



Metro Area House Prices and Affordability

Special Studies, July 18, 2007

By Elliot F. Eisenberg, PhD.

Report available to the public as a courtesy of HousingEconomics.com

A question frequently posed to economists at the NAHB is "What happens to housing affordability in my city when house prices rise?" One way to answer this is to change the price of a representative home by a fixed amount and observe the impact on affordability. Based on national mortgage underwriting standards, it is possible to estimate how many households that qualified for a mortgage before a house price increase no longer qualify for one afterwards. Those are the households that are "priced out" of the market for a home.

Applying this approach to the U.S. as a whole (detailed results for all 357 metro areas are provided in Table 1) shows that in 2007—using typical assumptions about the mortgage, down payment, property taxes and property insurance, a \$1,000 increase in a median-priced new home, more than 217,000 households.

The size of the priced out effect is largely a function of the income distribution. The larger the number of households that have the income necessary to buy a given priced house before the price increase, the more households will be priced out after the price rise. Conversely, the more expensive the house, the fewer the households adversely affected by a price increase.

Building Fees and Affordability

Over time house prices rise for many reasons, including rising household incomes and increases in house size. These are examples of changes in demand. Alternatively it may be that costs have increased. When house costs increase and income stays constant in a market area, affordability declines.

While cost increases can result from forces far beyond the control of government or government officials, frequently it is specific government action that reduces housing affordability. For example, any time a local government raises construction costs by increasing the price of a construction permit, a tap fee, a proffer or an impact fee, the cost of building a house in that area rises and affordability is necessarily reduced.

Moreover, the increase in the price of the home to the home buyer will generally be more than the increase in the governmental fee. This is because when construction costs rise, other costs such as financing costs and broker commissions rise in tandem. To be precise, NAHB estimates that for every \$819 rise in fees paid at the beginning of the construction process, the final price of the home to the buyer increases by \$1,000, or 22 percent more than the initial fee.

In addition, when the cost of a median-priced new house rises, prices of existing houses rise too. As a result, affordability across all price levels is reduced whenever building fees are raised and not just for buyers of new homes. A detailed breakdown of the final price increase can be found at the end of this article.

Metropolitan Area Results

By adapting the priced-out analysis to local housing market conditions and combining it with house price change information it is possible to estimate quite precisely how housing affordability [2] changes in every metro areas across the country. NAHB has often applied the method to still smaller geographic areas, as many of the crucial decisions that drive up house prices are imposed at the city or county level.

The most recent data source providing household income distributions for Metropolitan Statistical Areas (MSAs) is the 2005 American Community Survey (ACS). Using ACS data, the number of households priced out of the housing market by a \$1,000 price increase were calculated for all 357 MSAs. To best perform this analysis it is essential to estimate median new home prices for every MSA as house prices vary considerably from MSA to MSA [3]. For example, the median new home price is almost three times higher in Boston, Massachusetts (\$435,403) than in Bismarck, North Dakota (\$146,738).

Median new house prices are used as a measure of affordability as opposed to average new house price or average existing house price for two reasons. First, when building fees are raised new units are what are most directly affected. Second, the median is not skewed upwards by the construction of a few multimillion dollar mansions, while the average is. As such the media new house price better captures the typical cost of a new house to a household.

Looking at Table 1, the number of households priced out of the market by a \$1,000 increase in the price of a median-priced new home ranges from a low of 10 in both the La Crosse, WI-MN MSA and the Ocean City, NJ MSA, to a high of 4,193 in the Dallas-Forth Worth-Arlington, TX MSA. The MSA with second largest number of priced-out households is the Atlanta-Sandy Springs-Marietta, GA MSA with 4,022 priced-out households.

