Highways and Population Change

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Abstract

In this paper we return to an issue often discussed in the literature regarding the relationship between highway expansion and population change. Often it is simply assumed away that this relationship is well established and understood. However, we argue that an exhaustive review of the relevant literature fails to unambiguously support the notion that highway expansion leads to increased population growth. Using data on all major highway expansions covering the period from the late1960s through the early 1990s from the Wisconsin Department of Transportation, and a series of population counts at the minor civil division (MCD) level from the decennial census, we employ the analytical tools in geographic information system (GIS) software and theory from the expanding literature in spatial analysis and modeling to take a fresh look at this relationship. Our analysis reveals that there is a modest relationship between highway expansion and population growth among MCDs within 10 miles of major limited access highways. The causal structure, however, is complex. The analysis suggests that population growth precedes highway expansion as frequently as population growth results from highway expansion. The analysis has implications both for population estimation as well as short-term population forecasting.