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Property tax rates as an indicator of neighborhood change:

An examination of an unanticipated effect of Measure 50 in the
City of Portland

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Submitted for partial fulfillment of Master of Science degree in Geography
Portland State University

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LIST OF ACRONYMS

AV.....	Assessed Value (based on Measure 50)
BNP.....	Portland’s Adopted Boise Neighborhood Plan
CBD.....	Central Business District
CNP.....	Centennial Neighborhood District
CPR.....	Change Property Ratio
DART.....	Department of Assessment, Records and Taxation
M50.....	Measure 50 Value
MAV.....	Maximum Assessed Value
MFR.....	Multi-Family Residents
MNP.....	Adopted Montavilla Neighborhood Plan
ONI.....	Office of Neighborhood Involvement
RLIS.....	Metro’s Regional Land Information System
RMV.....	Real Market Value
SFH.....	Single Family House

ABSTRACT

Gentrification and stagnation are two prominent themes in neighborhood development today. The city of Portland, Oregon is experiencing both of these neighborhood stages in different neighborhoods. In Oregon a property tax measure passed in 1997, Measure 50, caused property tax rates to vary by location according to changes in real market values over time. Recent analysis has revealed that property tax rates in Portland follow the spatial patterns of gentrification and stagnation in Portland, and therefore could be contributing neighborhood change. Differential property tax rates have shown to influence mobility and homeownership, two factors of neighborhood change. In order to see if property tax rates are indeed contributing to neighborhood change this study conducts two main analyses on three neighborhoods of varying property tax ranges. The first is a comparison of socio-economic changes, based on census data, in the three neighborhoods to see how they relate to property tax rates. The second is an examination of urban policies established in the mid-1990s to see if there were any political and developmental drivers of this change. This preliminary study finds that property taxes are related to the socio-economic and political influencers of neighborhood change and are likely a catalyst.

INTRODUCTION

The State of Oregon's unique property tax system has garnered much media attention in recent years. In 2007 a *Willamette Week* article, "Spot the Differences", discussed how properties with similar market values can have drastically different property tax rates (Pitkin 2007). After the real estate market bust and decline, articles addressed how yearly increases in property taxes had nothing to do with changes in property value (Mayer 2009; Mayer 2010; OEB 2012a; OEB 2012b; Jaquiss 2013). These articles blame Measure 50 for the incongruity. Passed in 1997, Oregon's Measure 50 effectively decoupled property tax rates from market values. The result is that property tax rates are now a reflection of neighborhood change rather than a reflection of the property's sale price in the real market. Until recently, the popular press focused on the discrepancies between property tax rates and sales values of properties but had so far omitted the pattern of property tax rates over space. At the time of this study *The Northwest Economic Center* released a report showing that property tax savings are actually having an effect on sales price, which varies by neighborhood (Lee and Renfro 2014). The *Oregonian* explains that incongruities in property taxes among homes are furthered by giving an advantage to those who can afford to buy in the neighborhoods with faster increases in property values (Potiowsky 2014).

The City of Portland has been credited with having progressive politics that create a livable and vibrant city, and lauded for its "participatory approaches to regional development" (Butz and Zuberi 2012, 359). However, over the past 20 years Portland still has a number of issues to contend with. Housing gentrification and recent poverty growth are notable; Portland's poverty rates are below the average US city (Butz and Zuberi 2012). Similarly, there has been growing income inequality since the 1990s, with highest quintile growing and the lowest declining by 2.5% (Butz and Zuberi 2012). Furthermore, housing values have increased more

than income in the past twenty years, and the majority of Portland residents do not feel that housing is affordable (Butz and Zuberi 2012). As Butz and Zuberi (2012) point out ""Studying a person's residential location within a city and social structural barriers are essential to understanding their experiences and outcomes" (360). Therefore it is important to study changes at the neighborhood scale in order to determine how changes in policy, housing, and economics affect the residents of Portland.

This study will show that the ratios of property tax rates to market values of property can be used to gauge patterns of neighborhood change. Specifically, the discrepancies between property tax rates and market values over space parallel patterns of stagnation, revitalization, and gentrification in the Portland metropolitan area (City Club of Portland, 2013). This paper uses property taxes as a research framework to examine changes of three neighborhoods in Portland. The purpose of this study is to use the relationship between property tax rates and market values to illustrate how the socio-economic, political and geographic influences interact to create neighborhood change.

In the City of Portland the ratio between property tax rates and market values represent two things: change in market value since 1995 and the potential for tax savings by homeowners. In order to establish how high or low property tax rates in Portland are indicative of neighborhood change, this study examines three neighborhoods that represent different ranges of property tax rates. The neighborhoods chosen are Boise to represent low property tax rates, Montavilla to represent average property tax rates, and Centennial to represent high property tax rates (Figure 1).

Figure 1: The ratio of the Assessed Value to the Real Market Value of single-family houses in the City of Portland (Compiled from DART 2013 and Metro 2013)

Through examination of these neighborhoods this study aims to answer the following questions:

1. **How are property tax rates distributed throughout the City of Portland?**
  - Which neighborhoods and districts have lower/higher property tax rates?
  - How does the pattern of distribution follow theories of urban development?
2. **How do low or high property tax rates in selected Portland neighborhoods compare to changes in US Census and Esri Community Analyst housing and socio-economic data?**

- Looking at the years 1990, 2000 and 2010 what are the census changes for the neighborhoods chosen?
- How do the census changes relate to indicators of neighborhood change or gentrification?

3. What differences are there in the physical state of neighborhoods between 1995 and today? What policies were put in place in the 1990s that could have contributed to these changes?

Answering these questions will create a relationship between property tax rates, and neighborhood change and/or gentrification. Neighborhood change refers to the stage of development a neighborhood is experiencing: growth, stability, decline, or revitalization. Gentrification refers to an increase in neighborhood property values coupled with the socio-economic and demographic shifts of that neighborhood that result in the marginalization of its original residents (Bates 2013). Beyond being an indicator of neighborhood change there is a possibility that property tax rates are an influence on this change. If property tax rates are affecting neighborhood change to the point of gentrification in Portland, they would be doing so by influencing the decisions of certain individuals to buy properties in some neighborhoods over others. Houses in neighborhoods with lower property tax rates would have a market advantage and see an increase in demand. This demand for housing would be different for different demographic groups and hence affect their mobility. As a result, these low property tax neighborhoods would see an increase in homeownership, a shift in demographics, and a further increase in real estate market values.

Urban policies can either support or discourage gentrification. In the city of Portland, neighborhood development codes established in the 1990s provide evidence of investment and economic development initiatives in certain neighborhoods. It is likely that these original

investments and initiatives triggered revitalization in these neighborhoods leading to an increase in property values.

By comparing property tax rates with neighborhood change one can determine whether property tax savings are a viable indicator of this change. I expect to find evidence of a relationship between property tax rates and neighborhood change. Neighborhoods with low property tax rates will show evidence of revitalization, because low property tax rates are associated with greater increases in market values. Whereas neighborhoods with high property tax rates will show evidence of decline, because low property tax rates are indicative of less of an increase in market values.

Understanding how the property tax system in Oregon works is important for understanding why property tax rates would be related to neighborhood change, property values, and homeownership. Therefore, before addressing these relationships this paper will discuss the history and current manifestation of Oregon's property tax system.

ROLE OF OREGON'S PROPERTY TAX SYSTEM

It is a generally accepted principle that the property taxes owed on a property is indicative of the sale value of that property. In many American states this principle holds true to some extent. However, this is not the case in the State of Oregon. In Oregon the property tax rate has no correlation to the market value of that property (LRO 2010). This means there can be multiple homes with the same market value and drastically different property tax rates. This discrepancy is due to three Measures that were passed in the state in the 1990s, Measure 5, Measure 47 and Measure 50.

Prior to 1990 Oregon property taxes were paid on the market value of a property. The market value was assessed by neighborhood in six-year cycles by county appraisers. Before

these measures took effect it was found that the primary effect on property tax was through the assessment process (Buchanan and Weber 1982). In 1990 Measure 5 was passed and it initiated changes in the Oregon property tax system. Measure 5 set caps on property taxes for education (no more than \$5 for every \$1000 of property value) and local government (no more than \$10 for every \$1000 of property value). However, Oregon, specifically the Portland Metro region, was experiencing an influx of people (Census 2001) resulting in an increased demand for housing. This demand would have driven housing prices up somewhat erroneously as property appraisers were likely to increase value of homes due to future anticipated increases in demand and value. As a result assessed value for properties inflated and property owners thought that they were being taxed too much on their homes. In 1996 anti-tax advocate Bill Sizemore proposed Measure 47, which intended to limit the growth in the assessed value of a property to three percent per year. However, Measure 47 lacked clarity as to whether it was meant to replace Measure 5 or be an addendum to Measure 5. As a result Measure 50 was proposed and passed in 1997. Measure 50 acts as an addendum to Measure 5, restricting property taxes by rate and annual growth. The major distinctive feature of Measure 50 is that it established and defined the Maximum Assessed Value on which a property could be taxed (LRO 1999).

Measure 50 defined five values that can be associated with a property: the Real Market Value, the Assessed Value, the Maximum Assessed Value and in some cases the Special Assessed Value and the Maximum Special Assessed Value. For simplification purposes, this paper will only discuss the first three. The Real Market Value (RMV) is the amount a property would sell for in an arms-length transaction between a willing buyer and seller. An arms-length transaction stipulates that both buyer and seller share similar knowledge of the property and market, and that neither is being forced into the transaction. The RMV is based on the assessor's inspection

of the property and sale values of similar properties. Oregon law says the assessors must value property at 100 percent of their RMV.

The Assessed Value (AV) was first adopted in the 1997/1998 tax year. In this year each property's AV was set at ninety percent of its 1995 RMV. Therefore a property that was worth \$200,000 in 1995 would be given an AV of \$180,000 in 1997 despite what its RMV was in 1997 (Table 1). There are two ways to change the AV. The first is that counties can increase the AV by three percent a year. The second is that the AV can be increased in addition to the three percent a year if a change is made to the property by an exception event: new construction, rehabilitation, rezoning, or subdivision.

The Maximum Assessed Value (MAV) is the taxable value of a property and it will always be the lower of the AV plus three percent or the RMV. By looking at one property in 1995, 1997, and 2013 one can see how the three property values have affected property taxes in Oregon (Table 1). In 1995 the property was taxed based on its real market value, in 1997 the AV was established at ninety percent of the property's 1995 RMV. The MAV was established as the taxable value and set to match the AV since it was lower than the RMV. A three percent growth per year of the 1997 AV resulted in an AV of \$288,847 in 2013. This is less than the real market value of \$350,000 and as such the MAV and taxable value are \$288,847. The creation of these property value types resulted in the linking of property tax values to the value established in 1995, thereby eliminating the need for reassessment every six years (LRO 1999).

Table 1. Changes in property values in Oregon under Measure 5 and Measure 50

	1995	1997	2013
RMV	\$200,000	\$220,000	\$350,000
AV	NA	\$180,000	\$288,847
MAV	NA	\$180,000	\$288,847
Taxable value	\$200,000	\$180,000	\$288,847

If the RMVs of properties increased consistently throughout the State of Oregon over time then similarly priced properties would be paying similar amounts in property taxes today.

However this is not the case. In recent years the discrepancies in property tax rates in Oregon have been widely acknowledged. Oregon is suffering from 'horizontal inequities' in property taxes: "tax payers in equal circumstances treated differently by the tax system" (LRO 2010, 1).

