

RESEARCHING ZONING UPDATES: INSIGHTS FROM WASHINGTON, DC AND
BALTIMORE, MD

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By

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ABSTRACT

Zoning helps decide development. Where people live, work, and play in cities are all guided by behind-the-scenes codes and regulations. Washington, DC and Baltimore, MD both revamped their zoning paradigms in processes culminating in 2016. As seen through the lens of housing permits, this process may have a stronger impact in Washington, DC than in Baltimore, MD because of the former city's blistering growth in the early 21st century. The empirical work in this thesis underscores the need for strong municipal data, and suggests further supports – such as inclusionary zoning and community benefits agreements – are needed to ensure equitable development. Still, these zoning revamps at the very least updated decades-old regulations to help guide future growth in each city.

Key words: zoning, Washington, Baltimore, housing, development, urban studies

JEL code: O

To everyone who's heard me talk about DC and Baltimore far more than any sane person would,
thank you for putting up with me.

Now let's talk zoning.
Andrew Debraggio

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CHAPTER I – Introduction

Zoning determines the course of development in a city. It is one of the most powerful tools a city planner and a city government have to entice development, foster stronger communities, and guide the growth of a municipality. The mid-Atlantic region’s two most notable cities –Baltimore, Maryland and Washington, DC – both approved zoning overhauls in 2016. These cities are not alone. Minneapolis recently revamped its zoning regime to achieve what city leaders there are calling “Minneapolis 2040.”¹ Cities frequently tweak their zoning rules, but total overhauls are rare. Baltimore’s last zoning paradigm was established in 1971.² Washington’s last rewrite was even older, in 1958.³ That both Baltimore, MD and Washington, DC finalized zoning overhauls in 2016 is significant. Both cities seek to foster sustainable development and attract investment, and use zoning to guide development. Much has been written about general efforts to increase housing stock in bustling urban centers, but less space has been dedicated to tying development directly to zoning overhauls. This research seeks to make that connection explicit, and uses two mid-Atlantic cities as case studies. The 2016 revamp in zoning in Washington occurred amid increased housing stock and housing value, while Baltimore’s zoning revamp did not. Additional policy interventions are needed, regardless of the city, to ensure there is adequate affordable housing stock. Revamps in zoning are necessary now and again to address changing urban dynamics and standardize regulations, but additional policy tools are needed to increase housing supply for people at every income level.

¹ Capps, Kriston. "In Minneapolis, an Ambitious Rezoning Plan Scores a Historic Win." CityLab., accessed Sep 27, 2019, <https://www.citylab.com/equity/2018/12/mayor-minneapolis-2040-affordable-housing-single-family-zoning/577657/>.

² City of Baltimore Department of Planning, “Transform Baltimore,” accessed November 2, 2018, <https://planning.baltimorecity.gov/programs/transform-baltimore>.

³ Flanagan, Neil. "Get to Know DC’s New Zoning with this Map.", last modified July 17, accessed Sep 27, 2019, <https://ggwash.org/view/42304/get-to-know-dcs-new-zoning-with-this-map>.

CHAPTER II – Background

Zoning is the main course of action for urban leaders and planners in dictating and directing development in a city. From parking spots to multi-million dollar industrial sites, zoning provides the rules through which people interact with a city. Revamps in zoning are thought to encourage development, so it is critical to evaluate the efficacy of this policy change. Certain municipalities, like Houston, eschew stringent zoning laws under the belief that it deters economic growth. Others, like Washington, DC, have zoning laws that go into such detail like restricting the height of a building or preventing certain types of windows in the Georgetown historical district.⁴ Regardless of the scope of zoning in a city, it is important to determine how zoning changes impact housing stock.

Zoning typically breaks down into three main categories: residential, commercial, and industrial. Within these three categories, zoning can generally be described on a sliding scale from “heavy” to “light.” As an example, residential zoning can allow for dense apartment complexes or detached single-family houses. City planners tinker with zoning to promote development in certain parts of the city and to ensure vibrant communities. Zoning overhauls have recently been enacted across the United States, so it is critical to determine what extent they have on increasing housing stock – and on what type of housing stock they often encourage. If a neighborhood’s zoning is changed to allow for more mixed-use developments, does that foster more affordable housing stock or not? It is a policy imperative to explicitly link zoning overhauls to housing stock so policymakers can decide if the arduous process of a zoning revamp is worth the time and effort.

⁴ This is personal knowledge having lived in the Georgetown area while an undergraduate at Georgetown University.

CHAPTER III – Literature Review

This work rests upon robust literature from a variety of resources. In the past couple decades urbanization has swept through cities around the world, bringing with it a myriad of policy concerns. While many cities have grown in leaps and bounds, others have struggled in the midst of economic decline. Washington, DC is an exemplar of the former characteristic – recent years have been kind to the nation’s capital, bringing with them unprecedented growth and development. Baltimore, on the other hand, has shrunk in decades past and struggled to attract business and bodies. The differing fortunes of these cities make them ripe for comparison, and literature centered on urban policymakers’ tools, Washington, and Baltimore all form the foundation this thesis rests on.

