

Measuring the Impact of Community Gardens On Property Values
in Austin, Texas

By

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Applied Research Project

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ABSTRACT

The purpose of this study is to determine whether close proximity to a community garden impacts single family residential property values in Austin, Texas. The data used in this study were gathered from 200 homes from middle- to upper- class neighborhoods near 10 community gardens in Austin, Texas. Multiple regression analysis was used to test the influence of community gardens on property values. The results failed to support the hypothesis. Factors that influence property values include proximity to downtown, proximity to schools, number of bedrooms, and property size. Results showed that the proximity to community garden, proximity to rental housing and building age had an insignificant effect on property values.

About the Author

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Chapter 1. Introduction

Community Gardens

The origin of community gardens “stem back to therapeutic gardens associated with hospitals, school growing areas and early cooperative agricultural systems” (Quayle 2008, 2). Although, after a while, land started to fall into the hands of fewer people and individuals did not have the freedom to garden liberally. In the last half of the 20th century, interest in community gardens and their establishment has increased throughout the United States (Quayle 2008, 2).

A community garden is land “used for growing food by people from different families, typically urban-dwellers with limited access to their own land” (Okvat and Zautra 2011, 374). It brings an aesthetic sense to neighborhoods. Neighborhoods view community gardens as positive additions because they reduce crime, bring communities together, provide a safe place for groups to gather, and most obviously, provide fresh produce.

Community gardens are of vast economic benefit to the community (Voicu and Been 2008). According to a study, “community gardens have, on average, significant positive effects on surrounding property values, and that those effects are driven by the poorest of host neighborhoods” (Voicu and Been 2008, 277). Adding a community garden to a particular community in a city, especially a poor neighborhood, usually results in a rise in property values.

Austin, Texas, the 11th largest city in the United States and 4th largest in the state of Texas, is home to the State Capitol, the University of Texas at Austin, and numerous businesses ranging from Dell to Whole Foods. Like the growing city of Austin, community gardens in the city are growing at a rapid rate. According to the Austin Parks and Recreation

Department, “Austin’s Community Gardens are currently producing an estimated 100,000 pounds of local, organic produce for Austin residents every year!” (Austin Texas n.d.).

Despite the large presence of community gardens in the city of Austin, no study documents their impact. Although an abundance of studies document the benefits of community gardens in cities on the East Coast, Midwest and West Coast, similar evidence is lacking for the Southern United States. Though one could assume that community gardens have the same effect in Austin that they have in cities like New York, Chicago and Los Angeles, it is worth noting that Austin has different demographics, landscape and culture than those cities. Evidence of community gardens’ impact would be useful because it would allow researchers to juxtapose Austin with other cities. As of now, assumption is all that we have, but having solid data would either help prove our assumption true or shed new light and prove our assumption false.

Purpose Statement

The purpose of this study, specifically, is to examine the impact of community gardens on property values of single family residential homes in Austin, Texas. The study looks at numerous factors that could affect property value and with test and analysis, determine if the close proximity to community gardens has a positive effect of property values in Austin.

Chapter Previews

The upcoming chapters will cover a wide variety of information concerning not only community gardens but the study in question.

Chapter 2 will consist of the literature review and discuss what a community garden is, the history of community gardens, different types of community gardens, impacts of community gardens, and factors that affect property values. The chapter ends with a conceptual

framework.

Chapter 3 goes into detail concerning the methodology of the study. It encompasses the data collection procedure, the samples that the study consisted of, and finally the design that was used.

Chapter 4 will go over the results that came from running a multiple regression analysis. It will also show a regression results table listing the numerous factors that affect property value and their respective change to property value.

Lastly, Chapter 5 will look at why the results were so different than what was expected, speculate how the study could have been improved, and end with suggestions for further research into the topic.

Chapter 2. Literature Review

Chapter Purpose

There has been extensive research concerning the positive effects of community gardens on society. This research has examined community gardens throughout the United States and the world. This chapter looks at scholarly sources that relate to community gardens and their effects. The chapter examines the nature of community gardens, the history of community gardens (both early and contemporary), different types of community gardens, and the impacts community gardens have on society. Lastly, the chapter develops hypotheses designed to test the impact of community gardens on property values of single family homes in Austin, Texas.

Gardens

The history of gardens, interestingly, was not to have a garden to feed one's family necessarily but to show one's political power either by the technical capacity of the garden or by the plants that were produced in the garden (Wickham 2012, 2). In ancient Greece and Rome, the grander the garden or the more variety of plants planted in the garden, the more wealth and power was assumed of the owner of the garden. Gardens were even used to express the religious identity of the people occupying them. The Mughal Empire instilled Islamic elements into their gardens; likewise, during the Italian Renaissance there was a large number of Christian elements in gardens (Wickham 2012, 3-4). Eventually gardens moved away from being symbols of power and wealth and were an entity that was associated with people from all socio-economic levels.

Community Gardens

Before it is possible to look into the history of community gardens, let alone the effect of community gardens, it is important to become familiar with what a community garden is. Unlike a national park or a botanical garden, which are operated by the government and private citizens respectively, community gardens are unique in that the public operates them. Community gardens range in functionality, “some provide open space and greenery. Sometimes they provide cheap vegetables for a local community” (Ferris et al. 2001, 560). These versatile community gardens provide citizens of all lifestyles benefits.

The size of a community garden varies based on the amount of land a city or individual designates for the community garden. A community garden is “in some sense a public garden in terms of ownership, access, and degree of democratic control” (Ferris et al. 2001, 560).



American Community Gardening Association



Houses in Charlotte

History of Community Gardens

Early History:

Early 1800s - Mid 1900s

Community gardens have appeared around the world throughout history. They were first documented in England in the early 1800s; the practice traveled to the United States in the late 1800s. Historically people grew foods in gardens and in their backyards; these gardens supplied many foods. Community gardens are often established during times of adversity. Examples of this include in Europe during World War I and World War II, in the United States during the Great Depression and the 1970s Oil Crisis, in Cuba after the Soviets cut off aid and the United States imposed sanctions, and finally in various parts of Asia suffering endemically from extreme poverty and food scarcity (Turner et al. 2011, 490).

Community gardens can be traced back to England during the Industrial Revolution, a

time when much of England was suffering from of poverty and explosive population growth. Consequently, the British Parliament enacted legislation to promote the practice of community gardening. Victory Gardens became increasingly useful and prevalent during the World Wars as a way to battle food shortages (Hanna and Oh 2000, 209).

Much like the community garden movement that grew out of adversity in England, community gardens in the United States likewise flourished in times of crisis. During the Depression of 1882-85, Detroit initiated a program where the unemployed were given land (along with seeds and instructions for growing plants) for temporary use. After growing food and feeding themselves, the poor would sell the surplus in order to earn money and boost themselves out of poverty. This poverty-based relief program was eventually picked up in cities like New York, Boston, and Chicago (Lawson 2004, 154). Furthermore, during the Great Depression, community gardens helped those that were poor and unemployed (Okvat and Zautra 2011, 374- 75). At that time, cities in the United States allowed unemployed citizens to grow food on abandoned properties (Hanna and Oh 2000, 209). The United States government initiated relief projects during the depression in the form of helping the poor and hungry by giving them a garden plot as part of a relief package. After the depression, the government deemphasized community gardens by cutting their funding and instead initiated employment programs. Community gardens were, as a result, just left to private citizens because of the government's withdrawal (Lawson 2004, 159).