The State of Oregon Legislative Review Office studied inequities in four counties in 2010. They had six key findings:

- Horizontal inequities are widespread among the four counties
- No correlation with the assessed to market value ratio and market price
- Most variability was in the \$200,000 to \$300,000 price segment
- With the housing market collapse and a decrease in housing values , inequities still existed because of how drastic the differences were prior to the collapse
- When recovery begins the horizontal inequities will begin to grow because properties, neighborhoods, and regions do not all grow at the same rate
- Multnomah County has the most acute degree of horizontal inequities

(LRO, 2010)

There are two ways in which these horizontal inequities are realized (Table 2). The first example is three homes that currently have similar MAVs but drastically different RMVs. These three homes started out with similar RMVs but experienced different rates of inflation. Because their MAV was based on their 1995 values their MAV and as such property tax rates remained close.

The second example is three homes that have similar RMVs but drastically different MAVs.

These three homes had different RMVs in 1997 which is why they each had different MAVs. The homes with lower RMVs experienced a greater increase in value but because the MAVs were set in 1997 they all pay similar property tax amounts. These horizontal inequities increase with both

time and space. The spatial inequities between property RMVs and the AVs can be used to examine the dynamic patterns in growth of the city.

Table 2. Measure 50 effects on Maximum Assessed Value of Homes (Data compiled from DART 2013)

Neighborhood	Value	1997	2012
Three homes with similar M50 Values in 2012			
Boise	RMV	\$92,500	\$255,100
	M50	\$52,920	\$99,960
Montavilla	RMV	\$85,600	\$119,540
	M50	\$64,260	\$100,010
Centennial	RMV	\$101,000	\$100,050
	M50	\$77,220	\$100,050
Three homes with similar RMV Values in 2012			
Boise	RMV	\$86,400	\$250,180
	M50	\$33,390	\$51,940
Montavilla	RMV	\$139,700	\$250,140
	M50	\$101,070	\$157,380
Centennial	RMV	\$154,300	\$250,170
	M50	\$116,910	\$221,200

Since the AV is tied to the 1995 AV of properties, and has grown almost consistently since it was first established in 1997, it is the fluctuations in RMVs that are represented by the discrepancies. By looking at how the ratio of AV to RMV varies over space one can identify neighborhoods with relatively high increases or decreases in RMV. A high increase in RMV can be an indicator of either neighborhood revitalization or gentrification, whereas a relative decrease in RMV can be an indicator of decline. By comparing the increases or decreases of RMV in certain neighborhoods to the socio-economic and demographic changes in those neighborhoods one can determine whether property tax inequities are an indicator in revitalization, gentrification, decline, or neither.

DATA AND METHODS

As a municipality governed by Metro, Portland is required to create development codes and policies that are consistent with the policies and goals of Metro. Portland's Comprehensive Plan, established in 2006, contains these codes and policies. Portland is made up of seven distinct neighborhood districts: Southwest Portland, Northwest and Inner Southwest Portland, North Portland, Inner Northeast Portland, Central Northeast Portland, Inner Southeast Portland, and East Portland. Each district is made up of multiple geographically contiguous self-selected neighborhoods. As stated by the Office of Neighborhood Involvement (ONI), the neighborhoods each have an association formed by neighborhood residents to consider the issues affecting the livability of each neighborhood (ONI 2005). Most neighborhood associations created their own development codes to reflect the vision of the neighborhood. In 2005 these neighborhood associations were officially recognized in the City Code and Charter (ONI 2005). Many of these development codes were incorporated into the Comprehensive Plan. Since each neighborhood has its own distinct vision and boundaries this study will use this neighborhood scale to examine the locational differences of property tax discrepancies in Portland.

In order to establish how neighborhoods with high or low property taxes in Portland compare to socio-economic data, this study examines three neighborhoods that represent different ranges of property tax rates.

The Neighborhoods

On the low end of the property tax spectrum is the neighborhood of Boise, with an aggregate AV to RMV ratio of .301 for Single-Family Houses (SFHs), indicating that the property taxes for SFHs in this neighborhood are based on approximately thirty percent of the actual market value of the house. Most homes in Boise were built between the 1900s and 1930s (DART 2013). Boise is characterized by a mix of land use types, residents and commercial areas, both

old and new, with an industrial area to the south. Physically, Boise is small at about 0.4 square miles (Esri Community Analyst 2014). It is located in Inner Northeast Portland and is segregated from North Portland by I-205 to the west. The major access street in Boise is Martin Luther King Jr Boulevard, which connects Boise to both Northeast and Southeast Portland. Access to downtown is via the Fremont Bridge just south of Boise.

The history of Boise follows a pattern of many inner city neighborhoods. Boise was originally built as a residential neighborhood for the middle class and in the 1880s it was considered one of the most fashionable districts in Portland. This changed in the 1930s; with innovations in transportation allowing affluent residents to move to Portland's outer districts (BOP 1993). By the 1950's there was concern of 'blight' in Boise. In the 1960s a number of initiatives were set in place in order to combat this blight. Boise was considered fortunate for being considered worth saving; to the south the Eliot neighborhood had been cleared to build Legacy Emanuel Hospital (BOP 1993). Unfortunately the funding ended in the mid-1970s and it was not until the 1990s that there was active renewed interest in the neighborhood (BOP 1993).

In the middle of the property tax spectrum is the Montavilla neighborhood, with an aggregate AV to RMV ratio of .697 for SFHs, this is close to the City of Portland average in which the AV is approximately seventy percent of the RMV. According to the property appraisers at the Multnomah County Department of Assessment, Records, and Taxation (DART) most homes were built between the 1910s and 1940s. Montavilla is approximately 2.18 square miles (Esri Community Analyst 2014); it is located in the Southeast Portland district and lies just east of Mount Tabor. Mount Tabor effectively blocks Montavilla from central Portland; however S.E. Division Street, S.E. Stark Street, and N.E. Glisan Street are major thoroughfares that provide

automobile and public transit access to Montavilla. Although Montavilla is mainly a residential district, the major arterials have heavy commercial and some light industrial use.

Montavilla is a younger neighborhood than Boise. Prior to the opening of the Morrison Bridge in 1887 Montavilla was mainly farmland. The opening of the bridge enabled residential development. The extension of Portland street car service and the Union Pacific Railway terminal in the early 1900s led to urban development in Montavilla (BOP 1996b). According to a report by the *Oregonian* by March 1914, “Montavilla [was] considered one of the most prosperous suburbs on the east side of the river,” (BOP 1996b, 4). In 1968 the Montavilla Community Association was one of the first neighborhood associations to be established. The community association allowed residents to have a say on land use changes, traffic, park hours and “resolving used car lot disputes on 82nd Avenue,” (BOP 1996b, 5).

Finally, on the high end of the property tax spectrum is Centennial, with an aggregate AV to RMV ratio of 1.006 for SFHs. In this neighborhood it would seem that some property owners may pay property taxes on more than the RMV, but because of the MAV is the lower of the AV and the RMV these property owners are most likely paying property taxes based on the RMV. According to DART property appraisers most homes were built between the 1950s and 1970s. Centennial is approximately 2.95 square miles (Esri Community Analyst 2014); it is located in the East Portland district enters the City of Gresham on the east side. S.E. Division Street and S.E. Stark Street serve as major access roads from inner Portland districts to this Centennial. Centennial is characterized as being mainly residential with some commercial areas meant to be accessed by car.

Similar to Montavilla, Centennial was originally farmland and undeveloped until the twentieth century. It was first established as the ‘Lynch District’ in 1927 (BOP 1996a). At that

time, the Lynch District was separate from the city and contained the site of Troh's airport. Then in the 1950s a demand for additional housing attracted developers and farmland gave way to housing, Troh's airport was removed and the Centennial neighborhood became the residential district that it is today (BOP 1996a). Centennial did not establish its own neighborhood association until August of 1994 when "residents of Centennial realized that, not only would the earlier [unofficially created] plan not be continued as Centennial's neighborhood plan, but that the neighborhood might be left with nothing unless a completely new plan were written," (BOP 1996a, 9). The catalyst for establishing a neighborhood association was the clear-cutting of trees on the north side of Powell Butte, upsetting residents who viewed Powell Butte as a natural resource for the entire neighborhood. The incident revealed that the residents wanted to be able to have voice in neighborhood decisions (BOP 1996a).

Property Values

This study obtained the different property values for each tax lot in the city from the DART. Depending on the type of property - such as, residential, commercial, or industrial - property values are treated differently. For consistency, this study only used the property values for single-family residents, specifically houses. The reason that SFHs were chosen is because this study assumes that neighborhood change is related to homeownership and occupancy, and SFHs are regarded as the most representative of changes in homeownership and residence in a neighborhood. Multi-family apartments were not used because as rentals there is a difference between owner and resident; it is possible that changes in the characteristics of the residents may change when the owner has made no changes to the housing. With single-family residents, changes of those residing in the home are more likely to be combined with changes in the state of the housing. Finally, condominiums and vacant single-family tax lots were also omitted in

order to keep the data between neighborhoods as consistent as possible, neighborhoods with a higher percentage of condominiums or vacant lots could potentially influence the data.

For each SFH tax lot in Portland, the Real Market Value and the Measure 50 Assessed Value were obtained. The RMV was chosen to represent property sale value in a viable arms-length transaction for the 2013 tax year. Since the AV value is based on the RMV of the 1995 tax year and the maximum three percent a year growth, it was used to represent the value in 1995. The ratio between the two values represents the difference between the 1995 SFH values and the 2013 SFH values. The reason why the AV was chosen over the MAV is because of Measure 5 and compression. Because Measure 5 sets a cap on property tax rates the MAV can never exceed the RMV. As such one would not be able to distinguish between the neighborhoods where the AV has reached the limits of the compression caused by Measure 5 and neighborhoods that have exceeded that limit.

In order to aggregate this data to the neighborhood scale I used ArcMap 10.1. Metro maintains GIS data for Portland through their Regional Land Information System (RLIS). I obtained tax lot and neighborhood boundary shapefiles through RLIS. The RMV and AV data were joined to the RLIS tax lot shapefile. This joined data was overlaid with the neighborhood shapefile and each tax lot was assigned a neighborhood. The data was aggregated by adding the RMVs of each SFH, and adding the AVs of each SFH per neighborhood. The ratio between the two values was then calculated and mapped (Figure 1).

Socio-economics and Urban Policy

Once the changes in property values were established this study looked at changes in socio-economic and demographic characteristics of each neighborhood using the US Census and Esri Community Analyst housing and socio-economic data. This data was obtained through Esri's

Community Analyst which maps the data and interpolates it to the region of interest. One must note that the census data is collected by census block group and the neighborhood boundaries do not necessarily follow block group boundaries, therefore the numbers calculated are estimates for each neighborhood. Community Analyst calculates the percentage of each block group in the neighborhood boundary and then multiplies the census data by that percentage to get a value for the neighborhood for each block group that overlaps the neighborhood. For example if fifty percent of block group 1.1 was in the neighborhood boundary and the population of block group 1.1 was 1000 Community Analyst would calculate $1000 * 0.50$ is 500, therefore 500 people from block group 1.1 are in the neighborhood studied. However, since by nature no block group has an evenly distributed population, 500 would be an estimate of the actual population. By importing the neighborhood shapefile for each of the subject neighborhoods into Community Analyst, I ran reports on each neighborhood to get appropriate data on housing, people, economics and other factors of neighborhood change.

