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Close, but not too close: Landmarks and their influence on housing values

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ABSTRACT

The college town of State College, PA, USA is home to The Pennsylvania State University (PSU) and its many facilities. Our initial research interest was to understand the influence of the newly developed Arboretum at Penn State (APSU) on nearby housing values in State College over time. Current sales transaction data were gathered and a pooled cross-sectional regression analysis approach utilized. Contrary to the literature, our findings suggest proximity to APSU, as well as three other nearby open spaces, had no significant influence on nearby homes. Further, proximity to PSU's main campus was negatively associated with housing values. Neither of these patterns varied over time.

To further explore these results, the study area was expanded beyond the neighborhoods most proximate to APSU to the balance of the borough. These results replicated our earlier findings, confirming that living close to PSU's campus is negatively associated with housing values community-wide. These findings disconfirm the common practical assumption that the State College market places a premium on proximity to the town's major employment center (PSU campus) and a significant local landmark (APSU). Housing markets in similar college towns may not reflect typical residential areas and may require alternative evaluation considerations.

1. Introduction

"Location, location, location" is a mantra often touted by real estate agents and homebuyers when discussing what ultimately influences the sales price of a home. Similarly, numerous studies have investigated the extent of environmental influences on housing values (e.g., Anderson, 2000; Irwin, 2002; Netusil, 2005). Consistently, researchers have found proximity to open space positively contributes to a home's value. Further, proximity to local landmarks and places historically important to the community has also been shown as being positively associated with housing values. However, few studies have examined these relationships over time as spaces change and local landmarks develop. That is, there has been little published material on how the evolution of a natural local landmark, rather than a historic landmark, influenced housing values. The present research sought to address this issue through an examination of housing values influences in the college town of State College, PA, USA.

State College is home to the Pennsylvania State University (PSU), the Commonwealth's land grant university, and its many facilities. Since 1999, PSU has been developing an open space at the edge of campus into what is now known as The Arboretum at Penn State (APSU). APSU shares boundaries with multiple neighborhoods and apartment complexes. Since its founding, APSU has slowly evolved from an open space into a community landmark.

The purpose of this research was to explore how proximity to an open space that was evolving into a local landmark affected housing prices in nearby neighborhoods over time. Based on the literature, it was hypothesized that homes closest to APSU would have higher sales values than homes further from APSU. It was also expected that as APSU evolved into a local landmark, homes nearest to it would experience a greater rate of increase in their value over time.

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2. Theory

2.1. Open space and residential values

There is considerable evidence that proximity to open space has a positive effect on the sales price of a single family home. For example, research has shown residential property has a higher-selling price the closer it is located to a park (Correll et al., 1978; Geoghegan, 2002). Lutzenhiser and Netusil (2001) also found homes located near a 'natural area park' had higher property values compared to those located further away. More specifically, they found homes experienced the largest rise in sale price when they were *very* close to an open space – within 1500 feet from a park. The positive influence of proximity to open space on housing prices has been replicated internationally in a variety of cultures, including for example, China (e.g., Biao et al., 2001), the Netherlands (e.g., Luttik, 2000), and Nigeria (e.g., Ajibola et al., 2012).

Many possible reasons for this relationship exist. For example, the preference for being near open space may reflect a benefit of well-planned residential areas. Land use planning, or utilizing urban activities in an allotted amount of physical space that is in the public's best interest, has been demonstrated to have a positive effect on residential values. For example, Ajibola et al. (2012) found residential property values increased in response to land usage planning. Their study demonstrated potential residents were more willing to purchase homes near areas being developed with consideration of the public's health, safety, and environmental quality.

Alternatively, it is possible that there are specific characteristics related to open spaces that may have varying levels of influence on housing values depending on the surrounding community. For example, Anderson and West (2002) found that in a city, large parks had considerably more positive influence on housing prices compared to smaller parks. Similarly, in low-income neighborhoods, where parks are typically scarce, a study in The Bronx, New York City, NY found that within five years of opening a small community garden, property values increased by 9.4% in the nearest surrounding neighborhoods (Voicu and Been, 2008). Further, Lutzenhiser and Netusil (2001) found proximity to all types of open spaces could boost home sales prices (e.g., golf courses, parks), but that proximity to natural area parks, like arboretums, were particularly influential.

