

Lot Vacancy and Property Abandonment: *Colonias* and Informal Subdivisions in Texas

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Introduction

Considerable research has linked lot vacancy and property abandonment to a variety of negative externalities. At the municipal and metropolitan level, elevated rates of vacancy and property abandonment lead to declining property values, erosion of the tax base, and underutilization and inefficient use of existing infrastructure. This in turn may lead to a vicious circle of decline that further reduces the likelihood that local governments can effectively maintain such services (Gallagher, 2010). Vacancy and abandonment are equally detrimental to individuals and local communities: the phenomenon has been associated resident demoralization, fears about rising personal insecurity (Garvin et al., 2013), rising violent crime rates (Boyle and Hassett-Walker, 2008; Suresh and Vito, 2009), increased property-related crimes such as arson (Thomas, 2010), and elevated rates of drug use and drug-related crime (Yonas et al., 2007).

In order to intervene and cut through this downward spiral, policy makers and public officials are urgently looking for ways to improve market values in distressed neighborhoods (Heckert and Mennis, 2012), assist with housing rehabilitation, slow or redirect the construction of new housing, promote the demolition of abandoned structures, and facilitate the transfer of abandoned property by clearing back taxes (Swope, 2006). The feasibility of these interventions depends upon 1) the causes of housing vacancy and abandonment within specific markets, and 2) the capacity of local governments and actors in the land and housing market to overcome the market dysfunction that leads to these conditions.

Much of the aforementioned research and policy interventions have focused upon inner-city and suburban areas of cities in Europe and the US. Recently, however, research has highlighted the increasing trend of vacancy and abandonment in rural areas throughout the US as well as in urban and exurban areas in the developing world. Unique contexts such as these require that scholars rethink both the causes of and solutions to vacancy and abandonment.

In this paper we present findings on the lesser known phenomenon of vacancy and abandonment in informal subdivisions and “*colonia*” settlements in peri-urban areas of Texas, a context which we argue also lends insights to the growing literature on vacancy and abandonment in rural and exurban areas throughout the US and the developing world. In Texas, *colonias* have historically been characterized by non-existent or inadequate infrastructure, very poor self-built or self-managed housing conditions, and economic and social isolation given that most *colonia* settlements are found in rural areas just beyond the city limits (Ward, 1999; Mukhija & Monkkonen, 2006). *Colonia* developers typically sold vacant land in unserviced subdivisions to unsuspecting buyers, often with the false promise that infrastructure would soon follow. Buyers then proceeded to purchase a manufactured (trailer) home, or to build the dwelling themselves. The process of housing construction typically takes years, or even decades to complete (Ward 1999; Durst & Ward 2014).

Current estimates suggest that more than 400,000 residents live in over 2,000 officially-designated *colonias* in Texas, most of which are in the border region (Office of the Texas Secretary of State, 2013). Many thousands more live in low-income serviced subdivisions called model subdivisions which have developed over the past 25 years (Durst, *in press*); despite having basic infrastructure and utility services, the housing production process in model subdivisions is identical to that found in *colonias*. Informal (homestead) subdivisions are less well documented, but may be found outside of the border region in the hinterland of many cities throughout Texas. Informal homestead subdivisions are very similar to *colonias* in nature. These subdivisions have minimal levels of services and most owners engage in some sort of self-help or self-management of the dwelling. The majority of residents in informal homestead subdivisions are Hispanic, and although their incomes are not usually as low as those of *colonia* households, most households have incomes that are still sufficiently low to prevent them from qualifying for a traditional mortgage loan (Ward, 1999; Ward, 2014). Thus, a defining characteristic of *colonias* and informal homestead subdivisions is the widespread reliance upon seller financing as a means of entry into the homeownership market. As we describe, this dependence upon seller financing, along with other factors, has led to high rates of property vacancy and abandonment in these subdivisions.

More than a decade ago, extensive research across a number of *colonias* and informal homestead subdivisions (Ward, 2000; Ward & Carew, 2000) documented that as many as 28% of lots remained vacant. At the time, however, it was unclear whether the phenomenon would persist in the long run if and when owners decided (or could afford) to occupy their property. Our current study addresses that uncertainty, suggesting that although some uptake of vacant lots has occurred over the past 15 years, vacancy rates remain quite high and thus constitute an ongoing and intractable problem that results from characteristics of the land and housing market in incrementally built and occupied settlements. Moreover, our results suggest that more recently *property abandonment* (of both homes and vacant lots) has also become a significant problem in these communities, and warrants a renewed discussion of the causes of lot vacancy and property abandonment in these neighborhoods and, in particular, the development of policies for government and non-government intervention.