In order to establish how urban policy affected neighborhood change, I examined neighborhood development codes that were written in the mid-1990s, right around the time Measure 50 was passed. In the mid-90s Portland was dealing with an influx of residents. In response to the new residents and in order to accommodate to population changes the City of Portland conducted an overhaul of its Comprehensive Plan. Hand-in-hand with the overhaul many of the neighborhoods enacted their own development plan. In 1993 the *Portland's Adopted Boise Neighborhood Plan* was developed as part of the larger *Albina Community Plan*. In 1996 both the *Adopted Montavilla Neighborhood Plan* and the *Adopted Centennial Neighborhood Plan* were developed as part of the *Outer Southeast Community Plan*. I used these plans to create descriptions of each of the neighborhoods in the 1990s. I then visited each neighborhood and created present day neighborhood descriptions. By comparing the mid-1990s

neighborhood descriptions, goals, and policies to present-day descriptions this study offers explanation on how the neighborhoods have changed, and whether these changes are reflected in the property tax rates.

LITERATURE REVIEW

Academic research on the topics of urban design, neighborhood change and gentrification, residential mobility, and homeownership are relevant to this study. Urban design research provides a conceptual framework for urban form, necessary to understand how patterns of development are considered in a city. Neighborhood change and gentrification literature relate property values and property value growth to socio-economic and demographic changes in a neighborhood. Establishing these relationships allowed this study to examine socio-economic and demographic changes and compare them to property tax rates in Portland. The literature on residential mobility shows that residential mobility is necessary for neighborhood change, and that there is a relationship between property tax rates and residential mobility. As such property tax rates would have a relationship to neighborhood change. Similarly, the literature on homeownership reveals that changes in homeownership rates are indicators of neighborhood change. Property tax rates also have an influence on homeownership rates and hence an influence on neighborhood changes. In sum, the literature review will explain mechanisms for neighborhood change; mobility and homeownership rates. It will then address how mobility and homeownership are related to property tax rates. By creating these associations this paper will relate property tax rates with neighborhood change.

Urban Form and Evolution throughout the United States

Cities across the country are experiencing dramatic changes. Some cities, such as Detroit and Cleveland, are seeing high vacancy rates and property value declines, whereas cities like

Washington DC, San Francisco and Boston are experiencing revitalization of many neighborhoods resulting in gentrification. Recent economic shifts are associated with these city transformations, and urban economies realize this shift as a change from a focus on housing to a focus on retail and service (Puentes and McFerrin 2012). Within each city, neighborhoods experience these transformations differently. For example, historically inner-city neighborhoods tended to be the focus of revitalization but recent changes to suburban neighborhoods have brought more focus to cities' outer reaches (Charles 2013). The way in which these neighborhoods change creates a pattern of urban development. In the City of Portland property tax rates represent market value changes, market value changes are an important factor in determining patterns and cycles of urban development.

Urban geographers use space and the urban form to theorize why neighborhood change occurs. The central business district (CBD) in a city is a central accessible area in which property is expensive and consists of mainly of businesses (Knox and McCarthy 2005). In its purest form the CBD would be the main employment region for city residents. Bid-rent theory explains that the CBD would be the most accessible point in the city and, assuming all other factors are constant, rent values would be highest in this neighborhood and progressively decrease the further you get away from it (Knox and McCarthy 2005, 134). Hence the assumption is that wealthier neighborhoods surround the CBD. However, there is a tradeoff between transport costs (lower near the CBD) and housing demand (less expensive further from the CBD) which leads to bigger, more expensive homes on the urban fringe (Charles 2013). Using the bid-rent model Charles (2013) explains that neighborhoods closer to the CBD tend to be older and exhibit the largest disparity between the market value during the original development and the most profitable use as of a certain date; this is known as rent gap. Rent gap can potentially be illustrated through market value change in neighborhoods.

Similar to the bid-rent theory, the Ernest Burgess theory of centralization attempts to explain how urban form relates to the CBD. Centralization also considers the CBD the most accessible area in a city (Knox and McCarthy 2005). According to centralization, this accessibility results in a mix of economies. As these economies grow, industry close to the CBD would eventually move to the inner most residential area, making it less desirable and forcing its residents further out to take over the next inner most residential area (Knox and McCarthy 2005, 312-313). Eventually these industrial areas make the surrounding residential areas less desirable and they become low income neighborhoods. The Puentes and McFerrin (2012) report on urban changes throughout the United States follows this idea of centralization, claiming that most US cities had CBDs surrounded by either low-income or industrial areas. This also explains why inner-city neighborhoods have been the focus of revitalization. Puentes and McFerrin claim that former sites of production are shifting to new sites of consumption, as old industrial areas are becoming areas of retail and housing. As such some cities are experiencing a shift in their inner-city neighborhoods from industry to retail (Puentes and McFerrin 2012).

Bid-rent and centralization are both economically driven theories, but as Rosenstein (2009) reports, some urban changes are due to cultural effects. Today individuals are choosing to move into city centers to be close to culture, diversity, and accessible services (Ley 1986, Rosenstein 2009). This movement follows Richard Florida's popular idea that attracting the 'creative class' will attract professionals and lead to economic development in the city (Rosenstein 2009). The idea is that healthy cities are diverse in land use, demographics, housing options, and employment. This cultural theory is used to explain why urban policy focuses on neighborhoods where creative professionals reside; these neighborhoods have typically been former low-income inner-city neighborhoods. City planners have typically worked on enhancing the creative/artsy character of these neighborhoods through museums, restaurants, boutiques

and retail entities as a means to economic development (Rosenstein 2009). Rosenstein (2009) argues that in many cases these changes cause demographic shifts and the neighborhood's original residents who provided the creativity and diversity leave. Many neighborhoods with creative amenities are seeing a rise in household income and real estate values while seeing a decline in diversity (Rosenstein 2009). Therefore urban policy that promotes creative amenities could be using culture to drive certain types of urban change.

No single theory can explain the diverse urban forms or urban change throughout the United States; as individual cities evolve and adapt to changing economies they experience different outcomes. These outcomes can be positive or negative depending on the approach or the affected party. The concept of gentrification epitomizes how the approach to neighborhood change influences how the outcomes are viewed.

Neighborhood Cycles and Gentrification

The term gentrification first emerged in academic writing in the 1960s (Newman and Ashton 2004, McKinnish, Walsh and White 2010). Since then, the concept of gentrification has become quite ambiguous throughout the academic literature. In the broadest sense gentrification refers to the neighborhood change that results in a disproportionate increase in property values. The Appraisal Institute (2002) defines four stages of neighborhood change: growth, stability, decline, and in some cases revitalization. According to most scholars gentrification would occur in combination with or instead of revitalization (Lees 2004, Newman and Ashton 2004). This ambiguity arises when examining the processes and nature of neighborhood change that results in gentrification. Indicators of gentrification vary a lot throughout the literature depending on the authors' discipline and perspective. I have identified four common factors in the academic literature of neighborhood change that are associated with gentrification: 1) disproportionate increase of property values, 2) disproportionate

increase in mean household income, 3) an increase in residents with a Bachelor's degree or higher, 4) a change in the ethnic composition of the neighborhood (Lees 2004, Newman and Ashton 2004, Betancur 2011, Ellen and O'Regan 2011, Bates 2013). These four factors address the economic, social, and demographic aspects of gentrification. Ley (1986) examined a combination of approaches to gentrification and he found that the economic and cultural amenity factors of a neighborhood are stronger predictors of gentrification than the demographic and housing factors of a neighborhood.

In terms of why gentrification takes place the academic literature provides a variety of approaches to answer this question. Lees (2004) states that prior to the 1990s there were two main approaches to the study of gentrification: an economic approach of supply versus demand, and a cultural approach of consumption versus production. Similarly, Betancur (2011) defines two main approaches to defining gentrification: higher income displacing lower income, leading to conflicts and dislocations in communities; and urban revitalization and cultural revival.

Recently the political approach to studying gentrification has been getting more attention (Lees 2004, Newman and Ashton 2004). The political approach states that it is urban policy that leads to gentrification. Neoliberal policy emphasizes revitalizing cities through the gentrification process, deconcentration of poverty, and increasing low-income and moderate-income housing (Newman and Ashton 2004). Similarly Lees and Ley (2008) claim that gentrification was once seen as a problem to urban policy but is now seen as a solution. Studies of urban policy and gentrification address the positive and negative effects of gentrification, giving rise to the question of whether gentrification is a good or a bad thing.

Gentrification versus Revitalization

When a neighborhood is revitalized its residents experience a number of benefits; increase in property values, increase in safety, increase in public services, and drop in crime.

Higher-income individuals moving into lower-income neighborhoods can drive neighborhood revitalization (Rosenstein 2009). However, as a neighborhood becomes more desirable, the demand for higher-income homes can rise, leading to a decrease in affordable housing. Eventually, the decrease in affordable housing results in the displacement of the original residents to a less desirable neighborhood; this displacement is what some deem the difference between revitalization and gentrification (Bates 2013). As Newman and Ashton (2004) put it, “[r]evitalization that focuses on drawing in higher income residents and on increasing homeownership has the effect of targeting benefits away from those with very low incomes; almost no funding goes towards multifamily housing, housing rehabilitation or permanent affordability, and neighborhood services providers continue to struggle” (1170). This incongruence between the benefits and costs of increasing neighborhood property values, emphasizes the fact that revitalization and gentrification should be defined differently.

Similarly McKinnish, Walsh and White (2010) state that when historic low-income neighborhoods experience an increase in household income and property values this is sometimes lauded as revitalization of neglected neighborhoods or is criticized for displacement or marginalization of ethnic groups. The marginalization of ethnic groups is one of the most contentious aspects of gentrification. There are still a disproportionate number of African Americans and Hispanics in inner-city low-income neighborhoods where gentrification typically takes place (Puentes and McFerrin 2012). When these groups leave, they do not get to participate in any of the benefits of the neighborhood revitalization. Furthermore, neighborhoods that are experiencing an increase in higher-income residents lose some of the diversity and cultural amenities that once attracted the new residents (Rosenstein 2009).

On the other hand, some studies show that demographic flows associated with gentrification are not consistent with displacement and negative consequences (McKinnish,

Walsh and White 2010). Betancur (2011) notes that individuals at different income levels view gentrification differently. Gentrified neighborhoods are indeed attractive to middle-income minority groups (McKinnish, Walsh and White 2010); therefore it is not necessarily an ethnic displacement. This makes it difficult to determine what factors should be used as indicators of gentrification.

From an economic approach, the principal of progression states that if a property is surrounded by higher valued properties its property value will rise (ODR 2012). Therefore, original residents who choose to remain in the neighborhood undergoing a change will reap the benefits of rising values of surrounding properties. Ellen and O'Regan (2011) found that it was not only individuals moving in to a neighborhood that cause a rise in property values, but that the individuals that chose to remain in a neighborhood also experienced a rise in property values. This suggests that a rise in property values still provides benefits to those remaining in gentrified neighborhoods.

The definition this study chose for gentrification includes the factors involved in revitalization, but looks at how policies implemented can marginalize certain demographic groups. Because of the different responses to neighborhood change that results in the rise of property values, household incomes, and demographic changes, this paper adds a fifth factor to the common factors of gentrification. According to this study gentrification is: 1) disproportionate increase of property values, 2) disproportionate increase in mean household income, 3) an increase in residents with a Bachelor's degree or higher, 4) a change in the ethnic composition of the neighborhood, and 5) the marginalization and displacement of the neighborhoods original residents.

