



American Planning Association  
**Washington Chapter**

*Making Great Communities Happen*

# OBSERVATIONS ON THE COSTS OF LAND USE REGULATIONS AND GROWTH MANAGEMENT: Critical Perspective on a Controversial UW Study

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## Executive Summary

In a 2008 research study, University of Washington economics professor Theo Eicher explored the effect of land use regulations on the cost of housing. The study attributed dramatic housing cost increases in our state to land use regulations, which led to a provocative Seattle Times headline: "UW study: Rules add \$200,000 to Seattle house price." The Times article was subsequently cited by other media and in legislative proceedings at both state and local levels.

As land use practitioners, the members of the Washington Chapter of the American Planning Association (APA) are keenly interested in housing affordability and knowledgeable about the many factors that contribute to housing cost. Its members have practical knowledge of the broad variety of regulatory tools implicated in the UW study, the degree to which they depart from models elsewhere in the country, and the value they add to the quality of life in Washington.

Too many critical questions have been raised about the methods, assumptions, and conclusions contained in the UW study for it to be the definitive word on the cost of regulation in our state. Additional peer-reviewed research is called for to provide a sound basis for state and local policy. A critical review of this study by a committee of APA members highlights five major reasons to question its findings:

- 1. Inconsistency with well-documented historical and cross-regional data that do not point to growth management as a major driver of housing price inflation.**
- 2. Statistically derived estimates of the costs of regulations that far exceed cost estimates based on the economics of actual housing development.**
- 3. An overly simplistic model of the factors that drive housing prices, ignoring or underestimating the impacts of lending and interest rates, employment growth, landscape constraints, home size and quality, and real estate speculation.**
- 4. A largely self-reported database of land use regulations that fails to provide reliable city-to-city comparisons.**
- 5. A one-size-fits-all analysis that fails to distinguish between regulations that restrict housing availability from regulations that broaden housing supply, choice, and affordability.**

Land use regulations do add costs to housing. The same can be said of the effect of any regulation on a product, such as requiring airbags in automobiles or prohibiting lead in paint. However, as acknowledged by its author, the UW study focuses solely on cost. Consequently, it ignores the value that land use regulations add to the quality of life in Washington's communities, while our analysis indicates the study greatly overstates the costs of those regulations.

APA Washington does not support regulation for its own sake, nor do we argue that all regulations are sensible, nor that regulation should be relied upon to the exclusion of other tools such as capital improvements, tax policy, and public information programs. However, the answer to concerns about excessively costly regulation is not deregulation, but smarter regulations.

The Growth Management Act mandates that regulatory systems be timely, fair and predictable, that urban growth areas be sized to accommodate projected growth, and that comprehensive plans address the housing needs of all segments of a community. Thoughtful implementation of these statutory mandates holds more promise for increasing housing choice and reducing housing costs than does an agenda of regulatory erosion based on a sweeping and faulty premise that all regulations are, per se, excessive. To the extent that the UW study, with all of its limitations, is employed to advance such an agenda, it is ill-used and misapplied.



## Introduction

The headlines seemed to say it all: “UW Study: Rules Add \$200,000 to Seattle House Price”<sup>1</sup>—but there is much more to this story that planners, policy makers, developers, and the public need to know.

A well-publicized 2008 research study by University of Washington economics professor Theo Eicher explored the effect of land use regulations on the cost of housing, and attributed the majority share of housing cost increases to regulations. In particular, this research associated rather dramatic housing cost escalation with state regulations like Washington’s Growth Management Act (GMA). The study has received significant media attention, and is being cited in legislative and rule-making proceedings at both state and local levels. However, this research has limitations and weaknesses that render it potentially misleading as a basis for state or local public policy. Given the importance of the issue of housing affordability, the Washington Chapter of the American Planning Association concluded that a considered response is needed.

The controversy stirred by this study is nothing new. The relationship between land use regulations and housing costs has been a topic of heated discussion for many years, and in Washington most pointedly since the enactment of GMA in 1990. Elected officials, planners, environmental groups, business interests, and the building industry have debated the major questions, such as: Do urban growth boundaries and critical areas regulations restrict buildable land supply and thus drive up housing prices? Do project review and permitting processes add to development costs? Do local zoning codes accommodate the housing needs of current and future residents?

The planning profession has long emphasized affordable housing as a critical societal need. It is appropriate and valuable to question the factors, including public policies, that can lead to housing cost increases and to consider the most effective steps to encourage housing availability and choice for a broad spectrum of income levels across our communities. This makes it all the more important that research on housing costs is accurate and helpful in zeroing in on the key relationships among housing demand, supply, and cost. A review of this recent academic study points to weaknesses in data and methods as well as evidence that the costs of regulations are grossly overstated. Five key critiques, which are explored in the body of this paper, include:

- 1. Historical and cross-regional data on housing markets do not support the study’s finding that growth management is a major driver of housing price inflation.**
- 2. The estimated costs of regulations for cities in Washington State are inconsistent with the economics of actual housing project development.**
- 3. The study uses an over-simplified model of the factors that drive housing prices and thus misses the impact of major cost drivers, such as lending and interest rates, employment growth, natural constraints, home size and quality, and speculation.**
- 4. The study relies on a largely self-reported database on land use regulations that fails to provide reliable city-to-city comparisons.**
- 5. A one-size-fits-all analysis does not distinguish regulations that restrict housing from those that foster housing affordability.**

For starters, it is important to recognize why communities regulate land use and development. State and local governments adopt policies and regulations for a range of reasons that benefit individual property owners, their neighbors, and the community at large. Traditional regulations such as building and zoning codes have been used

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<sup>1</sup> *Seattle Times*, February 15, 2008.



for many decades for the protection of the public's health, safety, and welfare. Application of rules and standards, for example, governing wastewater disposal, access for emergency services, or separation of incompatible uses, are broadly accepted tools to ensure new development achieves minimal community standards.

