Are Foreclosures Contagious?
An Exploratory Space-Time Analysis of Franklin County, Ohio, 2001-2008

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ABSTRACT

Significant foreclosure activity in a weak housing market area is a sign of trouble, suggesting potential subsequent neighborhood decline. This article focuses on an under-researched question of whether higher foreclosure rates in a neighborhood tend to spill over into adjacent neighborhoods. The authors detail exploratory spatial methods to identify where potential spillover effects occur: kernel density surfaces, space-time local indicators of spatial association (LISA) and LISA Markov. Using data for Franklin County, Ohio the authors find that foreclosure rate hotspots are concentrated in lower-income, more African-American central city areas. The majority of hotspots (around 90%) persist over time and space but about 10% of all hotspots are consistent with contagion effects between neighboring areas. Only 1-3% of neighborhoods experience spillovers as below-average to above-average cluster transitions. In general, contagion effects occur in areas with higher rates of African-Americans, poverty and lower median home values and incomes. However, the authors also observe a sub-trend suggesting possibly accelerated hotspot growth in otherwise comparable Caucasian areas.

Keywords: Foreclosures, Hotspots, Local Indicators of Spatial Association (LISA) Markov, Space-Time Analysis, Spatial Association, Spillover Effects

INTRODUCTION

The foreclosure crisis in the United States cannot only be linked to a global recession, involving the collapse of major financial institutions, but also to very localized destabilization of particularly low-income and African-American neighborhoods where high-risk mortgage lending was concentrated (Aalbers, 2009; Immergluck, 2009; Rugh & Massey, 2010). Throughout the U.S., the rate of mortgage foreclosures accelerated from 0.4% in 2000 to 1.27% in February 2011 (Mortgage Bankers Association, 2009). While on average about 14% of

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loans were in foreclosure or at least one payment past due in February 2011, a larger proportion of borrowers were affected by foreclosures in states such as California and Florida where the share of loans in foreclosure was 36% in February 2011, down from 39% a year earlier (Mortgage Bankers Association, 2011).

To mitigate at least some of the detrimental effects of the foreclosure crisis on homeowners and neighborhoods, federal, state, local and nonprofit programs have been put in place (Immergluck, 2008; Immergluck, 2009; Mallach, 2008). Most well known is President Obama’s Neighborhood Stabilization Program, adopted in 2008 to accelerate the purchase and redevelopment of foreclosed homes, and the Making Home Affordable Program. Other initiatives include policy efforts by the Federal Reserve and nonprofit mortgage counseling programs such as NeighborWorks America’s National Foreclosure Mitigation Counseling Program.

One of the arguments to legitimize these expenditures is that foreclosures are associated with negative externalities that destabilize the neighborhoods they are located in by reducing nearby home values and local tax revenues, and increasing blight and crime. In light of public investments in foreclosure response programs and the spatial concentration of foreclosures, the question arises about where to spatially target these investments most strategically in order to maximize neighborhood stabilization (Johnson et al., 2010). For instance, some research suggests that foreclosed homes should be purchased in foreclosure hotspot areas to prevent hotspot growth (Schintler et al., 2010).

This article contributes to research on foreclosure contagion effects that can inform more strategic spatial investments of foreclosure mitigation measures. Most existing studies define foreclosure contagion (or spillover) effects in terms of the effect that one or more foreclosure(s) have on the sales prices of nearby non-foreclosed properties (for an exception, see Schintler et al., 2010). In this article we instead ask whether above-average rates of foreclosures of single-family mortgages increase the likelihood of nearby subsequent foreclosures.
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