It is important to acknowledge that space is an important aspect of gentrification. As Betancur (2011) points out low-income people lack the resources to take over space, as such are

at an inherent disadvantage when facing decisions that lead to neighborhood change. It is this idea of taking over space that reflects two main factors in neighborhood change: mobility and homeownership. Mobility is important because it implies choice, those who are mobile are choosing to move, yet those who do not have the ability to move are limited and potentially marginalized. Homeownership is like mobility in that it usually implies choice. Since homeownership is a long-term investment, the choice is whether to change locations or stay; and the choice of what can be purchased within a given budget and desired amenities. To be clear, in this paper homeownership refers to owner-occupation as opposed to owning a home to be rented out or used for another purpose. Both mobility and homeownership are influenced by property tax values, and the next section of this literature review will discuss how these influences are realized.

Residential Mobility

As stated above, neighborhoods are dynamic; individuals continue to move in and out from different demographic groups and socio-economic statuses. Residential mobility is a direct indicator of neighborhood change by affecting who is moving into and out of a neighborhood. However, it is not mobility itself that is an indicator of revitalization or gentrification but the reasons for the mobility. For the individual, residential mobility can be either a positive indicator such as a first-time homeowner or a negative indicator such as instability (Coulton, Theodos and Turner 2012). Studies have shown that the decision to move from or stay in a home, is related to life events such as: marriage, divorce, childbirth, children leaving home, change of employer, changes in income or assets, and retirement. Certain life events occurring in a neighborhood tend to be related with demographic characteristics, such as age, gender, socio-economic status, all of which are also associated with probability of residential mobility (Coulton, Theodos and Turner 2012). Similarly Ioannides and Zabel (2007) find that individuals choose to move to areas

with similar individuals, in terms of income level, education and ethnicity. If neighborhoods show demographic shifts consistent with certain types of mobility, one can determine how neighborhood change came about in these neighborhoods.

Also related to mobility are the feelings individuals have towards their neighborhoods. “Positive feelings toward the neighborhood and strong social connections have been found to keep households in place longer, and these effects have a stronger limiting effect on residential mobility among low-income compared with high-income families” (Coulton, Theodos and Turner 2012, 4). In terms of revitalization and gentrification, Ellen and O’Regan (2011) found that renters who chose to stay in neighborhoods with a large increase in property values reported higher satisfaction in their neighborhood than renters that chose to stay in neighborhoods without a rise in property values. This suggests that neighborhood change will affect low-income households both mobile and immobile.

While many claim that gentrification and revitalization leads to a reduction in crime (Rosenstein 2009), Coulton, Theodos and Turner (2012) find that neighborhoods with higher residential turnover tend to experience higher rates of crime and delinquency. They also notice that residential turnover promotes more mobility because it weakens the perception of being “close knit”. Mobility leads to demographic and socio-economic shifts in a neighborhood when the characteristics and well-being of newcomers differ from those moving out. On the other hand, selective mobility can maintain a neighborhood’s status quo; usually this occurs when the more affluent residents leave a distressed neighborhood (Coulton, Theodos and Turner 2012). Both immigration of higher income households and selective outmigration of lower income homeowners contributed to neighborhood income growth, as well as income gains among original residents (Ellen and O’Regan 2011). These studies reemphasize the fact that mobility is

an important factor in neighborhood change. Those who are mobile, why they choose to move, and where they choose to move all affect the type of neighborhood change that occurs.

Beyond the relationship between mobility and neighborhood change there are also studies linking property tax rates and mobility. In studies of individual states' property tax systems and mobility, California's Proposition 13 is probably the most researched (Ihlanfeldt 2011). Like Oregon's Measure 50, Proposition 13 sets a limit to the annual growth of property tax rates; the maximum amount an assessed value of a property can increase in California is by two percent. Also similar to Oregon, this cap on annual assessed value creates a savings to homeowners over time when the market values of properties increase far more than the assessed values. This situation was common during the housing bubble in the late 1990s and early 2000s, (Ihlanfeldt 2011) and many homeowners in both Oregon and California saw tax savings.

The main difference between California's Proposition 13 and Oregon's Measure 50 is that in California the assessed value gets reset to the real market value upon the sale of the home. In the states where the property tax savings are lost with a house sale an artificially-induced residential immobility is created, referred to as the 'lock-in' effect (Ihlanfeldt 2011). The lock-in effect is the result of homeowners choosing to remain in their home because they have low assessed values compared to market values and therefore low property tax rates. However since the assessed value of a recently purchased home would be the same as its market value, the property tax rates of the new home would not be low. In California it was found that homeowners with the ability to transfer the tax savings of low property tax rates moved more than homeowners who were not able to transfer the savings, supporting the theory that property tax rates are influencing mobility (Skidmore, Ballard and Hodge 2010). Similarly, Florida's Save Our Homes (SOH) initiative also limits the annual growth of assessed value. One

exception to the SOH initiative is Amendment One which allows homeowners who are owner-occupiers to transfer the property tax savings upon sale of their home to their new home (Ihlanfeldt 2011). When comparing mobility rates under the SOH initiative in Florida it was found that prior to Amendment One owner-occupiers with larger tax savings were less likely to move, and after Amendment One mobility was no longer affected by the amount of savings for owner-occupiers (Ihlanfeldt 2011). If mobility rates are influenced by property tax rates, neighborhoods with different property tax rates could have different mobility rates accordingly. In this sense, tax rates could affect mobility by discouraging movement to a property with high tax rates, and thereby giving homeowners with low property tax rates an advantage.

It is the choice or lack of choice behind residential mobility that will influence whether a neighborhood is stagnant, revitalized, or gentrified. The property tax rates in Portland are an economic factor that could encourage choice in neighborhoods where property owners can capitalize on property tax savings, but limit choice in neighborhoods with less opportunities for savings. If a buyer knows that certain neighborhoods have properties with lower tax rates they may be more inclined to purchase in that neighborhood than a neighborhood with higher property tax rates.

Homeownership

Homeownership is important because an increase in homeownership is an identifier of neighborhood revitalization and gentrification (Bates 2013). Much attention has been given to promoting ways to increase homeownership in neighborhoods with higher rental rates. The belief is that an increase of homeownership in a neighborhood is a sign of neighborhood revitalization. Like mobility, the differential property tax rate may make some locations more desirable for purchasing a home, as the financial savings can be capitalized on over time. Similarly, Coulson and Li (2013) found that increasing a neighborhood's homeownership rate is

related to an increase in neighborhood housing prices. Therefore homeownership is both an indicator of neighborhood change and an influence on neighborhood change since it will affect property values in a neighborhood.

Like mobility, homeownership is affected by property tax rates. There are many characteristics that are related to an individual's likelihood of becoming a homeowner. Also similar to residential mobility, homeownership is related to the demographic make-up of a neighborhood. These demographic factors include: preference for homeownership, age, marital status, professional level of employment, level of education, household income, and propensity to be a saver (Megbolugbe and Linneman 1993; Bourassa and Yin 2008; Gathergood 2011). For instance, mobile households which tend to be younger and unmarried are more likely to rent (Megbolugbe and Linneman 1993). Income uncertainty is also negatively correlated with the transition from renting to homeownership (Gathergood 2011). Therefore areas with less access to job opportunities are more likely to see lower homeownership rates. Homeownership rates and the demographic makeup of a neighborhood provide insight into the type of neighborhood change taking place in that particular neighborhood.

There are racial discrepancies in homeownership rates. Studies that control for economic and life-stage factors show that minority homeownership rates have lagged behind white homeownership rates (Brown and Webb 2011). Some demographic groups are less likely to own homes due to transaction costs, discrimination costs, and differential managerial efficiencies which fall unequally on different groups (Megbolugbe and Linneman 1993). Yet, even with initiatives such as the Community Reinvestment Act, which was created to minimize this inequality, this gap between minorities and whites has only slightly shrunk (Brown and Webb 2011). In the City of Portland minority homeownership rates have declined since the 1970s (Butz and Zuberi 2012). As a factor affecting neighborhood change, homeownership rates

are also dependent on location. Brown and Webb (2011) found that “policies that are superficially aspatial, and often promoted as such, in fact lead to highly differentiated outcomes from one place to another” (335). This study looks at the local neighborhood development codes to account for these differential locational outcomes.

Studies also examine the role of property tax rates with homeownership rates. Currently thirty-six states have a combination of rate and revenue limits on property taxes (Hoyt, Coomes and Biehl 2010). A study of these states reveals that legislation that reduces property taxes reduces future payments on homes, increasing the demand for housing (Hoyt, Coomes and Biehl 2010). This implies that all else equal, there will be a higher demand for housing in neighborhoods with lower property tax rates than in neighborhoods with higher property tax rates. Removing homeowners’ tax deductions will lower homeownership rates between less than one percent and five percent (Bourassa and Yin 2008). Similarly, Church (1974) shows that if owners know that homes are under-assessed they will over capitalize with anticipation for future increases, whereas properly assessed homes owners will capitalize as predicted. Therefore, it is likely that if purchasers know that the property taxes of a home are based on an assessment far below the market value they will be more likely to invest in that home in anticipation of capitalizing on the future tax savings. If this were the case then Portland neighborhoods with lower property tax rates are likely to exhibit higher increases in homeownership.

Another effect of assessment growth caps is length of stay in a home. Property tax caps could represent a long-term benefit. Those who are planning on purchasing a home for a long term may have a higher willingness to pay than those who are only purchasing a home for the short-term (Skidmore, Ballard and Hodge 2010). This could potentially attract those who want to stay in the neighborhood longer, and as such are more likely to invest in the neighborhood. If

this happens then neighborhoods with lower property tax rates will see a higher relative increase of homeownership rates than neighborhoods with higher property tax rates.

Although it seems that overall low property tax rates have a positive effect on homeownership, this effect is not equal among all income groups. Skidmore, Ballard and Hodge (2010) found that in the state of Michigan, those with higher incomes have a lower effective property tax rates. Similarly, in Australia, Wood (1999) found that younger and lower-income groups pay higher effective property tax rates than older and higher-income groups. These are examples of horizontal inequities among income groups. Others, found that income tax concessions do not affect homeownership rates in young households on the margin of renting and owning (Bourassa and Yin 2008). It is possible that property taxes do not influence homeownership rates but property costs. Although tax savings have been shown to have an influence on homeownership, house price effects dominate the tax savings effects (Bourassa and Yin 2008). Hoyt, Coomes and Biehl (2010) found that property tax limits due to Proposition 13 in California have a positive effect on housing prices, increasing them by two to three percent. Similarly, Do and Sirmans (1994) found that present values of homes are inversely related to the discount rate of property taxes. As stated above, Oregon is also experiencing horizontal inequities; homeowners with similarly valued properties are paying vastly different property tax rates. If these individuals come from different income levels these inequities can be either progressive (higher income individuals paying higher property tax rates) or regressive (lower income individuals paying higher property tax rates). One would have to look at the demographic make-ups of different neighborhoods to determine whether the inequities are progressive or regressive. Another thing to consider is that if home values rise in response to low property tax rates, it is possible that the increased demand for housing in low property tax

neighborhoods combined with the capitalization on property tax savings will cause an even larger inflation in market values of homes.

If property tax rates have contributed to a rise in market values of certain neighborhoods over other neighborhoods in Oregon, this rise in market values will affect the choice of different income groups to leave, stay, or purchase property in a neighborhood, likely changing the demographic make-up of the neighborhood. Whether this demographic shift is a reflection of gentrification or revitalization depends on whether these shifts contributed to the marginalization of the original residents in a neighborhood.

