PUBLIC TRANSPORTATION AS POTENTIAL REMEDY TO URBAN DECLINE IN DAYTON, OHIO: A CASE STUDY

Emeric, Ellen Jeanette
The University of North Carolina at Chapel Hill, eemeric@live.unc.edu

Newman, Galen
Texas A&M University, gnewman@arch.tamu.edu

1 ABSTRACT

Urban decline is a critical issue in shrinking cities. The collapse of the American housing market in 2008 resulted in widespread foreclosures/abandonment throughout many U.S. cities. Many municipalities in the Rustbelt, a historical region that has experienced massive depopulation since the 1960s, were hit particularly hard, leaving them characterized by vacant land, a visible symptom of decline. Research on how to deal with vacancy and abandonment has become a crucial urban issue. The specific aspects of sustainable urban form which can potentially aid in counteracting decline have not been thoroughly evaluated. It has been shown that cities developed around sustainable public transportation systems tend toward growth and stability as opposed to decline. This research seeks to better understand the relationship between proximity to public transportation hubs and urban decline and whether greater access to said public transportation hubs can encourage urban regeneration using Dayton, Ohio as an area of investigation. Dayton has suffered a 47% population decrease since 1960; these conditions have resulted in an abundance of declining area. This paper 1) presents an index for measuring area of urban decline using suitability modeling and 2) compares the spatial location of that decline to the proximity of three primary public transportation hubs. Results indicate that proximity to multi-modal transportation options is related to lower amounts of decline. Therefore, stronger policies encouraging complete streets, related alternative transportation options, and enabling mobility may be a strategy for preventing decline or spurring regeneration in declining areas in shrinking cities.

1.1 Keywords
Urban Decline, Public Transportation, Geographic Information Systems, Suitability Modeling