A number of states and cities across the country have taken further steps to manage growth and development in order to mitigate sprawl and its negative impacts. Unmanaged growth has significant costs over both the short and long term, to include loss of farmland and forests, degradation of environmentally sensitive areas, the decline of central cities, and expense of extending infrastructure to far-flung subdivisions. More recently, sprawling land use patterns have been linked to greenhouse gas emissions and climate change at a global scale. Growth management in Washington approaches these problems through coordinated county and local comprehensive planning, urban growth areas (UGAs), concurrency provisions, and critical areas protections.

Theoretically, both traditional regulations and growth management can cause housing prices to increase. Regulations may impact housing costs in a variety of ways. Zoning and/or development regulations may serve to maintain low densities, thereby reducing housing production and limiting new units to more costly large lot single family. Development codes, such as street standards, impose costs by requiring on-site improvements. Permit charges and impact fees for essential infrastructure also may add to the cost of new housing units.

However, neither land use regulations nor growth management need add significantly to the price of housing. Policies and regulations that are well designed and implemented will provide for a sufficient supply of new units to meet a range of needs currently and in the future. Importantly, the GMA was expressly designed to accommodate growth, not to slow or stop it. A central tenet of the statute holds that counties and cities must plan for a share of the projected population growth in the state for the succeeding 20 years. Requirements for comprehensive plan elements and periodic buildable lands evaluations ensure this baseline responsibility is met in communities where growth pressures are the strongest.

Let's review how this particular academic study examines the relationship between a broad range of land use regulations and housing price.

A forthcoming paper entitled "Housing Prices and Land Use Regulations: A Study of 250 Major US Cities"<sup>2</sup>, assesses the impact of over 70 indicators of land use regulations on housing prices based on data for a national sample of cities. The analysis purportedly finds that municipal regulations (i.e., zoning, permit approval processes) as well as state land use policies (i.e., growth management) were strongly associated with increases in housing prices over the 1989 to 2006 period. Cities (and states) with what were considered to be less stringent land use regulations generally were found to have lower price increases.

It is important to note that the analysis was designed to explore the relationship between regulations and housing costs at a national scale. However, the author goes a step further in using that statistical model to estimate the costs of regulations in each locality. Five cities in Washington State—Seattle, Kent, Tacoma, Everett, and Vancouver—are featured in the paper to highlight these findings in a state with strong growth management statutes. Specifically, the paper reports that regulations are associated with \$203,000 (well over 80 percent) of the \$226,000 after-inflation increase in the City of Seattle's median housing price since 1989. (Housing demand purportedly raised prices by only \$52,000. Meanwhile, national factors such as changes in interest rates and macroeconomic trends were found to have a countervailing influence on housing—effectively lowering prices by over \$36,000 in Seattle.) Although the study finds the most pronounced impact of regulations in the state for Seattle, state and local land use factors also are found to have a sizable impact on housing price increases over the same time period elsewhere in the state: \$125,000 in Kent, \$113,000 in Everett, \$83,000 in Tacoma, and \$73,000 in Vancouver.

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<sup>2</sup> "Housing Prices and Land Use Regulations: A Study of 250 Major UW Cities", Theo S. Eicher, *Northwest Journal of Business and Economics*, forthcoming. The most current draft of this paper, along with other related materials, can be accessed online at <http://depts.washington.edu/teclass/landuse/>.



## Five Reasons to Question the Findings on Regulations and Housing Cost

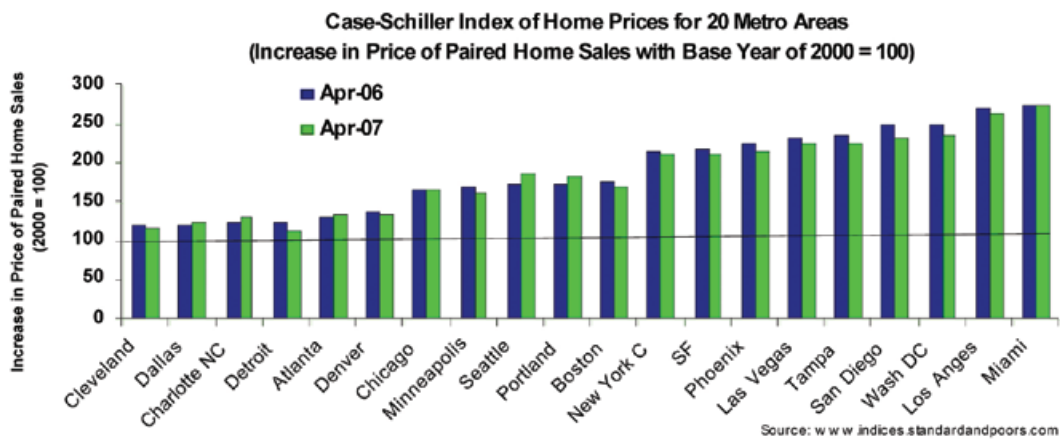
The findings reported in this study are eye-catching and provocative, but are they right? A committee of APA planners which has reviewed the UW paper finds five major areas where the data, methods, and/or conclusions of the analysis are called into question, and that cast doubt on the applicability of the study for public policy in Washington State. The sections that follow summarize those critiques.