One Size does not fit all, the Geography of Gentrification

Urban policy varies among cities and as such scholars have pointed to the fact that there is not just one form of gentrification but many forms of gentrification (Kingsley and Pitingolo 2013). In one of the first papers to discuss the geography of gentrification, Lees (2000) explains that livability varies according to one's location. Just as there are many theories as to why individuals choose a neighborhood there are many influences on the choice depending on the place. Lees (2000) points out the difficulties of linking the myriad of aspects of personal identity to place. Problems arise when using aggregate data to study neighborhood change, or when examining one city and applying the findings the other cities. In order to establish why neighborhood change or gentrification is happening in one neighborhood, one has to look at the neighborhood individually.

The principle of substitution states that all else being equal, an individual will choose to purchase a property with the lower cost, as opposed to the exact same property at a higher cost (ODR 2012). Oregon's variable property tax rates affects the principle of substitution because it can result in cost differentials through property tax savings among neighborhoods. For example, if there are two identical properties in different neighborhoods and the neighborhoods offer the

same services and amenities, but had different property tax rates the individual purchaser would be inclined to choose the property in the neighborhood with a lower property tax rate provided the price is the same. It is important to note that while neighborhoods will have a mean property tax rate that can be classified as a high, low, or mid range there is still variation in property tax rates among properties within a neighborhood.

From the political perspective, many of Portland's urban policies focus on urban renewal. Urban policies are important because they are a reflection of who has the influence in a neighborhood. Bates' (2013) study on gentrification in Portland finds that those moving into a neighborhood, the "gentrifiers," are more effective in making the changes they want to see in the neighborhood than are the original residents. Therefore associating newcomers or original residents of a neighborhood with the development policies of the neighborhood is essential to identifying whether a neighborhood is undergoing gentrification or not.

Bates' (2013) also discusses the factors that contribute to neighborhood change in Portland. Missing from Bates' study are property tax rates and their contribution to neighborhood change. Property tax rates are an economic factor that is usually omitted from studies of neighborhood change in the United States. In most states this omission is likely valid, however Oregon has a unique property tax system that has created inequities in property taxes among property owners (Linhares 2008; LRO 2010). The reason that property tax rates are significant is because horizontal inequities in property tax rates are likely associated with neighborhoods that have undergone significant economic and socio-demographic change in the past fifteen years (City Club of Portland 2013). Oregon's system is unique because other states with property tax caps have their AV reset to the RMV at the sale of the property. This is not the case in Oregon. In states with the AV reset the discrepancy between AV and RMV is diminished over time, whereas it continues to grow in Oregon.

If property tax rates are contributing to neighborhood change in Oregon, they are likely doing so by influencing mobility and homeownership. This paper assumes that homebuyers in Oregon are aware of the property tax rate at the sale, and because this rate has typically only growing three percent a year, homebuyers can anticipate their future taxes and incorporate the tax costs into the cost of their home over time. As such similarly valued homes with different property tax rates will actually have different costs. Therefore individuals are theoretically more inclined to purchase these low tax rate homes. When certain neighborhoods have lower tax rates they experience an increase in demand and homeownership. The following sections explain the pattern of property tax rates in Portland and how that pattern relates to the urban form. This study verifies that property tax rates are associated with neighborhood change via mobility and homeownership rates by looking at demographic changes in the neighborhoods. Finally, the paper will examine the local political influences on these urban changes and how they contribute to potential, revitalization, gentrification, stagnation or neither.

SPATIAL PATTERNS OF PROPERTY TAXES IN PORTLAND

This study first identified the spatial pattern of the property tax rates in the City of Portland by looking at the ratio between the AV and RMV by neighborhood. The aggregated ratios of the AV and the RMV per neighborhood in the 2013 tax year are rated from low to high (Figure 1). A low ratio indicates that the 2013 AV is much lower than the RMV. Since the AV is based on a constant three percent growth since 1995, its change should be consistent across neighborhoods. Thus, the differences are due to different fluctuations of RMV between 1995 and 2013. Neighborhoods with a low AV compared to RMV would seemingly result from a larger growth in RMV since 1995. By the same token, a large AV to RMV ratio indicates that the AV is close to the RMV and growth in RMV was close to the annual three percent growth in AV.

In the cases where the ratio is greater than one the AV has exceeded the RMV, indicating that the RMV has grown on average less than three percent a year between the 1995 and the 2013 tax year.

The areas with the biggest discrepancy between RMV and AV are in the inner Northeast neighborhoods of Portland; this discrepancy gradually decreases the further the neighborhood is from the city center (Figure 1). The neighborhoods with the highest ratios are in East Portland, suggesting that the SFHs in these neighborhoods have seen the least market growth since 1995. The Inner Northeast district has many transit lines and major arterials connecting its neighborhoods to the CBD (Figure 1). Of course distance to the CBD is not the only factor that may affect property tax rates throughout Portland; there are also the affects of urban renewal, transit routes, and other incentives established by city policy makers. It has been found that Metro's planning and sustainability policies, as well as the urban growth boundary may have lead to an increase in property values in certain Portland neighborhoods (Butz and Zuberi 2012).

The heterogeneity of AV versus RMV in Portland is a result of change in RMV over time, and there are distinct differences among the neighborhoods. This highlights the importance of studying property tax rates as a change in home values at the neighborhood level rather than at the city or county level. Furthermore, the fact that the discrepancy between the AV and RMV displays a visual pattern, suggests that the differences are not random and are spatial in nature. Following Tobler's first law of geography "everything is related to everything else, but near things are more related than distant things" (Tobler 1970), it seems that the property value discrepancies of each neighborhood are more similar to closer neighborhoods than further neighborhoods. The pattern of property tax rates in Portland shows that the inner city neighborhoods are seeing higher increases in home values, indicating that they are experiencing

revitalization and/or gentrification. This paper will examine three neighborhoods in different locations with different property tax ranges, Boise with a low range of property tax rates, Montavilla with a middle range of property tax rates, and Centennial with a high range of property tax rates (Figure 1) to identify patterns of neighborhood change.

This study first compared these neighborhoods by looking at how the aggregate single family house values have changed between 1997 and 2013. A comparison between the 1997 tax year (when Measure 50 was first implemented) and the 2013 tax year of the subject neighborhoods illustrates how Boise went from lowest to highest home values, Montavilla stayed in the middle, and Centennial went from highest to lowest home values (Table 3). Note the MAV was chosen based on the availability of historical data. However, the MAV differs from the AV in that it is subject to compression, therefore it will never rise higher than eighty-five percent RMV.

Table 3: Comparison between the 1997 values and 2013 values of SFHs in the Boise, Montavilla and Centennial Neighborhoods (Compiled from data from DART 2013)

		1997		2013
Boise	Mean	RMV	\$ 83,355.04	\$ 302,010.96
		M50	\$ 34,178.71	\$ 78,776.02
	Median	RMV	\$ 83,355.04	\$ 286,335.00
		M50	\$ 31,140.00	\$ 66,955.00
	Standard Deviation	RMV	\$ 27,752.79	\$ 76,699.27
		M50	\$ 18,145.33	\$ 48,254.08
Montavilla	Mean	RMV	\$ 107,308.65	\$ 205,074.27
		M50	\$ 79,245.88	\$ 134,884.49
	Median	RMV	\$ 105,200.00	\$ 200,210.00
		M50	\$ 77,940.00	\$ 130,890.00
	Standard Deviation	RMV	\$ 28,026.82	\$ 61,460.17
		M50	\$ 21,380.10	\$ 38,712.56
Centennial	Mean	RMV	\$ 116,915.58	\$ 151,494.18
		M50	\$ 88,630.20	\$ 142,704.79
	Median	RMV	\$ 113,700.00	\$ 145,610.00
		M50	\$ 86,130.00	\$ 138,520.00
	Standard Deviation	RMV	\$ 26,459.43	\$ 33,813.84
		M50	\$ 20,085.89	\$ 31,247.11

Figure 2. Yearly aggregate MAV and RMV for single-family houses (Compiled from DART 2013)

The aggregate MAVs and RMVs in each neighborhood from the 1997 tax year and the 2013 tax year are also graphed to show how they changed over time (Figure 2). The three neighborhoods have three very different patterns of changes in RMV (Figure 2). At first each neighborhood seems to be exhibiting equal and steady growth, however from the early-2000s to 2008 Boise sees a steep increase in RMV, following the pattern of the real estate boom. Montavilla and Centennial also see this increase but not at the same magnitude as Boise. Between 2008 and 2011 during the real estate market decline, each neighborhood sees a decrease in RMV, but the decrease for Centennial is most drastic. In 2012 Boise begins to see increases, and this picks up quite a bit in 2013. By 2013 both Montavilla and Centennial are showing an increase in their aggregate RMV values. On the other hand, the MAVs for each neighborhood increase as expected at a steady rate of around three percent a year. In 2012 the

MAV for Centennial actually decreases indicating that the RMVs of the SFHs have become low enough for Measure 5 and compression to kick in. Examination of just the change in AV/MAV and RMV between 1997 and 2013 would suggest that Boise is experiencing revitalization, Montavilla is experiencing stability and Centennial is experiencing decline. In order to determine whether Boise is experiencing revitalization or gentrification one would have to examine the demographic and political shifts of these neighborhoods.

PROPERTY TAXES AND SOCIO-ECONOMIC NEIGHBORHOOD CHARACTERISTICS

Demographics

The City of Portland grew in population about 20 percent between 1990 and 2010; both Boise and Centennial show growth similar to the city as a whole whereas, Montavilla's growth is quite a bit less at only 7.2 percent (Table 4). Boise and Montavilla are showing large decreases in percentage of population over the age of sixty-five, 47.1 percent and 41.4 percent respectively. In terms of race and ethnicity the diversity index reports the "percentage of times two randomly selected people would differ by race/ethnicity" (Esri 2013). In 1990 Boise was the most diverse neighborhood with a diversity index of 59.4 and a large Black population. However this neighborhood has seen quite a decline in Black residents, and large increase in White residents. Montavilla and Centennial had diversity indexes lower than all of Portland in 1990 with larger White populations. Both neighborhoods exhibited large increases in their diversity index, Montavilla at 80.2 percent and Centennial at 180.8 percent. Montavilla and Centennial have also seen a decline in percentage of White residents. Currently all three subject neighborhoods have larger diversity indexes than all of Portland. Therefore, if one were to compare the diversity index of 2010 with the current AV to RMV ratio it would seem that there is no relationship. However this study is looking at change at the neighborhood level and the two neighborhoods that originally had less diversity had smaller rises in RMV compared to Boise, which originally

had a large diversity index. Furthermore, Boise saw much of its increase in real market values shortly after 2000, right when the diversity index was at its highest at 75.1 percent, the rise in market value coincides with a decrease in Black population. This could support the theory that neighborhoods with more diversity are higher valued but lose their diversity once the market values rise (Rosenstein 2010).