This paper has four aims. First we describe the nature of market transactions in informal, peri-urban residential neighborhoods in Texas in order to highlight the unique causes of vacancy and abandonment in these communities and to contrast these with more widely known causes in developed and developing countries. Our analysis points to the distinct structural factors that lead to high rates of vacancy and abandonment in very low-income, incrementally-built informal settlements in Texas. Second, we draw on three separate empirical studies to document the extent to which lot vacancy remains a significant feature of Texas *colonias* and informal homestead subdivisions. Third, we provide preliminary insights into the more recent trend of property abandonment in these subdivisions. Finally, we discuss how the unique structural characteristics of the land and housing markets in these neighborhoods, coupled with the limitations in the governance and financing capacity of the county jurisdictions in which they are located, require flexible governance and financing policy approaches capable of overcoming some of the causes of market dysfunction. We argue that a two-part approach—a regional land bank partnered with local community land trusts—is well suited to this task.

The Determinants of Abandonment and Vacancy

In and of itself, property vacancy is not necessarily a problem. Indeed, a certain level of vacancy is needed for efficient functioning of the real estate market. As Monkkonen (2015) describes, two sources of vacancy are part and parcel of normal market function: first, as new properties enter the market they necessarily remain vacant until they are subsequently occupied; second, when current occupants choose to vacate a residence there is inevitably some period of time during which the property remains vacant.

Typically, however, when authors describe vacancy as a public policy problem, they are referring to vacancies that persist longer than is necessary to facilitate efficient market function and property exchange. Within particular markets, these excess vacancies can result from a variety of factors: for example low holding costs can reduce the incentive that owners have in seeking alternative uses for vacant property (Rosen & Smith, 1983); government subsidies can skew the incentives of property owners (Monkkonen, 2015); the lack of financing for particular subsets of the market can limit the effective demand of would-be buyers or tenants; and high costs associated with contracting and enforcement of rental or purchase agreements can prevent the occurrence of otherwise viable transactions.

A second cause of vacancy are broader changes in national and regional economies that result in declining aggregate demand for property in particular markets (Rabianski, 2002). Such economic changes, among other factors, have led to high rates of vacancy and abandonment in regions such as the American Rust Belt, hitting cities like Detroit particularly hard. Federal housing policy (or the lack thereof) has also exacerbated the vacancy problem, such as the promotion of subprime lending that led to the 2008 housing crisis and high rates of foreclosure and intensified housing vacancy and abandonment.

A third set of property- and neighborhood-specific factors are often associated with individual residents' decisions to occupy and/or abandon property. For example, Morckel (2013) explores four categories or clusters of explanation for property abandonment: 1) market conditions (property values, gentrification and neighborhood demographics); 2) levels of physical neglect in the neighborhood (the frequency of arson and demolitions, building age and quality); 3) socioeconomic conditions (education, race, and unemployment); and 4) financial neglect (tax delinquency and foreclosures). Her model finds that market conditions, gentrification, and physical neglect are good predictors of the propensity of property abandonment, findings that are supported by others (Arsen, 1992; Hillier et al., 2003; Silverman et al., 2012). Barring a change in the characteristics of a particular piece of property, or of a particular neighborhood, vacancies caused by these property- and neighborhood-specific factors are likely to persist.

Vacancy and Abandonment in Context

Much of the literature on vacancy and abandonment has focused on manifestations of the phenomena in urban areas throughout the US. Recently, however, there has been increasing acknowledgement by scholars of the unique causes of vacancy and abandonment in contexts other than American cities, such as in rural America (Holway, Elliott, & Trentadue, 2014; Tighe,

2013), and in developing countries (Fuentes & Hernandez, 2014; Monkkonen, 2015; Sperandelli, Dupas, & Pons, 2013; Struyk, 1988). Research on vacancy and abandonment in these various contexts is important not simply because the causes differ between locales, but also because the policy directions and capacity of local governments to address the problems associated with vacancy and abandonment varies widely in different contexts.

Abandonment in Exurban and Rural America

To date relatively little research has focused on vacancy and abandonment trends and their implications either in the suburbs or in rural and unincorporated urban areas. What little research does exist suggests that the specific causes of vacancy in rural areas differ by region. Today, many rural areas are experiencing high rates of vacancy and abandonment associated with population decline (Hollander et al., 2010). In certain contexts, however, vacancy in rural areas has resulted from uncontrolled growth. For example, Holway, Elliott, and Trentadue (2014) document the growth of “zombie” residential subdivisions throughout the US Intermountain West that were platted at the height of the 2000s housing boom but now remain largely undeveloped (with vacancy rates at upwards of 15%) due to the impact of the subsequent housing crisis and the recession.