### 1. The study's conclusion that GMA is the major driver of housing price increases in Washington is not plausible in light of historical and cross-regional housing data.

Haven't housing prices increased under GMA? No doubt, housing prices have increased substantially in Washington State, and particularly in the Seattle metropolitan region, over the past two decades. Affordable homes for first time buyers are scarce, especially in close-in locations. However, data show that these challenges are not unique to Washington, and a number of regions that lack strong growth management have less affordable housing and have seen faster price inflation.

According to the Housing Opportunity Index (HOI) of the National Association of Home builders, in 2006, the Seattle metro region ranked 151st out of 220 metropolitan regions in the country in the affordability of its housing. Since 1991, on average the region has ranked about 144 out of 220. This means that nationally about 2/3 of metro regions are more affordable than Seattle, while 1/3 are less affordable.

Another measure of house price change, the Case-Schiller Index, measures increase in same home sales over time. The graph below shows the increase in prices for 20 major metropolitan areas, with 2000 as the base year set at a value of 100. Out of the 20 metro areas shown, Seattle ranked 12th in 2006 and 11th in 2007 in the percentage rate of increase, just below the middle of the pack for this index, and well behind cities with relatively unfettered sprawl such as Phoenix and Las Vegas.



In particular, most metropolitan regions in the Western U.S. are growing and have considerably higher median home prices than the rest of the country, again, even though they represent a spectrum in their levels of regulation.<sup>3</sup> In 2007 the Seattle metro region ranked 40th in affordability (first being most affordable) out of the 67 metro regions in the western U.S., according to the HOI. In the West, Seattle is below the median in

3 The National Association of Realtors 2007 data on median sales prices of existing single family homes shows the median price in the western region at \$342,300 compared to the next highest region, the Northeast, which has a median of \$287,700. "Median Sales Price of Existing Single-Family Homes for Metropolitan Areas" (2005 - 2007) [http://www.realtor.org/Research.nsf/files/MSAPRICESF.pdf/\\$FILE/MSAPRICESF.pdf](http://www.realtor.org/Research.nsf/files/MSAPRICESF.pdf/$FILE/MSAPRICESF.pdf)



affordability, but not among the least affordable.<sup>4</sup> Washington also ranks favorably in homeownership. The 65% homeownership rate in the Seattle metro region is higher than the 64% for all western metropolitan regions. At 68%, Washington State's homeownership rate is very close to the national average of 69%. Viewed historically, as well, these are relatively high rates of home ownership.

How has affordability changed since the passage of GMA? Data for King County, the state's largest urban area, suggest that GMA has not exacerbated problems with housing affordability, and may even have helped. When housing costs are adjusted for inflation, interest rates, and regional median income, analysis shows that King County housing costs rose much more rapidly during the mid-1970s and early 1980s, prior to the passage of GMA and many other regulations now in place, than they have in the last two decades.<sup>5</sup> Comparing the monthly house payment for a median-priced house with the median-income household's monthly income reveals that the percent of income spent for housing was less in King County in 2007 than it was in 1980 and just slightly more than in 1990. See table below.

<b>Affordability of Median-Priced Housing 1970 - 2007 in King County</b>						
<b>Year</b>	<b>Median HH Income</b>	<b>Interest Rate</b>	<b>Median Home Price</b>	<b>Principal Owed after 10% Down Payment</b>	<b>Monthly payment</b>	<b>Mortgage payment as percent of median income*</b>
1970	\$9,361	9.0%	\$21,700	\$ 19,530	\$156	20%
1980	\$20,700	12.0%	\$71,700	\$ 64,530	\$657	38%
1990	\$36,200	10.0%	\$140,100	\$ 126,090	\$1,097	36%
2000	\$55,950	8.2%	\$245,000	\$ 220,500	\$1,638	35%
2007	\$68,400	6.2%	\$390,000	\$ 351,000	\$2,136	37%

\*Based on conventional 30 year mortgage at the prevailing interest rate with 10% down payment . 1970 - 2000 Home Price, U.S. Census Bureau. 2007 home sale data from Northwest Multiple Listing Service. Interest rates: [http://www.freddiemac.com/pmms/docs/30yr\\_pmmsmnth.xls](http://www.freddiemac.com/pmms/docs/30yr_pmmsmnth.xls) adjusted for WA State.

**2. The study's finding that 60%-88% of the real-dollar home price increase in Washington is due to regulations is inconsistent with the economics of real world housing developments.**

The study links between 60% and 88% of the price gains for a typical home to land use regulations in five selected Washington cities. Does this finding make sense in light of what we know about the economics of housing development? In fact, no. Research in King County illustrates why, and shows that if regulations have an impact at all, the size of that impact is much lower than estimated in the UW study.

Housing developers and others have long argued that GMA has driven up housing prices through, among other things, restricting land supply and thus driving up land costs. While this is theoretically true, land restrictions can be offset by other types of regulation, such as zoning for higher densities in urban areas, which expand the amount of housing that can be built on existing land.

