Executive Summary

Spring 2001

Growth Management:
A Clark County Housing Affordability Study

The housing affordability effect of the Washington Growth Management Act (GMA) is of paramount importance due to the contribution of housing affordability to a region's economic and social well-being. This point has been the focus of numerous recent journal articles. For instance, an article by Isaac Megbolugbe of the Fannie Mae Foundation points out how difficult it is for a local economy to sustain economic expansion if it cannot provide sufficient affordable housing. Additionally, authors such as Anthony Downs and Robert Cerrero have associated a lack of affordable housing with jobs-housing imbalance and concentrated poverty at the heart of many urban areas, adding to fiscal problems in the urban core, traffic congestion, air pollution, and diminished quality of life. Because of the importance of this issue and its timeliness in our state, we have been researching the Washington Growth Management Act (GMA) and its impact on housing affordability.

An empirical analysis of the Clark County housing market, conducted in cooperation with the Washington Center for Real Estate Research, was presented at the American Real Estate Society annual meeting in Coeur d'Alene, Idaho on April 19, 2001. The research covers a six year time period centered on the implementation of the GMA in Clark County on January 1, 1995. The study addresses two questions: 1) Was there an upward shift in housing price coincident with implementation of the GMA in Clark County? 2) Was the rate of change in home price in Clark County different post-GMA implementation from what it was prior to GMA implementation? The answer to both of these questions appears to be yes, at least for resale homes.

Is a Housing Affordability Effect Expected?

Theoretically, we expect to find a negative housing affordability effect coincident with implementing legislation similar to the Washington Growth Management Act. This expectation exists for at least two reasons — the constraint on land supply resulting from drawing an urban growth boundary (UGB) and increased regulatory costs of development. The graphs that follow help to explain why this is so.

Figure 1 shows how the land supply curve becomes steeper as the quantity of developed land in a market (Q_D) expands toward the UGB supply constraint (Q_T). This means that we expect land supply to become more and more price inelastic over time as development occurs within a constrained geography. Greater supply price inelasticity means that land price can be expected to grow at an accelerating rate even though the need for developed land may only grow at a constant rate. This effect is illustrated in figure 2.

Washington Center for Real Estate Research

Washington State University

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In theory, a negative housing affordability effect is expected

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Figure 2 overlays a constant rate of growth on the supply curve shown in figure 1. This figure shows why we expect to see an unwanted housing affordability effect resulting from adopting a UGB constraint. In this illustration, the demand for developed land shifts from demand curve D to demand curve D! then shifts again to demand curve D!!. These demand shifts occur over time and result in the quantity of developed land growing from Q_D to Q_D! to Q_D!!. Importantly, the change from Q_D to Q_D! is identical to the change from Q_D! to Q_D!!. Note, however, that the market price reaction to a constant change in demand is accelerating. The price increase from P to P! corresponding to the quantity of developed land growing from Q_D to Q_D! is much smaller than the price increase from P! tp P!! corresponding to the quantity of developed land growing from Q_D! to Q_D!!. This sort of price acceleration is directly related to the increasing supply curve inelasticity shown in figure 1.

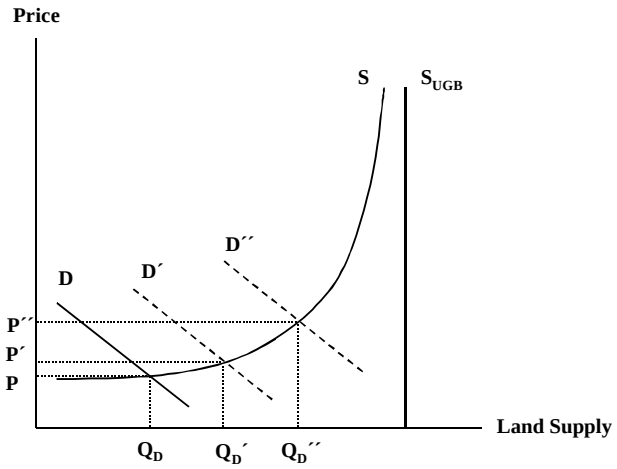


Figure 1: Price Effect of an UGB Constrained Land Supply

Figure 3 explains the second reason we expect an unwanted housing affordability effect — increased regulatory costs of development. Increased regulatory costs can come in many forms including a lengthened regulatory approval process, more professional fee requirements associated with greater approval process detail, higher application fees, and exactions in the form of impact fees, land set asides, and/or special improvement districts.

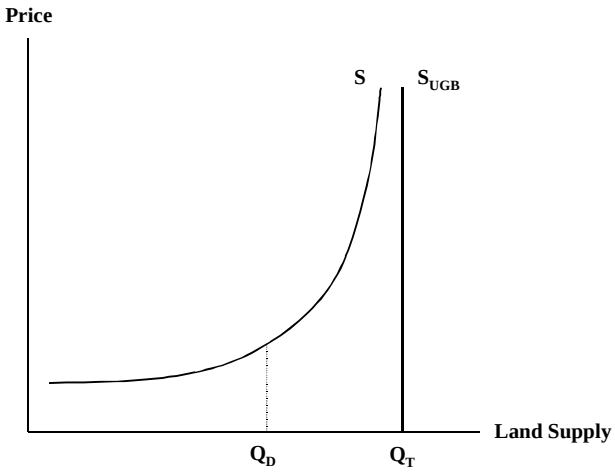
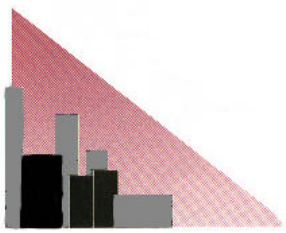


Figure 2: UGB Constrained Land Supply

In figure 3, the land supply curve has shifted leftward to the dashed line in response to increased land development costs. This shift means that less land will be developed at each relevant land price because of the additional costs that developers must now incur. The expected land price effect of such a supply curve shift is illustrated by looking at demand schedule D, which is held constant for the purposes of this illustration.