Although lot and housing abandonment in rural areas is rarely studied, it poses a particular problem because governance structures are inadequate to intervene in failing property markets. For example, Tighe (2013) explores the impact of the foreclosure crises in rural Appalachia, arguing that capacity constraints, a lack of targeted funding for rural areas, and the dispersed nature of rural housing makes prevention and response to the foreclosure crisis in rural areas difficult. As we discuss in the following section, the phenomenon of vacancy and abandonment in *colonias* presents unique challenges to policymakers, not simply because of their location in rural areas, but also because of the nature of the land and housing market itself.

Abandonment in the International Context

Internationally, abandonment is increasingly becoming a feature of the urban scene triggered by a variety of factors, although research on the phenomenon is notably sparse. Sperandelli, Dupas, and Pons (2013) document land vacancy rates of 21% in Atibaia (located in exurban São Paulo). Because of the low risk and low holding costs associated with land ownership in exurban areas, speculative investment has led to low densities in existing settlements, high servicing costs, and continued sprawl. Although cities in Brazil have policy tools at their disposal—namely, to raise taxes or require construction on unoccupied land, and to expropriate vacant land—the local political climate in cities often means these policies are not effectively enforced.

Many years ago Struyk (1988) identified high rates of property vacancy associated with absentee ownership in Jordan that resulted from low holding costs. In this instance, owners held property off the market, primarily in order to provide housing downstream for family members living outside the country. Struyk (1988, p. 379) highlighted the need for a two-fold strategy to both “lower the rate of return on an empty unit relative to other investments or to raise the return for renting them.”

Contemporary Mexico presents a particularly interesting case, where vacancy has resulted from government action rather than inaction. In this context, federal housing subsidies for workers in the formal sector via the INFONAVIT program have led to increasing rates of vacancy, particularly in mass social interest housing estates on low-cost peripheral and peri-urban land. According to Monkkonen (2015), the low cost of holding land, coupled with government housing subsidies in the peri-urban fringe, has also led to high rates of speculative ownership in housing and elevated property vacancy in the center and in other peripheral areas of cities.

In contrast to these subsidized mass housing estates that developed since the late 1990s, self-built informal settlements established since the 1960s continue to make up much of the built up area of cities in Mexico and Latin American cities and yet have almost non-existent levels of vacant and abandoned lots. This is because the informal nature of land capture (squatting or illegal sales), together with the insecurity of land claims and lack of title, makes physical occupancy of the lot essential, less the property claim be usurped by another household. Recently occasional dwelling abandonment has been observed in established *colonias* in cities such as Ciudad Juárez and Guadalajara, but this is usually tied to homes vacated by warring drug gangs or families driven out of the neighborhood (Jiménez & Cruz, 2014). Unlike their Texas *colonia* counterparts described below, lot vacancy and abandonment in Mexico is extremely rare.

Vacancy and Abandonment in Texas *Colonias* and Informal Homestead Subdivisions

Methods

In order to explore the nature of vacancy and abandonment in Texas *colonias* we draw on three separate datasets and surveys using often quite distinct methodologies. The first are data generated by the Ward and Carew (2000) study of 20 *colonias*, and which was subsequently extended and oversampled ten years later using aerial photogrammetry (Rojas, 2012). Second, we use lot survey logs from a large Contract for Deed titling survey undertaken in randomly selected *colonias* and lots in six Texas/Mexico border counties and which, because of their randomized method of selection provide findings that can be extrapolated to *colonias* across those six counties.¹ The data are complemented by several purposefully selected informal subdivisions in unincorporated areas of two central Texas counties where lots were also randomly sampled but for which findings cannot be generalized at the county level.

Although we set out to collect data on vacant lots in all six counties it was only after the first round of intensive surveying in five of the border counties that we began to observe the phenomenon of lot abandonment and stalled housing construction. Thereafter we began to collect more detailed data about the nature of those vacant lots but these meant that our lot logs only gathered abandonment data in one of the border counties (Maverick County), and in Hays and Guadalupe counties in Central Texas. This generated data that range from vacant lots (those with no physical structure or former evidence of the same; Figure 1A), lots with unfinished structures (Figure 1B), those with once occupied structures that have been abandoned (Figure 1C), and apparently (temporarily) unoccupied or closed up homes (commonly owned by migrant workers and therefore vacant but probably not abandoned). For the purposes of the current study,

¹ For copies of the report (Ward, Way, & Wood, 2012), methodology, and the full (redacted) database see <http://www.lahn.utexas.org/Texas%20Colonias/TDHCA.html>

all of these forms of vacancy are aggregated under a single term, that of “unoccupied lots”. A third dataset comprises the property tax records for selected *colonias* in one of the border counties (Cameron) and overlays these two sources.

