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A spatial analysis of the impact of housing foreclosures on residential burglary

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A B S T R A C T

In recent years, housing foreclosure has become a national crisis in the U.S. but limited geographical research has investigated the implications of this problem on neighborhood crime. This article adds to the existing research by investigating the impact of housing foreclosures on residential burglary using foreclosure and crime data aggregated to block groups in Louisville, the largest city in Kentucky. In particular, we explore the spillover effects of foreclosures beyond neighborhood boundaries and utilize geographically weighted regression (GWR) to tackle the spatial heterogeneity issues complicating the relationship between foreclosures and neighborhood crime. Results from the three regression models support our hypothesis that foreclosures have a statistically significant positive impact on burglary, but only in the neighborhoods in which they are located. More importantly, the relationships between foreclosures and burglary vary dramatically across neighborhoods – Foreclosure is a significant predictor of burglary for disadvantaged urban neighborhoods but not for more affluent suburban ones after accounting for other contextual variables. Implications are discussed.

Introduction

Housing foreclosures not only result in individual home value loss but also cause negative ripple effects on other homes in proximity, thus further undermining the social controls on crime and escalating neighborhood crime rates (Harding, Rosenblatt, & Yao, 2009; Kobie & Lee, 2011; Schuetz, Been, & Ellen, 2008). Given the fact that foreclosure has become a national crisis since the mid-1990s in the U.S., inadequate geographic research has investigated the spatial aspects of housing foreclosures across urban communities and its implications on neighborhood crime (Kaplan & Sommers, 2009; Lichtenstein & Weber, 2013).

As outlined in the theoretical discussions below, a concentration of foreclosures are believed to exacerbate physical and social deterioration, increase turn-over rates, and aggravate home abandonment, which may all attract more crime including burglary, robbery, and vandalism. Though numerous anecdotal observations have suggested foreclosures lead to higher crime rates, findings from the sparse literature on foreclosure and neighborhood crime are inconclusive. Whereas, some suggest foreclosures increase overall crime rates (Stucky, Ottensmann, & Payton, 2012), others dispute that they are causally related (Kirk & Hyra, 2012). Some found foreclosures result in more violent crime, but not property crime (Immergluck & Smith, 2006). Furthermore, little research has investigated whether foreclosures in adjacent neighborhoods affect crime rates in a given areal unit, despite growing concern about the spillover effects of foreclosed properties beyond neighborhood boundaries (Ellen, Lacoe, & Sharygin, 2013).

Additionally, scholars have generally assumed that the linkage between foreclosures and crime is universal across an urban community under study. However, recent studies such as Immergluck (2011) and Katz, Wallace, and Hedberg (2013) have observed that the detrimental effects of housing foreclosures on crime may vary considerably across space. This limited research suggests that housing foreclosures may tend to have a more severe impact on low income neighborhoods than on affluent ones. Therefore, addressing the spatial heterogeneity of the relationship between foreclosure and crime could add needed depth to our understanding concerning the adverse effects of housing foreclosures.

Built on the latest research on spatial patterns of housing foreclosures and the linkage between foreclosures and crime, this article investigates the impact of foreclosures on neighborhood

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crime in Louisville, the largest city in Kentucky. In particular, this research extends the existing scholarship in two aspects: First, we test the ripple effects of housing foreclosures on crime by including a spatially lagged independent variable (i.e. foreclosures in surrounding neighborhoods) in regression analyses. Second, we utilize geographically weighted regression (GWR) to explore if the impact of housing foreclosures demonstrates spatial variations across neighborhoods in the study area.

Theoretical literature on foreclosures and neighborhood crime

Three criminological perspectives are useful in explaining the potential crime impacts of housing foreclosures: routine activities theory, social disorganization theory, and the broken window theory. Each approaches the issue from a different angle.

Routine activities theory states that crime is likely to occur when motivated offenders and suitable targets converge in time and space with the absence of capable guardians (Cohen & Felson, 1979). Thus guardianship, or rather the lack of, plays an important role in explaining the occurrence of crime. Guardians can be formal such as police officers and security guards, but are more often informal ones that include building and facility managers, employees at their work stations, teachers in their classrooms, and homeowners monitoring their houses and neighborhoods (Eck, 1994).

As suggested by routine activities theory, home foreclosures are likely to increase crime in a number of ways. Homeowners experiencing the foreclosure process may lose emotional attachment and a sense of ownership for their homes, thus spending less effort and time actively monitoring them. When foreclosed homes become vacant effective guardianship of the structure and immediate area is lost. Vacant houses are more suitable targets to those who would attack them with graffiti, strip their utilities and copper wiring, or use them as a place to deal drugs, perform acts of prostitution, or store stolen property (Spelman, 1993). The more vacant structures in a neighborhood the greater the loss of guardianship, and the more crime likely to occur there.

