places must be reviewed and certified on the local level before being reviewed for national designation (NTHP 2013). In Texas, the Texas Historical Commission serves as the local approval body for nominating new properties for national designation. The process involves submitting a proposal and providing supporting documentation. The proposal is reviewed by the Texas Historical Commission to determine whether the property meets the National Register criteria. If the proposal is approved, the State Historic Preservation Officer will submit a nomination to the National Park Service and the property will be added to the National Register of Historic Places.

The National Historic Preservation Act also mandated that states have a State Historic Preservation Office that is responsible for the enforcement of the National Historic Preservation Act and administering the Certified Local Government Program (THC 2013). The Texas Historical Commission is the state historic preservation office for Texas. The Texas Historical Commission is responsible for all historic preservation activities in the state, as well as nominating properties to be added to the National Register of Historic Places. Additionally, the Texas Historical Commission is responsible for administering the Certified Local Government Program.

The Certified Local Government Program enables a municipality to conduct historic preservation programs including certifying properties and districts as historic, as well as awarding grants and other benefits described in the National Historic Preservation Act (Schwartz 2007). In Texas, there are seventy Certified Local Governments. Table 1.2, below, is a list of all the cities in Texas that are Certified Local Governments.

Table 1.2 Certified Local Governments in Texas Listed by Population				
Under 25,000	25,001 – 50,000	50,001- 100,000	100,001- 500,000	500,001 and larger
Blanco	Atascosa County	Bryan	Abilene	Austin
Castroville	Burnet County	Cedar Park	Arlington	Dallas
Corsicana	Caldwell County	Mansfield	Beaumont	Denton County
Denison	Galveston	Mission	Brownsville	El Paso
Elgin	Georgetown	New Braunfels	Comal County	Fort Worth
Ennis	Grapevine	Pharr	Corpus Christi	San Antonio
Fredericksburg	Matagorda County	Port Arthur	Denton	Tarrant County
Glen Rose	Nacogdoches	San Angelo	Hays County	Travis County
Granbury	Paris	Tyler	Jefferson County	
Kingsville	Rockwall		Killeen	
Marshall	San Marcos		Laredo	
Milam County	Seguin		Lubbock	
Mineola	Socorro		Lubbock County	
Mount Vernon	Val Verde County		McAllen	
Palestine	Waxahachie		Nueces County	
Quanah			Plano	
Rio Grande City			Round Rock	
Royse City			Waco	
San Augustine County			Wichita Falls	
Uvalde				

Tax Incentives

To encourage historic preservation, the federal government offers federal investment tax credits for rehabilitation of old historic structures (Ford 1989). The Revenue Act of 1978 provided the first economic incentive for historic preservation by granting tax credits for rehabilitating federally certified properties (Asabere & Huffman 1994, Haughey & Basolo 2000). The Revenue Act of 1978 has since been modified by a number of subsequent legislative acts, including the Economic Recovery Act of 1981, the Tax Equity Act and Fiscal Responsibility Act of 1982, and the Tax Reform Act of 1986 (Haughey & Basolo 2000).

Federal preservation tax law enables owners of a qualified property to receive up to 20% of their rehabilitation expenses in the form of tax credits for the renovation of a federally certified investment property (Asabere & Huffman 1994). Owners of rental and commercial property listed on the National Register of Historic Places qualify for preservation federal tax credits (Haughey & Basolo 2000). Homes listed on the National Register of Historic Places that are owner-occupied do not qualify for the preservation federal tax credits (Asabere & Huffman 1994). Property owners of owner-occupied homes may be less inclined to reinvest in their properties because they do not qualify for the federal investment tax credits.

In addition to federal tax credits, many states offer state income tax credits and half of the states in the United States allow some type of property tax abatement that can be applied to homes that are historically designated (Coulson & Lahr 2005). These financial incentives help relieve some of the maintenance and rehabilitation costs that are incurred by historic designation regulations.

National vs. Local Historic Districts

This section will provide background for national and local historic districting, and describe similarities and differences between them. Historic districting is a form of land use zoning (Asabere & Huffman 1991). A zoning overlay district is often used when designating a neighborhood as historic. Overlay districts create special use areas that must conform to the additional standards of the overlay as well as the restrictions of the base zoning. The two types of historic district designations that are used are national districts and local districts, each with their own respective benefits and restrictions.

National District Designation

    National district designations are granted to neighborhoods or areas by the Secretary of the Interior, and are placed on the National Register of Historic Places ("NRHP"). The process for a district to become nationally designated is detailed and requires an extensive cultural resource study to be conducted. A cultural resource study involves a survey of all the properties in a specific area. These studies include historic research and visual surveys to determine characteristics such as architectural style and year or period built to determine whether the property contributes to the historic value of the area. Additionally, nominations for designations must be certified through a state's historic preservation office prior to submission to the NRHP. Because of these requirements, new nationally designated districts also have a local historic designation as well. There are many benefits to being nationally designated.

    A nationally designated historic district is protected from large scale federal improvement projects such as the construction of highways (Ford 1989). This benefit is important to preserving neighborhood character, especially in old neighborhoods located adjacent to the central business district or a growing metropolitan city. However, national districts have very few regulations concerning the activities or design requirements of the buildings within the district (Ford 1989). Land use is relatively unrestricted, allowing property owners to modify and change their buildings as they see fit. Some additional restrictions do apply to properties that receive federal tax credits. There is more prestige associated with national districts than with local districts (Schaffer & Millerick 1991). Receiving a national designation is more difficult, which makes it more prestigious.

Local District Designation

Local historic district designations are much more common. In Texas, local designations are awarded at the state and municipal levels, and require a petition from the residents of the proposed district to begin the districting process. Similar to the national designation process, cultural resource studies are conducted; however, the qualifications are more lenient. There are some benefits and costs to being locally designated.

Local historic districts impose heavy regulation, typically focusing on maintaining a structure's exterior appearance (Ford 1989). Land use restrictions limit what the property can be used for and add extra restrictions in addition to the base zoning (Coulson & Lahr 2005). These restrictions help to preserve the character of the neighborhood. Local districts are regulated by a board or commission that maintains and enforces regulations (Gordon & Vaughan 2012). These boards and commissions monitor the review process for demolition, renovation and new development of properties within the historic district (Haughey & Basolo 2000). They have the authority to grant variances to the regulations and approve or deny building changes (Zahirovic-Herbert & Chatterjee 2012). An active local historic board or commission can help lead a local historic district to receive a national designation as well (Gordon & Vaughan 2012).

Economic Development

Economic development is important to the health of a city. It is a common misconception that historic preservation is an expensive luxury that inhibits the new development which is necessary for city economic growth (Laurie 2008). Contrary to this misconception, historic preservation can be used to promote economic development. Cities often use historic districting to revitalize properties and attract new residents and businesses to the neighborhood (Carruthers,

Clark & Tealdi 2010). Because older neighborhoods are frequently the ones in most need of rehabilitation and external stimulus, the areas that are most susceptible to urban blight are able to be economically stimulated through historic preservation (Coulson & Lahr 2005).

The main ways historic districts help promote economic development are by increasing the property value for properties within the district, and providing an existing stock of structures for sustainable development. It is generally accepted that historic districts increase the value of homes within the district (Zahirovic-Herbert & Gilber 2012). Redevelopment of the properties in the historic district stimulates the local economy, as well as preserving the historical and cultural value of the structure. Renovating old structures is also a sustainable practice.

Rehabilitation of old buildings or homes is a type of sustainable development. It would take sixty-five years to recover the lost energy from demolishing an old structure and building a new energy-efficient office building, half constructed from recycled materials (Gordon & Vaughan 2012). It is more cost and energy efficient to refurbish and repurpose existing structures. Historic building rehabilitation creates less construction related waste and debris than new construction. It is estimated that construction refuse accounts for one-third of the trash produced in the United States (Gordon & Vaughan 2012). When applying sustainable development concepts to historic districts, it is important to remember that, "[t]he greenest building is the one that is already built" (Gordon & Vaughan 2012). Sustainable development has become a popular attribute of economic development, and is important in historic preservation.

Small cities do not have many economic development tools for encouraging residential redevelopment. The financial burden and increased regulations that historic districts place on a property and neighborhoods are much less than the economic, historical, and cultural benefits

that the historic districts provide. Therefore, it is the goal of this study to explore the effects that historic districts have on residential property values in order to provide a more complete understanding of the benefits. The next section will present the research purpose statement.

Research Purpose Statement

The purpose of this applied research project is to explore the effects that residential historic district designations have on residential property values in mid-sized Texas cities.

Chapter 2

Literature Review

Introduction

The purpose of this chapter is to summarize the existing academic literature on residential historic preservation and its relationship to property values. The literature supports a value increasing effect from historic district designation on property values, as well as a value increase for properties adjacent to historic districts. Additionally, the literature identifies three factors that influence residential historic district property values. Those factors are (1) type of historic designation, (2) distance from the central business district, and (3) age of the homes in the district. The following sections will describe each major theme and subtheme that is discussed in the literature.