To get a true picture of the effect of land supply on housing costs it is useful to look at the actual land and development costs (not just housing prices)—before and after GMA—and to look beyond individual cities to an entire urban region. King County has analyzed data on residential land sales for a period of years straddling

<sup>4</sup> National Association of Home Builders (NAHB), "Housing Opportunity Index", 4th Quarter, 2007. <http://www.nahb.org/page.aspx/category/sectionID=135>

<sup>5</sup> King County Affordable Housing Bulletin, 2000, 2001 data updated to 2007.

the implementation of GMA: 1982, 1990, and 1999.<sup>6</sup> The price of raw vacant land in the UGA was found to have increased appreciably from 1982 to 1999. However, the average per unit cost of vacant land as a percentage of the average price of a newly-constructed home remained fairly constant at 7% - 9%. See table below. Total land costs—raw land plus physical development—on the average, amount to about 20%-30% of the final price of a home.<sup>7</sup> These data undercut the assertion that a rise in land costs after the passage of GMA drove up housing prices.

<b>Average Cost of Vacant, Urban Land as a Percent of New Single Family Home price (Current Dollars)</b>			
	<b>1982</b>	<b>1990</b>	<b>1999</b>
<b>Average New Home Price</b>	<b>\$ 110,000</b>	<b>\$ 215,040</b>	<b>\$ 361,500</b>
<b>Average Cost of Vacant, Urban Land Per Unit @ 6 DU / acre</b>	<b>\$ 9,474</b>	<b>\$ 15,028</b>	<b>\$ 33,195</b>
<b>Average Cost of Vacant, Urban Land as a Percent of New Home price</b>	<b>9%</b>	<b>7%</b>	<b>9%</b>

Further, the average sale price of vacant residential land in 1999, including land zoned for a wide variety of urban densities, was \$199,200 per acre. This amounted to about \$33,200 per housing unit.<sup>8</sup> This represents an increase in real dollars of about \$101,000 per acre<sup>9</sup>, or \$16,800 per unit, from 1982 to 1999, or 4.6% of the median price of \$361,500 for a new home in 1999. This is the amount that can be attributed to increased land cost after accounting for inflation. These findings suggest that growth management regulations may be responsible for 4%-5% of housing price increases.

Land cost is only one potential driver of housing price that may be due to regulations. A broader analysis of the full array of development costs suggests that regulations, at most, are associated with a small to modest portion of the price of a typical home. Data on development costs nationally and in the Seattle area are shown in the table below. The first column shows the results of a National Association of Home Builders 2007 survey on average costs. Residential project pro formas were provided by developers for three projects in King County: CamWest for a development on the Sammamish Plateau, Connor Development for a home in the Juanita area of King County, and the developer of a replacement home on an existing home site in Seattle. The local examples were built in 1999 and 2000, well after the GMA was in place.

<sup>6</sup> Rose Curran and David Ko, "Land and Housing in a Time of Growth: Factors Affecting Housing Prices in King County and Implications for Land Use and Affordable Housing Policy". Unpublished paper, March, 2001.

<sup>7</sup> According to the National Association of Home Builders' Construction Cost Survey, the cost of the finished lot comprised 21% of the total cost of a typical new house in 1969, 27% in 1988, and about 24.5% in 2007. See also Joe Peek and James A. Wilcox, *The Measurement and Determinants of Single-Family House Prices*, (Federal Reserve Bank of Boston: Working Paper Series, No. 91 -7, December, 1991), 3. In 1999, in King County, the average for a finished lot (including most of the regulatory costs) was just about 27%.

<sup>8</sup> This is based on a conservative assumed average of 6 units per acre. In fact, the average density achieved in that year was about 7.5 du / acre over all residential zones, putting the average cost per unit closer to \$27,000.

<sup>9</sup> Bureau of Labor Statistics Inflation Rate Calculator (1982 – 1999) <http://data.bls.gov/cgi-bin/cpicalc.pl>. The cost of land per acre in 1982 was \$56,845, amounting to \$98,139 in 1999 dollars. The 1999 average cost per acre of \$199,170 represented an increase of \$101,031 in real dollars. At 6 dwelling units per acre, this is \$16,800 per unit.

Real World Costs of Housing Development as a Percent of Final Price of a New Home				
	National	Local Pro Formas		
	NAHB Survey (2007)	Camwest	Connor	Seattle
Land Purchase	10.0%	7.6%	12.6%	27.8%
Permits and Fees (including permits, bonds and impact fees)	4.6%	4.9%	3.7%	3.0%
Site Preparation	9.9%	16.0%	10.3%	5.4%
Construction Materials, Labor, Contractor Costs & Profit	66.4%	64.0%	66.0%	55.7%
Financing on Land and Building	2.4%		3.9%	4.6%
Marketing & Closing Costs	6.7%		3.5%	3.5%
Other		7.5%		
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Based on these data, we can estimate the following components of the potential share of the cost of a new home that can reasonably be attributed to regulations:

- “Overt” regulatory costs, such as fees for subdivision and building permits, impact fees, and others account for 5% of home price.
- Increases in the price of raw land that may be attributable to GMA, per historical analysis on previous page, are estimated at 5%
- Financing costs attributable to permit delays may account for 2%
- “Embedded” regulatory costs, such as incurred through site preparation and landscaping, infrastructure improvements, design, and mitigation, may total 5% of the price of a home.<sup>10</sup>

The bottom line is that regulations are unlikely to contribute more than 17% of the final price of a typical home, and the impact in many communities may be much less. To use Seattle as a point of comparison, 17% would represent about \$68,000 (in current dollars) of a \$400,000 home.<sup>11</sup> Presumably, since many regulations were already in place in 1989, the base year for the UW study, the increase in regulatory costs since that time would be even lower. \$68,000 is considerably lower than the \$203,000, estimated by the author as the amount by which median housing costs have increased due solely to regulations. This analysis suggests that the study has grossly overestimated the impact of regulations by an order of magnitude of 300% or more.

