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The effect of new residential construction on housing prices

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ABSTRACT

New construction is generally expected to create positive externalities. We use a hedonic model to estimate the premium paid for new houses as well as the influence of new residential construction on the selling prices of existing houses considering the number and relative size of the newly constructed houses in the area. The results indicate even atypically large new houses command a premium. Construction of houses of average size relative to the reference group has little effect on existing house prices except to create some competition for houses that were achieving relatively high prices considering their attributes. Meanwhile, construction of a concentration of larger than average size houses exerts a small positive effect on existing house prices, especially for those houses that are selling for a relatively low price. The effect is the strongest when the new construction is located within one-quarter mile.

1. Introduction

Most new housing construction in the U.S. occurs on the rural periphery of cities where large areas of open land can accommodate subdivisions of homogeneous houses; however, in recent decades homebuilders have been responding to consumer demand for new construction inside urbanized areas to reduce commute time and cost. This new private development ranges from the construction of a single house on an existing lot to assemblage of vacant acreage on which an entire new subdivision is constructed. Such infill has not been restricted to central city areas, but instead is occurring in established communities throughout urban areas. What is consistent is that the new houses are often larger than existing structures in the surrounding area and create incongruous residential patterns within the urban landscape in contrast to the homogeneous nature of most American suburban residential development.

We examine the value of newly constructed houses inside built up areas as well as the influence that new residential construction has on surrounding residential property values with a focus on the influence of the construction of larger than average houses. Theory suggests that building new houses within existing urban neighborhoods may create both positive and negative externalities for private land owners in the area and the general public. Creating more dense urban environments through development inside existing urban areas on smaller lots rather than on larger suburban tracts is often encouraged by local governments to improve efficiency through reduced sprawl, increased ridership on mass transit, and economies of scale for provision of services and infrastructure financed through increased tax revenue (Burchell and Mukheri, 2003; Lang and Danielsen, 2002). Development in existing urban areas creates housing without eliminating rural open space while suburban expansion increases infrastructure costs and duplication of services. Suburban

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development often increases automobile traffic congestion and air pollution because of longer commutes (McConnell and Wiley, 2012).

In addition to the fiscal, social, and ecological benefits, new construction may create benefits for adjoining private property owners as well. New buildings can have positive spillover effects on existing neighborhoods through a creating more vibrant neighborhood as vacant lots are populated. If vacant lots create external diseconomies through attracting dumping, allowing criminal use, or creating an eyesore, then building new houses will eliminate the external diseconomy, increase resident population, improve the aesthetics of the area and raise surrounding property values (DeSalvo, 1974). New construction can be more aesthetically pleasing than unkempt lots or dilapidated buildings, which improves the views from existing houses. However, such infill development may result in adverse effects on surrounding properties through increased traffic congestion and lost open space (Malpezzi, 1996). New houses could also compete directly with existing houses in the same market segment or indirectly through filtering through linked submarkets, potentially reducing the values of nearby existing houses by increasing supply while demand remains constant (Simons et al., 1998).

Most previous research has focused on how government expenditures and subsidies for city center redevelopment influence surrounding property values; only limited research has focused on the influence private residential construction has on the local housing market both inside the central city as well as beyond the central core, and none has considered the differential effect of new construction across the price distribution of houses, which raises the question of whether these effects differ depending on the existing housing stock among which this development takes place. We add to the literature by examining not only how the presence of new construction and the concentration of new houses may affect the value of the new houses as well as the existing surrounding neighborhood, but also whether house price effects are influenced by the extent of atypicality of new development, particularly house size.[2] The size and range of these effects of private housing construction throughout the urban area are unknown.

Several factors contribute to the incentive for homebuilders to construct large new houses that may be perceived as overbuilding or atypical for an existing urban neighborhood. The cost of constructing new houses in built-up areas can be higher than on the urban fringe because of higher land and assemblage costs, more restrictive regulations, title complications, and possible brownfield remediation. Existing infrastructure may require upgrading (Farris, 2001), increasing the buildable price range. The small footprint allowed on urban lots must be offset with greater height to accommodate the increased square footage expected in modern houses[3]. Meanwhile, aesthetic and privacy concerns arise as critics fear the houses will overwhelm existing smaller houses, destroy neighborhood character, and block sunlight and air movement (Lang and Danielsen, 2002; Szold, 2005). Some critics such as Hinshaw (2002) suggest that constructing large houses in an established neighborhood of small houses is the epitome of public rudeness, that incompatible size development benefits only the new house owners, not the surrounding property owners. Researchers have not reached agreement on the relative value of houses of various sizes in a single neighborhood (Haurin, 1988; Turnbull et al., 2006).

Hamilton (1976) hypothesizes that property tax capitalization effects drive down the relative value of larger houses and increase the relative value of smaller houses in the same area. Thus, new houses will tend to sell for higher prices than comparably sized neighboring used houses; however, the price premium for a new house could vary depending on its size relative to its neighbors. Similarly, the effect of new construction on the prices of neighboring existing houses may also depend on the relative sizes of the houses. Even if the new larger houses have a positive spillover on neighboring property values, those increased values will result in higher taxes and possibly contribute to a housing affordability problem for existing urban residents. Despite the lack of knowledge about the impact of the construction of larger new houses on surrounding properties, many American cities have adopted policies to discourage or limit their construction (Nasar et al., 2007). Understanding the magnitude and characteristics of the influence of new construction on existing property values is essential in understanding the impact of urban policies designed to encourage or control private investment in urban areas. Developers are also interested in the influence that surrounding existing houses exert on the price they can achieve on new construction, which affects the profitability and attractiveness of infill projects to the private homebuilding industry.

The number of new houses constructed in an area may also be important in understanding the price effect. A small number of new houses in an area increase the probability that the new houses will be perceived as out of character for the neighborhood while a large number of new houses reduces their atypicality, but increases the perception that the older existing houses are unusual. Thus, both the stock and flow of new construction may be relevant in understanding the price effects.

To examine the value of newly constructed houses inside built up areas as well as the influence that new residential construction has on surrounding residential property values, we employ a hedonic estimation of the impact of new construction on house sales prices in Baton Rouge, Louisiana over an 18-year period. We further focus on whether construction of houses of larger scale than average houses in the area has a positive or negative impact on the sales prices of the new houses and the existing houses in the same area. Furthermore, this study differs from most previous work on housing in its focus on changes in the full distribution of prices. New construction may be valued more by high-income buyers who want the most expensive new features or by buyers at the low end of the price range whose only other alternative is an old

[2] Haurin (1988) argues that atypical houses by definition do not fit the neighborhood and so are priced to sell for less or take longer to sell.

[3] According to the U.S. Census Bureau (2010), the median size of a new single-family house in the US has risen from 1605 sf in 1984 to 2227 sf in 2005.