Gardens during War

During and after the World Wars, these communal gardens supplemented the food with minimum transportation and had the advantage of low costs because they were within the city (Okvat and Zautra 2011, 374-75). During World War I, Herbert Hoover, who was the Director

of the US Food Administration, encouraged civilian gardening so that food could be exported to Europe, which was suffering from a food crisis. Due to the efforts of national agencies, government agencies, educational institutions, gardening clubs, and local community organizations, five million people gardened and grew 520 million dollars' worth of food. Community gardening became an incredibly patriotic gesture nation-wide and people were planting gardens in backyards, parks, and on golf courses (Lawson 2004, 159). During World War I, millions participated in growing community gardens. After it, however, people stopped participating up until the Second World War (Hanna and Oh 2000, 209). Unlike World War I where there was a food scarcity, no such problem occurred during WWII. For WWII, gardening was part of the civilian war effort and had other benefits. Gardening led to people eating healthier, and exercising, and provided a distraction from the war. There was a shortage of gas in the United States during the war, and the fact that community gardens could be grown anywhere conserved precious fuel. Victory Gardens were grown also as morale boosters (Lawson 2004, 162).

Contemporary:

Community Gardens Movement

Modern day community gardens have a very different functionality than their depression and wartime predecessors. Community gardens have become a model for sustainable urban living (Turner 2011, 509). In recent times, due to the fear of future food insecurity; concerns about the health threats of GMOs, insecticides and pesticides; and the rising cost of food, there is a desire for community gardens. People are now setting up community gardens, kitchen gardens, and gardens for educational purposes to teach children about the benefits of healthy eating (Turner et al. 2011, 490). Community gardens are looked

at favorably in other parts of the world as well. Specifically, in Australia the community garden movement is enjoying a resurgence. The gardens in Australia are managed by the community through a committee. Anyone can go and plant; the committee draws up rules and gives community gardens order and structure (Lloyd 2015, 74).

In contemporary times, community gardens have become beautification projects for cities and gardening clubs. Community gardens are being used to fight civic unrest and employed as a form of activism. There is an emphasis to grow community gardens on vacant lots and abandoned buildings in order to rebuild communities. The interest in the gardens continues to grow daily (Lawson 2004, 163).

Some modern-day community gardens' goals connect to children by teaching them about the benefits of healthy eating, teaching gardening skills, and diverting them from unsavory elements of the urban social landscape. The community garden projects nowadays focus on rebuilding communities and restoring nature, the concept of healthy living, and self-sustainability (Hynes and Howe 2004, 172).

Different Types of Community Gardens

Several different kinds of community gardens have arisen, distinguished by the purpose they intend on fulfilling. These include neighborhood, youth/school, therapy, entrepreneurial, and demonstration community gardens.

Neighborhood Community Gardens

Neighborhood community gardens are sectioned off into various plots that can be rented or bought from the city's parks and recreation department or private organizations/individuals. Community gardens are tax exempt, meaning no property tax on the land of the community garden, thus the allure of partaking in a community garden is

prevalent. A person is able to grow and reap their hard work without the burden of taxes. Residents are in charge of the maintenance of their respective plots. Produce obtained from the plots is kept by the gardeners taking care of them. People communicate with and help one another for the benefit of the overall garden. For example, these gardens have a form of leadership where certain gardeners are in charge of assigning responsibilities to everyone under their hierarchy.

A specific subset of the neighborhood community garden is neighborhood pocket parks. These pocket parks are normally gateless and contain playgrounds, benches, picnic areas, trees, and shrubs. Ideally, these spaces create a sense of unity within the neighborhood (Ferris et al. 2001, 566).

The Kentucky Garden in Cleveland, Ohio is the perfect example of neighborhood gardens at work. Members of the garden own and take care of their plots and take the produce they grow. Plot cost varies based on the size of the plot. Plot ownership equates to benefits like seeds and plants to start the plot, tools, dirt, mulch, and compost, all of which are provided by the garden. Members of the garden must abide by club rules such as cleanliness, caring for one's plot and tools, and not engaging in any illegal activities. The Kentucky Garden encourages fellowships across the socio-economic spectrum and strengthens community ties (Flachs 2010, 5).



Gifford Park Community Garden

Youth/School Community Gardens

Youth and school gardens expose children at a young age to nature and the importance of gardening and eating healthy.

It has to be noted that certain states actually promote their youth to be educated about gardens. In Berkeley, California, numerous schools have gardens that have been integrated into their science classes. During class, students get to plant, harvest, and prepare soil, to name a few activities (Ferris et al. 2001, 562-63).



Community Garden at Atkinson Elementary School in Portland, Oregon

Therapy Community Gardens

Community gardens also provide therapeutic value particularly for hospital patients and people going through rehabilitation.

It should be noted that “healing and therapy gardens are becoming very much an important element in community care provision following the closure of large mental hospitals and the perceived need to treat many more people in the community” (Ferris et al. 2001, 565). Examples of healing and therapy gardens range from the AIDS Memorial Grove in San Francisco, California, for people who have had AIDS affect either their lives or the lives of loved ones, to the Comfort Garden at the San Francisco General Hospital variety which is used by patients and staff to gain comfort (Ferris et al. 2001, 565).



City Sprouts Community Garden

Entrepreneurial Community Gardens

Entrepreneurial gardens teach business-minded citizens the skills they need to succeed in business. The profits accumulated from the sales of produce are used to help the less fortunate of a community. The Berkeley Youth Alternatives Gardens in Berkeley, California are set up for many purposes; the overlying purpose is to give residents from low-income homes the opportunity to earn. It not only gives the participants of the garden valuable job experience but also gives them the chance to accumulate income (Ferris et al. 2001, 563). Participants are able to sell their produce to the public.



Seed to Table Community Garden

Demonstration Community Gardens

Demonstration gardens introduce and teach people how to garden. The Garden for the Environment in San Francisco, CA educates residents on proper gardening etiquette. There are also other various demonstration gardens throughout the United States with this same simple goal of educating youth and adults alike (Ferris et al. 2001, 566).



Demonstration Community Garden in Jamestown, NY

Impacts of Community Gardens

Health Impact

Community gardens provide gardeners with a pathway to living a healthier life as well as give them the opportunity to learn about nutrition and eat fresh, healthy produce. The easy accessibility of homegrown food increases the likelihood that participants will eat what they grow and reduce consumption of junk food (Allen et al. 2008, 430).

Community gardens provide healthful produce and an opportunity for physical exercise. Community gardening is comparable to walking, biking, and swimming in terms of health benefits. Partaking in community gardening can cut down the risk of heart disease, diabetes, high cholesterol, and high blood pressure (Hynes and Howe 2004, 178).

Lastly, community gardens have a therapeutic health impact on gardeners. People associate certain places with relaxation and happiness and many consider gardens to be such places. Hence, gardens provide a natural, healthy environment. Gardens offer reprieve to those suffering from stress (Pitt 2014, 84-5).

Social Impact

The community or neighborhood itself can change when community gardens are introduced. Community gardens normally start when a group of people come together and express their desire to the city to initiate a garden on public or private lands. This cohort then recruits neighbors and friends to help with the community garden project. In various cities, Hannah and Oh (2000) found evidence that community ties are strengthened by these gardens (211).

Much like a sports team where a group of people come together with the intention of winning a championship, individuals come together for community gardens with the main goal

of having a positive impact on the community in which they live. Research has shown that people who initially showed animosity toward each other were able to come together due to the community garden (Allen et al. 2008, 427).

Crime Reduction Impact

Community gardens are not conventionally thought of as a deterrent to crime. Criminals gravitate toward empty plots when partaking in illicit activities. However, when that empty plot is cultivated into a community garden, it takes away an avenue where people can congregate with dubious intent. When a community garden is in a neighborhood or residential setting, there are fewer incidents of graffiti and other acts of vandalism. Not only this, but Okvat and Zatura found that the greener an environment, the fewer property and violent crimes occur (Okvat and Zautra 2011, 379).