(Insert Figures 1 A-C about here)

(Insert Figure 2 about here)

Tracking Lot Occupancy, 2002-10

Here we propose to describe the changes in vacancy and occupancy between 2002 and 2010 for 20 *colonias* and informal subdivisions throughout Texas (Rojas, 2012). The full methodology is described in detail in the final report, so a brief review of the methods is provided here.² The primary data were gathered by analyzing Google Earth satellite images which allow the user to toggle between images of varying dates (see Figure 2): in this instance we analyze occupancy and vacancy at three different time points: 2002, 2006, and 2010, or the closest year for which an image was available. Once selected, the research team measured the occupancy or vacancy status of each lot in all three time periods. Given the nature of the methodology, abandoned and unoccupied structures were indistinguishable from occupied dwellings, and therefore here we report only on changes in lot vacancy and those lots with apparent unfinished structures. Once the analysis of aerial images was completed, property records from county (tax) appraisal districts were reviewed to verify ownership of the lot. In total some 11,085 lots were reviewed across the 20 settlements of the earlier study undertaken by Ward and Carew (2000).

(Insert Table 1 about here)

The results of this analysis are presented in Table 1, and show that lot vacancy did indeed decline significantly between 2002 and 2010, with the number of vacant lots (or those with unfinished structures) declining by nearly 8% (868 lots), falling from 28.5% to 20.7% of all lots surveyed. Interestingly however, Table 1 alerts us to the fact that the process of lot occupation is not unidirectional, but also includes exits from previously occupied lots (some 206 or 2% of the sample). Who exactly are these outflow residents is unclear, and further follow up research would be needed to determine what factors led to their vacating the lot. They may have been tenants or non-owners who were living on the lot temporarily—although they may also have been owners who chose to sell the property, or who were forced to abandon it.

Lot and Home Abandonment

The discovery of an “outflow” suggests that the process of lot occupation in *colonias* is not one-directional: for a variety of reasons residents sometimes vacate their lots when circumstances require, and when the temporary and portable nature of the dwelling allows. However, this raises the question of the extent to which abandonment of dwellings (and not just lots) occurs, and what factors oblige a family to leave a home which they have occupied for many years, sometimes decades, and into which they have invested significant time and money.

² For copies of the report (Ward et al., 2012), methodology and database see <http://www.lahn.utexas.org/Texas%20Colonias/TexasColonias4.html>.

The following analysis comprises preliminary data that come from a very large sample survey of property title practices in 65 randomly selected *colonias* and informal subdivisions across eight counties in Texas (Ward, Way & Wood, 2012; 2015). During the first round of initial randomly applied household surveys to elicit information about property acquisition and titles conducted in January of 2012 in five of these counties (Cameron, Hidalgo, El Paso, Starr and Webb), researchers kept detailed field notes regarding the occupancy status of the lot, categorizing properties as either *occupied* or *vacant*. As mentioned above, vacancy can take on a number of forms, although it was not until we returned from the field that we realized that we needed to more clearly differentiate between the various forms of vacancy.

In March of that same year (2012) we set out to conduct further surveys in an additional three counties, this time using a log-sheet that would provide a more finely-tuned typology of abandonment. The results of these two periods of surveying are shown in Table 2. First, of the more than 6,000 lots visited, 1,274 (or 21%) were unoccupied.³ Second, in the case of the 1,800 lots visited in Maverick, Guadalupe, and Hays counties—where we collected more detailed notes on the status of the 21% total of unoccupied lots surveyed—some 65% were vacant (no structure), 9% had an unfinished and un-lived-in structure of some sort on the lot, 15% had an abandoned structure, and 9% had an apparently livable but unoccupied home.

For the three counties in which we gathered this information the data show considerable variation, first in the percentage of unoccupied lots,⁴ and second in the status of those unoccupied lots.⁵ Hidalgo and El Paso (both randomized selections of *colonias* and lots) appear to show lower levels of vacant lots and are substantially lower than the data described in Table 1 for the central Texas county of Guadalupe, where informal subdivisions were not randomly selected.⁶ These variations may relate to settlement size (smaller equals less vacancy), or to the strategy that a particular developer adopted in promoting the initial settlement, or it may be due to local pressures of supply and demand and the availability of housing market alternatives. Informal subdivisions in Guadalupe County are relatively well located relative to the Austin-San Marcos metro area, or to the county seat of Seguin, and this offers a possible explanation for the relatively low rates of unoccupied lots in the county (11%) compared to the average across all counties (21%). Moreover, although abandoned structures and unoccupied homes each make up

³ These estimates are similar to those acquired via satellite image analysis (discussed earlier) although they are not directly comparable because 1) the data refer to different settlements and 2) abandoned or unoccupied homes are indistinguishable from occupied homes when using satellite image analysis, and thus the rate of vacancy as measured by the absence of a dwelling is closer to 16%.