Housing

The housing data for Portland and the selected neighborhoods are also compared for 1990, 2000, and 2010 (Table 5). The total number of households, (which includes all housing units such as multi-family residents, not only SFHs), in Boise has grown 48.3 percent which is larger than its increase of population which was 22.8 percent; coincidentally, the amount of vacant housing has decreased in this neighborhood. As would be expected there are now fewer people per households and a decrease in family size in Boise. Conversely, the increase in housing in Centennial is less than its increase in population. Additionally Centennial shows an increase in vacant housing. As such Centennial has seen an increase in household and family size. It is likely that housing supply is responding to consumer demands for housing, indicating that Boise is a more desirable neighborhood. The increase of housing units in the neighborhood with low tax rates shows an increase in demand for housing in areas of tax savings. It should be noted that this does not imply more SFHs, this increase in housing units could be due to more apartment buildings and other rentals in Boise. In terms of renting versus owning, Boise and Montavilla both show an increase of owner occupied housing, and Centennial shows a decrease. Renting is indicative of neighborhood depreciation (Hoyt, Coomes and Biehl 2010); therefore, this could very well be related to the relative decrease in house values in Centennial. Interestingly, Boise has seen a decline in percentage of family households. This could indicate that the individuals moving into the Boise neighborhood are at the earlier stages of the life cycle, such as recent

Table 4. Demographic changes in the City of Portland and selected neighborhoods (Compiled from Esri 2014)

	Boise				Montavilla				Centennial				City of Portland			
	1990	2000	2010	1990-2010	1990	2000	2010	1990-2010	1990	2000	2010	1990-2010	1990	2000	2010	1990-2010
Total Population	2686	3095	3298	22.8%	14971	15980	16042	7.2%	18011	20218	22323	23.9%	486600	529121	583776	20.0%
Median Age	27.7	29.4	31.7	14.4%	33.1	33.7	35.3	6.6%	32.7	34	34.2	4.6%	34.4	35.2	35.9	4.4%
Age 18+	67.0%	72.2%	84.8%	26.6%	77.3%	78.3%	80.6%	4.2%	73.4%	72.3%	73.4%	0.0%	77.7%	78.9%	80.9%	4.1%
Age 65+	10.9%	8.0%	5.8%	-47.1%	15.8%	11.8%	9.3%	-41.4%	11.0%	12.0%	11.0%	0.1%	14.4%	11.6%	10.4%	-27.8%
American Indian/Alaskan Native Alone	1.7%	1.9%	1.2%	-30.9%	1.2%	1.0%	1.3%	8.6%	1.0%	1.0%	1.2%	17.9%	1.2%	1.1%	1.0%	-16.7%
Asian Alone	1.5%	2.3%	2.0%	33.2%	7.9%	11.6%	12.6%	60.6%	2.6%	6.3%	8.8%	234.9%	4.8%	6.3%	7.1%	47.9%
Black or African American Alone	61.5%	43.4%	24.0%	-61.0%	1.5%	3.2%	5.3%	266.3%	1.1%	2.0%	5.3%	395.6%	6.9%	6.6%	6.3%	-8.7%
Pacific Islander Alone	0.5%	1.0%	0.4%	-24.7%	0.3%	0.5%	0.7%	94.9%	0.3%	0.3%	0.7%	161.3%	0.3%	0.4%	0.5%	66.7%
Some Other Race Alone	2.8%	7.6%	2.9%	4.3%	1.1%	3.6%	4.0%	248.9%	1.3%	5.8%	9.2%	621.0%	1.1%	3.5%	4.2%	281.8%
Two or More Races	1.8%	6.1%	6.4%	253.2%	3.0%	4.4%	5.3%	74.9%	3.2%	4.2%	5.0%	56.6%	2.7%	4.1%	4.7%	74.1%
White Alone	30.2%	37.7%	63.2%	108.9%	85.0%	75.7%	70.8%	-16.7%	90.6%	80.4%	69.8%	-22.9%	82.9%	77.9%	76.1%	-8.2%
Diversity Index	59.4	75.1	60.9	2.5%	31.3	49	56.4	80.2%	22.9	46.3	64.3	180.8%	34.8	46.3	51.2	47.1%

Table 5. Housing changes in the City of Portland and selected neighborhoods (Compiled from Esri 2014)

	Boise				Montavilla				Centennial				City of Portland			
	1990	2000	2010	1990-2010	1990	2000	2010	1990-2010	1990	2000	2010	1990-2010	1990	2000	2010	1990-2010
Total Households	953	1145	1413	48.3%	5849	6025	6463	10.5%	6804	7278	7683	12.9%	206,105	223,737	248,546	20.6%
Total Housing Units	1209	1267	1531	26.6%	6077	6361	6552	7.8%	7056	7644	8095	14.7%	217,986	237,307	265,439	21.8%
Occupied Housing Units	78.8%	90.2%	92.3%	17.2%	96.3%	94.8%	94.8%	-1.6%	96.4%	95.1%	94.4%	-2.1%	94.5%	94.3%	93.6%	-1.0%
Owner Occupied Housing Units	30.1%	38.3%	34.8%	15.6%	54.4%	56.7%	57.8%	6.3%	60.8%	61.2%	57.0%	-6.3%	50.8%	52.6%	53.7%	5.7%
Renter Occupied Housing Units	48.7%	52.0%	57.5%	18.1%	41.9%	38.1%	42.2%	0.6%	35.6%	33.9%	37.4%	5.0%	43.7%	41.7%	46.3%	5.9%
Vacant Housing	21.2%	9.8%	7.7%	-63.7%	3.7%	5.2%	5.2%	42.1%	3.6%	4.9%	5.6%	57.2%	5.5%	5.7%	6.4%	16.4%
Average Household Size	2.8	2.7	2.3	-17.9%	2.4	2.5	2.4	0.0%	2.6	2.8	2.8	4.5%	2.3	2.3	2.6	12.2%
Average Family Size	3.3	3.4	2.9	-12.0%	3.0	3.1	3.1	1.7%	3.1	3.3	3.4	9.7%	3.0	3.0	2.9	-2.4%
One Person Households	26.1%	31.8%	33.3%	27.6%	29.0%	28.8%	31.7%	9.3%	22.3%	24.0%	24.3%	9.0%	33.9%	34.6%	34.5%	1.8%
Nonfamily Households (2+ people)	9.7%	17.7%	28.9%	197.9%	8.9%	12.0%	15.1%	69.7%	6.7%	7.4%	8.0%	19.4%	9.4%	12.5%	15.0%	59.6%
Family Households	64.2%	51.1%	37.8%	-41.1%	62.1%	59.2%	54.2%	-12.7%	71.0%	68.6%	75.7%	6.6%	56.8%	52.9%	65.5%	15.3%
Average Rent	257.9	481	\$683	164.8%	350.52	582	na	NA	374.21	590	650	73.7%	\$356	\$588	\$769	116.0%
Median Rent	264.05	479	\$661	150.3%	346.83	561	na	NA	364.39	581	641	75.9%	\$341	\$562	\$694	103.5%

college graduates and young professionals, and these are the life stages when people switch from renting to owning (Megbolugbe and Linneman 1993, Bourassa and Yin 2008, Gathergood 2011). These individuals also tend to start neighborhood trends that result in the neighborhood to be more culturally desirable (Coulton, Theodos and Turner 2012). The changes in homeownership rates and household populations support the idea that Boise is the neighborhood in the highest demand. This could be due to location, culture, or house prices and is likely a combination of the three.

Socio-economics

The final census comparison is of socio-economic characteristics of the selected neighborhoods and Portland as a whole between 1990, 2000, and 2010 (Table 6). Boise, which had the largest increase in RMV, saw a larger increase in median household, average household and per capita incomes, and a decrease in families below the poverty level. Centennial, which saw the smallest overall increase in RMV, saw the smallest increase in all income measurements, and an increase of 84.7 percent of the percent of families below the poverty level. In 1990 Centennial had a higher median household income than the Portland average, but it was quite a bit less by 2010. In terms of education, all neighborhoods saw an increase of residents with a Bachelor degree and higher. Boise and Montavilla were both very high at a 301 percent and a 157 percent increase respectively. Since income level, education and property values are all related these socio-economic characteristics seem to be indicators of neighborhood change.

Summary

The US census and Esri Community Analyst data suggests that each of the three neighborhoods are experiencing different stages in the neighborhood cycle; Boise is going through a stage of revitalization as suggested by increase home values and rents. Montavilla is

Table 6. Socio-economic changes in the City of Portland and selected neighborhoods (Compiled from Esri 2014)

	Boise					Montavilla					Centennial					City of Portland				
	1990	2000	2010	1990-2010		1990	2000	2010	1990-2010		1990	2000	2010	1990-2010		1990	2000	2010	1990-2010	
Median Household Income	13892	27605	31141	124.2%		25313	38608	43338	71.2%		28142	38774	41657	48.0%		\$25,812	\$40,150	\$48,053	86.2%	
Average Household Income	18577	33198	42615	129.4%		27663	43118	51029	84.5%		30692	44671	52671	71.6%		\$33,341	\$52,592	\$65,941	97.8%	
Per Capita Income	6743	12320	20434	203.0%		11350	16885	\$21,631	90.6%		11658	16232	19700	69.0%		\$14,344	\$22,643	\$29,160	103.3%	
Below Poverty Level	36.1%	24.1%	32.2%	-10.6%		10.6%	10.4%	15.0%	41.0%		9.3%	10.9%	17.1%	84.7%		13.3%	11.9%	15.1%	13.5%	
High School Graduate, No Degree	50.4%	47.2%	46.3%	-8.2%		55.7%	53.8%	47.6%	-14.5%		64.9%	61.1%	47.6%	-26.7%		51.5%	47.2%	43.2%	-16.1%	
Associate Degree	6.1%	4.1%	3.8%	-37.3%		8.7%	6.5%	7.5%	-13.7%		6.8%	7.1%	5.9%	-13.7%		6.3%	5.8%	6.1%	-3.2%	
Bachelor's Degree or Higher	8.6%	23.5%	34.5%	301.0%		12.7%	21.4%	32.5%	156.8%		9.9%	11.1%	14.3%	44.1%		24.6%	32.7%	40.1%	63.0%	
Enrolled in School (over age of 3)	32.8%	31.3%	18.3%	-44.3%		26.1%	27.6%	28.0%	7.3%		23.9%	27.6%	27.3%	14.3%		24.7%	25.3%	24.8%	0.4%	
Worked in County of Residence	85.4%	78.0%	89.5%	4.7%		80.9%	76.3%	78.3%	-3.2%		82.5%	81.1%	81.2%	-1.6%		80.3%	77.6%	77.7%	-3.2%	
Worked in State of Residence	98.1%	96.0%	96.7%	-1.4%		97.7%	97.0%	1.0%	-99.0%		96.8%	97.9%	95.9%	-1.0%		97.5%	97.1%	97.0%	-0.5%	
Worked outside County of Residence	12.7%	18.0%	7.2%	-43.1%		16.8%	20.7%	17.9%	6.8%		14.3%	16.8%	14.6%	2.3%		17.2%	19.5%	19.3%	12.2%	
Worked outside State of Residence	1.9%	4.0%	3.3%	75.9%		2.3%	3.0%	3.8%	62.1%		3.2%	2.1%	4.2%	30.9%		2.5%	2.9%	3.1%	24.0%	

in a state of stability, as there have been no significant changes in this neighborhood relative to all of Portland. Centennial is in a state of decline as indicated by higher vacancy, relatively lower increases in property values and rents. Looking at the socio-economic shifts of the three neighborhoods supports the idea that there is a relationship between property tax rates and neighborhood change. The neighborhood with the low property tax rate is exhibiting revitalization and the neighborhood with the high property tax rate is exhibiting decline. Looking at the life stage of those moving into Boise further supports evidence of rehabilitation in Boise. Multnomah County's property tax data from 1997 documents that Boise did have the lowest property tax rates of the three neighborhoods, making housing in Boise initially more affordable. Individuals in the beginning stages of their professional life may have started purchasing homes here because they could afford this housing prices and property tax rates. As more and more professionals move into a neighborhood the neighborhood is seen as desirable and the property values increase. Whether there is a correlation or not is not known but property tax rates could be used as indicator of neighborhood stage in Portland. In terms of gentrification, Boise has seen: 1) a disproportionate increase in property values, 2) disproportionate increase in mean household income, 3) an increase in residents with a Bachelor's degree or higher, 4) a change in the ethnic composition of the neighborhood. However it is unclear as to whether Boise has experienced 5) the marginalization and displacement of the neighborhoods original residents.