It is critical to understand theoretical and philosophical notions regarding the role of cities to appreciate how zoning updates fit into development. John Logan and Harvey Molotch emphasize that the role of a city is to grow; that, in other words, city planners and leaders are primarily preoccupied with fostering development and that this constrains policy choices.⁵ Understanding this general framework is critical in order to fully appreciate the role of zoning – it ultimately seeks to promote development and ensure a city’s growth. Relatedly, Nicole Stelle Garnett notes that zoning is a way for urban policymakers to use such “urban-construction regulations” to promote order.⁶ Cities and city leadership are preoccupied with growth; zoning fosters social order and orderly growth. Rather than allow an industrial site sit next to a residential neighborhood, potentially harming the viability of the latter, zoning promotes sustainable development in a city.

⁵ John Logan and Harvey Molotch, “The City as Growth Machine,” *American Journal of Sociology* (1976), page 310.

⁶ Nicole Stelle Garnett, “Ordering the City” in *Ordering the City: Land Use, Policing, and the Restoration of Urban America*, (2010), 28.

Moving away from the theoretical, zoning is also simply a practical tool for policymakers to guide development in a city. David Schleicher explores the dynamics of zoning in “City Unplanning,” critiquing its use by arguing that it can result in market inefficiencies. Schleicher also talks about the history of zoning, and that the 1970s solidified its use across America.⁷ Vicki Been, Ingrid Gould Ellen, and Katherine O’Regan in “Supply Skepticism: Housing Supply and Affordability” note that most evidence shows restrictions on housing supply – which zoning can facilitate by controlling what can be built, and where – leads to increased rents and unaffordable cities. Still, since zoning came into vogue in the 1970s, cities only tended to make small amendments and piecemeal changes to zoning paradigms.

Recently, however – and fueled in many localities by burgeoning urban populations – cities have looked to either update or overhaul their zoning codes. As J. Brian Charles’ “Rendezvous With Density” makes clear, Seattle opted more for the former tact, using “a scalpel to carve out areas for up-zoning instead of taking a hammer to its zoning ordinance, as Minneapolis did.”⁸ Minneapolis’ plan, Minneapolis 2040, completely overhauled the city’s zoning paradigm and, as Kriston Capps’ interview with Minneapolis mayor Jacob Frey makes clear, centered on ending single-family residential zoning and fostering racial equity.⁹ This thesis interacts with and builds upon well-established conversations on the efficacy of zoning and rezoning, placing two mid-Atlantic cities at the forefront.

Washington in the 21st century is a city transformed. The city made waves in 2018 when its population ticked back over 700,000 for the first time in decades, something the Mayor’s

⁷ David Schleicher, “City Unplanning,” *Yale Law Journal* (2015), p. 1674.

⁸ J. Brian Charles, “Rendezvous With Density,” *Governing* (2019), p. 44.

⁹ Kriston Capps, “Why Minneapolis Just Made Zoning History,” *City Lab*, December 7, 2018 <<https://www.citylab.com/equity/2018/12/mayor-minneapolis-2040-affordable-housing-single-family-zoning/577657/>>

office touted.¹⁰ Indeed, the DC Office of Planning has a myriad set of resources for researchers interested in development in the city. Local outlets from The Washington Post, Greater Greater Washington, NPR affiliate WAMU, and DCist have covered zoning issues and associated development news. So too has the D.C. Policy Center, particularly through researcher Yesim Sayin Taylor. Taylor’s “Single-family zoning and neighborhood characteristics in the District of Columbia” outlines the effect of residential zoning types throughout the city, emphasizing the need to increase housing supply through a concerted consideration of the impact single-family zoning has on the District of Columbia.¹¹ Washington, DC was a growing city, and needs increased housing supply to match demand.

Baltimore is not such a thriving city, but has a wealth of literature about it as well. The Baltimore Sun is the preeminent media source in the city, and has dedicated a significant amount of ink to covering development and zoning in the city. Benjamin S. Fuld’s “We’re not against development, we’re against bad deals’: How Baltimore negotiated the Port Covington Community Benefits Agreement” in the *Journal of Business & Technology Law* is a useful case study in the byproduct of a rezoning endeavor in a section of the city. Useful sources can also be found from the City of Baltimore Department of Planning’s website.

In sum, this thesis exists within a theoretical conceptualization of the role city and policy leaders play in urban development. There is a remarkable amount of recent literature dedicated to zoning as multiple municipalities like Seattle and Minneapolis have sought in recent years to update or overhaul their zoning codes. This thesis links Washington and Baltimore to this

¹⁰ “New U.S. Census Bureau Numbers Officially Put DC’s Population Over 700,000,” Office of the Mayor, December 19, 2018, <https://mayor.dc.gov/release/new-us-census-bureau-numbers-officially-put-dc%E2%80%99s-population-over-700000>.

¹¹ Yesim Sayin Taylor, “Single-family zoning and neighborhood characteristics in the District of Columbia,” *D.C. Policy Center*, July 17, 2019 < <https://www.dcpolicycenter.org/publications/single-family-zoning-2019/>>

general trend, and draws out the unique relationship each has to zoning as Washington and Baltimore cope with boom and bust times, respectively.

CHAPTER IV – Conceptual Framework

As discussed earlier, this thesis tests a recent trend in city planning: comprehensive zoning overhauls. More specifically, it tries to test whether or not zoning overhauls have an effect on development in the city, as seen through housing prices and housing stock. Zoning is closely related to development in a city – where a city’s industries, businesses, and people are located are all predicated on zoning codes. A developer cannot place a power plant in an area zoned only for residential purposes, and a big box store cannot be placed in a neighborhood zoned only for single-family homes. Accordingly, it stands to reason that zoning would have a profound effect on development dollars flowing into and being spent in a city.