Conceptual Framework[1]

This study is based on a conceptual framework that is organized into five working hypotheses. These hypotheses were identified using a review of the existing academic literature, and general principals of historic preservation and economic development strategies. The following is the framework for this study.

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[1] For more information on how the conceptual framework was developed see Shields and Rangarajan (2013) and Shields and Tajalli (2006).

Table 2.1: Conceptual Framework	
Working Hypothesis	**Scholarly Support**
WH1: Homes in historic districts have higher property values than homes in non-historic districts.	Coffin 1989, Ford 1989, Gale 1991, Schaffer & Millerick 1991, Asabere & Huffman 1994, Clark & Herrin 1997, Haughey & Basolo 2000, Coulson & Leichenko 2001, Leichenko, Coulson & Listokin 2001, Romero 2004, Coulson & Lahr 2005, Carruthers, Clark & Tealdi 2010, Zahirovic-Herbert & Chatterjee 2012, Zahirovic-Herbert & Gibler 2012
WH2: Homes located adjacent to a historic district have higher property values than homes not located near a historic district.	Coffin 1989, Ford 1989, Clark & Herrin 1997, Coulson & Leichenko 2001, Leichenko, Coulson & Listokin 2001, Coulson & Leichenko 2004, Coulson & Lahr 2005, Carruthers, Clark & Tealdi 2010, Heintzelman & Altieri 2011, Thompson, Rosenbaum & Schmitz 2011, Zahirovic-Herbert & Chatterjee 2012, Zahirovic-Herbert & Gibler 2012
WH3: Historic districts that have both a local and national designation have higher property values than historic districts with only a local designation.	Asabere & Huffman 1991, Schaeffer and Millerick 1991, Asabere & Huffman 1994, Haughey & Basolo 2000, Coulson and Leichenko 2001, Leichenko, Coulson & Listokin 2001, Coulson & Lahr 2005, Gordon & Vaughan 2012, Zahirovic-Herbert & Chatterjee 2012, Zahirovic-Herbert & Gibler 2012, Heintzelman & Altieri 2013
WH4: Historic districts located in the downtown central business district have higher property values than historic districts located outside of the central business district.	Haurin 1988, Asabere & Huffman 1991, Haughey & Basolo 2000, McMillen 2003
WH5: Historic districts with an older average age of homes have higher property values than historic districts with newer homes.	Asabere & Huffman 1991, Schaffer & Millerick 1991, Asabere & Huffman 1994, Clark & Herrin 1997, Haughey & Basolo 2000, Coulson & Lahr 2005, Hayunga et al. 2008, Narwold 2008, Carruthers, Clark & Tealdi 2010, Thompson, Rosenbaum & Schmitz 2011, Winson-Geideman, Jourdan & Gao 2011, Zahirovic-Herbert & Gilber 2012, Heintzelman & Altieri 2013

Literature Review

Proximity Characteristics

The location of a home in relation to a historic district can influence the value of the property. The sphere of influence from the historic district includes homes within the historic district as well as homes surrounding the historic district. This section will review the literature concerning the effect that proximity to a historic district has on residential property values. Additionally, this section will review the literature on the effect that proximity to the central business district has on residential historic district property values.

Property Value within the Historical District

This section will look at the effect that historic districts have on property value, explore both sides of the issue, and conclude with a hypothesis this study will test.

Historic districts have a positive effect on the values of homes located within their boundaries (Coffin 1989, Coulson & Leichenko 2001, Ford 1989, Leichenko, Coulson & Listokin 2001, Zahirovic-Herbert & Chatterjee 2012). Houses located in historic districts are typically valued 5% to 27% higher than similar homes in non-historic neighborhoods (Clark & Herrin 1997, Leichenko, Coulson & Listokin 2001, Asabere & Huffman 1994, Zahirovic-Herbert & Gibler 2012, Coulson & Lahr 2005, Carruthers, Clark & Tealdi 2010). Several explanations regarding why the property values are higher in historic districts have been proposed.

Maintaining a home's original design will increase its value (Clark & Herrin 1997). Extra additions to an older house often alter the design and appearance of the structure causing it to lose value.

Historical information about a home makes the house more appealing to buyers, thereby increasing the value (Coffin 1989). Historic districts require that owners maintain a certain appearance and standard (Romero 2004). This creates a type of "insurance" for property owners that increase the likelihood that the quality of the neighborhood will be maintained (Leichenko, Coulson & Listokin 2001). The continued rehabilitation of properties improves a neighborhood's character that, in turn, increases the neighborhood's property values (Zahirovic-Herbert & Chatterjee 2012). Along with repaired and renovated homes, the rehabilitation of a historic area brings a reduction in crime and an increase in community tourism (Zahirovic-Herbert & Gibler 2012). Low crime rates and community tourism increase property values in a neighborhood. While it is generally accepted that historic districts increase the values of the properties within their boundaries, some dissenting opinions hold that historic districts actually reduce property value.

In some cases, property values in some historical districts have declined when compared to similar non-historic neighborhoods (Schaffer & Millerick 1991). The decline in property value is attributed to restrictions on land use and development codes (Schaffer & Millerick 1991). These restrictions and codes significantly increase the cost of property rehabilitation and reduce reinvestment in property by owners (Schaffer & Millerick 1991, Haughey & Basolo 2000); thereby reducing their market value for some buyers, especially those considering using the buildings for other uses (Zahirovic-Herbert & Gibler 2012).

Comparing the average property values between the homes in historic districts and similar homes in non-historic neighborhoods will identify to what extent the designation of a neighborhood as historic affects the residential property values either positively or negatively.

Accordingly, the following hypothesis is proposed: homes in historic districts have higher property values than comparable homes in non-historic districts.

Property Value Surrounding a Historical District

Spillover effects are defined as positive property value increases that are experienced by properties in close proximity to historic districts. Heavy restrictions can reduce property value; however, homes surrounding historic districts are not subject to the land use and building restrictions that are present in historic districts. These benefits turn a historic district into a positive externality, increasing the property values of surrounding homes (Coulson & Leichenko 2001). There are potential spillover effects for homes that are within a quarter mile of the historic district's boundaries (Coulson & Leichenko 2001, Ford 1989, Zahirovic-Herbert & Chatterjee 2012, Coulson & Leichenko 2004, Thompson, Rosenbaum & Schmitz 2011). Homes within 100 feet of a historic district boundary sell for a fourteen percent "premium" over similar homes in non-historic neighborhoods (Carruthers, Clark & Tealdi 2010). Spillover effects begin to dissipate as the distance from the district is increased, beginning after four city blocks from the historic district (Heintzelman & Altieri 2011).

Historic neighborhoods are often better maintained and, as a result, non-historic properties that border these historical districts tend to have higher property values (Coulson & Lahr 2005, Leichenko, Coulson & Listokin 2001). In addition, historic districts provide an incentive to surrounding property owners to invest and improve their homes, and benefit from the design restrictions placed on historic properties (Ford 1989, Leichenko, Coulson & Listokin 2001). Being on the edge of a well-maintained neighborhood can increase property values, because the homes are often better kept and more aesthetically pleasing. Bordering homes enjoy

the perks of a historic district, well maintained and renovated homes, without having to incur the associated costs or restrictions (Zahirovic-Herbert & Gibler 2012).

Other studies find no proximity effect for non-historical homes. For example, a study of property values of homes surrounding historical districts in Baton Rouge, Louisiana, found no increase in property values of homes adjacent to historical districts. The homes surrounding historical districts in Baton Rouge, Louisiana, did experience faster sales times as a result of the historic district positive externality (Zahirovic-Herbert & Gibler 2012). Demand for properties surrounding historic districts is high because those homes are an alternative for people who want historic properties but have financial limitations (Zahirovic-Herbert & Gibler 2012). A 20% decrease in the property values of homes within one block of a historic district was recorded in Sacramento, California, with no effect on value found for homes further than one block away (Clark & Herrin 1997). A high demand for homes located within a historic district can significantly lower the demand for nearby non-historic homes (Coffin 1989, Clark & Herrin 1997). Some buyers are only looking for homes specifically located inside of historic districts.

Comparing the average property values between homes in close proximity to a historic district and similar non-historic homes will identify to what extent the designation of a neighborhood as historic affects, either positively or negatively, the residential property values of homes surrounding a historic district. Accordingly, the following hypothesis is proposed: homes located in close proximity to a historic district have higher property values than comparable homes not located near a historic district.

Proximity to the Central Business District

Similar to historic districts, central business districts have a spillover effect onto the value of nearby properties. The closer a home is to the central business district the greater the sales premium it experiences (Haughey & Basolo 2000, Asabere & Huffman 1991, Haurin 1988). The higher property values that are associated with close proximity to the central business district quickly dissipate as the distance from the central business district is increased. For every mile away from the central business district, homes experience a 3.8% to 8% reduction in property value (McMillen 2003). In recent years, urban areas have seen a shift in central business districts from a manufacturing core to office buildings and white collar jobs. This shift has created a need for housing in and around the central business district. Higher property values for homes close to the central business districts are attributed to an increase in high paying downtown employment and the consequent need for more housing (McMillen 2003). Homes close to the central business district are typically some of the oldest structures in the city, and often have been neglected and left to deteriorate as the working population move farther from the urban core to the suburbs. The industry shift in the central business district makes these homes good candidates for renovation, which adds to the value of the house (McMillen 2003).