Specifically, Chicago public housing projects have “found that vegetation that preserves view and visibility (e.g., trees and low shrubbery) has a role in reducing crime” (Hynes and Howe 2004, 178). Individuals in or around a green environment are likely to find happiness and a relief from their worldly stresses and thus less likely to commit crime. A study in upstate New York showed that when a community garden was placed in a low-income minority neighborhood, it would cause residents of the community to engage in positive community discussion that would not only improve community conditions but also prevent potential crime (Hynes and Howe 2004, 178).

The results of a literature review that employed the MEDLINE, PubMed, Scopus, and PsycINFO databases showed that of the several recurring themes regarding the benefits of community gardens, crime reduction was one of them (Egli et al. 2016, 349).

Environmental Impact

Community gardens play a role in affecting not only the well-being of society, but also the well-being of the environment. One area of the environment about which people have a deep concern is climate change. It has been found that gardening can “assist in the effort to stabilize climate change via both direct pathways (greenhouse gas, GHG mitigation) and indirect pathways (urban lifestyle change and education)” (Okvat and Zautra 2011, 380). Carbon sequestration, eliminating carbon that already exists in the atmosphere (a process known as photosynthesis) is an important outcome of gardening. Carbon sequestration occurs when present carbon is removed. Community gardens are beneficial to the environment in that in the past 10 years alone, 10,000 community gardens have sequestered 190,000 tons of carbon (Okvat and Zautra 2011, 380). Community gardens generally compost inedible parts of plants (leaves, stems, etc.), which are often waste. The use of compost “decreases GHG emissions resulting from the transport of such “garbage” to landfills and from the landfills themselves” (Okvat and Zautra 2011, 381). Lastly, as previously mentioned, community gardens are used as a classroom for both children and adults. During these informal class sessions, educators can teach students how to live their life in a more environmentally friendly way by making people more aware of not only what they eat but also the environment. It can go a long way in slowing down global warming (Okvat and Zautra 2011, 381).

Environmental benefits of community gardens go far beyond fighting climate change; they put people in contact with nature on a daily basis and change thinking patterns. When individuals go outdoors regularly to plant, weed, and have palpable interactions with the environment, they not only want to participate in other outdoor activities, but they also approach those activities with more environmental consciousness (Quayle 2008, 61-2).

Community Gardens and Property Values

Clearly, there are significant benefits to community gardens for individuals, families, neighborhoods and cities. This study asks whether all of these benefits combine to increase property values around the gardens in Austin, Texas.

This objective is achieved by testing a set of hypotheses, which explain Austin's property values (including proximity to a community garden). The first hypothesis focuses on community gardens. The remaining hypotheses take into account or control for well-known factors that influence property value. Taken together, these hypotheses represent a model that can test for the influence of community gardens on property values.

Factors that Affect Property Values

There are numerous economic advantages of a community garden. Individuals can see their property values increase due to the proximity to a community garden; though this is an advantage for wealthier individuals, this can have a negative impact on poorer individuals in a city. The apparent benefit is that one has the ability to plant and grow their own produce, thus creating an avenue to go out and sell their produce; it also eliminates the need to purchase produce elsewhere. This advantage is evident when one looks at community gardens in cities. Urban grocery stores are more expensive than their counterpart suburban stores. These urban grocery stores also have a scarcity of healthy, low-cost foods. By having a community garden in an urban city, people can grow their own healthy fruits and vegetables and avoid going to a grocery store where their only options are unhealthy and expensive foods (Hynes and Howe 2004, 176).

H1: Proximity to Community Garden

A significant factor that has been shown to affect property values is the proximity to a community garden. Researchers have looked at cities in the United States, on the East Coast, West Coast, and Midwest. Bolitzer and Netusil (2000) found that residences on the West coast, in cities like Portland, Oregon, that were in close proximity to green space¹ saw the value of their home increase by 1.8 percent. In Los Angeles, California, Pincetl et al. (2003) found that the price of homes went up by 1.5 percent once community gardens were initiated close to them. An increase in property value translates to a better quality of life for the residents of the area.

On the East Coast, in the city of Greenville, South Carolina, Espey and Owusu- Edusei (2001) similarly saw a positive effect of 11 percent on the prices of homes that were within a few hundred feet of a green space. Even in the concrete jungle of New York City, green space has played a significant role in the pricing of apartments. Studies have shown that having a residence in close proximity to any green space increases the value of the residence by 1.4 percent. Most surprisingly, in the boroughs of Brooklyn, Queens, and Staten Island, a home that was close to a park was 8 to 30 percent higher in value than homes that were further away (New Yorkers for Parks and Ernst and Young 2003).

Lastly, in the Midwestern city of St. Louis, Tranel and Handlin (2006) found that not only were property values shown to increase but also home ownership was shown to increase as well in the close proximity of community gardens. Unfortunately, there has not been any significant research conducted on the effects of community gardens on housing prices in the

¹ Logic was applied to provide a reason for the relationship between property values and gardens. It was a reasoning by analogy. One should not, however, conflate greenspace and community gardens in the process.

southern United States.

On top of the aforementioned data, there are also data on the positive effects of green space on residential property values in Europe. In Finland “they find that the distance to the nearest small area of forest has a negative and significant effect, and that the presence of a forest view from the housing unit has a positive influence” (Irwin 2002, 465).

Cities ranging from Portland to New York City have shown that a community garden has a statistically significant positive effect on property values. Voicu and Been (2008) show that with the passage of time, the property’s value appreciates even more due to the garden (244-45). Having green space close to property can give homes an economic boost. Studies in the United States and abroad in countries like Finland have all shown the same results, that green space equates to higher property values. The further the homes are from the community gardens, the lower they are in valuation (Irwin 2002, 465).

Therefore, one would expect:

H1: The proximity to community garden will increase the property value of single family residential homes in Austin, Texas.

**Table 2.1:
Factors Explaining Property Values Across Twelve Studies**

Study	Year	Community Garden	Control Factors						
			1	2	3	4	5	6	7
Bolitzer and Netusil	2000	X	X					X	X
Ellen et al.	2007				X				
Espey and Owusu-Edusei	2001	X							
Fack and Grenet	2010		X	X			X	X	X
Irwin	2002	X							
New Yorkers for Parks and Ernst and Young	2003	X							
Okvat and Zatura	2011	X							
Pincetl et al.	2003							X	X
Thompson	2016		X	X			X	X	X
Tranel and Handlin	2006	X							
Voicu and Been	2008	X			X				

1: Proximity to Community Garden, 2: Proximity to Downtown, 3: Proximity to School, 4: Proximity to Rental Housing, 5: Number of Bedrooms, 6: Property Size, 7: Building Age

Table 2.1 represents numerous studies that were looked at concerning community gardens and factors that affect property values. A study that goes over a respective factor is checked off with an X under the factor that it discusses.

Control Factors

To determine the unique contributions of community gardens on property values it is necessary to control for other factors known to influence property values such as proximity to downtown, proximity to schools, proximity to rental housing, home specifics, and home description.

H2: Proximity to Downtown

A variety of different factors play into housing pricing. More than anything, the location is the underlying factor that causes property values to increase. Fack and Grenet showed that the closer homes get to the center of the city, the higher the price per square meter for property (Fack and Grenet 2010, 66). This is because downtown areas equate to convenience of being closer to work and having downtown resources like shopping, eating

and relaxing. While there are instances of homes being of greater or equal value that are not in the center of the city, these homes are normally located in affluent suburbs (Bolitzer and Netusil 2000).