Salient variables include the general trajectory of the city (i.e. is it growing in terms of population or not), neighborhood composition (i.e. amount of wealth in a locality), and time. If a city is growing, it needs more housing. It is critical to identify to what degree housing stock can be attributed to simple supply and demand metrics as compared to specific zoning overhauls. Race is also important – there is a wealth of literature on the racial legacies of zoning, particularly in northern cities like Chicago and Detroit. Washington and Baltimore are no different – for instance, the development of I-395 in the former was stopped in large part by activists who rallied around the mantra “white man’s roads through black man’s bedrooms.”¹² Revamps in zoning pick winners and losers. Historically that has meant whites win while blacks lose. Crime may also matter here. If a city has endemic violence, no amount of zoning changes will entice developers’ dollars. All of these variables matter when looking at the outcome: housing value in a city.

¹² Douglas B. Feaver, 1978, "No New Freeways Slated for District," Washington Post, -10-30T12:00-500. <https://www.washingtonpost.com/archive/politics/1978/10/30/no-new-freeways-slated-for-district/73617023-5f32-4617-99ae-edf7eab5192a/>.

If revamps in zoning are effective a city will be growing, attracting investment, and encouraging its citizenry to stay and build communities. Housing values get at the effectiveness of zoning. If values are rising, holding other variables constant, it stands to reason that revamps in zoning are an effective tool. Housing values can also be seen as a proxy of sorts for the type of housing being built. Desirable housing in an American sense tends to mean single-family units. If revamps in zoning are increasing housing values, particularly of single-family units, it may indicate that this policy lever does not do a sufficient job of encourage specific types of housing like denser apartment units.

This thesis's model is inspired by Brookings researcher Jenny Scheutz's "Restrictive zoning is impeding DC's goal to build more housing" policy brief. She uses housing permits to get at the effect of zoning on DC's development. By using a similar model but taking permit data from before and after the zoning revamp – in 2016 – this analysis will try to get at the question of zoning revamps and their effect on a city's development.

CHAPTER V – Data and Methods

Comparing Baltimore and Washington DC using their own respective municipal data will require the use of two different datasets. Though it is essential to use different datasets to get the level of detail required for each particular city, any comparisons between the two cities should be seen as tentative. The information from each dataset is largely the same – each measuring housing values and number of permits – but because the datasets are technically drawn from different sources and using slightly different methods peculiar to each city conclusions will not be as strong as they otherwise could be.

That being said, this analysis will use robust regression analysis. This thesis uses housing permits data starting from before the zoning revamp to after to try to get at the effect of a zoning overhaul on the city's development. Initially, this analysis focuses on the entire population within each city, analyzing the general effect the zoning had on housing development. This analysis also goes deeper, however, and includes a variable measuring wealthy (and whiter) neighborhoods with predominately single-family detached homes. In Washington, DC such neighborhoods tend to be in upper NW – think Tenleytown and Cathedral Heights. Isolating the effect of a zoning overhaul is particularly salient on these neighborhoods because residents here are more likely than others to be NIMBYs – Not In My Backyard types – who oppose up-zoning through apartment buildings and the like. Therefore, if zoning overhauls have a greater effect on housing value in such neighborhoods, this would demonstrate a unique irony; those who most oppose facets of zoning changes may actually benefit the most from it.

It is important to be able to note just how much housing prices increased as a result of rezoning. If the effect is statistically significant but marginal (i.e. only improves housing values

by less than a percent of total worth), it could be argued that zoning revamps – which are costly, timely endeavors – may not ultimately be worth it for the small gains it might bring.

The dependent variable will be the number of housing permits per census tract. DC’s data had new housing permits clearly broken out. Baltimore’s data, unfortunately, did not so I used permits pertaining to single-family or multi-family zones. The key independent variable will be housing value. Taking data from before and after the zoning paradigm was approved tries to enable this analysis to isolate the effect of zoning overhauls. Controls further enhance the robustness of this work. First, a dummy variable for if a housing unit is in a predominately wealthy (and white) neighborhood or not which will help ascertain the effect of wealthy localities on housing value. This analysis will also include an interactive variable between housing value growth and this “wealthy neighborhood” variable to see if there is any linkage between these two measures.

The general equation for the analysis, particular to each city, is as follows:

$$y = x_1(\textit{housing value change}) + x_2(\textit{wealthy neighborhood}) + x_1(x_2)$$

This general equation will be used for both datasets: DC and Baltimore. Though, as mentioned, using different datasets makes comparing the two more difficult and requires slightly different methodologies for each city

CHAPTER VI – Empirical Results

Washington, DC

DC is an exploding metro area in terms of development, and the number of permits bares that out. My analysis for this booming city, however, centers on the relationship between permits and housing values in the city. Permits reflect the nature of zoning in a city; an address' zoning code dictates, to a large extent, what development and permits are allowed at that particular location.

The DC dataset is organized by census tract. Housing value change for the period 2015-2017, which spans the zoning revamp in the DC, is assigned by tract as well. My first analysis incorporates the number of permits per tract, and regressing that on a census tract's housing value change. I included an indicator variable set equal to one if the tract is west of Rock Creek Park, where the most expensive real estate and the most restrictive zoning codes are in the city. Furthermore, I included an interactive variable between housing value and if a census tract was west of Rock Creek Park. It stands to reason that there is a relationship between growth and location in that part of the city.

