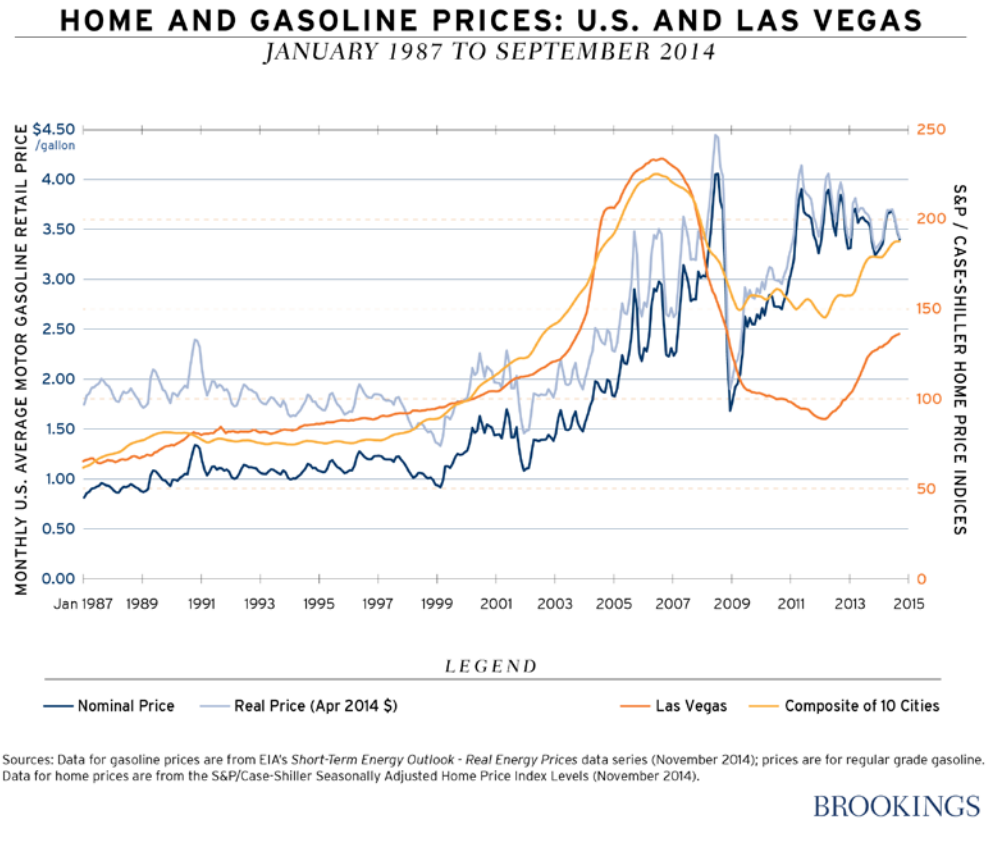
Economic Studies at BROOKINGS

10 Percent Increase in Gasoline Prices Can Change Average Home Values in Different Neighborhoods by Up to $13,500, New Analysis Finds

Study shows increased gas taxes have direct link to home values; Consequences for carbon pricing policies

A 10 percent increase in gasoline prices can shift the relative value of homes over a range about 2.5 percentage points or about $13,500, with some property values including some close to the city center rising as gasoline prices increase, while some home values in city outskirts falling outward, according to a first-of-its-kind study today by Brookings Institution Fellow Adele Morris and Associate Dean at of the University of Nevada, Las Vegas Helen Neill.

In "Do Gasoline Prices Affect Residential Property Values?" Morris, policy director of the Climate and Energy Economics Project (CEEP) Policy at Brookings, and Neill examine real estate transactions in metropolitan Las Vegas and surrounding areas in Clark County, Nevada -- an area known for its housing boom in the early 2000s and subsequent bust in 2008. The authors link 931,000 home transactions between 1976 and 2010 with gasoline prices to show that gas prices can indeed affect home values in neighborhoods differently.



Sources: Data for gasoline prices are from EIA's *Short-Term Energy Outlook - Real Energy Prices* data series (November 2014); prices are for regular grade gasoline. Data for home prices are from the S&P/Case-Shiller Seasonally Adjusted Home Price Index Levels (November 2014).

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The findings have direct implications for policy at both the local and national level. For example, because recently proposed carbon pricing policies would raise gasoline prices by at least a 10 percent, the researchers estimated the potential impact of such a policy on real estate, finding it would increase home values in some neighborhoods, particularly in the city center, by up to $5,590, while lowering the average home value in other areas by $7,850, with little net effect on many mid-city areas (about $500). The study is also unique in that it uses color-coded

maps to exhibit the complex distribution of relationships throughout the sample area to visualize pricing patterns.

"Understanding how housing markets respond to gasoline prices is important for anticipating the environmental and distributional outcomes of energy policies," they write. Maps of the results suggest that properties near major business centers, and roads and highways with more efficient travel for workers and commerce can increase when gasoline prices rise, which could help inform city-planning, they note. Likewise, home-buyers should be aware that there are "significant location-specific risks within metropolitan areas, notably outlying suburbs," where higher gasoline prices may negatively affect credit, property markets, or overall household wealth. The findings are particularly pertinent to cities such as New York, Los Angeles, Boston, Miami, and San Francisco where housing supply constraints are at least as binding as in Las Vegas.

"Gasoline prices do matter," they conclude, and the complex spatial patterns of the effects should motivate further exploration of the estimated elasticities other than location. "For example, tracts with higher mean household income may have property values that are less sensitive to gasoline prices, positive or negative. This could have implications for the distribution by income of the housing wealth effects of a carbon tax. Certainly commuting costs as a share of home value are likely to vary which may impact the overall price point of a neighborhood. Other demographics, such as the share of non-working age adults, might also matter. Tracts closer to employment centers, highways, and public transport could systematically have positive relationships with gasoline prices. Areas with older homes or greater population density may have less elastic housing supply, and thus be more prone to gasoline price capitalization (positive or negative). Relating the gasoline price effects to neighborhood income levels would also estimate the potential impacts of carbon pricing on households' housing wealth by socioeconomic status." The authors also point out evidence that "…the broad sensitivity (positive and negative) of home prices to gasoline prices [has fallen] significantly since 1976. This could derive in part from the 70 percent increase from 1975 to 2010 in the average fuel economy of new cars sold in the United States."

To read the full paper: http://www.brookings.edu/research/papers/2014/12/04-gasoline-prices-affect-property-value-morris