<sup>10</sup> While it is true that some regulatory costs can be “hidden” or “embedded” in the cost of land or in the requirements for certain levels of infrastructure, construction design, or landscaping, it seems apparent from the examination of land costs above, and from these pro formas that even a generous estimate of “embedded” regulatory costs, would yield an overall regulatory effect well under 20% of the final home price. Clearly more research on embedded regulatory costs is warranted, but given the magnitude of other costs, 5% of the final price seems like a high-end estimate.

<sup>11</sup> It is difficult to see how the 17% of the price of a home that could reasonably be attributed to regulatory impacts, could increase the cost of a home by more than that proportion. We saw that the increase in vacant land costs in real dollars in King County (including Seattle and the suburban cities) during a comparable period was just about 5% of the median home price. In fact, saying that regulations increased the price by 17% assumes that all of the regulatory costs were new costs imposed from the base year onward. Some of these regulatory costs and effects, such as imposed by permit fees, health and safety standards, and street improvements, were certainly already present and accounted for in the base year price. Even if they increased at the rate of inflation, they would not have contributed to a real increase in home price.

### 3. The study uses an over-simplified model to analyze the impact of land use policies and regulations on housing prices.

The model of housing prices developed for the UW study is exceedingly simple. The dependent variable in the multiple regression analysis—the 17-year change in inflation-adjusted housing prices—is analyzed with respect to a small set of independent variables that includes: 1) local demand factors—income and population growth and density, 2) supply factors—represented solely by measures of state and local land use regulations, and 3) a “constant” that theoretically captures factors influencing housing prices nationally, such as changes in interest rates.

While a simple model may be appropriate for a high-level study of national trends, common sense and professional experience tells us that local and regional housing markets are much more complicated. Several widely recognized drivers of housing price appear to be under-represented or not represented at all in this analysis. The result, particularly for areas like metropolitan western Washington, is an overemphasis on costs purportedly caused by regulations and an under-estimate of major factors that have pushed housing costs up in recent years.

- **Employment growth** is a major driver of housing demand. Economic expansion is a key measure of the attractiveness of an entire region and is a strong determinant of housing demand, independent of population growth in any one jurisdiction. Washington State has had one of the most robust economies in the nation for 15 years. The central Puget Sound region alone gained more than 425,000 jobs from 1990 to 2006. Growth in high-wage technology jobs has had a particularly strong effect on the demand for new, larger, and more expensive homes. As a result, income distribution has become more polarized. For example, in King County, households earning above 150% of area median income have risen from a quarter to nearly a third of the total. Neither overall job growth nor changes in wage structure are addressed explicitly in the UW study.<sup>12</sup>
- Ready access to historically cheap credit drove a “**housing bubble**” from 2002 to 2006. Financing factors fueled a run-up in home prices throughout the nation, and most profoundly in “hot” coastal cities like Seattle. **Low interest rates and sub-prime lending practices** dramatically increased demand for ownership housing and spurred speculative buying in many areas. The study, which covers the time period through 2006, the peak year of the bubble, does not appear to accurately reflect this phenomenon. The model accounts for a range of “common factors across cities,” including home financing, through the use of a constant applied across the board. Surprisingly, however, this constant effectively lowers home prices in the model! While it is difficult to peel apart all of the factors that feed into the constant, the analysis appears to have missed entirely what has been a demand-driven tsunami in home prices in the first half of this decade. With that wave receding in 2007 and 2008, home prices have fallen nationally by over 15%, and much more in highly inflated markets such as Las Vegas, Miami, and many areas of California<sup>13</sup> The major conclusions of the UW study on the costs of land use regulations don’t make sense in light of the recent dramatic decline in real estate values.
- Housing demand from **real estate investment** has also driven up prices. Many investors shifted their assets from the stock market to real estate before and after the dot-com crash of 2001. Research has shown that people who have accumulated wealth through financial investments have reinvested a significant portion in real estate, driving up demand.<sup>14</sup> This has been particularly evident in the Puget Sound region where

<sup>12</sup> The model does include change in median household income as an independent variable. However, this does not capture changes in income distribution, where growth at the higher end would affect the cost of ownership housing.

<sup>13</sup> According to Northwest Multiple Listing Service, quoted by Aubrey Cohen in *Seattle Post Intelligencer*, February 8, 2007, October 5, 2007, and January 8, 2008, Seattle home prices declined in 2007 to about \$400,000. Using the more recent figure as an end point for the long-term trend reduces the annual rate of change from 4.2% per year to a significantly lower 3.4% per year. This rate is fairly typical of historical price increases in housing.

<sup>14</sup> Jud and Winkler (2002), Bond and Seiler (1998), Green (2002), Sutton (2002), and Kakes and Van Den End (2004)

beneficiaries of stock options from Microsoft and other thriving technology companies transferred wealth to real estate during the late 1980s and 1990s. Relatively poor stock performance in the early 2000s may have increased this effect, leading to the much-storied rise in speculation and purchase of second homes.