⁴ Across all eight counties there is statistically significant variation in the proportion of vacancies (Chi square test statistic of 118, p-value of <.000).

⁵ Across the three counties for which detailed vacancy occupancy status was collected (Guadalupe, Hays, and Maverick), there was a statistically significant variation in the proportion of lots in each of the four categories (vacant, unfinished structure, abandoned structure, and unoccupied homes; Chi square test statistic of 24, p-value of <.001).

⁶ A Chi square test comparing the vacancy count in randomly selected *colonias* in six counties (Cameron, El Paso, Hidalgo, Maverick, Starr, and Webb) with those in Guadalupe and Hays counties was marginally significant (Chi square statistic of 3.4, p-value of .065).

26% of the vacant lots in Guadalupe county, this is not surprising given that the total number of unoccupied lots in the subdivisions studied is rather limited since access to the nearby cities and the county seat make for lesser levels of vacant lots, and where these occur they are often associated with home abandonment rather than failure to take up residence in the first place.

(Insert Table 2 about here)

While these data clarify the variety of forms of non-occupancy in *colonias*, they tell us little about the extent to which owners of vacant or abandoned property continue to hold out hopes to eventually (re)occupy the lot. In order to make some assessment about the ongoing ownership status of vacant and abandoned lots we consulted the tax assessor rolls.⁷ Our hypothesis was that lot vacancy and abandonment would be associated with property tax delinquency, and that owners who have declining expectations of ever occupying their home or lot are likely to have a much lower incentive to pay ongoing property taxes. We therefore expected owners of unoccupied land to be more likely to be in tax arrears than owner occupiers, and that owners would also have a greater tax liability given that their properties were appraised on both land and home improvement values. In order to test these hypotheses, we examined the property tax records for all unoccupied lots surveyed in one of the study counties. Cameron County was selected because GIS shapefiles of individual parcels and property records were accessible online and could therefore be linked fairly easily to the maps and logs used during field surveys. In total, we were able to collect and analyze the tax records of 181 of the 218 unoccupied lots (83%) identified during the household survey fieldwork in Cameron County. In order to provide a baseline for comparison, we also randomly selected 100 occupied lots from within the same *colonias* studied. The results of this analysis are presented in Table 3.

(Insert Table 3 about here)

As one can observe in Table 3, the majority of registered owners of unoccupied lots have addresses in Cameron County (66%), although a significant minority have non-local addresses (27%). This suggests that many, by virtue of a lack of close residential proximity, may have settled elsewhere and have less intention of occupying or developing the lot in the medium or long term. Comparatively, only 6% of owners of occupied lots have non-local owner addresses, and these are probably owners who have chosen to rent or let their property to other family members. Interestingly, subsequent analysis (not shown here)⁸ suggested that owners with non-local addresses were no more likely to be in arrears than were owners with local addresses ($p=.41$); thus, although these owners may not live nearby, they do not appear to have walked away from their investment.

⁷ Owners in these low income *colonias* and informal subdivisions are liable to property taxes, albeit a relatively low and usually flat rate on vacant lots. Tax appraisals on the improvement value are often quite rough and are invariably quite modest.

⁸ We estimated logistic and ordinary least squares regressions predicting arrears status (in arrears=1, not in arrears=0) and the total amount owed, respectively, as a function of the occupancy status of the lot, the total property value, and whether a local address was given for the March tax liability data.

In Cameron County taxes are due by October 1, yet owners are not considered delinquent on payments until the following February; thus we decided to wait until the beginning of March 2013 before checking the tax assessor's records since we expected that there would be a number of residents who, while they had not paid their taxes by their due date, would do so prior to becoming tax "delinquent." Our initial results suggest that, *prima facie*, owners of unoccupied lots are more likely to owe back taxes. Even though some owner occupiers and absentee owners are also in arrears early in the year (i.e. by March), and by about the same amount in dollar terms (\$956 and \$897 respectively), the proportion is higher among non-occupants (34% versus 22%, Table 3). However, by August the delinquency rate had declined significantly (by more than half among absentee owners – down to 15%), with approximately the same proportion of delinquency among unoccupied and occupied lots. There are two potential explanations for this delayed payment. First, after July 1st late payments invoke a penalty amounting to between 15-20% of the amount owed. Thus, many owners appear to scramble between March and July 1st in order to clear their arrears and avoid the penalty. A second explanation is that households may use their income tax rebate (refund) received in early summer to pay their property taxes.⁹

Although by August the percentage of owners in arrears is the same across both occupied and unoccupied lots, owners of occupied lots are far more likely to reduce their overall tax liability between March and August. For example, among owners of occupied lots the average amount owed (median in parenthesis) fell from \$897 (\$577) to \$791 (\$453) between March and August, while for owners of unoccupied lots it actually increased from \$956 (\$421) to \$1,712 (\$743) across the same time period. The dramatic increase in the average (median) amount in arrears suggests that by August those who remained in arrears often owed significant sums and were therefore unlikely to pay their debts any time soon. Even more illustrative of the sharp differences in delinquency rates between owners of occupied and unoccupied lots is the fact that by August, owners of unoccupied property owed on average 11.7% of the value of their property and had not made a payment for an average of 42 months. This compares with 3.0% delinquency on occupied property, and an average of 15 months since making the last payment.