The literature indicates that properties closer to the central business district will have higher property values. It can be inferred that because homes near the central business district experience higher property values, a neighborhood or historic district as an aggregate of homes would also experience higher property values as a result of being close to the central business district. Comparing the differences in average property value for a historic district to the respective distance from the central business district that the historic district is located will identify if proximity to the central business district has an effect on the residential property

values of a historic district. This concept has not been examined thoroughly in the literature; however, this study will explore this relationship. Comparing the difference in average property value for a historic district to its distance from the central business district is a part of the conceptual framework for this study.

Historic District Characteristics

The property values inside a historic district are affected by a variety of different overall district characteristics. This section will review the literature concerning the effect that the type of district designation, national or local, has on the residential property values.

Type of District Designation

There are two historic district designations in the U.S.; a national designation where the district is listed in the national register of historic places, and a local designation that is awarded on the municipal level. A historic district can have one or both of these designations. The effect on property value associated with a historic district house can change based on whether the district has a national designation, local designation or both (Zahirovic-Herbert & Chatterjee 2012).

National designation has a greater effect on the increasing property values in a historic district than a local designation (Coulson and Leichenko 2001, Haughey & Basolo 2000). National historic districts are very prestigious which causes the property values to be higher than local districts (Zahirovic-Herbert & Chatterjee 2012, Schaeffer and Millerick 1991, Leichenko, Coulson & Listokin 2001). Many property owners take pride in the fact that their home is recognized by the federal government as historic, bestowing prestige on the historic buildings.

Fewer restrictions on land use and regulations on property exist with a national designation, which is favorable for a buyer (Zahirovic-Herbert & Gibler 2012). Buyers looking for a property are not in favor of areas with restrictions that can limit or restrict their potential land use.

Nationally designated properties have even more prestige than homes located within a national historic district because the individual house has been identified as historic over the area as a whole. A property value increase of 0.14% for every historically designated house within a census track has been observed (Coulson & Leichenko 2001). This observation explains that having more nationally designated homes in a historic district will cause the district's average property value to rise. Individual nationally designated homes do not share the same proximity effect as national historic districts. Homes close to nationally designated properties do not experience a proximity benefit unless they are located in a historic district (Carruthers, Clark & Tealdi 2010). Local districts have a lesser effect on property value because of heavy design and land use restrictions.

Required code compliance with local historic district regulations causes high levels of property maintenance (Schaeffer & Millerick 1991). Local districts regulate the exterior appearance of a property and often require home exteriors to be maintained or receive the consequence of a fine. More stringent and restrictive building codes can dissuade investors by making rehabilitations and new development a long and expensive process (Haughey & Basolo 2000, Asabere & Huffman 1991). Local districts must grant certificates of appropriateness for all renovations and additions. Obtaining approval under this process can be lengthy and usually requires homes to use traditional, often more expensive, materials. Historic district land use restrictions can reduce property value by preventing the "best use" of a property and limiting its future potential uses (Coulson & Lahr 2005). It was observed that creating a local historic district

can reduce the value of homes inside the district by 11.6% to 15.5% (Heintzelman & Altieri 2013). While it is generally accepted that local designation has a lesser effect on the property value increase of the properties within their boundaries, some dissenting opinions hold that local designations have a greater effect on property value.

Dissenting literature argues that districts with a local historic designation have a greater effect on the property value of homes inside the historic district than national districts. The increased regulation and restriction that is associated with local historic designation creates neighborhood stability, increasing the value of properties (Coulson & Lahr 2005, Asabere & Huffman 1994). The extra local ordinances help maintain the appearances of the neighborhood and preserve its character, thereby raising property values (Gordon & Vaughan 2012). One study observed a 14% value increase associated with local historic designation, while national designations caused a 4% reduction in value (Coulson & Lahr 2005).

The majority of the literature indicates that a national historic designation has a greater effect on property values than a local historic designation. Districts with a duel designation should have the greatest effect on property values by providing benefits from both designations. This study will compare the average property values between nationally designated districts, locally designated districts, and districts with both designations. This comparison will identify whether the district's type of designation has an effect on the average property value of the district. This concept has been minimally examined in the literature and this study will explore this relationship in more depth. Measuring the difference in average property values between national, local, and duel historic districts is part of the conceptual framework for this study.

Historic District Composition Density

   The composition characteristics of a historic district can affect the average property value. This section will review the literature concerning the effect that two different composition characteristics of a historic district have on the residential property values. The two district composition characteristics that are explored in this study are (1) the number of nationally designated individual homes in the district, and (2) the average age of homes in the district.

Average Age of Homes

   The average age of homes within a historic district can affect the average property value within the district. Older homes have higher values than newer homes (Asabere & Huffman 1994). The higher property values are experienced by homes that are at least forty-eight years old and the value continues to grow with the highest value being experienced by homes that are between 80 and 119 years old (Hayunga et al. 2008, Narwold 2008, Winson-Geideman, Jourdan & Gao 2011).

   Older homes or homes of "the greatest historical importance" are the most likely to be renovated, which increases the value of the property (Asabere & Huffman 1994, Winson-Geideman, Jourdan & Gao 2011). Economic incentives, such as tax rebates and grants, to renovate older homes are high because of the prestige associated with them. Older homes have higher values because they are perceived to be culturally and structurally unique, and superior as well as a rarity in the housing market (Haughey & Basolo 2000, Hayunga et al. 2008, Winson-Geideman, Jourdan & Gao 2011). Buyers are willing to pay more over the value of a home for the oldest house they can find and claim as their own (Winson-Geideman, Jourdan & Gao 2011, Narwold 2008). Additionally, the extra restrictions from historical district designation can reduce

values on newer development (Heintzelman & Altieri 2013). The restriction imposed by historic districts can severely limit the design options of new construction, and make the process lengthy and cost ineffective. While the literature strongly advocates that older homes have higher values, some dissenting opinions argue that age reduces property value and that new development has higher values.

The older a home is the less value it retains (Heintzelman & Altieri 2013, Zahirovic-Herbert & Gilber 2012, Schaffer & Millerick 1991). This reduced value is mainly caused by deterioration of the structure. However, the reduced value is mitigated if the old home is located in a historic district and the home is younger than 100 years old (Carruthers, Clark & Tealdi 2010, Clark & Herrin 1997). Historic districts provide regulation and incentives to maintain the structure and property as a whole. Additionally, the dissenting opinions argue that new homes are more valuable than old homes in a historic district.

Historic district benefits affect new properties and raise the property value of new development (Thompson, Rosenbaum & Schmitz 2011). Houses that are between zero and three years old benefit the most from historic districting (Coulson & Lahr 2005). These new homes are not as affected by the strict restrictions on redevelopment, which can be expensive and laborious; however, they can still be subject to design restrictions (Heintzelman & Altieri 2013). A study on land values found a 131% premium on the sale of residential vacant lots in historic districts (Asabere & Huffman 1991). These observations support estimates that new development in a historic district will experience higher values than new development outside of a historic district.

The literature indicates that older homes within a historic district have higher property values than newer homes within a historic district. From this it can be presumed that the older the average age of homes in a historic district, the higher the average property value will be.

Comparing the average house age between historic districts and its corresponding average property value will identify if the age of the homes in a district affects the average property value. Measuring the difference in average home age and average property value for historic districts is a part of the conceptual framework for this study.

The next chapter will describe the research methods used for this study.

Chapter 3

Research Methods

Introduction

The purpose of this chapter is to explain the research methods used in this study. The chapter begins with an explanation of the research method, followed by the operationalization of the conceptual framework. The sampling methods and data sources follow next. The variables and statistical analysis are described last.

Research Method

Previous research on this topic was primarily conducted through case study method using hedonic regressions. These case studies are not generalizable and, therefore, the conclusions made may not apply in other locations (Babbie 2007). It is the aim of this study to provide generalizable conclusions about the influence historic districts have on residential property values for cities similar to those examined in this study.

The research method used in this study is quantitative analysis that aggregates individual level housing data into aggregate neighborhood data. The aggregate neighborhood property data needed for this study is not recorded by any official agency; however, it was compiled using existing individual level housing data which is recorded. Quantitative analysis of aggregate data has benefits and weaknesses.

The benefits of quantitative analysis include low to no cost readily accessible data that can be collected in an unobtrusive manner. Quantitative analysis of aggregate data has very little to no cost because the data already exists, and is often collected by public agencies (Babbie

2007). The data collected in this study was readily available and free to access. As an unobtrusive research method, the researcher does not affect the subjects of the study (Babbie 2007). This study does not require any interaction with members of the general public and, therefore, data collection will not affect the residents who live in the historic districts being studied.