Therefore, one would expect:

H2: The proximity to downtown will increase the property values of single family residential homes in Austin, Texas.

H3: Proximity to Schools

Families could find living close to a school convenient, and this convenience could drive up the prices of homes. Living closer to a particular school could be appealing also due to the fact that the quality of a school that a child attends is directly related to where that child grows up. Traditionally, people who live in wealthier neighborhoods attend better schools due to their location in a specific city. However, studies have interestingly also shown that the better academic performance a school attains, the higher housing prices will rise (Fack and Grenet 2010, 59). At the same time, schools that go through a financial crisis see the residential homes in the area negatively affected financially (Thompson 2016).

Therefore, one would expect:

H3: The proximity to schools will increase the property values of residential homes in Austin, Texas.

H4: Proximity to Rental Housing

As much as proximity to a major downtown or a specific school might come into play when it comes to property value, there are instances when rental housing drives down the prices of homes in areas. Instances where they don't drive down home prices are usually when the rental housing is by some sort of greenery. In these instances, the price of the rental housing was seen to go up (Voicu and Been 2008, 245). Regardless, homes by that same greenery would also see their value increase. Any negative effect of the rental housing would

be negated due to the greenery. Most people who own homes do not want to have rental housing, especially subsidized housing, in their communities. Cities like New York normally are not affected by subsidized rental housing because the subsidized rental housing is in an area of town going through hardship, where buildings are abandoned and decaying (Ellen et al. 2007, 261).

However, in other parts of the country the results are not as favorable. In larger neighborhoods, residences in the direct proximity to rental housing are “2.6 percent lower than prices in the larger neighborhood in the 2 years prior to completion, and 8 percent lower immediately after completion” (Ellen et al. 2007, 275).

Therefore, one would expect:

H4: The proximity to rental housing will decrease the property values of single family residential homes in Austin, Texas.

H5: Home Specifics (Bedrooms)

The specifics found inside of a home factor into the property value of a home. Data show this across the spectrum not only in the United States but also abroad. A study shows that, in the United States, the more rooms and bathrooms in a home, the higher the property value (Thompson 2016, 58).

Likewise, in countries such as France, we see the same trend. The more bedrooms in a home, the higher the property value. The price variation that is seen based on the number of bedrooms is in the thousands of dollars (Fack and Grenet 2010, 67).

Therefore, one would expect:

H5: The number of bedrooms in homes in close proximity to a community garden will increase the property value of single family residential homes in Austin, Texas.

H6 & H7: Home Description (Property Size and Age of Property)

The value of a home can be directly correlated to the property size of a home and the age of the property. Studies such as the one performed by Thompson, concerning the effects of fiscal stress on school district and housing price, have shown that the larger the property and/or the newer the property, the higher the value of that specific residence. Likewise, this study shows that the smaller and/or older the property, the sharper the drop in the value of the residence (Thompson 2016, 58).

Therefore, one would expect:

H6: The property size of homes in close proximity to a community garden will increase the property value of single family residential homes in Austin, Texas.

H7: The building age of homes in close proximity to a community garden will increase the property value of single family residential homes in Austin, Texas.

Geographic Region

Table 2.1, which summarized the literature, also revealed that studies connecting community gardens to higher property values were predominantly in the East and West Coast. This study adds to the literature by examining the question in Austin, Texas, a city in the Southwest region that is highly educated and experiencing a population boom.

Conceptual Framework Table

The model used to test the impact of community gardens on property values in Austin is summarized in the conceptual table (Table 2.2). Each variable in the model is presented and linked to the literature used to justify its inclusion.

Table 2.2: Conceptual Framework

Formal Hypothesis	Sources Used to Support the Hypothesis
<p>Purpose: The purpose of this research is to see if community gardens have an impact on property values in single family residential homes in Austin, Texas.</p> <p>H1: The proximity to community garden will increase the property value of single family residential homes in Austin, Texas.</p>	<p>Bolitzer and Netusil (2000), Espey and Owusu-Edusei (2001), Irwin (2002), New Yorkers for Parks and Ernst and Young (2003), Okvat and Zatura (2011), Tranel and Handlin (2006), Voicu and Been (2008)</p>
<p>Control Hypotheses:</p> <p>H2: The proximity to downtown will increase the property values of single family residential homes in Austin, Texas.</p>	<p>Bolitzer and Netusil (2000), Fack and Grenet (2010), Thompson (2016)</p>
<p>H3: The proximity to schools will increase the property values of single family residential homes in Austin, Texas.</p>	<p>Fack and Grenet (2010), Thompson (2016)</p>
<p>H4: The proximity to rental housing will decrease the property values of single family residential homes in Austin, Texas.</p>	<p>Ellen et al. (2007), Voicu and Been (2008)</p>
<p>H5: The number of bedrooms in homes in close proximity to a community garden will increase the property value of single family residential homes in Austin, Texas.</p>	<p>Fack and Grenet (2010), Thompson (2016)</p>
<p>H6: The property size of homes in close proximity to a community garden will increase the property value of single family residential homes in Austin, Texas.</p>	<p>Bolitzer and Netusil (2000), Fack and Grenet (2010), Pincetl et al. (2003), Thompson (2016)</p>
<p>H7: The building age of homes in close proximity to a community garden will increase the property value of single family residential homes in Austin, Texas.</p>	<p>Bolitzer and Netusil (2000), Fack and Grenet (2010), Pincetl et al. (2003), Thompson (2016)</p>

Conclusion

In conclusion, a community garden is a plot of land where people can come together and cultivate fruits, vegetables, and plants. Though community gardens started more for urban use, they have slowly made their way into suburban America. Due to the various uses of

community gardens, there exist various types of community gardens, all with various functions and purposes.

The literature concerning the history of community gardens, the types of community gardens and the effects of community gardens is plentiful. There is a significant amount of literature about the effects of community gardens on property values but unfortunately, there is no literature concerning community gardens and property values in Austin, Texas.

The studies that do exist have found that community gardens that are in close proximity to single family residential areas directly affect property values in a positive manner.

Chapter Summary

The literature review chapter discussed in depth literature that addressed the impact of community gardens on single family residential property values. A concrete definition of community garden was provided to the reader. Also discussed were the history of community gardens and their various types. Lastly, we analyzed the different impacts community gardens have on a society as well as hypothesized various causes of increase in property values of single family residential homes. The following chapter details the methodology used in testing the underling hypotheses.

Chapter 3. Methodology

Chapter Purpose

The methodology chapter describes the methods used to test the hypotheses about the influence of community gardens on property values in Austin, Texas. It should be noted, “methodology is viewed as the theory of organization of an activity” (Novikov and Novikov 2013, 5). Multiple regression analysis was the statistical tool used to the unique influence of community gardens on property values. Regression analysis “is often used to test hypotheses about the existence of causal effects, and to compare the strength of effects across groups” (Stolzenberg 2014, 165).

The dependent variable of this study is market value of middle-class residential properties around community gardens in Austin, which is measured in dollars. The property value is found by using zillow.com. The independent variable in table 3.1 represents the proximity to community gardens and it is measured in feet. The proximity to a community garden is found by using Google maps. Finally, table 3.1 consists of several control variables: proximity to downtown, proximity to schools, proximity to rental housing, number of bedrooms, property size and building age. Proximity to downtown, proximity to schools and proximity to rental housing are all measured in feet. The proximity of all three from the community garden to downtown, schools and rental housing can be found using Google maps. The number of bedrooms can be found using zillow.com. Property size is measured in square feet and the building age is measured in years; both of these can be found using zillow.com. It is important to note that the operationalization table states how a variable is calculated and how it correlates to hypothetical ideas (Shields and Rangarajan 2013, 52, Shields and Tajalli 2006, 321).