A simple scatterplot (see figure 1) suggests that this belief has merit. Permits appear to be positively correlated with housing value change. However, we need to use regression-based analysis with controls, including if a tract is in a restrictively zoned area of the city or not, to determine to what extent this relationship appears to be true (or not).

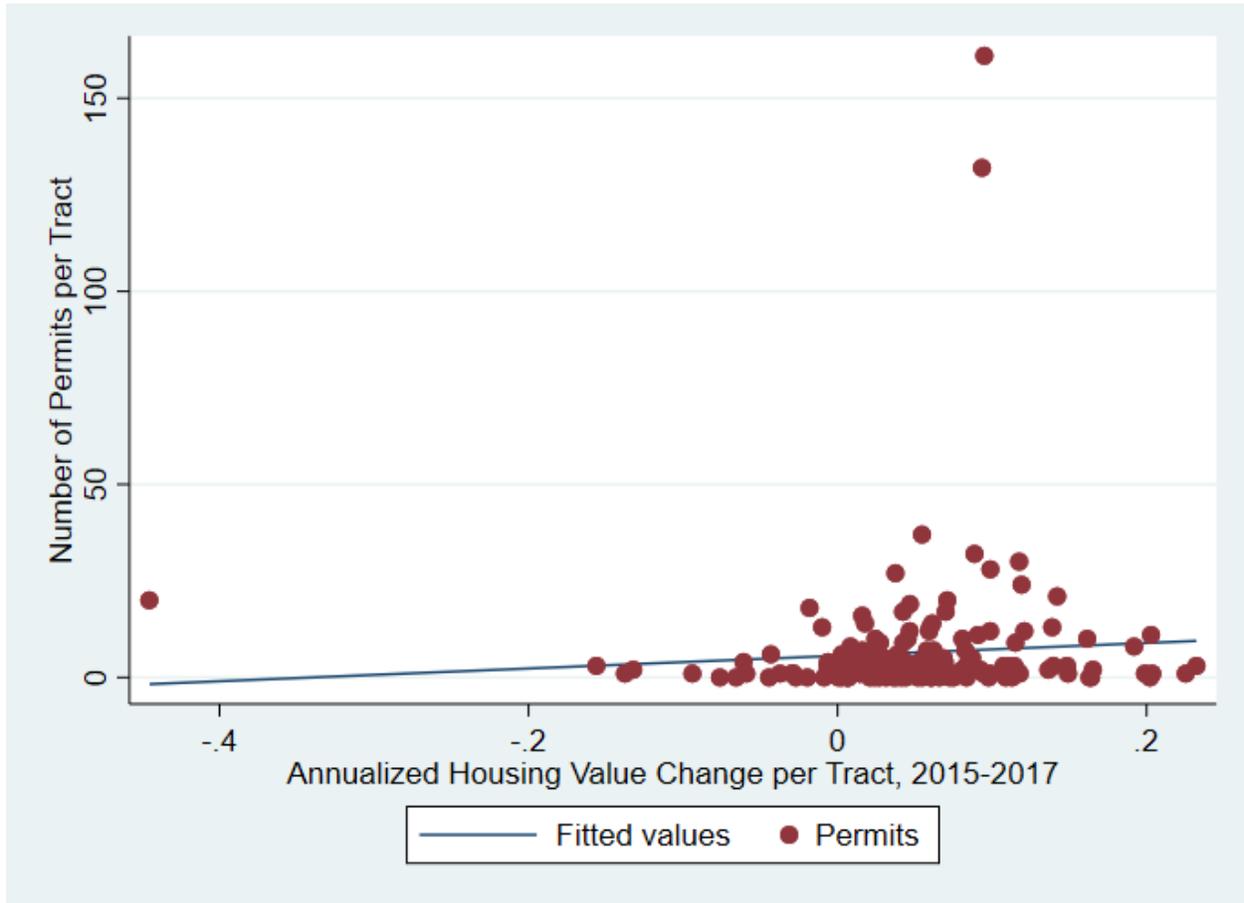


Figure 1. Washington: Permits by Annualized Housing Value Change per Tract, 2015-2017.

The results are statistically significant and demonstrate the strength of this regression model (see table one). The number of permits in a census tract is positively related with a tract’s housing value growth, holding other variables in the model constant. In other words, development (more permits) is good for a census tract’s housing value.

Though the *RockCreekWest* variable is not statistically significant on its own, it is statistically significant at the $p < .05$ level upon a joint significant test, so it stands to reason that there is some relationship there. This indicates that even more restrictively zoned parts of the city

benefit from development. In other words, although other parts of city bear more of the burden of new construction, the wealthy and restrictive parts of the city share in the benefit.

Table 1. Washington: Regression Analysis of the Relationship Between Housing Permits and Housing Value Change.

VARIABLES	(1) numberpermits
annualgrowth2	33.95** (15.15)
RockCreekWest	0.961 (1.506)
INTannualgrowth2	-57.54*** (17.70)
Constant	4.565*** (0.845)
Observations	172
R-squared	0.017

Robust standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Taking the log of the number of permits does not change the general takeaways we had in the first DC regression. The graph between the logged number of permits and annualized housing value change shows a stronger positive relationship between the two compared to when the dependent variable was not logged (see figure 2). To what extent this relationship is significant (or not), we need to again to use regression-based analysis.