The US Census and Community Analyst data indicates the temporal changes are very important because what is happening in the neighborhood at a certain time will affect how the housing values react. In the next section, I assess the state of each neighborhood in the mid-1990s around the time that Measure 50 came into effect. By examining each neighborhood's development code, I look at how urban policy drives changes.

NEIGHBORHOOD CHANGE BETWEEN 1995 AND TODAY

While the selected neighborhoods' property values, are changing with changing neighborhood demographic characteristics, it remains unclear as to whether these changes are coincidental or related. In order to determine the relationship between property values and demographics this paper will look at factors that may have triggered these changes by looking at what was happening in these neighborhoods at the time that Measure 50 was enacted.

Boise

In 1993 Boise had been plagued with problems of image, disinvestment, population and income loss *Portland's Adopted Boise Neighborhood Plan (BNP)* was intended to address these issues (BOP 1993). As the *BNP* (1993) stated, "[a]fter several decades of bad press and neglect, attention is being focused once again on the neighborhoods of inner north and northeast Portland and steps are being taken to improve their attractiveness as places to live and do business" (1). The neighborhood was targeted for revitalization because the area had appeal with historic homes, spacious yards, and tree-lined streets (BOP 1996).

Of the three neighborhood plans, the policy goals of the *BNP* were the most ambitious. Most of the policies focused on the need to improve the livability of the neighborhood, by increasing housing options, safety, public services, education and employment. The *BNP* emphasized preserving the historic nature of the district while finding ways to improve its public image. The *BNP* gave much attention to the need to improve available housing and to increase owner-occupiers. The plan also addressed the need for more multi-family dwellings that cater to individuals at a variety of income levels. Furthermore, the plan encouraged local businesses to hire local residents. The policy on 'Business Growth and Development/ Employment' listed the goal to "attract new retail businesses such as groceries, restaurants, dry cleaners, pharmacies

and hardware stores to Boise and support existing ones” (26). The types of retail and services they wanted addressed the basic needs of the residents, emphasizing Boise’s state of decline.

Figure 3. Residents found in Boise in January 2014

Furthermore, the *BNP* was the only plan of the three studied to have a policy for “Education/Daycare/Job Training for Youth”; the aim was to provide more opportunities for youth to be safe in the educational system, obtain vocational training and enter the workforce. This policy is important because it highlights the fact that in the mid-1990s, employment and education were scarce in this neighborhood. The final noteworthy point is that “[a]n important issue for Boise will be ensuring that current residents and businesses are able to remain in the neighborhood and benefit from the new investment that will be made” (BOP 1993, 1). At the time, the *BNP* recognized that population growth may lead to the displacement of the original Boise residents.

By 2014 Boise was quite a different neighborhood than the one described in the *BNP*. In a number of ways the visions of the *BNP* were realized. There was a large variety of housing; many of the older homes remained untouched, others had been rehabilitated, and there were many new developments (Figure 3). There was also a mixture of single-family residents and multi-family residents (MFRs) (Figure 3). Much of the historic housing had been kept intact (Figure 4) and improvements had been made to existing MFRs (Figure 5). There are two major commercial streets: N. Mississippi Avenue and N. Williams Avenue. The first, N. Mississippi Avenue had been getting much attention in recent years for being a hip and trendy strip in Portland. A site visit to the area shows historic buildings with new businesses, restaurants, boutique shops, and cafes. The website mississippiave.com lists businesses on N. Mississippi Avenue, including: North Portland Bike Works, Mississippi Chiropractic and Optik PDX among other niche and signature businesses. In terms of commercial and economic development, businesses in Boise were those that serve a higher income clientele and specific cultural/demographic groups, rather than the basic services of dry cleaners or hardware stores, mentioned in the *BNP*. The basic commercial needs had been surpassed; this is highlighted by

Figure 4 Residence shown by the BNP as being listed Portland's Historic Resources Inventory (Source: BOP 1993, and Google Maps 2011)

Figure 5. Fourplex on N. Missouri Avenue (Source BOP 1993 and Google Maps 2011)

Figure 6. Site which was once the Phipps Rexall Drugs, now the Fresh Pot café (Source: Neighborhood Notes 2014)

the historic Phipps Rexall Drugs building which has been repurposed as a café (Figure 6). As opposed to N. Mississippi Avenue, which was established by early 2014, N. Williams Avenue was in the beginning stages of redevelopment (Figure 7). But these developments are in new buildings,

Figure 7. New commercial developments on N. Williams Avenue as of January 2014.

not the historic buildings of N. Mississippi Avenue. There was seemingly less emphasis on catering to historic nature of the neighborhood on N. Williams Avenue. Many of the new commercial sites on N. Williams Avenue, such as the New Seasons Grocery store cater to higher income individuals, rather than the residents described in that area in the 1990 US Census and the *BNP* (Figure 8). The site visit indicated that perhaps the original residents of this neighborhood did not remain; therefore the *BNP* was not able to meet the goal of ensuring that current residents would remain in the neighborhood.

Figure 8. New Seasons market just opened on N. Williams Avenue (January 2014)

It is evident that the changes in Boise were influenced by the policies of its 1993 neighborhood plan. Initial changes in economic development opportunities, providing more housing options, and increasing safety were likely catalysts of neighborhood change. The hip and trendy neighborhood of 2014 catered to a younger demographic group, further supporting evidence that Boise attracted individuals at earlier stages of life. It is likely that the policies in the *BNP* started to come into effect in 1997 to 1998, right around the time Measure 50 was implemented. Therefore, these changes would have begun to drive up property values while property tax rates remained a little lower, thereby making the neighborhood more affordable and attainable for early life stage individuals.

Today, incoming residents are also benefitting from the discrepancy in home value and property tax. The local policies written in 1993 created a neighborhood with many amenities, while housing values are the same as other neighborhoods the property tax rates are not. In this regard Boise is a more affordable neighborhood, furthering its attractiveness. While this provides evidence that the neighborhood is revitalized it is still not conclusive as to whether gentrification took place. The demographic shift in the neighborhood suggests that it is the influx of White individuals to the neighborhood who are enjoying the new developments, and

that the Black/African American individuals who have moved out are not benefitting from these changes. However, this is difficult to prove as there is no information on those who moved out of the neighborhood. It is possible that the property tax rates in Boise actually allowed low income homeowners to remain in the neighborhood while the property values increase, as they would not have to pay the increase in property tax rates usually associated with property values. Further investigation into each policy and who the beneficiaries are would be needed to determine whether gentrification is happening in Boise.

Montavilla

In 1996 the *Adopted Montavilla Neighborhood Plan (MNP)* was enacted (BOP, 1996b). This Neighborhood Plan described Montavilla as a well-to-do neighborhood in Southeast Portland, explaining that the 1990 US Census showed Montavilla as having the greatest increase in median household income compared with the rest of the Outer Southeast neighborhoods. The neighborhood consisted of predominately single-family houses in good condition, some industrial uses to the northeast, and a few MFRs interspersed throughout the rest of the neighborhood. The *MNP* described its commercial areas with more reverence than the other neighborhood plans studied. The mention of the neighborhood churches in the *MNP* suggests that they were seen as vital to community development. The identified commercial areas were E. 82nd Avenue, N.E. Glisan Street, S.E. Division Street, and the S.E. Washington Street and S.E. Stark Street couplet between E. 76th and E. 82nd Avenue. Also held in esteem were the neighborhood's recreation areas; Harrison, Barrydale and Montavilla Parks are described as great facilities. This sense of pride in the neighborhood was enhanced by the highly localized policies outlined in the *MNP*.

The vision and policies of the *MNP* focused on enhancing rather than changing the character of Montavilla to create a sense of community. In terms of housing, the *MNP* called for improving housing quality, building 100 new housing units, and enforcing zoning. The *MNP* expressed a desire to create a theme for the business district, preserve the historic areas, and produce an attractive urban design. The policy on 'Economic Development' encouraged businesses to create "good neighborhood plans" that ensure good working relationships between residents and businesses. There was also the desire to attract residents to businesses by encouraging outdoor seating and wide sidewalks (Figure 9). Further catering to the

Figure 9. Image of ideal commercial area in Montavilla (Source: BOP 1996a, 26)

Montavilla residents, the *MNP* called for increasing, "residential developments around Montavilla's commercial areas to foster a market for the development of service businesses which will serve the neighborhood residents," (BOP 1996b, 24). The Stark/Washington couplet was to be an area of attractive urban design with cafes and antique shops, mixed-use developments were to be created along E. 82nd Avenue. This

emphasis on having commercial areas cater to residents and mixed-use, shows that the neighborhood association wanted Montavilla to be a local self-sustaining neighborhood. The last policy of note is 'Parks, Open Space and Environment'. Beyond updating the parks there was a desire to encourage community activity in other open spaces. Developing community gardens

on churches and school lots, or converting vacant lots into non-traditional parks such as graffiti or skateboard parks were proposed.

By the end of 2013, the Montavilla neighborhood was much like the one described in the *MNP*. The residential areas were mainly of single-family residents, with the exception of a few MFRs close to the commercial areas. The houses were bigger than those in Boise, and although many houses were maintained, there were very few newly built houses (Figure 10). Similarly, most of the sites on N.E. Glisan Street, N.E. Division Street and E. 82nd Avenue reflected what was described in *MNP*; restaurants, salons, financial services, and used-car lots (Figure 11). Notable in Montavilla was the variety of cultures represented in the commercial sites (Figure 11). There was no indication of mix-use or any new developments on the commercial streets, and in some cases lots have been vacated (Figure 12). One exception is a small revitalization of the Stark/Washington couplet with, new restaurants, cafes and boutiques existing alongside older businesses (Figure 13). Churches were present both on commercial sites and in residential neighborhoods (Figure 14), supporting evidence that this neighborhood views churches as an important part of the community. In regards to the 'Parks, Open Spaces and Environment Policy' there were a few community gardens opening in Montavilla, but the site visit found little evidence of other developments. The major commercial streets, such as E. 82nd Avenue retained the "main street" character, keeping them distinct from the residential areas. While many of the goals listed in the *MNP* never came to be, Montavilla effectively maintained and updated their neighborhood. The fact that the image of Montavilla in 1996 is consistent with what is seen there today implies that Montavilla is in the stage of stability. The neighborhood plan did not encourage many changes; therefore it is likely that its policies contributed to the stability Montavilla was experiencing. If Montavilla was a desirable neighborhood in the mid-1990s

Figure 10. SFHs in Montavilla (December 2013)

Figure 11. Commercial sites in Montavilla (December 2013).

Figure 12. Vacant lot on E. 82nd Avenue (December 2013).