- **Rising construction costs and increased size and quality of homes** have contributed to higher home prices. Costs have risen faster than inflation for site preparation, engineering, building materials, and labor. Further, these costs are not uniform throughout the nation. Labor costs are higher in the Seattle region than in many other parts of the U.S. For instance, in 2005-2006, the average wage for all civilian construction occupations in the Seattle-Tacoma-Bremerton area was \$22.39 per hour, 15% higher than the national average of \$19.46, and significantly more than the \$15-\$16 per hour wage prevalent, for example, in the southern U.S.<sup>15</sup> Compounding the rise in construction costs is the continuing trend toward building larger homes with more expensive finishes. For instance, it is now commonly expected to have 2 bathrooms in a 2 bedroom unit and up to 3 or 4 bathrooms in a larger house. Nationally, average home size rose from 1,750 sq. ft. in 1978 to nearly 2,500 sq. ft. in 2007, an over 40% increase in 29 years. During the 17 years analyzed in this study, house size increased by a quarter.<sup>16</sup>
- **Natural and geographic factors** play a significant role in a region's housing prices.<sup>17</sup> Urban areas such as the San Francisco peninsula, Manhattan, Honolulu, Boston, Vancouver, BC and Seattle, are severely constrained by water bodies, steep slopes, mountains, and other geological challenges. These factors make land more scarce, development more costly, and hinder the lateral spread of the urban footprint. As relatively scarce amenities, mountain views and waterfront can also increase the relative value of housing. Housing prices are notably high in all of these cities. Such natural constraints are much less prominent in cities such as Denver, Phoenix, Houston, and many others, where housing prices have not risen as steeply, despite rapid growth. The study does not account for variation in natural setting as it affects housing markets.

In sum, the model overlooks or minimizes key variables. Factors driving housing demand are more numerous and powerful, and housing supply is shaped by many factors beyond merely land use regulations. Cognizant of these factors, the study's conclusion that regulations are the primary cause of housing price increases in Washington State stretches credulity.

Press coverage and statements on the UW study made by various interest groups also oversimplify the matter by suggesting that land use regulations have caused housing prices to rise. However, as the saying goes, correlation does not imply causation, and that is quite true with respect to this type of analysis. The author has used regression analysis to identify associations between independent variables (density, growth, income, and regulations) and dependent variables (housing price increase). Correlations, however strong on their face, though, are just as likely influenced by a third, or multiple other variables, compounded by the possibility that there may be complex interactions at play.

The truth is that a complex web of cause and effect exists among the various supply and demand factors that shape housing costs. For example, growth itself is a driving force for both markets and regulation. History has shown that communities often respond to growth by enacting new regulation. In fact, Washington's GMA was enacted in 1990 and 1991 in the midst of rampant growth and a run-up of housing prices.

It is also important to recognize that sound planning in general, and the GMA in particular, may influence the value of housing not through restricting supply, but by enhancing livability. Growth management policies can

<sup>15</sup> Bureau of Labor Statistics, *Occupational Wages for each of the Nine Regional Areas*. See <http://www.bls.gov/ncs/ocs/compub.htm#Division>

<sup>16</sup> U.S. Census Bureau.

<sup>17</sup> In a cross-section of metropolitan areas, constraints of all kinds explained about 40 percent of the variation in house prices, with about three-quarters of that attributable to natural and one-quarter to regulatory constraints. Rose, 1989a and 1989b

enhance the value and thus market price of housing through design guidelines, infrastructure provision, and development of local amenities such as parks and ball fields, libraries, open space preservation, and improved public transportation. The result is communities that are more attractive to businesses, new residents, and current residents choosing to stay.

Far from merely academic, the question of causation is key to a reasonable policy response to this type of research. Would removing regulations cause housing prices to drop? Which regulations? By how much? At what costs, intended or unintended?

**4. The study uses a national database on land use regulations that relies on subjective self-reporting, thus preventing reliable comparisons of the “restrictiveness” of local and state policies.**

The study purports to show that communities with more “restrictive” regulations have experienced much greater housing price inflation. This analysis relies on a national dataset, the Wharton Residential Land Use Regulatory Index, which ranks states and localities as more or less restrictive in regulating housing development.<sup>18</sup> Obviously, there are advantages to using a set of national indices. Theoretically, this provides an apples-to-apples comparison across a broad sample of communities. However, upon scrutiny, this particular database may not reliably reflect meaningful differences between cities.

First and foremost, much of the data were obtained through a written survey returned by “planning directors” from communities across the United States. Respondents were asked to report their ratings on questions such as “local council involvement in regulation” and “community pressure/involvement in regulation” (1-not at all, 5-very). The problem is that these questions are open to wide variation in interpretation and response, depending on the knowledge, demeanor, and experience of the respondents.

To cite one example of how this can skew the data: Seattle’s planning director (or other designated staff) responded to the question on “state legislature involvement in regulation” such that Seattle is in the 98th percentile of all communities across the nation (e.g., nearly the most restrictive). In nearby Kent, a city in the same state, metro area, and county, the response to this same question placed Kent in the 76th percentile nationwide. In the Seattle suburb of Des Moines, WA, the planning director’s response placed that city in the 49th percentile nationwide. All three respondents are interpreting the level of involvement of the same state legislature, even as it affects the same metro area. Yet the results are radically different.

Planning directors were also asked to rate their communities with respect to a number of quantitative factors affecting housing, such as land and housing units supply and demand, lot development costs, and permit processing times. Without the benefit of actual comparable data and rigorous analysis on such measures to back up their responses, we have no way of knowing that local staff were able to provide Wharton with reliable and comparable ratings.