Table 3.1: Operationalization of the Conceptual Framework

Variable	Hypothesis	Variable Measure	Data Source*
Dependent Variable			
Property Value		In Dollars (\$)	www.zillow.com/find-your-home/
Independent Variable			
Proximity to Community Gardens	H1(-)	Actual Distance in Feet (Ft.)	Find community garden using Google maps. Upon finding garden, locate home. When a home is picked, calculate the distance from the home to the community garden using Google maps.
Control Variables:			
Proximity to Downtown	H2(-)	Actual Distance in Feet (Ft.)	Find community garden using Google maps. Upon finding garden, locate home. When a home is picked, calculate the distance from the home to downtown using Google maps.
Proximity to Schools	H3(-)	Actual Distance in Feet (Ft.)	Find community garden using Google maps. Upon finding garden, locate home. When a home is picked, calculate the distance from the home to schools using Google maps.
Proximity to Rental Housing	H4(-)	Actual Distance in Feet (Ft.)	Find community garden using Google maps. Upon finding garden, locate home. When a home is picked, calculate the distance from the home to rental housing using Google maps.
Number of Bedrooms	H5(+)	Number of Bedrooms	www.zillow.com/find-your-home/
Property Size	H6(+)	Property Size of Residential Home in Square Feet (Sq. Ft.)	www.zillow.com/find-your-home/
Building Age	H7(-)	Age of Building in Years (Yrs.)	www.zillow.com/find-your-home/

Table 3.1 specifies the variables used in the study, how they are connected to a hypothesis, how they are measured and the data source.

*See Appendix A-J for complete data set.

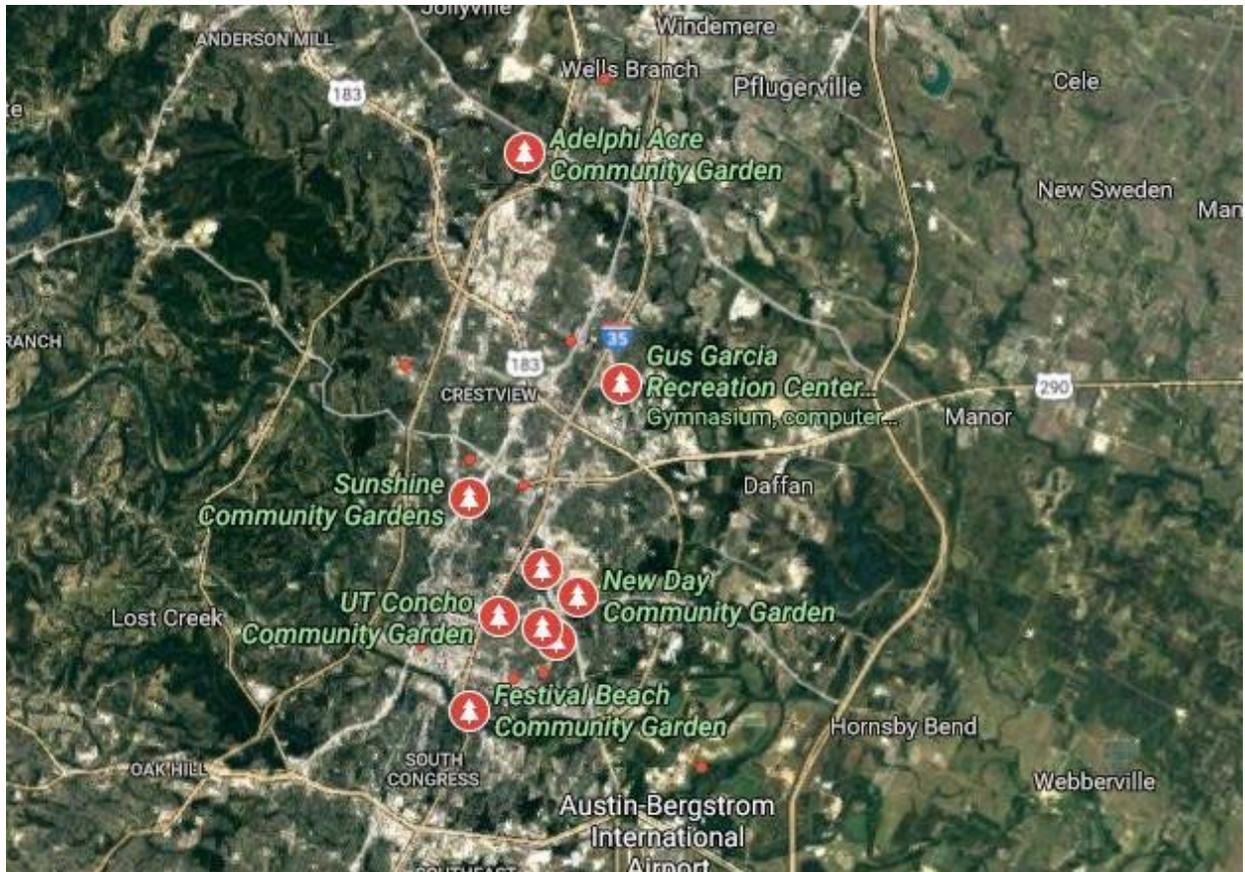


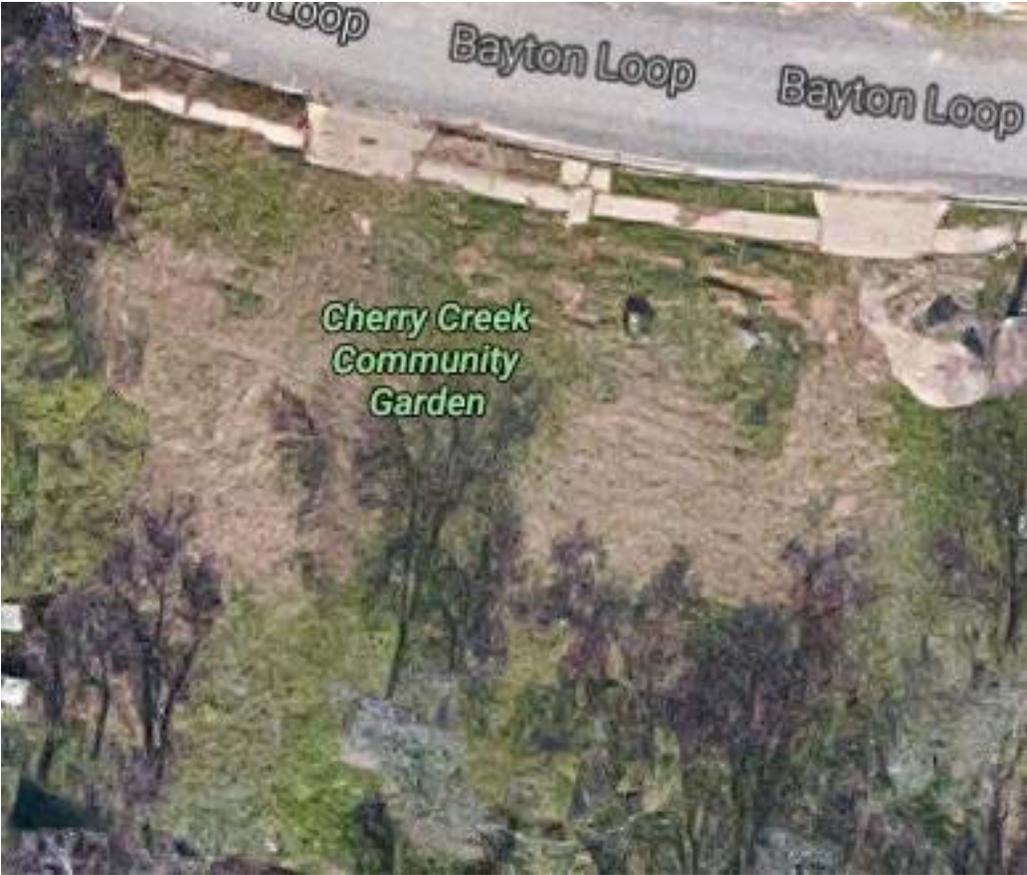
Illustration 3.1: Community Gardens in Austin, Texas

Source: Google Maps

The illustration shows various community gardens in Austin, Texas.