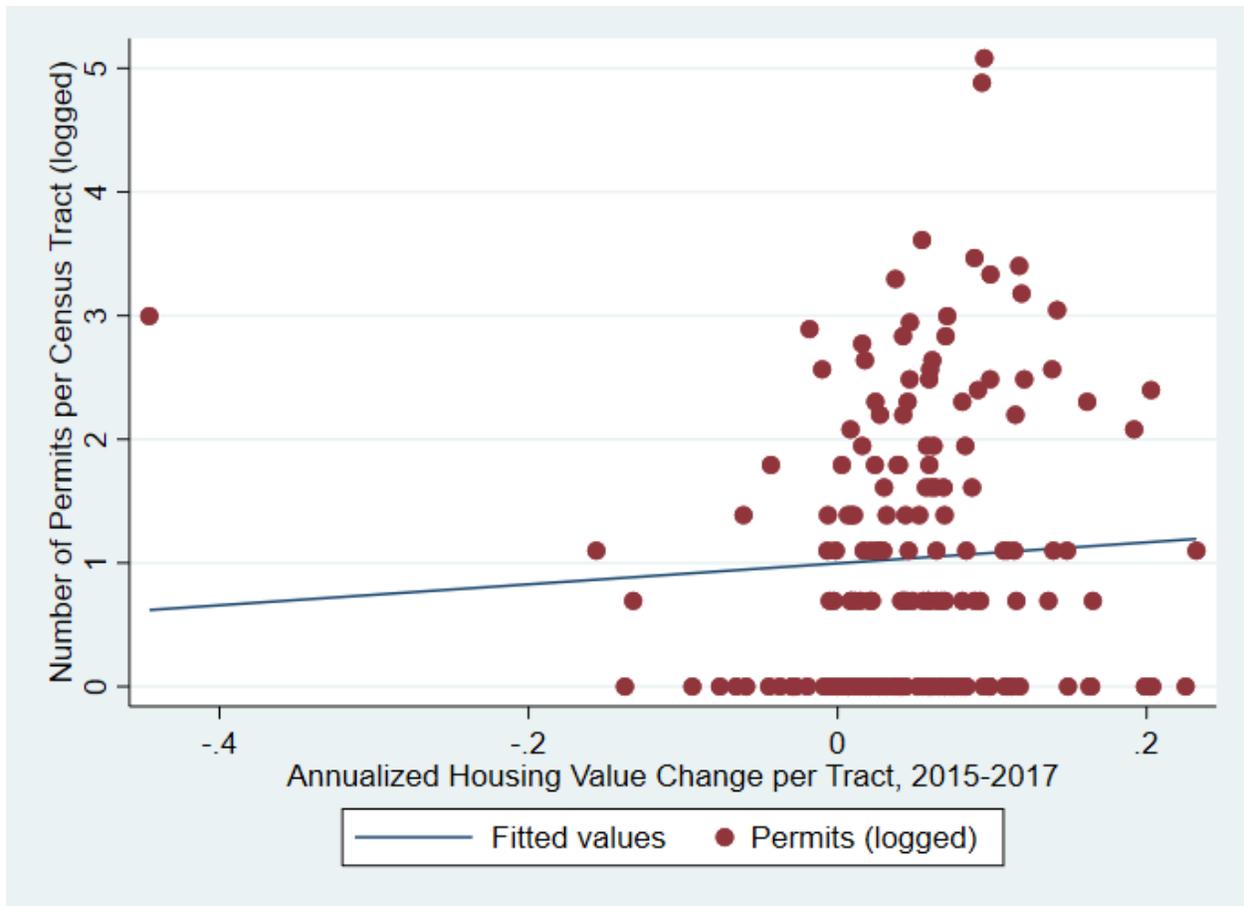


Figure 2. Washington: Logged Permits by Annualized Housing Value Change per Tract, 2015-2017.

Permits are positively related with housing value change. The most significant difference between this logged regression and the former is that the *RockCreekWest* variable is significant at the $p < .01$ level (see table 2). For every \$1 increase in housing value, we expect permits to increase by 2.933 percent. In Rock Creek West, a census tract there is expected to have .4 % percent more permits.

Table 2. Washington: Regression Analysis of the Relationship Between Logged Housing Permits and Housing Value Change.

VARIABLES	(1) numberpermits2
annualgrowth2	2.933** (1.321)
RockCreekWest	0.409* (0.240)
INTannualgrowth2	-5.400** (2.082)
Constant	0.834*** (0.0973)
Observations	172
R-squared	0.037

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Baltimore, MD

Baltimore is not a thriving city like Washington, DC and my regression results bear that out. Unlike with Washington, neither regression result had a statistically significant housing value variable (see tables three and four). That indicates that we could not find a relationship between the number of permits in Baltimore and a tract’s housing value. This might be an expected result. Development and housing value growth are less certain in a struggling city like Baltimore. That Washington – the opposite of a struggling city – and Baltimore have such differing results reflects the macroscopic differences between the two cities.

In lieu of the *RockCreekWest* variable a *gentrification* variable was used to demonstrate areas of high growth. The *gentrification* variable was coded by assigning census tracts in high-

value neighborhoods using the “Live Baltimore”¹³ website and a map from the Baltimore Neighborhood Indicators Alliance (see Appendix 1). In both regressions, *gentrification* was statistically significant. This makes sense – areas undergoing rapid change would likely have more permits than areas that are not undergoing significant change (see tables 3 and 4).

Table 3. Baltimore: Regression Analysis of the Relationship Between Housing Permits and Housing Value Change.