Other studies found that potential buyers might favor the aesthetics of open spaces (Luttik, 2000). Houses in appealing, green settings (i.e., proximate to water bodies, open space, and attractive landscapes) sold for more than homes located in less attractive locations. Specifically, being within view of an open space (as compared to simply being close to it) could earn homes extra selling premiums.

Additionally, outside of the planning literature, there is a wide body of psychological and biophysical literature examining the psychological and health restorative benefits of exposure to green spaces which provides insight into reasons residents of urban areas are drawn to natural spaces. For example, urban residents express a desire for contact with nature, and this desire is often considered a strong emotional driver of suburbanization (Van den Berg et al., 2007). Green urban spaces have been found to both lower emotional stress (Van den Berg et al., 2014) as well as moderate the negative health effects of experiencing stress (Van den Berg et al., 2010).

The positive psychological and physiological effects of exposure to green spaces in urban environments are not limited to only the most "wild" of natural urban spaces. Manicured gardens and parks are similarly effective in promoting health and well-being (Van den Berg et al., 2014). There is some evidence to suggest that the larger the green space, the more restorative the space might be (Van den Berg et al., 2010). Beyond mere square footage, evidence also exists that urban residents' perceptions of and emotional attachment to these natural spaces are likely key to understanding their preferences for green spaces. For example, Zhang et al. (2015) examined two cities with similar amounts of usable green space, sociodemographics (including socioeconomic status), and housing conditions. The two cities only differed in the (subjectively) perceived and (objectively) measured accessibility of the green spaces. While residents of the two cities showed similar physical health levels, respondents with greater access to green spaces emotionally valued these spaces more. They also reported better mental health overall. These results suggest it is not only the availability of urban green spaces that is appealing, but also access to those spaces that may be important in understanding the premium home-buyers place on proximity to open space.

2.2. Landmarks and residential values

Emotional connection to specific places may help explain other similar patterns of home-buying in which urban residents pay premium prices for their homes. Being within close proximity to local landmarks has also been shown to consistently and positively influence housing prices. Lazrak et al. (2011) found homes sold in preserved historic neighborhoods experienced a 26.4% premium in sales price. Further, across multiple cities, similar studies found designation of a historic landmark (Noonan, 2007) or district (Ijla, 1994) caused homes within that district or near the landmark to experience faster rates of increased value.

The benefits of landmarks on housing values can be particularly influential for certain types of homes and markets. For example, in an analysis of the housing market of Baton Rouge, LA, USA also home to a large land grant university, Zahirovic-Herbert (2012) found historic preservation positively affected a home's value, and that these effects were particularly beneficial for lower-end properties. This reflected the fact that buyers of lower-end homes, compared to higher-end home buyers, tended to be more concerned with the features of a house than its size.

3. Study 1: materials and methods

3.1. Selection of the study area

It was hypothesized that the homes in State College, PA, most affected by APSU's evolution as a local landmark would be those within walking distance to it. Walking distance has conventionally been considered by researchers to be one-quarter mile (Duany and Plater-Zuberk, 1992; Song and Knaap, 2003). Consequently, the spatial scope of the study area included the neighborhoods closest to APSU: East College Heights, West College Heights, and Overlook Heights (See Fig. 1).

3.2. Selection of the study time frame

APSU has slowly evolved as a local landmark over the past 15 years. This open space was previously undeveloped land, freely open to the public for recreation, and occasionally used by University faculty for conducting botanic and landscape experiments. In 1999, the University Board of Trustees officially integrated APSU into the "University Park Campus Master Plan" (The Arboretum at Penn State [APSU], 2014). The first tree of APSU was dedicated in 2005. Construction of the main attraction at APSU, the H.O. Smith Botanic Gardens, was completed in 2009 and officially dedicated in 2010. A second attraction, the Childhood's Gate Children's Garden, opened in 2013.

The years for analysis were determined by three criteria: (1) to coincide as closely as possible with the most significant steps in