Table 3.2: Community Gardens Used in Research and their Addresses

Community Garden	Address
Clarksville	1705 Waterson Ave.
Blackshear	2011 E. 9 th
Homewood Heights	2606 Sol Wilson Ave.
Emerald Wood	S. 1st and Emerald Wood
Gus Garcia	1201 E. Rundberg Ln.
North Austin YMCA	1000 W. Rundberg Ln.
Kenny Dorham's Backyard	1106 E. 11th St.
Adelphi Acre	3701 1/2 Adelphi Ln.
Cherry Creek	5618 Bayton Loop
Downtown Austin	842 Springdale Rd.



Cherry Creek Community Garden (Aerial View)



Cherry Creek Community Garden



Illustration 3.2: Sample of Community Garden and homes picked for study

The illustration shows homes around Cherry Creek Community Garden. Homes surrounding the community garden were chosen and using www.zillow.com/find-your-home/, home data were collected.

Data Collection

Data collection for this study was comprised of two main sources:

www.zillow.com/find-your-home/ and Google maps. The website, www.zillow.com/find-your-

home/, was able to give information such as an estimated property value, number of bedrooms, property size and building age. Google maps was used to initially locate the community garden. Upon finding the community garden, Google maps was used to locate a residence in earth view. Once this happened, the address of the residence was put in the www.zillow.com/find-your-home/ website for home values for Austin, Texas homes. In order to find out distances, Google maps was used by putting the distance of the residential property and the other respective address that it was being measured against.

Sample

The sample of the study is comprised of single family residential homes that are in close proximity to community gardens. In Austin, Texas, there are numerous community gardens but this study focuses on 10 established community gardens and the single family residential homes that surround them.

From the 10 community gardens, data were collected from 20 single- family residential homes near each respective community garden. Data were taken from homes very close in distance to further out from the community garden. The reason that homes were taken in such a sample size technique was to get a wide variety and range of homes. Getting an equal number of homes from each sample area shows an equal balance in sample homes. In total, 200 homes surrounding 10 community gardens were used as a sample.

Design

This study used data from public records to test the hypotheses. These data, as previously mentioned, are found on www.zillow.com/find-your-home/ and using Google maps. By first going through Google maps, it is easy to navigate and find the community garden on a map. Once this is done, homes that are in close proximity to the community gardens can be

located and picked out for further data collecting. Once the home is picked out, going onto www.zillow.com/find-your-home/ can help get all the various information needed for the research (number of bedrooms, property size and building age). In the rare case that no data are given for the number of bedrooms, three bedrooms is placed; as three is the average number of bedrooms in the homes where data were collected. Regression is the design method used in this study. The dependent variable is the market value of single family residential homes. The main independent variable is the proximity of the sampled homes to the community garden. The other independent variables are the control variables. The control variables are factors that through prior studies have been shown to have an effect on the price of property. Having these control variables in play will help us determine if in fact the proximity to a community garden has an impact on the value of a home.

Chapter Summary

The methodology chapter went over operationalization, the operationalization table that showed both dependent and independent variables, data collection methods, sample, design, and finally concluded with a chapter summary. The next chapter will discuss the results of multiple regression analysis.

Chapter 4. Results

Chapter Purpose

The chapter examines the impact of community gardens on property values in Austin, Texas. The hypotheses (research and control) were tested using multiple regression analysis.

Statistical Results

The regression results (see Table 4.1) revealed that proximity to community gardens did not influence property values of single family residential homes. All the control variables, except the building age and proximity to rental housing, demonstrated a significant impact on property values. Distances of homes from downtown and a school were inversely proportional to property values. For every foot further from downtown, property values dropped \$3.86. Surprisingly, the greater number of bedrooms a home possessed, the lesser its property value. As expected, property size had a positive influence on property values.

It can be speculated that the impact of population growth in Austin, and thus the demand for housing, is the main driving force for prices in the housing market. Thus, the impact of ancillary factors such as community gardens is marginalized by a more impactful determinant. Other cities might not see same growth, which is why community gardens showed significant effects on property values there. Furthermore, cities like Chicago, New York, and Los Angeles have tended to establish community gardens in impoverished areas with aged infrastructure to revitalize communities. Since community gardens in Austin exist near middle-class neighborhoods, property values cannot experience the same significant increase as they would have in dilapidated neighborhoods.

Table 4.1. Determinants of Housing Market Value

Independent Variables	Unstandardized Coefficients
Proximity to Community Garden (In Feet)	2.84
Proximity to Downtown (In Feet)	-3.86**
Proximity to Schools (In Feet)	-12.42*
Proximity to Rental Housing (In Feet)	-11.52
Number of Bedrooms	-29025.64*
Property Size (In Square Feet)	144.77**
Building Age (Years)	-207.10
(Constant)	412747.31**
R-square	.533
F-value	31.318**
N	200

* Significant at $\alpha < .05$

** Significant at $\alpha < .01$

Chapter 5. Conclusion

The overall growth of property values in Austin may have overwhelmed the influence of community gardens in the city. This does not mean that community gardens have no positive economic effect in Austin, but rather that the effect cannot be measured due to the high growth of the city overall. It is possible that the community gardens had positive effects that cannot be measured in terms of economic gain. The community gardens very well may have caused positive effects in terms of resident satisfaction in a specific neighborhood, a high quality of life for the residents, low crime rates in their neighborhood, healthier lifestyles, and education in healthy eating. Though the community gardens did not show a significant economic impact in current times, they might show an impact when Austin is not experiencing an explosive growth.

The study focused on 10 established community gardens in Austin, Texas. The homes in each respective community garden vicinity were located in middle- to upper-middle- class neighborhoods. One way the study could have been improved is if the homes being looked at were in more distressed neighborhoods in the city. It would have been noteworthy to look for discrepancies in the impact of community gardens between poor and affluent neighborhoods. It very well could be that community gardens have a significant economic impact when they are established in areas going through economic hardship as part of a revitalization effort.

It would be interesting, as already noted, for future studies to look into the effects of community gardens in both poor and affluent neighborhoods. Likewise, future studies should focus not only on the established community gardens that have been around for decades but also the community gardens that were established in the past five to ten years.

It would be worth studying to see if they have the same results. Other cosmopolitan cities in Texas should also be examined to see if they have similar results as Austin, or if they vary. Lastly, examining other cities in the United States with the same dynamics as Austin would be helpful in seeing the impact of community gardens when factored into cities that are experiencing massive economic and population growth.