Finally, the Wharton database also uses a ranking of state-imposed land use restrictions from a study by Foster and Summers (2005). Based on a review of documentation on executive and legislative activity, states were ranked high on restrictiveness merely based on amount of state-level activity in adopting and enforcing land use policies. However, measuring relative state involvement does not tell us much about the type of policies and overall policy framework adopted by various states, and thus yields a potentially misleading set of rankings, especially for the purposes of this study.

<sup>18</sup> “A New Measure of the Local Regulatory Environment for Housing Development”, Gyourko et al., *Urban Studies*, 2007.

**5. The study fails to distinguish between policies and regulations that restrict housing supply versus policies, such as adopted under GMA, that aim to increase the supply and affordability of housing.**

The UW study is based on a premise that land use regulations cause housing prices to increase because they are designed to limit housing supply. Such a broad-brush assumption greatly oversimplifies the reality that policies and regulations are adopted by communities for a great variety of purposes, and even far reaching and rigorously enforced regulations may have very different impacts on housing.<sup>19</sup>

A weakness of the study and the Wharton database it relies upon is a failure to distinguish between state policies and local regulations that accommodate housing growth and promote affordable housing vs. policies and regulations that restrict housing development and/or are exclusionary of more affordable housing types. There is a significant lack of specificity about what policies are being considered, which does little to help communities understand the trade-offs between different policy choices. Methodologically, the distinctions between traditional zoning and growth management, between exclusionary and accommodating regulations, are blurred in a single analysis. A study design with separate models likely might have rendered more valid findings.

Notably, the UW study is just one example among a large body of research on the relationship between land use regulations and housing costs. As a whole, that literature finds that a complicated mix of supply and demand factors determines the price of housing in any given market. Numerous studies have indeed identified land use regulations as having a modest influence on area housing prices; however, the literature also suggests that the impact of regulations varies considerably depending on the type of regulatory tools in place. Specifically, we should distinguish growth controls—regulations that restrict the amount and type of housing produced—from growth management, which is designed to accommodate population growth but direct it in ways that are less consumptive of land and natural resources. Research shows fairly conclusively that growth controls increase housing costs. Growth management, on the other hand, may have little impact on housing cost, according to the research, and may indeed provide a wider variety of affordable housing choices than would exist under conventional land use regulations.

One widely cited review of academic research by Nelson et al. (2002), concludes that market demand, not land use constraints on supply is the primary determinant of housing costs.<sup>20</sup> To the extent that they restrict housing supply, regulations exert upward pressure on housing prices and rents. Conventional tools such as low-density zoning and restrictions on clustered or attached dwelling units have the effect of excluding lower-income households. A properly designed growth management program, however, can provide for a mix of densities and housing types, regional fair share policies, and other provisions that can offset land supply constraints.

Washington's GMA, in particular, is explicitly designed to accommodate housing, and, further, to foster provision of housing that is affordable to "all economic segments" of the state's population. This is not just words on paper. Communities that are not planning effectively to accommodate housing and to address affordability are subject to appeal before a Growth Management Hearings Board. Under threat of state financial sanctions, cities and counties are compelled to comply with board rulings, such as by amending their plans and regulations.

<sup>19</sup> Even where the data may be accurate, ratings of regulatory involvement cannot be understood well across a broad spectrum of communities without knowing the context for those regulations and practices. For one, cities have very different starting points in their levels of infrastructure; e.g. age of water/sewer; density/availability of transportation network. Another is overall urban maturity, which has implications for how much development must be done as more complex redevelopment, with demolitions, brownfield development, mitigation needs, compatibility with adjacent use, and other issues at play. Context is key to understanding the relationship between regulations and development costs.

<sup>20</sup> See Nelson, R.C., R. Pendall, C.J. Dawkins, and G.J. Knaap, "The Link Between Growth Management and Housing Affordability: The Academic Evidence," Brookings Institute, 2002. Two additional recent reviews of the academic literature conclude that the academic evidence for linking house price inflation with land use regulations is uneven and hampered by a number of methodological challenges. Schill (2004) finds that research to date has been insufficient to inform public policy, particularly at the state and local level. In particular, research to date has had difficulty separating out the impact of supply and demand factors on housing prices. Quigley and Rosenthal (2005) conclude that sorting out this complex relationship will require new data and methods that address the complexity of local policies and tools. It will be necessary to examine confounding factors, such as the tendency of wealthier communities to enact more restrictive regulations, and to develop more reliable indicators of both housing costs and restrictiveness of regulations.

As a basis for local accountability, the GMA mandates periodic monitoring reports in western Washington's six most populous counties. The reports assess how well those counties and the cities within them are accommodating housing and job growth. The GMA requires that local governments do more when growth objectives are not met. The most recent Buildable Lands reports, released in 2007, confirm that the GMA has largely worked as designed. Major findings include the following:

- Housing production during the first half of this decade was higher than growth during the late 1990s. This trend is especially notable in light of the economic downturn of 2002-2004 with stagnant or falling employment in many areas. If land use regulations had driven up prices by restricting new housing supply, the data should bear that out, but they don't. The recent robust numbers of newly permitted units suggests that **regulations have not greatly reduced the ability of developers to build new housing units.**
- Residential densities have increased. On average, new housing, both single-family and multifamily, is adding more units per acre of land developed and redeveloped. This trend indicates that **communities have used land more efficiently**, a trend which should benefit housing affordability by cutting down on land costs per unit and increasing future potential housing supply on remaining vacant and redevelopable parcels.
- Based on adopted plans and regulations, as well as recent development trends, each county and most cities were found to contain more than **sufficient land to accommodate new households and new jobs** through 2025. In most locations, there is a cushion of buildable land—with consideration for market availability, critical areas, and land needed for infrastructure—to respond to housing demand.