Figure 13. Businesses on S.E. Stark Street in 1995 (left) and 2013 (right) (Source: BOP 1996a, 24)

Figure 14. Churches in Montavilla. The church on the left is on the busy E. 82nd Avenue, whereas the church on the right is in a residential neighborhood (December 2013)

and continued to maintain its status quo, it makes economic and political sense that both the property values and property tax rates had grown consistent with the rest of Portland. There were no political or economic drivers to encourage either revitalization or decline.

Currently, there is evidence that Montavilla may be entering another stage in neighborhood change. Comparisons of photos from Google streetview taken in July of 2011 and photos taken in December 2013 show recent changes, such as a vacant building in 2011 being used as a restaurant in 2013 (Figure 15), and the development of a new Portland Community College campus (Figure 16). In order to determine whether property tax discrepancies are actually related to neighborhood change it would be important to monitor the changes to property values in this neighborhood. Montavilla would be an especially good example since this neighborhood has maintained City of Portland average growth since 1997, in terms of both development and RMV. Furthermore, since the property tax rate is currently the mean in Portland, this neighborhood could be used as a control to see if neighborhoods with either high or low property tax rates undergoing similar changes will have a similar change of socio-economic characteristics and property values in the future.

Figure 15. Comparison of the same lot on E. 82nd Avenue between July 2011 (left) (Google 2014), and December 2013 (right)

Figure 16. Comparison of the same lots on S.E. Division Street between July 2011 (left) and December 2013 (right). The photo to the left is from Google Streetview and shows a German Restaurant and vacant restaurant, the photo on the right is more recent and shows the vacation of the German Restaurant and the Building of a Portland Community College Campus

Centennial

At the time that the *Adopted Centennial Neighborhood Plan (CNP)* was enacted, Centennial was considered one of the more wealthy neighborhoods in Portland. As a residential neighborhood, Centennial had a variety of housing, sixty-seven percent single-family residents, three percent duplexes, twenty-two percent apartments, and eight percent were mobile homes. There were four public elementary schools and three small neighborhood parks (BOP, 1996a).

The *CNP* was the least ambitious of the three studied, the focus of the *CNP* being to preserve, rather than transform, enhance, or revitalize the neighborhood. As opposed to the *BNP* which encouraged an increase in home ownership the *CNP* specifically stated the desire to keep home ownership at the 1996 rate. Also of the three neighborhood plans, the *CNP* had the least mention of business and commercial development. The stated neighborhood identity came from schools, parks, churches, and the natural features of the area. The *CNP* was created with the intent to protect this identity from market pressure for redevelopment. The plan wanted to guide developers to build according the neighborhood image and maintain and encourage the suburban nature, pleasant appearance, and safety of Centennial. Business and commercial development were to stay on the main arterials of S.E. Stark Street, S.E. Division Street and S.E. Powell Boulevard. Similarly MFRs were to be restricted to these main arterials. Additionally, adjacent to the commercial/MFR areas there was to be a mixed-use zone buffer protecting the single-family residential neighborhoods. Like the *BNP* and the *MNP*, the *CNP* encouraged neighborhood safety, but again the intent was to remain at the existing level of safety. Also, where the *MNP* promoted graffiti parks, the *CNP* supported an active graffiti clean-up program because “graffiti communicated gangs, drugs, crime and danger” (BOP 1996a, 33). The automobile was the major form of transportation, with no bus service on the major north-south streets of S.E. 148th Avenue and S.E. 162nd Avenue. Furthermore, in some locations the main streets did not have sidewalks and two of the listed main streets (S.E. Powell Boulevard and S.E. 174th Avenue), did not have curbs. One of the policies was to add curbs and sidewalks to these streets. The natural areas were mentioned as a source of pride of the neighborhood, the *CNP* aimed to protect these areas and create more recreational open space. Specifically mentioned, was the intent to purchase a twenty acre landfill site at S.E. 155th Avenue north of

S.E. Main Street and develop the property as a park. Overall this neighborhood plan exhibited a sense of pride in the neighborhood and little reason to change.

By, 2014 very little had changed structurally, but the safe suburban culture that was lauded in 1996 was out-of-date and showed signs of neglect. Keeping homeownership at the 1996 rate proved to be counterintuitive given Portland's population growth. Single-family houses in Centennial remained on larger unimproved lots (Figure 17). The MFRs and commercial sites were confined to S.E. Stark Street, S.E. Division Street and S.E. Powell Street; however S.E. Powell Street still had a number of SFHs. The types of businesses on the main streets were varied: fast food restaurants, pubs, grocery stores, salons, churches, and adult clubs (Figure 18). Many of these

Figure 17. SFHs in Centennial (January 2014)

Figure 18. A church next to an adult club on S.E. Stark Street in Centennial (January 2014)

businesses were neglected and there were many vacant lots and buildings on both S.E. Stark Street and S.E. Division Street (Figure 19). In addition to the vacancy, another sign of neighborhood disinvestment were the Drug Free Zone signs found throughout Centennial. Drug Free Zones are created in “geographic areas of the City [that] have a significantly higher level of narcotics activity than other areas of the City,” (PPB 2011, n.p.), and their existence suggests that there had been an increase in criminal activity in Centennial since 1996. Finally, there was little attention to natural areas and open space; the landfill site mentioned in the *CNP* remained unused (Figure 20). Overall the lack of improvements and developments were an obvious sign of neglect and disinvestment in the neighborhood.

Figure 19. Vacant sites in Centennial's commercial district (January 2014)

Figure 20. Landfill site on S.E. Main Street remains unused as of January 2014.

CONCLUSION

While many factors contribute to neighborhood change, this study looked specifically at the relationship between Oregon's Measure 50 and neighborhood change. It offers an

explanation for the perceived relationship between Portland property taxes and neighborhood change, and addresses the assumptions and other factors involved.

Based on this examination it seems that the relative lack of growth of Real Market Values in Centennial compared to the rest of Portland is a reflection on the stagnant state of the properties in Centennial. In terms of the political influence, the desire to preserve rather than update the neighborhood has resulted in Centennial remaining static and thus not progressing with the rest of Portland. In contrast, the desire for transformation and development in Boise has allowed for its relative growth. It is likely that the political desire for stability in Centennial initially kept owner-occupancy at its 1990 rate, as such, property values did not increase, resulting in AVs of the neighborhood SFHs to equal the RMVs and for property tax rates to become even higher.

It is evident that the urban policies and development codes of the three neighborhoods had an influence on the initial stages of development of each neighborhood. These initial changes led to the differences in property tax rates which encouraged these developments or lack thereof.

Measure 50 caused discrepancies between the value that a property is taxed on and the market value of that property. These discrepancies are inherently geographical and spatial. In the City of Portland neighborhoods in the Inner-Northeast district have seen the most significant increases in SFH values since 1997. These increases in SFH values have led to larger discrepancies between MAVs and RMVs, resulting in lower property taxes per property value. In the outer East Portland district the reverse is true, with the market values of properties decreasing relative to the MAVs of these properties. As a result, the properties are taxed on a value that is closer to the actual market value of the property.

Of the three neighborhoods analyzed in this study, the neighborhood with the highest relative increase in RMVs, Boise, showed the highest increase in median income, percent of the population with a Bachelor's degree or higher, housing units, owner occupiers and the lowest relative increase in diversity. All of these are indicators of gentrification. The neighborhood chosen to represent the mean change in RMV over time, Montavilla, showed demographic changes consistent with those in the City or Portland as a whole. Whereas the neighborhood with the lowest relative increase in RMVs, Centennial, showed very little increases in income and other economic statistics but did see the highest increase in the diversity index.

Examination of the three neighborhoods' demographic and property value data shows a pattern but is only part of a complex urban dynamic. The patterns of changes in diversity in each neighborhood suggest that diversity is a reason people to move to a neighborhood (Boise), yet the change in housing affordability is leading to a decrease in the diversity. If culture and diversity were the only factor, this pattern suggests that Centennial will potentially experience an increase in desirability, owner-occupation and home value.

The demographic changes exhibited could be coincidental and do not necessarily mean that there is a relationship between demographics and property values; however, it is likely that these changes occurred as a response to urban policies. This study examined the state of each neighborhood prior to Measure 50 and the visions and goals that each neighborhood had for the future. Boise's neighborhood was in a state of neglect with 'blight' being mentioned many times in the neighborhood plan. The policies in the *BNP* intended to make significant changes to the neighborhood, allowing for a variety of housing and economic development opportunities. This neighborhood plan was also very keen on maintaining the historic image of Boise, and developing a thematic urban design. Many of the design and economic development policies had been realized at the time of this study, suggesting that the ambitious policies and desire for

transformation signifies a neighborhood in the first stages of revitalization. Montavilla's 1996 neighborhood plan encouraged enhancing of the neighborhood, but focused less on transformative changes. It seemed that this neighborhood had a less cohesive theme as it strived to create a neighborhood image. Many of Montavilla's policies were realized at the time of the study, but the policies were less ambitious than those of Boise. Centennial had the least ambitious neighborhood plan, preferring to have the neighborhood stay as it was in 1996. Not many changes had been made in this neighborhood and that the lack of updates resulted in neighborhood decline.

So what does this have to do with property taxes in Portland? The ratio between property tax rates and property values indicate patterns of neighborhood change in terms of both demographics and economic development. Therefore the discrepancies between property tax rates and values due to Measure 50 are indicative of neighborhood change. It is likely that Measure 50 is also contributing to neighborhood change by encouraging growth in areas with low property tax rates. In this study the neighborhood with a large difference between AV and RMV, and thus a small ratio, was undergoing rehabilitation and possibly gentrification, whereas the neighborhood with a small difference between AV and RMV was in the stage of decline. Because of a temporal lag between property value increase and property tax increase, when Measure 50 was passed there was already a differential cost savings in property taxes among neighborhoods. The neighborhoods that were seeing revitalization and increasing property values would have had slightly lower tax rates. The lower tax rates would have furthered demand in the revitalized neighborhoods while neighborhoods that were not seeing growth would not have gained this benefit from lower tax rates. The idea that property tax rates are contributing to neighborhood change is supported by the fact that property sellers with low property tax rates are inflating their property costs to capitalize on these property tax savings

(Gaston 2014). It seems that both real estate agents and home buyers who are aware of these property tax savings are taking advantage of these benefits and focusing their attentions on certain neighborhoods. According to Gaston (2014) this is leaving neighborhoods with less property tax savings at an unfair advantage, because they are getting less funding for public services and infrastructure, exacerbating the state of decline that they are in.

In order to confirm a real relationship between Measure 50 and neighborhood change a number of other studies can be conducted. Potential other studies are:

- A study of all of Portland comparing property values with demographic changes at the Census block group scale,
- Analysis of economic development by examining the changes in businesses and commercial establishments of each neighborhood,
- Analysis of the cultural aspects of neighborhood desirability,
- Analysis of urban renewal, and a comparison of urban renewal neighborhoods with non-urban renewal neighborhoods,
- Finally, now that the discrepancies have been established, following sales data into the future to see if home purchasers really are choosing neighborhoods with lower property tax rates.

This study used Oregon's Measure 50 and the effects that it has on property taxes to show the relationship among, property values, mobility, homeownership, and demographics in a neighborhood. It is the first study to assess how the effects that Oregon's Measure 50 is having on property taxes are contributing to neighborhood change. By acknowledging this contribution, policy makers can use the property tax discrepancies as an indicator for areas that need to be the focus of economic development in the future. In the broader sense, policy makers should consider the impacts that property tax rates can have on a neighborhoods development.

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