

## The Effect of Land Use Regulation on Housing and Land Prices

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### **Background**

Land use regulation (LUR) is required in Florida as the means of implementing the comprehensive plans of local governments. The goal of these plans is to manage population growth so as to mitigate urban sprawl, environmental degradation, and public infrastructure overload. However, while LUR may or may not produce these benefits, there is the concern that it may also decrease housing affordability. Greater LUR restrictiveness increases developers' costs, which may be passed on to the homebuyer in the form of a higher purchase price.

While many studies have investigated the effects of LUR on housing prices, there remains considerable uncertainty regarding these effects. The most recent review of these studies appeared in the U.S. Department of Housing and Urban Development's journal *Cityscape* by John Quigley and Larry Rosenthal, both urban economists at the University of California-Berkeley. They suggest that LUR may actually have little effect on housing affordability: "The net effect of adopting development restrictions may ultimately be symbolic only, meant to appease "not-in-my-backyard" and other constituencies, but generally lacking the will or ability to implement true growth management in the face of population pressures" (*Cityscape*, Volume 8, Number 1, 2005, page 69). Quigley and Rosenthal's main criticism of studies that have investigated the effect of LUR on housing prices is that these studies have not allowed for the possibility of reverse causation: "...a statistical association [between LUR and housing prices] may show regulatory effect or may show that wealthier, more expensive communities have stronger tastes for such regulation" (page 69).

### **Purpose and Methodology of Study**

This policy brief presents the results obtained from a new study that I have done investigating the effects of LUR on housing prices. I also examine

LUR's effect on the price of vacant residential land and on the sizes of new houses. Regarding the former, if households are mobile among local jurisdictions with different degrees of LUR restrictiveness, home builders may find it difficult to pass all regulatory costs forward to home buyers. In this case, some of these costs may reduce the value of vacant lots. The effect of LUR on house size is investigated because it is frequently hypothesized that builders shift up-market in response to development restrictions, causing an increase in the supply of larger houses in comparison to smaller houses. This would tend to further reduce the affordability of homes within jurisdictions with higher degrees of LUR restrictiveness.

My study is the first to address the concern of two-way causality; i.e., LUR may affect housing price and housing price may affect LUR. The econometric techniques that I use to estimate the effect of LUR on housing prices allows for the possibility that jurisdictions with higher mean housing prices may impose more stringent development restrictions. The degree of LUR restrictiveness is measured at the jurisdictional level by summing up the number of restrictive land use management techniques (out of a total of 13) currently used by the jurisdiction. To illustrate the construction of the index, the list of restrictive measures included such variables as whether the jurisdiction has large lot zoning, whether it limits the number of building permits issued, and whether environmental impact analyses are required for small projects. The higher the value of the resulting LUR index, the more restrictive LUR is considered to be within the local jurisdiction. While crude, the index method for measuring LUR restrictiveness is by far the most popular approach used in prior studies.

The data used to estimate my models come primarily from the abbreviated property tax rolls that each Florida county must annually submit to

the Florida Department of Revenue for auditing purposes. From these rolls I extracted thousands of property sales located in 25 counties for which a digitalized parcel ID map was available. With these maps each sold property was geocoded, which allowed jurisdictional, neighborhood, and locational variables to be measured for each property. These variables served as control variables in estimating my models. The LUR restrictiveness index is based upon a survey of the chief planner within each jurisdiction.

### **Findings**

The results show that if the typical approach of ignoring reverse causality is taken, housing prices are higher in more restrictive communities, but not by much. A unit increase in the LUR restrictiveness index increases price within the average county by only 1.2%. However, when I allow for reverse causality, a unit increase in the index is found to increase price by 7.7%. The latter estimate is for a county containing an average number of jurisdictions. Larger effects are observed for counties having fewer jurisdictions, because with less jurisdictional choice home builders can pass a larger amount of their regulatory costs forward to home buyers.

Regarding land prices, the results indicate that a unit increase in the LUR index decreases the price of the typical sized single-family lot (1/3 acre) by \$5,200. The combined findings that an increase in the index increases house price and decreases land price suggests that greater regulation restrictiveness increases developers' costs and that the increase in house price fails to completely offset these higher costs.

To measure the size of new homes, both interior square footage and lot size were used. A unit

increase in the LUR index is found to increase both of these measures – house size goes up by 61 square feet, while lot size increases by .019 acres. Together, these size effects cause a unit increase in the index to raise house price by 3.1%. The results, therefore, support the hypothesis that builders shift up-market in response to greater LUR restrictiveness.

### **Conclusion**

The extent to which LUR reduces affordability has been hotly debated. The evidence on this issue has been highly mixed, with only about half of prior studies showing a statistically significant relationship. However, all extant evidence has come from studies with serious methodological shortcomings. Using better data and an improved methodological approach, I find that LUR can cause a serious erosion in housing affordability. More restrictive communities have both higher unit housing prices and larger homes, both of which make the average priced home difficult to afford for middle and lower income households. In addition, owners of vacant residential land are found to suffer a decline in their wealth within more restrictive communities.

Because neither I, nor anyone else, has successfully quantified the benefits of LUR, I cannot recommend any changes in LUR based upon my findings. However, given Florida's current housing affordability crisis, my results do clearly point to the need to carefully consider the housing cost consequences of moving toward greater LUR restrictiveness.

**Keith Ihlanfeldt** is Director of the DeVoe Moore Center. This policy brief is based on his forthcoming article to appear in the *Journal of Urban Economics*.

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