The Buildable Lands evaluations provide direct evidence that GMA has not had the effect of restricting overall housing supply or production during recent years when housing prices have risen dramatically. Further, the measures employed in the Buildable Lands evaluation provide a basis for accountability that future housing needs are met through local planning in our fastest growing urban areas.<sup>21</sup>

<sup>21</sup> Information on Washington's Buildable Lands requirement and reports is available at [http://www.cted.wa.gov/portal/alias\\_\\_CTED/lang\\_\\_en/tabID\\_\\_419/DesktopDefault.aspx](http://www.cted.wa.gov/portal/alias__CTED/lang__en/tabID__419/DesktopDefault.aspx).

## Conclusion

No single study or model is sufficient to fully understand housing market dynamics and their implications for sound public policy. This is a complicated topic that defies simple explanations and one-dimensional solutions. We recognize the value of this study as an attempt to analyze the issues at a national scale using newly available data on land use regulations. However, as highlighted in this paper, there are many critical questions that need to be explored through peer review and corroborating research before this work can be considered valid as a basis for state or local policy.

More and better designed research is called for to both broaden and deepen our understanding of the issues addressed in this study. This work needs to encompass both the costs *and* benefits of land use regulations. Quantifying the costs of public actions absent an accounting of the substantial benefits accrued through good planning skews the debate to the detriment of both homeowners and the community at large.

More analysis needs to be done that focuses locally on the regulatory climate and housing market dynamics within specific states and metropolitan regions. As noted, the UW study uses a large sample of cities to make general findings about the influence of regulations on housing prices nationally. This may be valuable as an academic exercise. However, the math gets very fuzzy at the local level, where estimates of the costs of regulations cannot be made with much confidence, and where a range of additional factors need to be considered to provide accurate and useful information for policy makers.

Opponents of growth management have and will continue to use this study to call for rolling back GMA and other state and local policies. The proper response to such arguments, however, is not deregulation, but smarter regulations. As discussed previously in this paper, the GMA already requires measures to address issues around housing supply and affordability. Counties and cities are required to designate urban growth areas that are large enough to meet the need for housing and other land uses including good jobs. Counties and cities must designate areas for the housing types and densities needed to meet projected housing needs. They must plan for the streets, transit, water facilities, sewers, storm water facilities, schools, parks, and other public facilities and services needed to serve housing and other needed and desired uses.

The smart choice is to build on the solid foundation for accommodating growth and affordability provided for under GMA with local comprehensive plans and regulations that further enable and encourage builders to provide a variety of affordable housing choices in locations that provide access to efficient urban services, amenities, and job centers. To this end, Washington APA has promoted a variety of public policy steps, particularly at the state level, to promote housing affordability, including the following:

- **Provide infrastructure for needed residential growth.** It starts at the state level. Counties and cities cannot do it alone. The legislature should provide additional funding to help counties and cities provide the water, sewer, storm water, parks, and transportation facilities needed to support their land use and housing plans. As outlined in a proposed Growth Management Infrastructure Program, funds can be targeted to support, specifically, affordable housing development, and, more broadly, anticipated growth where local governments have made effective provisions for a range of affordable housing types.
- **Expand the range of affordable housing choices.** Counties and cities should periodically evaluate their comprehensive plans and development regulations for their effects on housing production and to gauge whether they are able to provide sufficient capacity for a variety of affordable housing choices with access to job centers. Local plans and regulations need to create the conditions where the market can respond with some flexibility and creativity to the housing needs of current and future residents. Cities can and should do more to increase affordability by providing opportunities to build a full range of densities and housing types, not only high density mixed-use centers as a complement to traditional single-family neighborhoods, but also

row and town houses, duplexes, courtyard houses, detached accessory dwelling units, and other innovative alternatives.

- **Further streamline permitting processes.** Since the mid-1990s state law has required counties and cities to reform their land use regulations and permitting systems. Regulations that are clear and easy to use and permitting processes that eliminate unnecessary steps and are efficient can reduce the time needed to obtain permits. Time is money in the permitting process. Throughout Washington, counties and cities have reduced the time needed to obtain permits. These efforts should continue. Thorough review of new projects is necessary to ensure that development is consistent with local and state goals and values. But lengthy and uncertain permitting processes are a major driver of costs to developers, costs which can be passed on to homebuyers. Local governments should regularly revisit their rules so the development the community wants and needs is the easiest to build.

There is no doubt that overly restrictive growth controls, ill-considered regulations, and needless permit delays can have an outsized impact on housing costs. And unfortunately, history shows that there have been cases where communities have deliberately used zoning and other regulatory tools to limit housing supply and as a barrier to entry, to keep certain types of people or income levels out. For example, such actions by the Township of Mount Laurel prompted the courts and legislature in New Jersey to take strong measures to pre-empt such exclusionary behavior. The mandates of the Federal Fair Housing Act, Washington's Growth Management Act, and the Code of Ethics of the American Planning Association, likewise reject such exclusionary practices. The members of APA Washington, and our organization, pledge to work to ensure that our state's communities provide housing opportunities for all.