VARIABLES	(1) CensusTractTotal
housingvalue	-0.000461 (0.00140)
gentrification	176.6*** (58.88)
INTvaluegentrification	0.00508 (0.00523)
Constant	286.3*** (15.80)
Observations	172
R-squared	0.173

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

¹³ Lawrence Brown, “Two Baltimores: The White L vs. the Black Butterfly,” *The Baltimore Sun*, June 28, 2016, <<https://www.baltimoresun.com/citypaper/bcpnews-two-baltimores-the-white-l-vs-the-black-butterfly-20160628-htmlstory.html>>

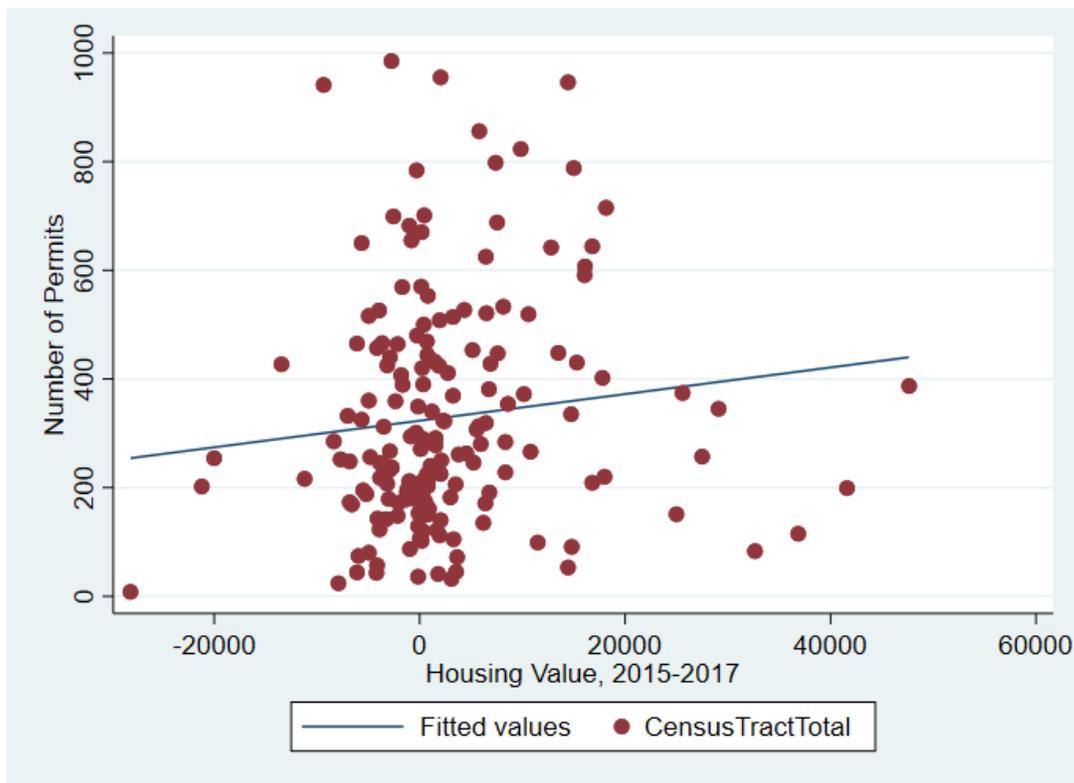


Figure 3. Baltimore: Permits by Annualized Housing Value Change per Tract, 2015-2017.

Looking at a scatterplot (see figures 3 and 4) can help reveal why Baltimore lacks statistical significance. Many census tracts in Baltimore lost housing value, whereas in Washington nearly every tract showed increases in value. Having data points on either side of a zero can diminish significance. The coefficient is influenced by both negative and positive values, and can lack a strong relationship one way or the other – as is the case here.

A logged number of permits per census tract ultimately bears out the same results as the first regression (see table 4). The *gentrification* variable is still statistically significant, as it was in the first Baltimore regression, but *housingvalue* and the interaction variable continue to lack significance. This shows the consistency of the results – conclusions do not vary according to the model used.

Table 4. Baltimore: Regression Analysis of the Relationship Between Logged Housing Permits and Housing Value Change.

VARIABLES	(1) LoggedCensusTractTotal
housingvalue	4.72e-06 (9.20e-06)
gentrification	0.492** (0.191)
INTvaluegentrification	1.29e-05 (1.83e-05)
Constant	5.423*** (0.0706)
Observations	172
R-squared	0.114