Data Matrix, Property Information of Homes by Community Gardens

Appendix A: Clarksville

Clarksville	Proximity to Community Garden (In Feet)	Proximity to Downtown (In Feet)	Proximity to Schools (In Feet)	Proximity to Rental Housing (In Feet)	Number of Bedrooms	Property Size (In Square Feet)	Building Age (Years)	Property Value (\$)
1	102	8976	2112	1584	3	2,013	87	\$748,467
2	226	9504	2112	1584	3	1,826	95	\$772,054
3	95	8976	2112	1584	3	2,324	34	\$825,593
4	33	8976	2112	1056	3	638	46	\$425,413
5	328	9504	2640	1584	3	1,532	62	\$641,425
6	138	9504	2112	1584	2	768	61	\$548,903
7	479	9504	2112	1584	3	984	67	\$491,068
8	479	9504	2112	1584	3	780	65	\$417,605
9	430	9504	2112	1584	2	984	93	\$466,527
10	479	9504	2112	1584	3	984	67	\$491,253
11	623	8976	3168	2640	5	3,972	14	\$1,213,935
12	3696	5280	2640	3168	1	994	117	\$668,633
13	528	7920	2112	1584	3	2,200	25	\$686,264
14	279	8976	2112	1056	2	700	72	\$522,065
15	2112	6864	1056	1056	1	656	95	\$481,210
16	420	7392	1584	1056	3	2,192	77	\$793,463
17	469	7392	1584	1056	1	1,558	81	\$624,685
18	528	9504	2640	2112	3	2,163	17	\$780,387
19	1056	7920	2112	2112	2	884	91	\$878,538
20	1056	7920	2112	2112	3	2,074	14	\$942,878

Appendix B: Blackshear

Blackshear	Proximity to Community Garden (In Feet)	Proximity to Downtown (In Feet)	Proximity to Schools (In Feet)	Proximity to Rental Housing (In Feet)	Number of Bedrooms	Property Size (In Square Feet)	Building Age (Years)	Property Value (\$)
1	217	9504	2112	1584	3	1,380	87	\$315,951
2	23	9504	1584	2112	3	640	87	\$311,787
3	75	9504	1584	2112	5	1,860	5	\$535,730
4	528	9504	2112	1584	6	2,407	14	\$585,880
5	528	10032	2112	1584	5	1,502	85	\$393,325
6	528	10032	2112	1584	3	850	80	\$317,519
7	1056	10032	2640	1056	3	1,450	11	\$456,810
8	1056	10032	2640	1584	4	2,251	5	\$495,070
9	115	9504	2112	2112	3	850	80	\$317,651
10	171	9504	2112	1584	3	1,646	58	\$388,085
11	423	10032	2112	1584	4	1,872	82	\$391,826
12	482	10032	2112	1584	3	993	82	\$328,099
13	528	9504	2112	1584	2	2232	87	\$556,377
14	528	10032	2640	1584	3	1484	6	\$420,368
15	528	8976	1056	2112	3	1666	4	\$485,000
16	528	8976	1584	2112	2	650	92	287,767
17	528	8976	1056	2112	2	1361	11	500,068
18	528	8976	1584	2112	4	2250	117	\$595,144
19	528	8976	1584	2112	3	1076	97	\$289,915
20	528	8976	1584	2112	2	800	105	\$414,632

Appendix C: Homewood Heights

Homewood Heights	Proximity to Community Garden (In Feet)	Proximity to Downtown (In Feet)	Proximity to Schools (In Feet)	Proximity to Rental Housing (In Feet)	Number of Bedrooms	Property Size (In Square Feet)	Building Age (Years)	Property Value (\$)
1	52	14256	1584	1056	3	989	70	255,000
2	49	14256	1584	1584	3	744	77	257,938
3	302	14256	1056	1056	2	866	71	264,367
4	148	14784	1584	1584	2	844	77	255,487
5	20	14256	1584	1584	3	1000	7	263,030
6	144	14784	1584	1584	1	1208	92	303,020
7	200	14784	1584	1584	3	1200	87	356,441
8	262	14784	1584	1584	3	1232	15	265,519
9	328	14784	1584	1584	3	1897	0	525,000
10	289	14784	1584	1584	1	1003	81	285,758
11	528	15312	2112	2112	3	1544	87	499,900
12	423	14784	2112	1584	3	1001	95	285,802
13	528	14784	2112	2112	3	1192	69	292,076
14	364	14874	1584	1584	2	900	71	274,787
15	528	14874	2112	2112	3	1083	13	297,853
16	528	15312	2112	2112	4	2252	1	480,239
17	492	15312	2112	2112	2	588	67	276,263
18	528	14784	2112	2112	3	1503	111	333,094
19	528	15312	2112	2112	3	1159	69	289,512
20	16	14256	1584	1584	3	576	66	249,733

Appendix D: Emerald Wood

Emerald Wood	Proximity to Community Garden (In Feet)	Proximity to Downtown (In Feet)	Proximity to Schools (In Feet)	Proximity to Rental Housing (In Feet)	Number of Bedrooms	Property Size (In Square Feet)	Building Age (Years)	Property Value (\$)
1	62	25344	6336	4224	3	2171	47	319,889
2	121	25344	6336	4224	3	1011	47	242,701
3	174	25344	6336	4224	3	1009	47	249,935
4	243	25344	6336	4224	3	988	47	243,203
5	302	25344	6336	4224	3	1320	47	278,440
6	440	25344	6336	4224	3	1012	47	239,393
7	528	25872	6336	4752	3	1000	46	253,997
8	528	25872	6336	4752	3	1285	46	271,820
9	1056	25872	6336	4752	3	960	46	238,201
10	528	25872	6336	4752	3	1035	46	247,297
11	1056	25872	5808	5280	3	1400	46	265,927
12	1056	25872	5808	4752	3	294	46	272,527
13	1584	26400	5808	5280	3	1108	46	256,950
14	1056	26400	5808	5280	3	1551	46	285,561
15	1056	25400	5808	5280	3	1062	46	251,287
16	1584	26928	5280	5808	3	988	46	250,439
17	1584	26400	5280	5280	3	1350	46	275,388
18	1584	26400	5280	5280	3	1490	46	281,762
19	1584	26928	5280	5808	3	1089	46	253,962
20	2112	26928	4752	5808	3	1712	45	258,085

Appendix E: Gus Garcia

Gus Garcia	Proximity to Community Garden (In Feet)	Proximity to Downtown (In Feet)	Proximity to Schools (In Feet)	Proximity to Rental Housing (In Feet)	Number of Bedrooms	Property Size (In Square Feet)	Building Age (Years)	Property Value (\$)
1	1584	41712	1584	1584	3	956	43	182,793
2	1584	41712	1584	1584	3	1075	43	190,864
3	1056	41712	1584	1584	3	1048	43	188,165
4	1584	41712	1584	1584	3	1096	44	204,032
5	1584	41712	1584	1584	3	1039	45	190,250
6	1056	41712	1584	1584	3	1048	43	188,165
7	1056	41712	1584	1584	3	1099	45	195,009
8	1584	41712	1584	1584	3	964	44	187,693
9	1584	41712	1584	1584	3	1701	43	203,668
10	1584	41712	1584	1584	3	1049	43	187,981
11	1584	41712	1584	1584	3	957	43	185,752
12	1584	41712	1584	1584	3	1117	44	194,289
13	1584	42240	1584	2112	3	1737	45	229,270
14	1584	42240	1584	2112	3	1078	44	191,153
15	1584	42240	1584	2112	4	1651	43	209,095
16	1584	43296	1584	2112	3	1013	43	176,945
17	1584	43296	1584	2112	3	968	43	204,785
18	2112	42240	2112	2112	3	1018	43	190,034
19	2112	42768	2112	2112	3	962	43	186,229
20	1584	43296	1584	2112	3	958	42	186,871