The market's reaction to increased regulatory costs is captured by the intersection of supply and demand — so-called market equilibrium. Before the supply curve shift, land quantity demanded is Q_D and market price is P. After the regulatory-cost-induced supply curve shift, less land development is demanded (Q_D!) and the market price of land is higher at P!. The land price increase from P to P! represents the adverse housing affordability effect.



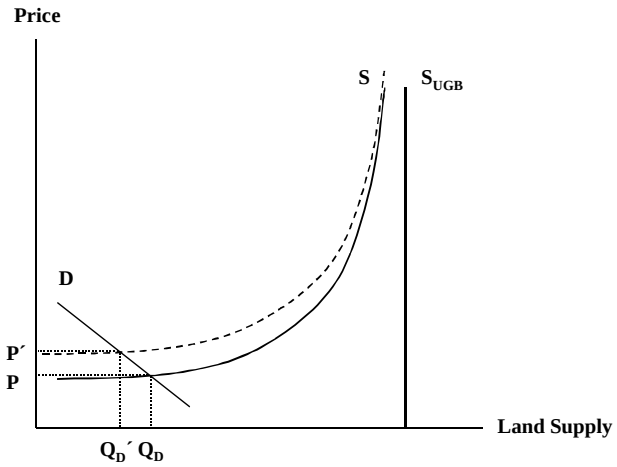


Figure 3: Effects of Increased Land Development Cost

Empirical Evidence

Our Clark County study found empirical evidence in support of the theories illustrated in figures 1, 2 and 3. In conducting the study, we first developed a quarterly, Clark County, constant-quality, real housing price index. The index covered 12 quarters prior to implementation of the GMA and 12 quarters after implementation of the GMA, and was derived from 16,064 single family home resales occurring during the 24 quarter period. Real prices were employed in the study to enable measurement of home affordability in terms of constant 1992 purchasing power. In developing the housing price index, we controlled for variation from sale to sale in distance from the Vancouver central business district, distance to the nearest freeway interchange, bedroom and bathroom count, home age, lot size, outbuilding size, fireplaces, garage, central air conditioning, and home quality. Our model explained 71.1% of the variability in real home price over the study period.

Once the home price index was developed, it was tested for significant change in real price coincident with implementation of the GMA in Clark County. This model controlled for other factors that may have affected movement in the index over the study period such as excess supply, construction costs, population growth, interest rates, and seasonal factors. We found that the typical resale house (1,767 SF, 3.2 bedrooms, 2.01 baths, 7.84 years old, situated on a 20,300 square foot lot located 7 miles from the Vancouver CBD) increased in price by 6.19% coincident with implementation of the GMA, a price increase of $8,831 in real 1992 spending power. Additionally, we found that the rate of real home price change post-GMA was significantly greater than the rate of real home price change pre-GMA. When the two effects are combined, the study reveals a 15.97% adverse real price, resale home affordability effect in Clark County as of the end of 1997. This means that the typical resale home sold for $19,749 more than it would have at the end of 1997 absent the measured GMA effect (measured in 1992 dollars).

A similar study was attempted for new homes, but was inconclusive. Our data included only 1,175 new home sales over the study period, which we believe to be much less than the actual number of new homes built during the 6 year period. We attribute this difference in new home count to the fact that many new home purchases are not recorded as home sales by county assessors, hence did not appear in our data.

Failure to capture the new home purchase in the public record occurs when a new homeowner purchases a lot and then hires a builder to build a home on the lot. The lot sale will be of record, but there will be no home sale of record even though the improvements will be reflected in the assessor's tax assessment value estimate.

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the typical resale house . . . increased in price by 6.19% coincident with GMA (and) the rate of real home price change post-GMA was significantly greater than pre-GMA.

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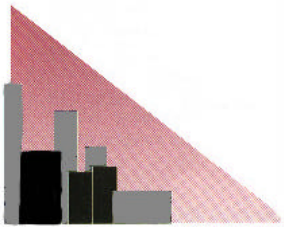

GMA's reliance on UGBs is likely to result in higher housing development costs and higher housing prices.

Conclusions

The Washington Growth Management Act embraces laudable, but perhaps conflicting goals. Urban growth boundaries are drawn in an attempt to funnel development into areas with existing or easily developed public facility and service capacity. In addition, UGBs reduce urban sprawl improving jobs-housing imbalance and hopefully reducing the rate of future increases in air pollution. However, as figure 1 illustrates, UGBs can also increase the inelasticity of developed land supply within UGBs. This outcome, along with an inward supply schedule shift due to regulatory costs, is likely to result in higher housing development costs and correspondingly higher housing prices. The State has not shown how it can or will meet the underlying goals of the GMA while remaining true to its stated goal of also providing affordable housing in municipalities adopting UGBs.

As this study shows, the market is likely to work against housing affordability when confronted with a UGB constraint and greater regulatory costs. Therefore, it seems inappropriate for the State to require that comprehensive plans include a UGB consistent with population projections provided by the Washington Office of Financial Management without also including proactive measures to counteract adverse, market-determined home price outcomes. Such measures could at least mitigate some of the adverse housing affordability effects for the State's lower income residents — those on the margin of qualifying for a home purchase loan and therefore most affected by GMA-induced home price increases.

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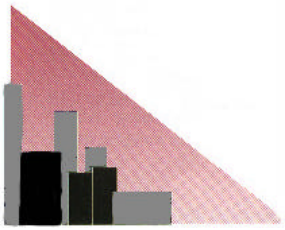

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