The weakness of quantitative analysis of aggregate data is that the study is limited to only information that has previously been recorded (Babbie 2007). This is relevant because data collected on the county level has been omitted from the records in some counties. An example of this is missing entries for age of a home from some of the individual level house samples. This occurred because each county has different reporting procedures and requirements. Additionally, property tax is determined by a human, so there exists a certain amount of personal bias and human error that cannot be avoided; however it can be reduced by aggregating the data.

Table 3.1 presents the operationalization of the conceptual framework, and the dependent and independent variables. A copy of the coding sheet is presented in Appendix A.

Table 3.1: Operationalization of the Conceptual Framework		
Variables	Operationalization	Data Source
Historic District Average Residential Property Value ($)	HDVALUE = sum of residential property values/number of residential properties	County Appraisal Office
Bordering Neighborhood Average Residential Property Value ($)	BORDERVALUE = sum of residential property values within two blocks of the historic district/ number of residential properties	City Website and County Appraisal Office
City Median Residential Property Value ($)	CITYVALUE = median residential property value	U.S. Census Bureau 2012 American Community Survey
Central Business District (# of miles)	CBD: Ratio measure	City Planning Department
Type of Designation (0,1 variable)	NATIONALHD 0 = Local Designation Only 1 = Both Local and National Designations	Texas Historic Commission, National Register of Historic Places, City Planning Department
Average Age of Homes (year built)	AVGAGE = sum of the year built for each home/number of homes	County Appraisal Office, City Planning Department
Adjusted Historic District Value (%)	ADJHDVALUE = (HDVALUE / CITYVALUE) x 100	County Appraisal Office and U.S. Census Bureau 2012 American Community Survey

Sample

This study uses aggregate neighborhood data from twenty historic districts (n=20) in Texas cities with a populations between 10,000 and 75,000. The unit of analysis being examined is the district/neighborhood. Out of each district and neighborhood examined, thirty residential properties were selected by random sampling. In order to measure the spillover effects, homes

that are within two blocks of the perimeter of each historic district will be included as a border neighborhood in the sample.

Once the sample districts and neighborhoods are identified, aggregate statistics will be compiled from a sample of the individual homes. The method used for sampling of the individual level data will be a random sample. Random sampling of individual houses within the identified neighborhoods will reduce researcher bias and increase the likelihood of achieving a representative sample. Additionally, the random sample will account for some variations in neighborhood housing stock and localized market effects.

Sampling is necessary because of the limited time and resources available to this study. Table 3.2 summarizes the cities and districts that were selected for this study.

Table 3.2: Summarization of Sample	
City	Historic District Name
Buda	Old Town
Galveston	East End
Galveston	Silk Stockings
Galveston	Lost Bayou
Georgetown	Old Town
Grapevine	D.E. Box Addition
Grapevine	College Street
Nacogdoches	Zion Hill
Nacogdoches	Virginia Avenue
Nacogdoches	Washington Square
Paris	Church Street
Rockwall	Old Town
San Marcos	Belvin Street
San Marcos	Burleson
San Marcos	Hopkins Street
San Marcos	San Antonio Street
San Marcos	Dunbar
San Marcos	Lindsey- Rogers
New Braunfels	Sophienburg Hill
Bryan	Eastside

Data Sources

       The data for this study comes from five sources; county appraisal offices, the Texas Historic Commission, the National Register of Historic Places, U.S. Census Bureau and city planning departments. The county appraisal office will be the source of all of the property tax data as well as the ages of homes. The Texas Historic Commission and National Register of Historic Places databases will be used to obtain information on historic properties. The U.S. Census Bureau 2012 American Community Survey will be used to obtain information on city median residential property values. City planning departments will be used to identify comparable non-historic neighborhoods, boundaries to historic districts, and distance from neighborhoods to the central business district.

Variables

Historic District Average Residential Property Value

       HDVALUE represents the average residential property value for the homes inside of the historic district. The measure for this variable is the U.S. dollar. This variable will be compiled for each neighborhood by taking the mean of the appraised property value from the homes sampled in the individual level data sample. For ease of calculation, HDVALUE has been rounded to the nearest whole dollar. The data for the individual level sample will be collected from the various county appraisal offices. This measure does have some reliability concerns, because the tax appraisal process allows for some appraiser discretion which creates bias. The averaging of the data will mitigate these concerns and improve the reliability of the measure.

Border Neighborhood Average Residential Property Value

The variable BORDERVALUE represents the average residential property value for homes within two city blocks of a historic district. A study by Heintzelman & Altieri found that spillover effects were observed within four blocks from the historic district (2011). This study will use a sample of homes within two blocks of the historic district, a more conservative distance for bordering neighborhood. The measure for this variable is the U.S. dollar. This variable will be compiled for each neighborhood by taking the mean of the appraised property value from the homes sampled in the individual level data sample. For ease of calculation, BORDERVALUE has been rounded to the nearest whole dollar. The data for the individual level sample will be collected from the various county appraisal offices. This measure does have some reliability concerns because the tax appraisal process allows for some appraiser discretion which creates bias. The averaging of the data will mitigate these concerns and improve the reliability of the measure.

City Median Residential Property Value

This variable controls for the unaccounted factors that influence the city average residential property value. This variable, CITYVALUE, will measure the city median residential property value in U.S. dollars. Median value for a city's residential property was chosen over a mean value, to mitigate the effects of both extremely high value and low value homes that could bias the mean value of a city's housing stock. CITYVALUE will be collected from the U.S. Census Bureau 2012 American Community Survey. This variable will be used in a comparison of means analysis and as a control variable to account for additional externalities that are not examined in this study that influence property values such as market forces and geographic features (i.e. rivers, lakes and oceans).

Central Business District

As identified in the literature review, the distance a neighborhood is located from the central business district can influence the property value. The variable CBD measures the distance in miles between the central business district and the neighborhood. Districts and neighborhoods often have amorphous shapes without an easily identifiable center which would make calculating the distance from neighborhood center to central business district center very difficult. To avoid this difficulty and inaccuracy, this study will measure the shortest distance from the neighborhood boundary to the central business district boundary. To maintain as much accuracy as possible, this measurement will be performed using GIS data and tools provided by each city's planning department.

Due to a small sample size (n=20), this variable will be recorded as a bivariate response; in the central business district, and out of the central business district. Because all of the historic districts are abutting or within one-half mile of the central business district, "in" and "out" will be distinguished by "in" meaning abutting or within one city block (0.2 miles) of the central business district. "Out" meaning any district farther than one city block (0.2 miles) from the central business district. The measures for this variable will be coded as 0= less than 0.2 miles from the CBD, and 1= farther than 0.2 miles from the CBD. With this small sample (n=20), testing this variable as a bivariate should increase the accuracy and statistical significance of the test.

Type of Designation

The type of historical designation can influence the average residential property value. In Texas, there are only two types of historic districts, local historic designation only and dual designation districts, meaning a district with both a national and a local designation. This allows for only two possible choices for designation for all the neighborhoods in the sample; local only, and dual designation. The variable NATIONALHD is used to record this nominal data. The variable identifies local and dual districts with the measures; 1= dual district designation and 0= local designation only. The data for this variable was collected from the National Register of Historic Places and the planning department of each individual city.

Average Age of Homes

The average age of a neighborhood can influence the average property value. The variable AVGAGE measures the average year built of the sampled homes from each neighborhood. For ease of calculation, AVGAGE has been rounded to the nearest whole year. This was calculated by aggregating the sampled individual level housing data. In some cases, the year an individual level home was built was unable to be determined due to incomplete records maintained by the respective data sources. These cases were omitted from the neighborhood average age calculation because zero values would have skewed the average age measure. Individual level year built information was provided by the county appraisal offices and the city planning departments.

Due to a small sample size (n=20), this variable will be recorded as a bivariate response. Previous studies of historic properties found that the greatest effect on value was experienced by homes that were over eighty years old (Hayunga et al. 2008, Narwold 2008, Winson-Geideman,

Jourdan & Gao 2011). Based on the literature, homes built before 1934 have the greatest impact on property values. This study will round up from 1934 and use 1940 as the cutoff for the sample. Districts with the average year built of 1940 or before will be coded with a "0." Districts with the average year built of 1941 or after will be coded with a "1." With this small sample (n=20), testing this variable as a bivariate should increase the accuracy and statistical significance of the test.

Adjusted Historic District Value

   In order to account for some of the unknown external factors that can affect property value, the variable ADJHDVALUE will be created to test the value enhancing district characteristics. This variable will represent historic district value as a percentage of the city median value. ADJHDVALUE will be created by dividing HDVALUE by CITYVALUE, and then multiplying by one-hundred to create a percentage. By expressing the historic district value as a percentage of the city median value, additional unaccounted for external factors, such as housing market condition, geography, and household income, should be neutralized. ADJHDVALUE will be used to test the three historic district characteristics identified as CBD, NATIONALHD and AVGAGE.

