

Open Space at the Rural-Urban Fringe: a Joint Spatial Hedonic Model of Developed and Undeveloped Land Values

Summary

In this paper we examine the impact of different open space amenities on sale prices of developed and undeveloped lands in two time periods in a rapidly urbanizing county in central Ohio. Our main hypothesis is that unplanned development processes accumulate over time resulting in reduced value of nearby houses and land. We further contribute to the literature by developing methods to jointly estimate hedonic equations for bare land sales and house and land sales. A two-step procedure is developed to account for both the spatial nature of the data, and the likely correlation between house sales and land sales.

The undeveloped and developed land price equations estimated in this paper are used to predict the impact of land use changes on property values as urbanization into predominantly agricultural areas takes place. Our results indicate the extent of spillover capitalization into the housing and land markets, as well as determine how amenity values change over time. Our empirical results indicate that interactions between the land markets examined are complex and dynamic; that households' valuation of open space lands differs between land only transactions and transactions that include a house; and further, we can predict changing household preferences over time.