While there are many reasons why the number of households priced-out because of a \$1,000 price increase differs from MSA to MSA, a key determinant is the percentage of households that can initially afford to purchase a median-priced new home before any price increase. Not surprisingly, that number also varies dramatically from location to location. For example in the San Jose-Sunnyvale-Santa Clara, CA MSA, just eight-tenths-of-one-percent of the households can afford to purchase a median-priced new home estimated to cost \$849,022. Just behind San Jose, is the Salinas, CA MSA where 3.5 percent of households have the financial ability to purchase a median-priced home that is estimated to cost \$669,901.

The three other least affordable MSAs in the nation are the San Luis Obispo-Paso Robles, CA MSA where a mere 4 percent of households have sufficient income to afford a median-priced new house, the La Crosse, WI MSA where only 4.2 percent of households can initially afford to buy a median-priced new home, and the Honolulu, HI MSA, where the percentage of households able to buy a median priced house is just slightly better at 5.9 percent.

While three of the five least affordable MSAs are relatively small (San Luis Obispo, Salinas and La Crosse), there are almost 600,000 households in San Jose and slightly more than 300,000 households in Honolulu. Yet, even in those two larger metropolitan areas few households are priced out due to a price increase because so few households can initially afford a median-priced new home.

By contrast at the other end of the affordability continuum is the Charleston, WV MSA. There, fully 66.9 percent of households can afford to buy a median-priced new home, a home estimated to cost \$85,804 before any price increase. Close on the heels of Charleston, WV is the Morristown, TN MSA where 61.2 percent of households currently have sufficient income to purchase a median-priced new house which estimated to cost \$97,640.

The other three most affordable MSAs, as determined by the highest percentage of households able to purchase a median-priced new home, are the Lubbock, TX MSA where 59 percent of households can afford a median priced new home, the Trenton-Ewing, NJ MSA where 58.5 percent of households have the financial ability to purchase a median-priced new home, and the Idaho Falls, ID MSA where the number of such households is 56.9 percent.

As for the Dallas-Fort Worth-Arlington, TX MSA and the Atlanta-Sandy Springs-Marietta, GA MSA, mentioned earlier, the reason they rank one and two in terms of the number of households priced out is because those metropolitan areas are very large. Moreover, house prices in both MSAs are relatively affordable at \$207,076 in the Dallas-Forth Worth-Arlington, TX MSA and \$237,715 in the Atlanta-Sandy Springs-Marietta, GA MSA. As a result of favorable new housing costs, the percentage of households that that can afford a median new house is 40.6 percent in Dallas and 37.6 percent in Atlanta; the highest and third highest affordability percentages in the nation for cities with over 650,000 households.

The priced-out results do not answer questions such as “How many households will not buy a house when they otherwise would have?” or “What will the resulting reduction in home construction be?” To answer those questions requires an economic model that not only incorporates the willingness of households to buy smaller houses, older houses and houses that have fewer amenities, but also the many interrelationships between different segments of the local housing market, as well as the behavioral adjustments of home builders and of surrounding local governments.

By contrast, the priced out effect is relatively easy to understand and justify, straight forward to calculate and available for any housing market in the U.S. However, its limitations must also be kept in mind.

Summary and Conclusion

This article shows that increases in house prices attributable to government action, such as an increase in permit fees, generally raises the final price of the home by 22 percent more than the amount of the initial increase. Thus, every \$819 increase in fees paid by builders and developers raises house prices by \$1,000. This article also explains that the number of households priced out due to a fee increase varies substantially from MSA to MSA. This is because the number of priced out households itself depends critically on the percentage of households that can afford to initially purchase a median-priced new house and on the size of the MSA.

Footnotes

[1] See below “[Determining the Number of Households Priced Out of a Market](#)” for a basic description of current national mortgage underwriting standards.

[2] The measure of affordability is somewhat different than and should not be confused with the NAHB HOI.

[3] For a description of how 2007 house prices were estimated for each MSA see P. Emrath and H. Liu “New Home Prices by State and Metro Area” Housing Economics Online, June 2007.

For more information about this item, please contact Elliot Eisenberg at 800-368-5242 x8398 or via e-mail at eeisenberg@nahb.com.