Statistical Analysis

   This study will use comparison of means testing to determine whether historic district designation has an effect on residential property values. The comparison of means will reveal general relationships that exist in the sample among the variables being tested. Due to the small

sample size (n=20), a more in-depth statistical analysis, such as regression analysis, would yield unreliable results.

Comparison of descriptive statistics will be used to determine if historic district and bordering neighborhood property values are higher than the city median value. Comparing the means of HDVALUE and CITYVALUE will indicate whether property values in historic districts are greater than city median property values. Additionally, comparing the means of BORDERVALUE and CITYVALUE will indicate whether property values in bordering neighborhoods are greater than city median property values. While comparing means will identify differences in values, it has some weaknesses.

With a small population of n=20, there is a chance that the sample is not representative of the population. Additionally, this type of analysis does not account for all outside influences to property values and, consequently, the results can be biased and cause spurious conclusions. The results from this test are only representative of the sample and cannot be generalized to all historic districts or bordering neighborhoods. The historic district characteristic variables will be analyzed using individual sample t-tests.

Individual sample t-tests will be used to analyze the effects that the historic district characteristics, distance from the central business district, national historic designation, and age have on the residential property value of a historic district. T-test analyses are used for testing the significance of difference between the means of two populations, based on the means and distributions of two samples (Williams & Monge 2001). The t-test determines the probability of occurrence of a null hypothesis against the working hypothesis (Williams and Monge 2001). Table 3.3, below, lists the working hypotheses and null hypotheses for the historic district characteristics tested.

Table 3.3 Working and Null Hypotheses	
Working Hypothesis	Null Hypothesis
WH3: Historic districts that have both a local and national designation have higher property values than historic districts with only a local designation.	$WH3_0$: The type of historic designation has no effect on property value.
WH4: Historic districts located in the downtown central business district have higher property values than historic districts located outside of the central business district.	$WH4_0$: The distance from the central business district has no effect on property value.
WH5: Historic districts with an older average age of homes have higher property values than historic districts with newer homes.	$WH5_0$: The average age of homes in a historic district has no effect on property value.

The results produced from the independent samples t-test analysis will indicate if the null hypothesis for a tested characteristic can be rejected. If the null hypothesis is rejected, then it can be assumed that the characteristic affects the property value of a historic district.

The output statistics from the independent samples t-test analysis contain the following: n-values, mean values, standard deviation values, t-value and sig. value. The n-values indicate the number of cases from the sample for each condition. The mean values indicate the mean value for each of the two conditions. This value will determine which of the conditions tested has a greater influence on residential property values in historic districts. The standard deviation for each condition is also in the output. The standard deviation is the square root of the variance, and will provide insight into the distribution of the scores for each condition (Williams & Monge 2001).

The t-value and sig. value indicate the probability of occurrence in testing the null hypothesis with the alternative working hypothesis (Williams & Monge 2001). This study will use the standard confidence interval of 95%, meaning that there is a 5% chance of the null

hypothesis being true. While t-testing is a good fit for testing the hypothesis, it has some weaknesses.

Skewed sample distributions can affect the accuracy of the independent samples t-test. Additionally, the independent samples t-test only tests the one condition, and does not account for any additional factors that may influence the dependent variable (ADJHDVALUE). With a small sample size this can cause the results to be unreliable and not valid. This type of analysis does not account for all outside influences to property values and, consequently, the results can be biased and cause spurious conclusions. Some of these weaknesses have been accounted for through variable adjustments. SPSS statistical software will be used for all statistical analysis.

Chapter 4

Results

Introduction

In this chapter the results of the data analysis are presented. The sample size is n=20 and represents twenty historic districts from ten Texas cities with populations between 10,000 and 75,000. Because of this small sample size (n=20), additional statistical testing beyond descriptive statistics and independent samples t-tests was not performed as it would most likely yield inaccurate results. The following section discusses variable adjustments. The subsequent section discusses the data and results of the statistical tests.

Variable Adjustments

During data collection, it was discovered that Hays County Appraisal District does not keep records of the year homes were built. Six of the districts sampled are within Hays County. To minimize the number of omitted entries in the data set, other data sources were used to supply the missing data. First, cultural resource surveys were used to provide the missing data, which were obtained from the various city planning departments. The real estate website *Zillow.com* was used for properties not listed in the cultural resource survey. The next section discusses the data and results of this study.

Descriptive Statistics

Table 4.1, below, is a bar chart comparing the mean values of the historic district, border neighborhood, and overall city property values sampled.

Table 4.1 Comparison of Mean Variable Values

Comparison of Mean Values

(bar chart, y-axis labeled "Thousands" from 0 to 180 in increments of 20)

- Historic District Average: ~170
- City Average: ~147
- Border Average: ~110
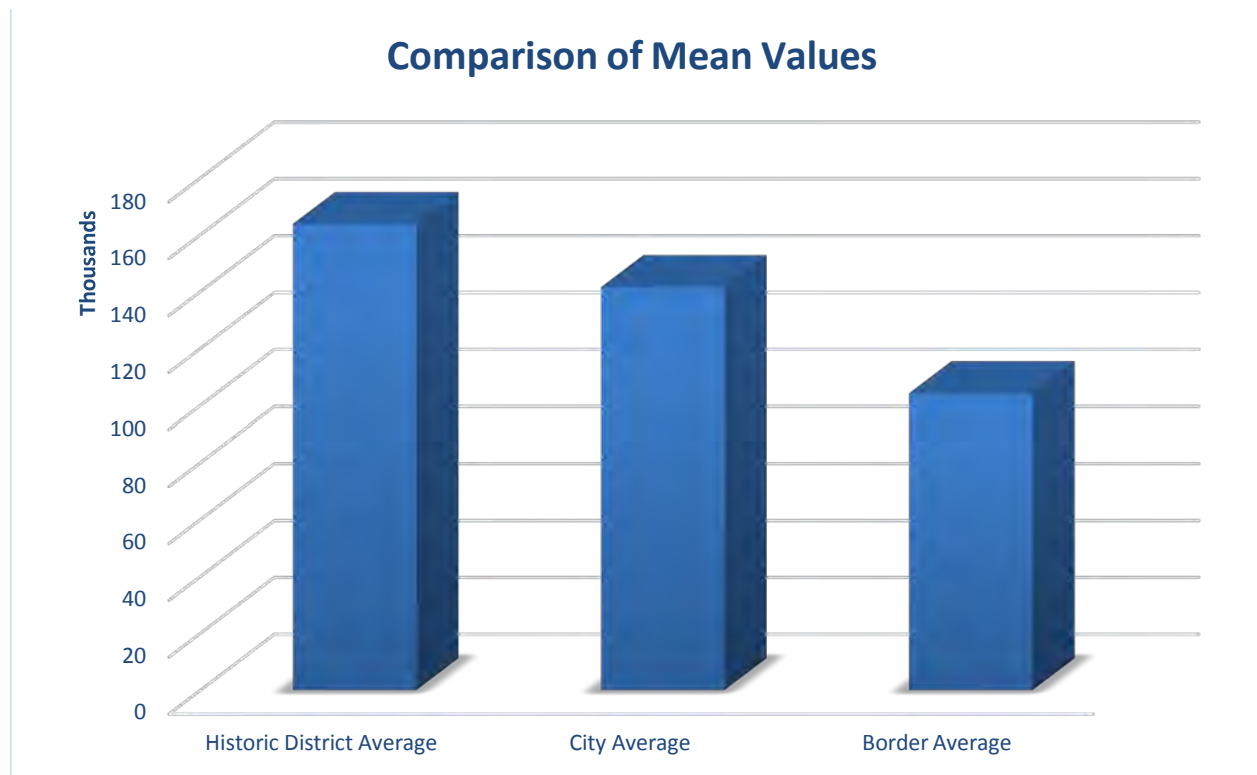
Based on the comparison of means, there is mixed support for the hypotheses. As expected, historic districts have a higher mean value than border neighborhoods and overall city values. However, border neighborhoods have a lower mean value than the overall city average.

One possible explanation of this finding can be that homes in border neighborhoods are not renovated or rehabilitated at the same rate as homes in the historic districts. The literature indicates that renovation and rehabilitation of older homes contributes to higher values in historic districts (Zahirovic-Herbert & Chatterjee 2012). Without the economic incentives, such as tax credits, border neighborhoods are less likely to be renovated. Additional externality factors such

as being located near a university campus or having a large number of undeveloped lots nearby can explain the outliers of border neighborhoods.

The Lindsey-Rogers historic district in San Marcos is directly adjacent to Texas State University. This proximity to a major university can influence values of surrounding homes causing the values to be unusually high. Additional factors such as high numbers of undeveloped vacant lots in a neighborhood can cause the values of homes to be significantly lower. The area surrounding the Virginia Avenue historic district in Nacogdoches has many undeveloped vacant lots, which can account for the very low border neighborhood value. The next section will discuss in depth the relationships between historic districts, border neighborhoods and overall city values.