Notable in Table 3 are the large differences between the mean and the median values for unoccupied lots at the end of August, suggesting that there are two sub-groups: i) those that are hopelessly underwater and are extremely unlikely to liquidate their tax debt and reenter the market as owners or as users; and ii), those whose hold and retention on the lot is still a possibility providing that neither the debt nor the number of months become overly extended. The longer the time period since the last payment and the larger the debt, then the more likely that the lot will be abandoned (either de facto already, or at some time in the future). However, these data also highlight that among the wider majority of lot occupiers, a significant number of owners also appear to be vulnerable to possible downstream sequestration and asset loss due to non-payment of property taxes. Indeed, if the (small) comparative sample of owner occupied lots in Cameron County were found to be replicated more widely, then these data suggest that some

⁹ We are grateful to one of the anonymous reviewers for pointing out this possible explanation, not least since it concurs with one of our findings elsewhere (Durst & Ward, 2014) that tax rebates are frequently used to make home improvements.

14% of lot owners in *colonias* are in trouble, and may ultimately find themselves obliged to abandon or sell their housing asset in the future.¹⁰

If these data are found to be representative of conditions across the *colonias* studied, then it appears that a limited, but substantial portion of property owners are, indeed, in arrears in the border region. The reasons for the substantial tax liability, particularly among owners of unoccupied property, are unclear, and further research is needed to document the factors that precipitate delinquency and lot abandonment. Some of the reasons why would-be home owners chose not to occupy their lots were described in an earlier survey (Ward & Carew, 2000) and included the inhospitable conditions early in the settlement's development, the lack of services, the insecurity of lot purchase from a developer under Contract for Deed, and the fact that many owners saw the lot as an investment for the distant future. But the question remains about why homeowners who were actively living on their lots should abandon their home and walk away from what was, for many, their single most significant asset.

Tracking former homeowners who have abandoned their home will require further research, but here we hypothesize a number of factors that may be in play and which are substantially different from those outlined by Morckel (2012) in distressed and declining inner city areas. Tax delinquency (also cited by Morckel) is one possibility, although we have no way of knowing whether, in specific cases, this is a cause or an effect of abandonment. But *prima facie* other causes of abandonment are likely to apply extensively, if not uniquely, in *colonias* and informal homestead subdivisions. These precipitating factors include major household life course changes such as divorce or death; relocation due to changes in employment; financial stress caused by loss of income, rising costs and debt obligations; loss of the dwelling due to fire or storm and flood damage; title or property issues such as the lack of clean title or the "clouding" of title due to informal market transactions or unresolved inheritance conflicts (Ward, Way & Wood, 2012; Ward, 2014).¹¹

But why *abandon* the lot and property rather than sell it? Where the opportunity costs of not trying to retain a hold on the property are insignificant—e.g. if the improvement value was low, or the dwelling had been rendered unusable through fire or storm damage, then the owners may decide to cut their losses and walk away, particularly where there is no home insurance to cover the costs of rebuilding (which is invariably the case). Similarly, if the urgency is so extreme, or the owner is underwater on his finance payments, then he may abscond and abandon the property. Alternatively, where the opportunity cost is high, or where there is the firm intention to ultimately transfer the lot to a close kinsman or to a child as part of one's

¹⁰ The selection of the survey *colonias* in the six border counties was randomized to allow for extrapolation to *colonias* in each county—a condition of the grant from the Texas Department of Housing and Community Affairs. However, these data are for Cameron County only and cannot be extended to other counties, although our extensive observations suggest that these results are not out of line with housing vacancy and abandonment levels elsewhere.

¹¹ While the latter issue is largely latent, the aging of long-term lot owners, combined with the very low proportion of *colonia* owners who have a will (less than 8%; see Ward, Way & Wood 2015), mean that inheritance conflicts are likely to rise and, if not resolved, are likely to accentuate tax delinquency as well as an increase in the trend of abandonment.

inheritance, then the owner is likely to explore alternative options such as renting out the home or lot, or gifting or loaning it to friends or family, etc.