Robust standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

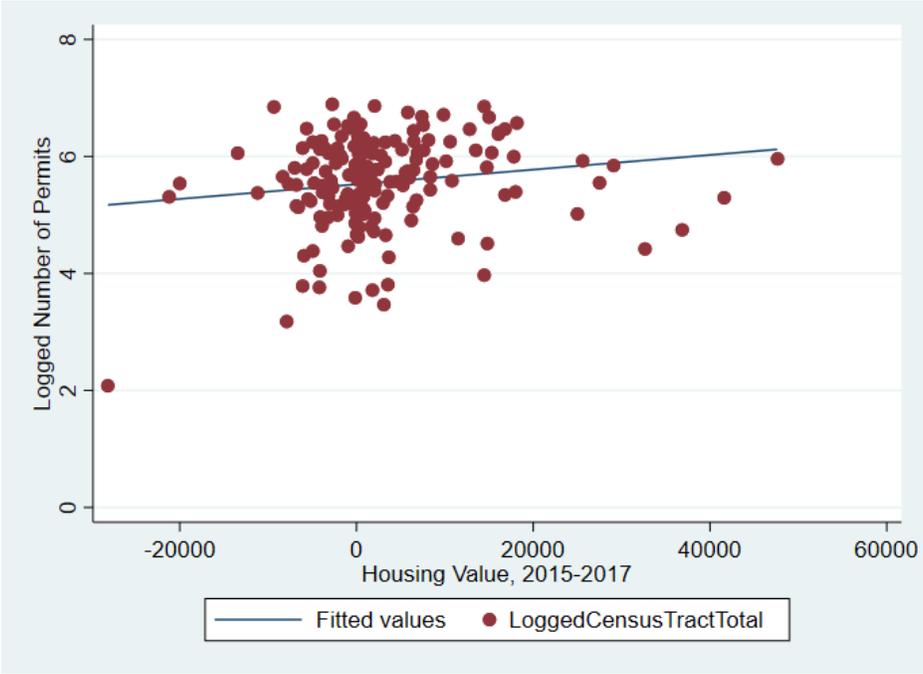


Figure 4. Baltimore: Logged Permits by Annualized Housing Value Change per Tract, 2015-2017.

Summary of Main Empirical Findings

Washington, DC and Baltimore, MD operate in different contexts. The former is thriving, the latter is not. That there is statistical significance between housing value and permits in Washington while there is a lack of significance between the two in Baltimore suggests that the general trajectory of each city matters. In Washington, over the period of a zoning revamp, the number of housing permits and housing value grew in nearly every tract. In Baltimore the story was more mixed. Of course, this is only over a three year span and using slightly different methodologies particular to the city, so it is difficult to make firm conclusions between the municipalities. That being said, there are important policy implications to draw from this empirical analysis.

CHAPTER VII - Policy Discussion

The results from the previous chapter demonstrate that housing policy and zoning in a city are complicated, but fraught with implications for a city's residents. The key results of my statistical analysis are: permits in Washington, DC are related to housing value growth but the same cannot be said for Baltimore, MD. This reflects the need for different types of interventions in different cities -- there's no one-size fits all solution for any policy issue, including urban housing. Drawing out the differences between these cities allows us to consider policy implications particular to each type of city (struggling or not), while attention should also be given to the need for better municipal data.

The models used in Washington and Baltimore do not get at the exact question of the efficacy of a zoning revamp. Considering how recently both of these zoning revamps occurred and the complicated fabric of inputs that are reasonably associated with housing growth (both in terms of development and value), it would be difficult if not impossible to isolate the effect of a zoning overhaul alone. That being said, the Washington result in particular suggests that housing permits are associated with housing value growth. Furthermore, value in the more restrictively zoned portion of the city was also associated with an increased number of permits per census tract. So, development – in the form of permits – in a thriving city like Washington is correlated with rising values. That suggests cities should foster development. Cities, as previously noted from Harvey and Molotch, have a growth imperative. More permits means more housing units, more housing units means more tax-paying citizens, and – according to my empirical analysis – more housing units is related with increasing housing values.

Of course, one of the most salient factors to consider when evaluating my empirical results is the macroscopic economic environment of the city. Washington, DC is one of the most

robust urban areas in the country. Before the Coronavirus epidemic, the population was growing; the city's government was enjoying a healthy budget; and cranes were everywhere across the city. So, per my empirical analysis, permits are associated with housing value growth. But general economic conditions matter too, and would likely be associated with both more permits and more money down needed to buy a home in the city. This indicates, therefore, that other policy levers are needed to ensure equitable development.

Encouraging growth, or more housing units, alone won't make Washington affordable. DC is one of the expensive cities in the country to live in with sky-high rents, and more permits are associated not with more affordable housing but more expensive housing. The supply-demand calculus implied here does not work in Washington. More units alone won't mean people of more moderate means can live comfortably in the District. Policy levers like inclusionary zoning, community benefits agreements, and community land trusts are all necessary to ensure Washington is accessible for people of all means. The free market alone will not stem ever-higher rents; active policy interventions that supplement the eventual effect of increased supply (presumably, lower costs) can do so at this point in time.

Baltimore, as the empirical results make clear, operates in a far different context than Washington does. That there was little to no statistical significance in the models used for that city demonstrate yet again the effect of macroscopic economic conditions on permits and housing value change. Baltimore's economic outlook is less certain than Washington's. Many census tracts did not increase in housing value between 2015 to 2017 in Baltimore, unlike Washington where nearly every tract's housing market became more expensive. However, this is not to say government inventions like inclusionary zoning and the like are not helpful in a struggling municipality like Baltimore. It is well-documented that Baltimore has a de-facto

segregation problem: the “White L” versus the “Black Butterfly.”¹⁴ Certain neighborhoods – the ones that are predominately white – have the best housing stock in the city, better schools, more accessible transit, and other factors that make for livable communities. Other neighborhoods – the ones that are predominately black – suffer from aggressive policing, poor food options, and other ills. More equitable housing policy can help ameliorate the effect of concentrated opportunity, in which much of the city loses out.