Social disorganization theory also suggests a likely connection between housing foreclosures and crimes. According to this theory, community social structural factors including socioeconomic disadvantage, family instability, racial heterogeneity, and residential mobility reduce the level of informal social control in neighborhoods necessary to control crime (Sampson & Groves, 1989; Shaw & Mckay, 1942). Residential mobility is particularly important because many residents moving in and out of neighborhoods make it harder for people to get to know their neighbors and develop the social ties necessary to create effective informal social control. Housing foreclosures, because they result in increased residential mobility, attack the very root of informal social control. Therefore, from a social disorganization perspective, it seems likely that foreclosures would impact neighborhood crime rates.

Broken window theory also suggests a relationship between foreclosures and crime. Under this theory, physical and social disorders (e.g., excessive litter, abandoned buildings, graffiti covered walls, public drug usage or drunkenness) create the impression that residents do not care about their neighborhood in the mind of potential offenders (Wilson & Kelling, 1982). Offenders are then inspired by the belief that nobody will interfere with their activities or report them to the police. Residents are also believed to be impacted by the presence of disorder. To them, excessive disorder suggests that community and city authorities are incapable of controlling either disorder or serious crime, resulting in increased fear that causes them to withdrawal both physically and socially from the community. This in turn results in reduced informal social control and more crime (Garofalo & Laub, 1978; Wilson & Kelling, 1982).

Media outlets, the real estate and banking industries, and limited research all indicate foreclosed homes tend to be less maintained, especially after vacancy. Homeowners that are in default on their mortgages often stop caring for their properties, whether due to the fear of losing the property or not having the extra money to spend on maintenance (Been, 2008). Once vacant, the property is even more likely to suffer from disrepair, vandalism, and theft. When these signs of abandonment become visible, they can lead to a decrease in neighboring property values, additional foreclosures, and an increase of neighborhood blight (Been, 2008). Abandoned, neglected, and vandalized homes are a signal to potential offenders that a neighborhood is disorderly and vulnerable. The more disordered a neighborhood, the more likely it is to attract crime (Pandit, 2011). In particular, the concentration of housing foreclosures generates negative externalities throughout neighborhoods, thus increasing social disorder and encouraging more criminal offenses.

Empirical studies of foreclosures and crime

Inconsistent findings on the impact of foreclosures

Responding to the national crisis of housing foreclosure, recent geographical studies have investigated the spatial characteristics of the foreclosure phenomenon in a number of cities or metropolitan areas including Columbus, Ohio (Brown, Webb, & Chung, 2013), Summit County, Ohio (Kaplan & Sommers, 2009), Tuscaloosa, Alabama (Lichtenstein & Weber, 2013) and Philadelphia, Pennsylvania (Crossney, 2010). These studies suggest that housing foreclosures tend to spatially cluster within urban communities and neighborhoods dominated by low income or minority households, but some authors have found evidence of foreclosure clustering in nearby higher income suburb-like areas (e.g. Lichtenstein & Weber, 2013), suggesting a dispersed spatial aspect of foreclosures across urban communities.

An important concern about the detrimental effects of foreclosures is whether or not they are criminogenic in nature and increase neighborhood crime rates. Foreclosures have been observed to prolong housing vacancies, increase housing abandonment rates and the physical deterioration of vacant homes, and thus may provide more opportunities for criminal activities including burglary, vandalism, and robbery (Herrmann, 2013; Lee & Wilson, 2013; Morckel, 2014). By mapping the locations of foreclosures and crime incidents in the city of Akron, Ohio, Teasdale, Clark, and Hinkle (2012) found that foreclosures and crime incidents are spatially collocated across neighborhoods, suggesting a potential linkage between foreclosures and crime.

Though scant geographical research has specifically addressed the causal relationship between foreclosures and crime (Wilson & Paulsen, 2008), an increasing number of empirical studies in the literature of criminology, sociology, and other social science subjects have done so, but their results have been less than conclusive. In their pioneering study on the adverse effects of single family mortgage foreclosures on crime, Immergluck and Smith (2006) found a significant positive relationship between foreclosures and violent crime using data aggregated to census tracts in the city of Chicago. The regression coefficient of foreclosures to property crime was insignificant, but still positive, which may be due to the problem of under-reporting that plagued the accurate measurement of property crime in their study.

Succeeding studies identified statistically significant evidence regarding the effects of foreclosures on both violent crime (e.g., robbery) and property crime (e.g., burglary). Using foreclosure and