However, in informal housing markets such as *colonias*, the option to sell the property, even at a loss, is undermined by the lack of financing mechanisms to underwrite buy-outs so that the possibility of selling the property is neither easy nor quick, and often entails significant risk to both buyers and sellers (Larson, 2002; Way, 2009). Thus unless one finds a cash buyer, seller financing over an extended period of time through a Contract for Deed is the default option and one that penalizes low-income households wishing to liquidate the property on divorce, or who wish to move and purchase elsewhere. And even if they are fortunate to find a prospective buyer rather than grossly underprice the sale value of the home, those who are obliged to move may opt to rent or lend the property to others, a phenomenon that appears to be increasing (Ward, Way & Wood, 2012; Durst, 2014a). For some residents, however, renting or gifting the property also entails risks, or may be difficult to manage for those who do not live locally, and here, too, owners may abandon the homestead. Financing or land readjustment mechanisms are urgently required to facilitate buy outs or lot acquisition of those who, for whatever reason, need—or wish—to relinquish their property claims.

Policies to Mitigate Vacant Lots, and to Reduce Home Abandonment in *Colonias* and Informal Homestead Subdivisions

Our results illustrate that lot vacancy continues to be a widespread and intractable problem in *colonias*. As we have suggested, a combination of factors have led to high rates of lot vacancy and, more recently, to what appears to be the growing trend of property abandonment. First, the nature of self-help and self-managed housing facilitates, and in fact often necessitates, considerable delays in the occupation of lots. The low holding costs of land allow widespread and long-term absentee speculative ownership, and even owners who have every intention of occupying the lot often wait years to do so. Although rates of vacancy declined considerably over the 10-year period studied here, they still remain high and will continue to do so without some sort of targeted intervention.

Second, there is little or no indication that the high rates of vacancy in *colonias* are due to declining aggregate demand for housing (in general, within the low-income end of the market) in the region. Indeed, elsewhere (Durst, *in press*) one of us documents how demand for lots in self-help settlements has remained high throughout the border region. A back-of-the-envelope calculation will put the magnitude of the vacancy problem into perspective. If, as our estimates show, approximately 20% of lots in *colonias* are vacant, these communities could reasonably house an additional 80,000 to 100,000 people (up from an estimated 400,000 people at present, most of whom live in six border counties; see Texas Secretary of State, 2013). This is roughly equal to the number of people currently living in newer model subdivisions in these same counties (Durst, *in press*). In other words, had policies been put in place to incentivize and facilitate the resale of vacant or abandoned property in *colonias* where the state had already committed and made major investments in providing basic infrastructure, the uptake of unoccupied properties in *colonias* could have largely or entirely obviated the spread of model subdivisions.

Thus, rather than representing a problem of insufficient demand, the *colonia* land and housing market is plagued by insufficient *effective* demand due primarily to a lack of buyer financing. As noted above, those owners who wish to sell their property typically must finance the sale themselves (just as the developers from whom they bought had done), often through an informal (unrecorded) contract for deed, which is now against state law, and which carries considerable risk for both buyer and seller (Ward, Way & Wood, 2015). In many cases, owners will lease or lend out the property in order to make use of it, to earn some additional income, and to ensure the property is not left unoccupied (Durst, 2014a). As our analysis of tax assessor data indicate, in relatively few cases, however, do owners abandon the property entirely.

High rates of vacancy in *colonias* have led to considerable inefficiency and waste. Land developers have spent hundreds of millions of dollars to develop vacant land and install new infrastructure in model subdivisions,¹² while existing land and infrastructure in *colonias* remains underutilized. In some ways, too, *colonias* may be preferable places to live since they are closer to cities and places of employment, the average quality of housing is better since families have had more time to invest in home improvement, and over the years they have come to enjoy much of the same infrastructure as model subdivisions. Presumably, with the correct tax and incentive structure, the cost of facilitating lot sales in *colonias* could be largely paid for by the reduction in development and servicing costs for new model subdivisions.

A Two-Part Policy Approach, Land Banks and Community Land Trusts

Previous policy proposals have suggested possible “carrots” and “sticks” that would help to open up the supply and reentry of vacant lots to the market (Ward 1999; Ward & Carew, 2001). However, it is increasingly apparent to us that in order for policy interventions to be successful three obstacles must be overcome. First, some sort of organizational and local governance structure is required to oversee land management and to incentivize more productive uses for vacant land across a dispersed geographic region. Second, there is an urgent need for some level of formal financing that would make the market work more smoothly and obviate (or at the very least reduce) the need for informal seller financing. Third, ongoing support is needed to ensure long-term housing affordability for the poor.