Another important takeaway from this empirical work is the need for strong, clean municipal data. Slightly different methods were used for each municipality in part because of what the data allowed for. Washington, DC had new construction clearly defined in its permit data. Baltimore did not, so instead that analysis focused only on permits in single-family and multi-family units. Therefore, while the Washington analysis was able to get closer to the question of development as seen through new buildings, the Baltimore analysis relied on a proxy of sorts; namely, that it stands to reason areas of high development would have more permits – new construction and otherwise – than other areas. Good data is critical for effective public management. Municipalities need to invest in appropriate data management that can inform public policy. Knowing which intersections have the most accidents directs a department of transportation to focus on those problem areas. Knowing how permits are related to development directs a housing authority to craft a multi-pronged strategy to facilitate, if they so choose, equitable development in a thriving or a struggling city. Publicly accessible, clean data helps governments make informed decisions that are in the best interests of their citizens.

¹⁴ Lawrence Brown, “Two Baltimores: The White L vs. the Black Butterfly,” *The Baltimore Sun*, June 28, 2016, <<https://www.baltimoresun.com/citypaper/bcpnews-two-baltimores-the-white-l-vs-the-black-butterfly-20160628-htmlstory.html>>

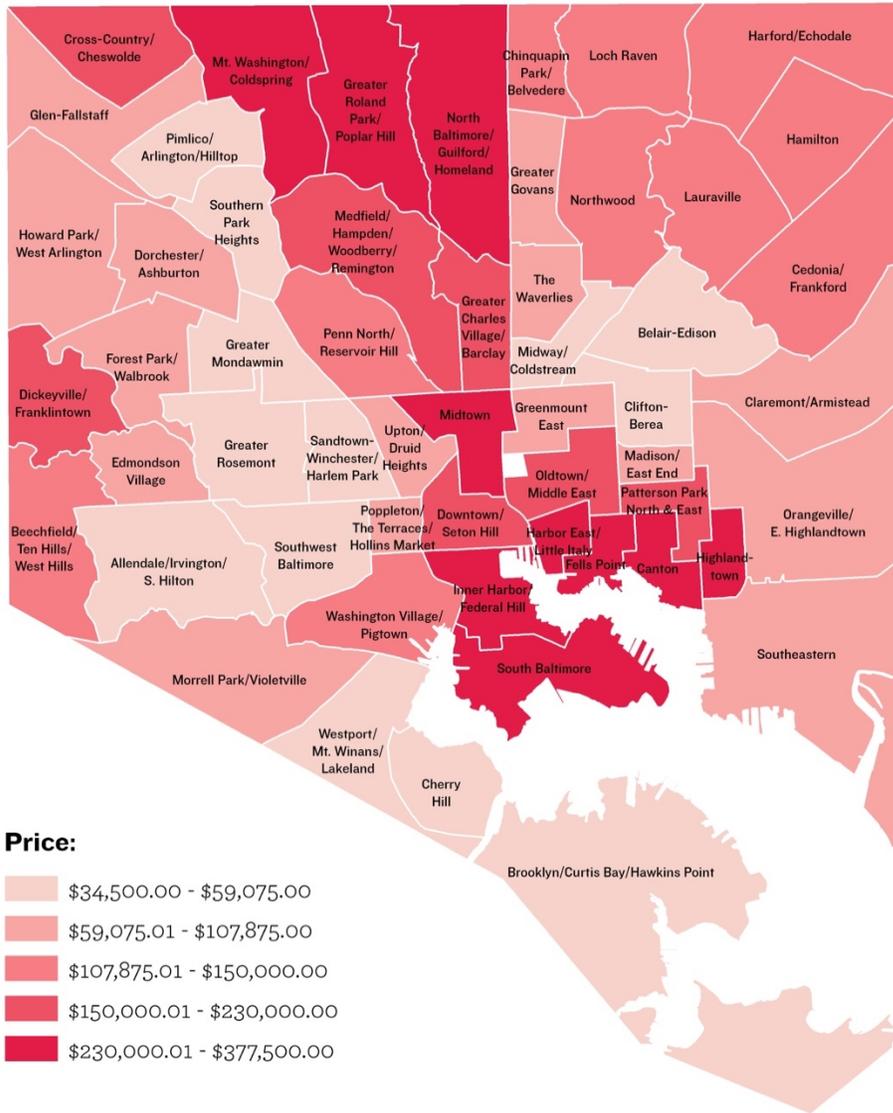
CHAPTER VIII - Conclusion

When I was growing up in upstate New York I would take shelter from the sometimes oppressive cold in front of my home computer screen. One of my favorite games was SimCity 3000 Unlimited. In this game the player acts as an omniscient and omnipotent (especially with cheat codes) mayor, deciding what gets built and where. The chief driver of development in this game was zoning, and as the lord of my fiefdom I decided what zones went where. I created vibrant, high-density downtowns with robust commercial sectors. I had the option to build a university on a hill, with lower-density housing near it to mirror the college towns I was so used to (and eventually ended up at). Zoning guides development in SimCity 3000 Unlimited; zoning guides development in cities around the county.

This thesis is more practical and contains more actionable information than a decades-old computer game. SimCity 3000 does not contain space for policy levers like inclusionary zoning or community benefits agreements, the latter of which did not even become commonly used until after the game was released. Robust policy research encompasses far more nuance than any video game could, and reveals far more information about specific ways policymakers can make lives better.

The research in this thesis centered on Washington, DC and Baltimore, MD and shows the tapestry of considerations urban policymakers must take into account when fostering development in a city. In a place like Washington, growth is more certain and stronger interventions are needed to ensure equitable growth. In Baltimore, growth is less certain but measures should still be taken to ensure it's a city that works for everyone.

APPENDIX



Map created by BNIA-JFI, 2019

Source: First American Real Estate Solutions (FARES)

Figure A1. Median Price of Homes Sold, 2017

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