Table 4.2 Historic District, Border Neighborhood and City Property Values
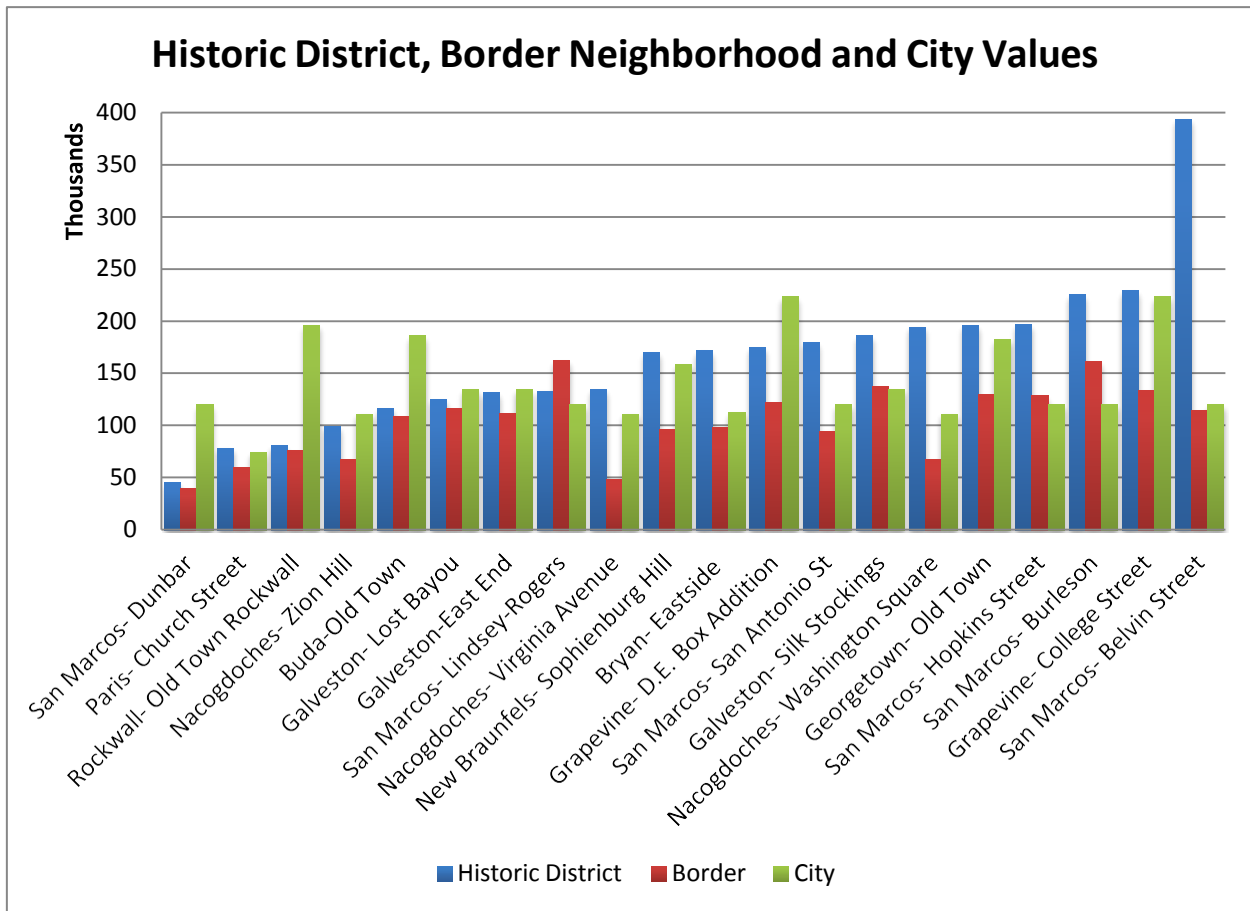
Historic district average property value (HDVALUE) is the average of a random sample of the county appraised tax value of single-family homes within the historic district boundaries. The mean historic district property value is $163,790, with a median of $171,549 (See Table 4.3). The range of property values for historic districts is $348,351, with a lower value of $46,185 and an upper value of $394,536. It is important to note that historic districts have the greatest variation in property values compared to non-historic districts. Historic district property values have a standard deviation of $74,064 compared with $35,164 for border neighborhoods and $40,640 for overall city values.

The average property value for historic districts is $22,275 greater than the average of residential property values for all cities. This is a 16% difference in value (See Table 4.1). Cities with residential property values between $130,000 and $185,000 have the smallest variation between historic district values and city values (See Table 4.D). This may be attributed to a relatively high city value and historic district properties being valued near the top of what the housing market will bear for that city. The value of homes bordering historic districts will be examined next.

Neighborhoods that border historic districts are expected to have higher property values that the city average.   Border neighborhood average property value (BORDERVALUE) is the average of the county appraised tax value of a random sample of single-family homes within two blocks of the historic district. The mean border neighborhood property value is $104,229, with a median of $110,514 (See Table 4.3). The range of property values for border neighborhoods is $122,869, with a lower value of $40,209 and an upper value of $163,078. Border neighborhood property values have a standard deviation of $35,164, which is the lowest value when compared with $74,064 for historic districts and $40,640 for overall city values.

The average property value for border neighborhoods is $59,561 less than the average property value for historic districts. This is a 57% difference in value (See Table 4.1). Historic districts with property values over $170,000 have the largest difference between historic district values and border neighborhood values (See Table 4.2). The overall city values for each city sampled will be examined next.

The average values for all residential properties within a city are expected to have the lowest values. Overall city residential property value (CITYVALUE) is the median value for the

single family residential properties in the city as reported by the U.S Census Bureau's 2012 American Community Survey. The mean city residential property value is $141,515, with a median of $121,200 (See Table 4.3). The range of property values for city residential property values is $149,100, with a lower value of $75,100 and an upper value of $224,200.

This variable has a lower mean value than the historic district values; however, it does have a greater value than border neighborhood values. The mean of the border neighborhood property values is $37,286 less than the mean city residential property value. This is a 36% difference in value (See Table 4.1).   The next section will provide the results for each of the historic district characteristics examined.

Table 4.3 – Variable Descriptive Statistics				
Variable Name	N	Mean	Median	Standard Deviation
HDVALUE	20	$163,790	$163,790	$74,064
BORDERVALUE	20	$104,229	$110,514	$35,164
CITYVALUE	20	$141,515	$121,200	$40,640

Table 4.4 Historic District and City Property Values
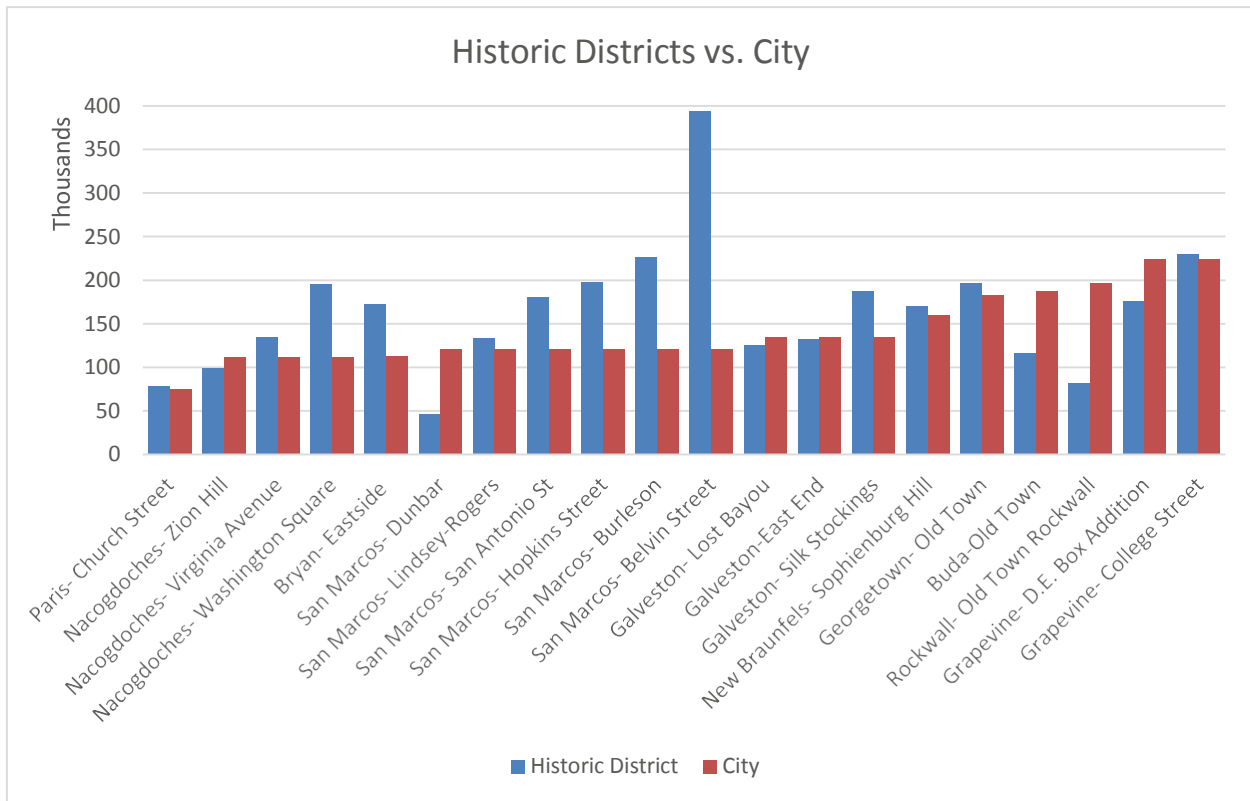
Explaining the Effects of Historic Districts

A variety of neighborhood characteristics might explain the magnitude of the effects of historic district designation, including distance from the central business district, the type of historic designation, and the age of the homes in the district. In order to adjust for unknown variables in property values, such as market condition, geography, and household income, the variable ADJHDVALUE was created. This variable is an expression of historic district values as a percentage of their respective city average. It is important to note that because the sample (n=20) was smaller than originally anticipated, the possibility for statistical error is greater. This section will analyze the results from the three historic district characteristics identified, and

determine whether they have an influence on the benefits experienced by historic designation.

