

# The Effect of Exogenous Boundaries on the Price of Urban Amenities: An Empirical Analysis

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## Abstract

Standard models in urban economics assume that the boundary of an urban area will expand as long as the present value of land for urban uses is greater than the present value of land for rural uses. Under this assumption, the boundary of the urban area is endogenously determined by the rent paid to rural landowners. But this assumption is not realistic. The physical expansion of many major urban areas in the United States is impeded by an exogenous boundary. For example, geographic growth of the three most populated metropolitan areas in the country (New York City, Los Angeles, and Chicago) is limited by an ocean or a Great Lake. In this paper, we argue that such exogenous boundaries affect land prices throughout the urban area because inter-city migration is costly and these boundaries effectively constrain the supply of land and housing services. Specifically, we show that prices are highest in cities with the most restrictive exogenous boundaries, *ceteris paribus*. This argument implies that researchers who do not control for exogenous boundaries could be introducing a systematic bias in their findings if they use land prices or rents to measure the value of public amenities in urban areas or the relative desirability of different cities.