Appendix F: North Austin YMCA

North Austin YMCA	Proximity to Community Garden (In Feet)	Proximity to Downtown (In Feet)	Proximity to Schools (In Feet)	Proximity to Rental Housing (In Feet)	Number of Bedrooms	Property Size (In Square Feet)	Building Age (Years)	Property Value (\$)
1	528	44352	3168	2112	4	2264	47	281,755
2	528	44352	3168	2640	3	1626	47	263,671
3	528	44352	3168	2112	5	2620	47	302,662
4	528	44352	3168	2112	3	1937	47	273,291
5	1056	45408	2640	2640	3	2037	47	276,927
6	1056	45408	2112	2640	4	1724	47	279,588
7	1056	45408	2112	5280	3	1914	47	273,496
8	1056	44880	3168	2640	3	2432	47	286,578
9	1056	44880	3168	2640	3	1749	47	261,817
10	1056	44880	2640	2640	3	1535	47	263,174
11	1056	44880	2640	2640	3	1746	47	272,239
12	1056	45408	2640	2640	5	2524	47	295,456
13	1584	45408	2640	5280	3	2221	46	289,439
14	1584	45408	2112	5280	3	2393	46	287,958
15	2640	44880	2640	6864	4	1996	46	271,240
16	1584	45408	2112	3168	4	2050	47	280,676
17	1056	45408	2112	3168	3	2206	48	287,293
18	1056	44880	2112	3168	4	1955	48	281,638
19	1056	44880	2112	2640	4	1436	48	254,714
20	528	44880	2640	2640	3	2284	48	288,318

Appendix G: Kenny Dorham's Backyard

Kenny Dorham's Backyard	Proximity to Community Garden (In Feet)	Proximity to Downtown (In Feet)	Proximity to Schools (In Feet)	Proximity to Rental Housing (In Feet)	Number of Bedrooms	Property Size (In Square Feet)	Building Age (Years)	Property Value (\$)
1	459	5808	2112	3168	3	980	94	323,459
2	499	5808	2112	3168	3	1320	12	389,304
3	528	5808	2112	3168	3	897	12	339,164
4	528	5808	2112	3168	3	1324	12	381,648
5	528	5808	2640	3696	3	1388	11	391,297
6	528	5808	2640	3168	3	1309	15	362,236
7	528	5808	2640	3168	3	2298	13	534,022
8	528	5808	2640	3168	4	2048	15	553,616
9	1056	5280	2640	3696	3	1527	19	409,301
10	1056	5280	2640	3696	3	1266	20	364,699
11	1056	5280	3168	3696	3	1428	20	401,285
12	1056	5280	3168	3696	3	1104	20	354,726
13	1056	5280	3168	4224	4	1528	20	404,049
14	1056	5280	3168	4224	1	1831	18	572,189
15	1056	5280	3168	3696	3	1324	18	382,567
16	1584	5280	3168	4224	3	1266	20	365,331
17	1584	5808	3168	4224	3	568	18	390,731
18	1056	5808	3168	4224	3	1190	18	360,136
19	1584	5808	3168	4224	3	1265	18	364,852
20	1056	5808	3168	3168	3	1270	18	366,757

Appendix H: Adelphi Acre

Adelphi Acre	Proximity to Community Garden (In Feet)	Proximity to Downtown (In Feet)	Proximity to Schools (In Feet)	Proximity to Rental Housing (In Feet)	Number of Bedrooms	Property Size (In Square Feet)	Building Age (Years)	Property Value (\$)
1	1584	71280	1584	4224	3	1282	36	279,344
2	1584	71280	1584	4224	3	1600	36	276,802
3	1584	71280	1584	4224	3	1441	36	274,988
4	1584	71280	1584	4224	3	1531	36	280,605
5	1584	71280	1584	4224	3	1448	36	270,924
6	1056	71280	1584	3696	4	1472	36	279,487
7	1056	71280	1584	3696	3	128	36	277,116
8	1584	71280	1584	4224	3	1448	36	270,924
9	1056	71280	1584	3696	3	1922	36	290,869
10	1056	71280	1584	3696	3	1389	36	325,000
11	1056	71280	1584	3696	3	1401	36	278,876
12	1056	71280	1584	3696	3	1291	36	274,910
13	1056	71280	1056	3696	3	1376	36	273,702
14	1056	70752	1056	3696	3	1536	36	284,838
15	1056	70752	1056	3696	3	1406	36	277,632
16	528	70752	1056	3168	3	1254	36	273,620
17	1056	70752	1056	3696	3	1312	36	276,310
18	1056	70752	1056	3696	3	1584	36	278,087
19	1584	71280	1584	4224	3	1345	36	273,357
20	1584	71808	2112	4224	3	147	36	276,056

Appendix I: Cherry Creek

Cherry Creek	Proximity to Community Garden (In Feet)	Proximity to Downtown (In Feet)	Proximity to Schools (In Feet)	Proximity to Rental Housing (In Feet)	Number of Bedrooms	Property Size (In Square Feet)	Building Age (Years)	Property Value (\$)
1	1056	42240	4752	3696	3	1800	46	286,504
2	1056	42240	4752	3696	3	1952	46	298,646
3	528	42240	4224	3696	3	1804	46	279,202
4	1056	42240	4752	3696	3	2067	41	314,372
5	528	42240	4224	3696	3	2122	46	313,537
6	1056	42240	4752	4224	3	1754	45	307,243
7	1584	42768	5280	4224	3	1509	46	262,686
8	1056	42768	4752	4224	3	1526	46	265,469
9	1056	42768	4752	4224	3	2291	45	392,609
10	1056	42768	4752	4224	3	1563	46	266,924
11	1584	42768	5280	4224	3	2328	45	372,603
12	1584	42768	5280	4224	3	2393	46	374,214
13	1584	43296	5280	4224	3	1633	45	272,454
14	1584	42768	5280	4224	3	1563	46	270,317
15	2112	43824	5808	4752	3	2242	45	316,714
16	2112	43296	5808	4752	4	2066	45	316,552
17	2112	43824	5808	4224	3	1661	45	271,478
18	1584	43296	5280	4224	3	1157	45	245,699
19	1584	43296	5280	4224	3	1616	46	271,175
20	1584	43296	5280	4224	3	1514	45	266,022

Appendix J: Downtown Austin

Downtown Austin	Proximity to Community Garden (In Feet)	Proximity to Downtown (In Feet)	Proximity to Schools (In Feet)	Proximity to Rental Housing (In Feet)	Number of Bedrooms	Property Size (In Square Feet)	Building Age (Years)	Property Value (\$)
1	528	18480	1584	5280	3	1720	82	394,912
2	489	17952	1584	5280	3	2074	77	420,950
3	361	17952	1584	4752	3	1088	77	315,282
4	430	17952	1584	4752	2	936	77	314,616
5	528	18480	1584	5280	3	4020	9	608,552
6	528	18480	1584	5280	3	1536	65	364,400
7	361	17952	1584	4752	3	1088	77	315,282
8	528	17952	1056	5280	3	1528	77	325,715
9	1056	17952	1056	5280	3	796	82	321,695
10	1056	16896	1056	5808	3	1421	76	363,020
11	1056	16896	528	5808	1	720	59	280,628
12	1056	17424	528	5808	3	1368	77	353,397
13	1584	17424	528	5808	3	1532	71	365,350
14	1584	17424	528	5808	3	2550	82	512,263
15	1584	17424	486	5808	3	832	77	289,889
16	1584	17424	528	5808	3	2550	82	512,263
17	1584	17424	528	5808	3	1060	70	317,415
18	1056	16896	528	5808	3	1343	69	337,092
19	1056	16896	1056	5808	3	1512	69	368,118
20	1056	16896	1056	5808	3	1228	71	336,941

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