Central Business District Proximity

Proximity to the central business district should affect the benefits of HD designation because homes located close to the central business district are often the oldest and best candidates for renovation (McMillen 2003). Additionally, the nationwide increase in high paying downtown employment and desire to live close to work should affect property values (McMillen 2003). The variable CBD measures if the historic district is within 0.2 miles from the central business district. Of the twenty sampled districts, nine districts were less than 0.2 miles from the city's central business district; six of those districts were abutting the central business district. Eleven districts were greater than 0.2 miles from the city's central business district, with the farthest district being approximately one-half mile from the central business district.

Historic district property values are higher for districts that are farther than 0.2 miles from the central business district. This finding is not in the expected direction. The difference in the property values for historic districts that are farther than 0.2 miles of the central business district (M=147.73, SD=67.331) and historic districts that are within 0.2 miles from the central business district (M=91, SD= 41.665) were statistically significant (t (18)= 2.2, p= .041) (See Table 4.5).

This finding may be attributable to the size of the city and potential lack of high paying employment. The cities sampled had populations ranging from 10,000 to 75,000, and are small to mid-sized cities. High paying jobs in downtown central business districts are typically seen in much larger cities and metropolitan areas such as Houston, Dallas and Austin. The business

types in most of the sampled central business districts are restaurant, retail and small office, which are not typically high paying jobs.

Table 4.5 – Central Business District				
CBD	N	Mean	Std. Deviation	Std. Error Mean
>0.2 miles	11	147.73	67.331	20.301
<0.2 miles	9	91	41.665	13.888
t = 2.2; sig. = .041				

National Historic Designation

A national historic designation should affect the benefits of the historic district designation because of the additional prestige brought to the area by the national designation (Coulson & Leichenko 2001). The variable NATIONALHD indicates if the historic district has a local historic designation or if the district has both a local and national historic designation. Ten of the districts sampled had both a local and national historic designation, while the remaining ten districts only had a local designation.

Historic district property values are higher for districts with the national designation. This finding is supported by the literature. However, further analysis indicates that the difference in the property values for districts that have only a local historic designation (M=111.9, SD=49.429) and districts that have both a local and national historic designation (M=132.5, SD= 75.307) was not statistically significant (t(18)=-.723, p=.479) (See Table 4.6).

One explanation for this finding is that all the districts sampled had local historic designations which are accompanied by additional local regulations. The added benefits associated with the national designation could be neutralized by the increased local regulation. The results indicate that homes within a historic district have higher property values than the average home in a city; however, no significant effect on property values from the type of designation was found in this sample.

Table 4.6 – National HD vs. Local HD				
NATIONALHD	N	Mean	Std. Deviation	Std. Error Mean
Local	10	111.9	49.429	15.631
National	10	132.5	75.307	23.814
t = -7.23; sig. = .479				

District Age

Older homes in a historic district should affect the benefits of the historic designation because homes that are older have greater historic significance and homeowners are willing to pay more for the oldest house they can find (Winson-Geideman, Jourdan & Gao 2011, Narwold 2008). The variable AVGAGE represents if the average home in the district was built in 1940 or before or if the average home in the district was built in 1941 or after. The oldest sampled district is the Belvin Street District in San Marcos with an average year built of 1915. The youngest sampled district is the Old Town District in Rockwall with an average year built of 1963.

Historic district property values are higher for districts that were built in 1940 or before. This finding is expected, and supported by the literature. The difference in the property values for historic districts that were built in 1940 or before (M=153.4, SD=69.308) and historic districts that were built in 1941 or after (M=91, SD= 37.193) were statistically significant (t(18)=2.509, p=.022)(See Table 4.7).

The variable AVGAGE does not take into account any value premium for being significantly older than 1940, such as the Belvin Street district in San Marcos (built in 1915) which has the highest value and the greatest value increase over city values of all the historic districts sampled. Previous studies of historic properties found that the greatest effect on value was experienced by homes that are between 80 and 119 years old, which supports the finding (Hayunga et al. 2008, Narwold 2008, Winson-Geideman, Jourdan & Gao 2011). The next section will present a summary of the findings.

Table 4.7 – District Age				
AVGAGE	N	Mean	Std. Deviation	Std. Error Mean
Pre 1940	10	153.4	69.308	21.917
Post 1940	10	91	37.193	11.762
t = 2.509; sig. = .022				

Summary of Findings

Historic districts were found to have higher property values than the overall city values. In contrast, border neighborhoods had an average property value that was less than the overall city value, which was not expected. Of the three historic characteristics examined, distance from the central business district and the age of the homes in the district were found to be statistically significant.

Historic districts located farther away than 0.2 miles of the central business district had a greater effect on the historic district benefit than districts within 0.2 miles of the central business district. This result is in contradiction with the literature and hypothesis. However, as expected, historic districts with homes built before 1940 had a greater effect on the historic district benefit than districts with homes built after 1940.

The results do show that historic districts with both a national and local designation have higher property values than districts with only a local designation. However, this observation was not statistically significant and based on the data collected, no inference can be made as to the relationship between national and local designations at this time.

These results are examined in the next chapter. The following Table 4.8 presents a summary of the findings for the independent variables.

Table 4.8 Summary of Findings		
Hypothesis	**Results**	**Finding**
WH1: Homes in historic districts have higher property values than homes in non-historic districts.	HDVALUE; M = $163,790 CITYVALUE; M = $141,515	The hypothesis is supported by the evidence.
WH2: Homes located adjacent to a historic district have higher property values than homes not located near a historic district.	BORDERVALUE; M = $104,229 CITYVALUE; M = $141,515	The hypothesis is not supported by the evidence.
WH3: Historic districts that have both a local and national designation have higher property values than historic districts with only a local designation.	Local = 111.9 National = 132.5 t = -7.23; sig. = .479	The null hypothesis cannot be rejected and the working hypothesis is not supported by the evidence.
WH4: Historic districts located in the downtown central business district have higher property values than historic districts located outside of the central business district.	> 0.2 mi = 147.73 < 0.2 mi = 91 t = 2.2; sig. = .041	The null hypothesis is rejected; however, the working hypothesis is not supported by the evidence.
WH5: Historic districts with an older average age of homes have higher property values than historic districts with newer homes.	Pre 1940 = 153.4 Post 1940 = 91 t = 2.509; sig. = .022	The null hypothesis is rejected and the working hypothesis is supported by the evidence.

Chapter 5

Conclusion and Recommendations

Introduction

   The purpose of this applied research project is to explore the effects that residential historic district designations have on residential property values in mid-sized Texas cities. The method used was quantitative analysis that aggregates individual level housing data into aggregate neighborhood data. The results of the statistical analysis only support two of the five hypotheses, and this chapter will explain the meanings of the findings.

Conclusions

   The most important finding of this study is that historic districts have higher property values than the city median value. The results of this study support the use of historic districting as a tool for economic development and neighborhood revitalization. While historic preservation has cultural value, without being economically beneficial, historic preservation would likely be unpopular and minimally used. Because of the governmental protection of historic districts, removal of the homes for redevelopment into large commercial structures, such as strip centers and business parks, is prohibited. In mid-sized cities, this will ultimately affect the design and layout of the city and aid in the integration of single family housing into business commercial areas, thereby encouraging a walkable community and public transportation, which are desirable concepts in current urban planning. Historic neighborhoods also help anchor community identity and promote tourism (Laurie 2008). Contrary to the literature and the hypothesis, no spillover effect was observed in this sample.

The benefits associated with historic districts were not observed to extend beyond the boundaries of the historic district. Bordering neighborhoods had lower property values than both the historic district and the city median. One explanation for this is that the historic districts have not been completely renovated and the city is not large enough to inspire the renovation of the bordering neighborhoods. Most of the case studies performed in literature review which found a spillover effect were in large cities and metropolitan areas such as New Orleans, Chicago and Baltimore. These cities have been largely developed and do not have many new large single family subdivisions being built near the core of the city. Because of the urban trend of recentralization in these cities, it is logical that the bordering neighborhoods have been renovated. In small and mid-sized cities, especially in Texas, there is still a large amount of land available within commuting distance to the urban core that is being developed into new single family subdivisions. Most likely, when the economics of residential development shift as the city grows, and undeveloped land within commuting distance of the urban core becomes increasingly scarce, these bordering neighborhoods will be renovated. This redevelopment concept has been witnessed with the renovation of the Eastside of Austin, stimulated by a housing crisis and recentralization pressures. Additional research of the spillover effect is necessary to determine what factors influence the rehabilitation of bordering neighborhoods.

