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# Deconstructing distressed-property spillovers: The effects of vacant, tax-delinquent, and foreclosed properties in housing submarkets

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ABSTRACT

In this empirical analysis, we estimate the impacts of property-tax delinquency, vacancy, and foreclosures on the value of neighboring homes. We demonstrate that these externalities differ in high- and low-poverty submarkets. Numerous studies have estimated the externality of foreclosures. These papers theorize that the foreclosure impact works partially through creating vacant and neglected homes. To our knowledge, this is only the second attempt to estimate the impact of vacancy itself and the first to use tax-delinquency as a measure of property neglect. We link vacancy observations from Postal Service data with property-tax delinquency and sales data from Cuyahoga County, Ohio. We find that an additional property within 500 ft that is vacant or delinquent reduces a home's selling price by 1 to 2%. In low-poverty submarkets, the negative impact of a home that is both vacant and delinquent is −4.6%. Low-poverty submarkets penalize a sale near a tax-current recent foreclosure by 4 to 8%. In high-poverty submarkets, we observe positive correlations of sale prices with vacant foreclosures. This may reflect lenders selectively foreclosing only on relatively well-maintained properties.



## 1. Introduction

Recent events in housing markets are attracting much scholarly attention to distressed properties. One rapidly developing line of research focuses on the externalities associated with foreclosure, primarily a foreclosed home's impact on surrounding properties. This study addresses two questions that build on this literature. Do other undesirable statuses, specifically vacancy and tax delinquency, also impose a negative externality on nearby home values? Are these negative externalities different in high-poverty and low-poverty neighborhoods?

Foreclosure sales are easily identified in county recorder or court records, so many studies have been conducted on the impact of foreclosures. Often these studies are motivated by suggesting that the foreclosed properties are frequently vacant, abandoned, and blighted. However, in weaker housing markets, foreclosed homes are a small (and declining) fraction of vacant and neglected properties. Not all foreclosed homes are vacant or neglected, so foreclosure is not a good measure of these conditions. A few distressed-property studies have incorporated measures

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of vacancy, but these have been limited by the relative unavailability of timely, parcel-level vacancy data (Mikelbank, 2008; Hartley, 2010). This analysis introduces a direct parcel-level measure of vacancy and uses property-tax delinquency as a measure of neglect. We begin with administrative data maintained by Cuyahoga County, Ohio. These data include addresses, sales transactions, property-tax delinquencies and building characteristics. We use the U.S. Postal Service's (USPS) administrative records to identify the vacancy status of every address in our data, as of the end of each month. To the authors' knowledge, this is the first study to use property-tax delinquency as an objective indicator of neglect. The vacancy and delinquency measures are used in conjunction with foreclosure observations to disentangle the impact of these conditions on the value of neighboring properties.

The existing literature has attempted to estimate distressed-property externalities using sales observations that are pooled across large cities, counties or states. This obscures important differences between the widely varied housing markets within a metropolitan area. In high-poverty areas, we find positive relationships between foreclosures and neighboring home values. This could arise from mortgage holders selectively foreclosing only on homes in relatively good condition. Pooling high-poverty observations with low-poverty observations hides the large negative impact of foreclosures that are measurable in mid-to-upper income areas. Similarly, pooled estimates obscure the large negative impact from homes that are both vacant and delinquent in low-poverty areas. In this analysis, we arrive at different estimates of the externalities in these submarkets by evaluating the model using separate data from high- and low-poverty areas.

The rest of the paper proceeds as follows. In Section 2, we discuss types of property distress and their relationship to one another. Section 3 reviews the relevant literature. In Section 4, we discuss the empirical models we will use in estimating the externalities. Section 5 describes the data, and Section 6 presents the results. In Section 7, we discuss policy implications of our findings. Section 8 concludes.

## 2. Background

Of the three property conditions that we study here, vacancy is the status that is normally common even in robust housing markets. It is necessary for turnover between owners and tenants. However, vacancy is a condition property owners and neighbors usually want to end as soon as possible. Vacant homes do not contribute to the vibrancy or security of a neighborhood. In many cases, no one is attending to their appearance daily, so the grass is mowed less frequently, the snow is not cleared, the leaves are not raked, etc. Some of this inattention may be offset if the home is on the market and the sellers have invested in "curb-appeal" cosmetic improvements. Unless the home is vacant because it is undergoing major renovations, or awaiting a rental tenant, it is either a unit on the market or part of the shadow inventory. The shadow inventory consists of homes owned by individuals or institutions that want to sell, but who are not actively marketing because they are hoping demand will increase in the near future. When a single lender owns many delinquent loans secured by proximate properties in a weak housing market, the lender may deliberately pace the marketing of foreclosed properties. In any case, these vacant homes (which are often easy to identify in person) signal to buyers that the market is flush with inventory and shadow inventory, and therefore they can bargain for low prices.

Unlike vacancy, property-tax delinquency does not have definitive indicators visible on the street. Time and effort would be required to look up the tax delinquency status of neighboring homes. However, tax-delinquency should be highly correlated with either distress or neglect for residential properties. If the homeowners are unwilling or unable to pay their property taxes, which could result in tax-foreclosure, it is very likely that they are unwilling or unable to maintain the property. These properties include homes owned by landlords who choose not to pay the taxes to increase their profit or minimize their losses. The possibility of losing the home to a tax foreclosure is a risk they are willing to bare. Presumably, these owners perform the absolute minimum maintenance necessary to attract tenants to the property. In other cases, homeowners whose incomes have fallen, due to retirement or a job loss, cannot write checks for $500 or $1000 twice each year. These households would also have difficulty paying for the home repairs that would maintain property values on their block.

Foreclosure, as mentioned above, is the most studied type of property distress. Foreclosures should have a direct impact on property values because they involve sales transactions, and sales prices determine the value of similar houses. In most foreclosure auctions, no one bids above the lending institution's auction reserve, so the reserve is recorded as the sale price and the lender takes possession of the property. The property becomes real estate owned (REO) on the lender's balance sheet. In many cases, these homes are placed back on the market or held as shadow inventory by the lender (Whitaker, 2011). Foreclosures add to the supply on the market, which lowers prices if demand is unchanged. When a home is sold out of REO, a second transaction is recorded, usually at a discounted price. The direct link between these foreclosure-related sales and other sales is the comparables or appraisal process.[2] The sales price of the foreclosed homes will be considered by sellers, purchasers, and lenders in determining the value of a nearby nonforeclosed property.

With the exception of strategic defaults, every household that has gone through a foreclosure has experienced financial distress. When the homeowners accept that they will likely or certainly lose their homes, they no longer have an incentive to invest anything in maintenance.[3]

[2] Real estate appraisal guidelines allow for some discretion when selecting comparable properties. See, e.g. Uniform Standards of Professional Appraisal Practice 2010-2011, Standards 1 & 2, available at http://www.uspap.org/USPAP/frwrd/uspap_toc.htm. Thus, foreclosure liquidations and REO sales may or may not be used when selecting comparable properties.

[3] In states that allow deficiency judgments, where the lender can pursue borrowers for the difference between the amount owed on the loan and the price paid for the home at foreclosure auction, homeowners may have more of an incentive to actively maintain homes. Historically, however, deficiency judgments are rarely pursued for many reasons. Homeowners who have gone through foreclosure rarely have the ability to repay a deficiency judgment, and such judgments are more easily dischargeable in bankruptcy than secured debt.