Of the three historic district characteristics examined in this study only one, age of homes in the district, was statistically significant and in support of the hypothesis. The findings demonstrate that historic districts comprised of homes built in 1940 and before have the greatest impact on the property value benefit associated with historic districts. The literature supports this finding. In order to extract the greatest benefit from historic districting, local governments should identify the oldest neighborhoods as the best candidates for historic districting. Coincidently, the

oldest neighborhoods are also the best candidates for rehabilitation (McMillen 2003). The

rehabilitation of the oldest neighborhoods through historic districting can also be the solution to

urban blight, which is seen most often in the oldest parts of a city.

Contrary to the hypothesis, historic districts outside or farther than 0.2 miles from the

central business district had the greatest effect on the historic district benefit. One explanation for

this is based in urban zoning practice, that buffering is needed between incompatible uses, in the

case of this study, a minimum one block buffer between business commercial uses and detached

single family residences. A review of the literature indicates the highest property value benefits

for properties within one mile of the central business district (McMillen 2003). The added traffic

and noise associated with business commercial uses is not a desirable characteristic for detached

single family neighborhoods. By providing a buffer of at least one city block between the edge of

the central business district and the start of the single family neighborhood, much of the noise

and additional traffic can be mitigated. Maintaining walking distance between the residential

neighborhood and the commercial services provided in the central business district promotes a

walkable community. Additional research of historic district proximity to the central business

district is needed to determine if these results are localized to small and mid-sized Texas cities,

or if this phenomenon exists in larger cities and states.

It could not be established from this study whether a national historic district

designation affects property values in the historic district. The results from the statistical analysis

were not statistically significant. The literature provides strong support that a national historic

designation has a greater effect on the property value benefit experienced in historic districts.

Further research is necessary to determine the direction and size of the effect between districts

with both local and national designations and those with only a local designation.

Even though only one of the historic district characteristics was found to be statistically significant in support of the hypothesis, historic districting as a whole is useful for promoting residential rehabilitation and increasing property values.

Based on the results of this study, the general recommendation to Texas local governments with populations between 10,000 and 75,000 is to utilize historic districting as an economic development tool to promote rehabilitation, and increase the tax base through increased property values. The ideal candidate for historic districting is a neighborhood with homes built in 1940 or before, which is between 0.2 miles and 0.5 miles from the central business district.

This study has shown that despite the additional property restrictions and costs associated with renovating and maintaining a home in a historic district, historic districting does increase the average property value of a neighborhood. The value in a historic district comes from all the homes inside the district and the ability to maintain a common theme and character. Federal tax credits are issued for renovations of nationally designated historic commercial property and residential property that is not owner occupied. This is a benefit to private companies that are renovating and flipping homes, it does not encourage owner occupied properties to invest in home renovations. The federal government should provide tax credits for the renovations of nationally designated historic owner occupied homes to encourage historic preservation and rehabilitation of structures.

Small to mid-sized cities in Texas can use this study's recommendation for historic districts as a tool for economic development, by encouraging renovations in older residential neighborhoods. Cities that are small to mid-sized in Texas mostly attract new subdivision development over renovation or redevelopment of exist housing stock. Urban sprawl is often the

result of this lack of centralized redevelopment. By encouraging the renovation of existing housing stock, cities can provide an alternative to outward residential expansion while increasing their property tax base and ensuring orderly city development. The next section will discuss the limitations of this study, and provide suggestions for future research.

Limitations of the Study and Suggestions for Future Research

This research project was intended to provide generalizable conclusions about the influence historic districts have on residential property values for cities similar to those examined in this study. The sample size for this study was small (n=20), due to both the time required to gather data as well as the availability of the information. A larger sample would provide for a higher level of statistical analysis and results that are more generalizable. Because of the small sample size and the limited scope of the project, the results can only be generalized to cities in Texas with populations, geography, and market conditions similar to those in the sample. Future research on the general effect of historic districting on residential property values should focus on exploring each historic district characteristic individually in greater depth. This study will add to the body of knowledge for small to mid-sized cities struggling with residential economic development.

The academic literature and research on this subject is small and limited. Previous research on this topic was primarily conducted through a case study method using hedonic regressions. While these case studies are not generalizable, they do account for many of the additional aspects that influence residential property values, such as geographic externalities, market forces, housing stock, and local development trends. Few studies referenced in this research examined characteristics of the historic district.

This study attempts to account for some of the external forces through the creation of ADJHDVALUE; however, this does not account for all factors, including development trends, housing demand, and housing stock. These external factors can have a substantial influence on the cases in the sample. For example, the City of San Marcos had both the highest (Belvin) and the lowest (Dunbar) individual historic district values. The Belvin historic district is the oldest district sampled, and contains large two story homes including a few that are valued over one million dollars. In contrast, the Dunbar historic district, located only a few blocks from the Belvin historic district, is small lot small homes, most of which have not been renovated to the same extent as the Belvin historic district. This difference in housing stock can greatly affect the property values the historic district. Future research with the goal of generalizing the effects of historic districts on residential property values should use the aggregate values from all the historic districts in a city as the unit of measurement. This approach should minimize additional influences from outside factors.

Finally, a case study of San Marcos' historic districts may provide some insight into what other factors and district characteristics influence the residential property values in both historic districts and bordering neighborhoods. San Marcos has the greatest variance noted between historic districts of all the cities sampled and a case study would be a good exploratory study of historic districting.

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Appendix A

Example Data Coding Sheet							
District Name	HDVALUE ($)	BORDERVALUE ($)	CITYVALUE ($)	ADJHDVALUE (%)	CBD (0,1)	NATIONALHD (0,1)	AVGAGE (0,1)
example	$140,000	$120,000	$100,000	140	1	0	1

Appendix B

Raw Score Sample Data						
District Name	HDVALUE	BORDERVALUE	CBD	NATIONALHD	AVGAGE	CITYVALUE
Buda-Old Town	116809	109162	0	Y	1942	187000
Galveston-East End	132135	111866	0.15	Y	1944	135300
Galveston- Silk Stockings	187124	138359	0.5	N	1949	135300
Galveston- Lost Bayou	125296	116389	0.46	Y	1952	135300
Georgetown- Old Town	196630	130282	0	N	1934	182900
Grapevine- D.E. Box Addition	175489	122729	0.44	N	1962	224200
Grapevine- College Street	230412	133744	0	Y	1952	224200
Nacogdoches- Zion Hill	99705	67764	0.2	Y	1921	111500
Nacogdoches- Virginia Avenue	134953	49035	0.3	Y	1918	111500
Nacogdoches- Washington Square	194975	67764	0	Y	1930	111500
Paris- Church Street	78881	60660	0	Y	1934	75100
Rockwall- Old Town Rockwall	81554	76223	0	N	1963	196900
San Marcos- Belvin Street	394536	115301	0.48	Y	1915	121200
San Marcos- Burleson	226512	161857	0.52	N	1930	121200
San Marcos- Hopkins Street	197535	129603	0.275	N	1935	121200
San Marcos- San Antonio St	180335	95202	0.35	N	1949	121200
San Marcos- Dunbar	46185	40209	0.11	N	1955	121200
San Marcos- Lindsey-Rogers	133646	163078	0.38	N	1945	121200
New Braunfels- Sophienburg Hill	170468	97111	0.3	N	1924	159600
Bryan- Eastside	172629	98244	0.27	Y	1938	112800

Appendix C

Coded Sample Data				
District Name	ADJHDVALUE	CBD	NATIONALHD	AVGAGE
Buda-Old Town	62	1	1	1
Galveston-East End	98	1	1	1
Galveston- Silk Stockings	138	0	0	1
Galveston- Lost Bayou	93	0	1	1
Georgetown- Old Town	108	1	0	0
Grapevine- D.E. Box Addition	78	0	0	1
Grapevine- College Street	103	1	1	1
Nacogdoches- Zion Hill	89	1	1	0
Nacogdoches- Virginia Avenue	121	0	1	0
Nacogdoches- Washington Square	175	1	1	0
Paris- Church Street	105	1	1	0
Rockwall- Old Town Rockwall	41	1	0	1
San Marcos- Belvin Street	326	0	1	0
San Marcos- Burleson	187	0	0	0
San Marcos- Hopkins Street	163	0	0	0
San Marcos- San Antonio St	149	0	0	1
San Marcos- Dunbar	38	1	0	1
San Marcos- Lindsey-Rogers	110	0	0	1
New Braunfels- Sophienburg Hill	107	0	0	0
Bryan- Eastside	153	0	1	0