Combined, these factors suggest the need for an integrated approach to housing and land market dysfunction in *colonias*. We believe a two-part solution is in order: namely, coordination between a regional land bank that can oversee the acquisition of vacant and abandoned properties, and the promotion of local community land trusts that can facilitate access to and maintenance of affordable homeownership opportunities. Given the unique characteristics of the land and housing markets in *colonias*, as well as the governance challenges associated with land and property management in unincorporated settlements of county jurisdictions, we believe that

¹² Elsewhere we document how approximately 30,000 lots have been developed since 1990 in model subdivisions across seven counties (Durst, *in press*). Assuming that inflation-adjusted costs for land and infrastructure development (for water, waste water, electricity, and paved streets) are \$5,000 per lot—a conservative estimate, for sure—developers have spent at least a \$150 million. Much of this cost has been passed along to buyers.

these policy recommendations are germane to research on vacancy and abandonment both in rural Americas as well as throughout the developing world.

Land banks are a relatively recent development in the realm of land management. In short, they oversee the acquisition, management, and disposition of vacant, abandoned, and tax delinquent properties. Although they can operate within an existing local government, land banks can also act as an intergovernmental entity that coordinates land acquisition and disposition between multiple and often conflicting taxing entities, such as cities,¹³ counties, and school districts (Alexander, 2005). In this instance, the primary task of the land bank would be to acquire vacant lots and either bring them back into the marketplace, or to engage in land readjustment or land pooling so that formerly vacant lots might serve some other form of common good (small parks, sports fields, community gardens, rental housing, recycling drop off centers, or other social activities deemed important by the community).

In the case of those lots where owners cannot be traced and where there is a tax lien on the property, then, after a requisite period and notice, a policy of compulsory purchase or sequestration would be required in order to acquire the land. Where delinquent absentee lot owners can be traced, then the land bank would negotiate buy-outs to cover the tax debt for those who cannot make back payments and who do not contemplate occupying their lots in the short term. Sequestration policies of this sort would require significant coordination between the land bank, local governments, and local housing non-profits. Such collaboration would be mutually beneficial: counties would benefit greatly from the increased tax revenue garnered by densification in *colonias*, while for non-profits there would be a significant increase in the land and housing supply available for development as affordable housing.

As our data suggest, the majority of absentee owners continue to remain current on their taxes, despite the long-term nature of lot vacancy. This suggests the need for a set of policies to incentivize development on vacant lots, or their sale. One option is simply to increase the holding costs for absentee owners, for example, by raising the taxes levied on vacant land. In *colonias*, however, we believe this approach by itself has limited potential. For absentee owners whose occupation of the lot has been delayed by a lack of financing for the self-help construction process, increases in the holding cost of vacant land will likely only delay occupation even further. Moreover, even for absentee owners who have no immediate plans to occupy the lot, increasing the holding costs would do little to facilitate sale of the property in the absence of some sort of viable financing mechanisms for resale of vacant lots.

Thus, in addition to the land bank's role in acquiring delinquent properties, financing is needed to support the self-help construction process or to facilitate the sale of lots to would-be owners. Regarding the former option, the state already provides financing and technical support for self-help housing in *colonias* via the Owner Building Loan Program. Moreover, over the past twenty years Texas has developed a raft of non-government organizations in the self-help and low income housing sectors. Many of these experiences provide the basis for the creation of a Community Land Trust (CLT) governance structure headed by an executive board made up of

¹³ In 2003 Texas passed HB 2801 allowing for the establishment of a land bank by the City of Dallas. To our knowledge, no other governmental entities are currently authorized to operate a land bank in Texas.

representatives of an NGO, residents, and local officials. Under the CLT model, land is owned by the non-profit organization, rather than by the resident, and is thus removed from the for-sale market indefinitely. The land is then leased to individuals—typically for long periods of time—for various uses which serve the objectives of the trust, including but not limited to housing production, business activities, and communal uses such as parks or gardens. While residents do not own the land itself, they do retain ownership rights to any improvements upon the property (Davis, 2010).

CLTs are not without their critics, although we believe that in the context of *colonias* and informal homestead subdivisions the benefits far outweigh any disadvantages. For example, as Bagdol (2013) notes, although CLTs limit the appreciation of land held by the trust—thus promoting long-term affordability—this also has the detrimental effect of limiting the financing capacity of local governments and thereby limiting the services they can provide. However, because in this instance the trust would be designed specifically to free up unused lots and to facilitate housing construction upon them, they would, by expanding the tax base, likely increase rather than decrease tax revenues.

A second critique questions the ability of CLTs to facilitate community self-governance. For example, as Moore and McKee (2012) note, the success of CLTs in promoting self-governance largely rests upon the structure and composition of the governing board, and in particular upon which CLT residents (community members) are able, or choose, to participate in the management of the trust. This is largely a moot point, however, since at present few opportunities exist for *colonia* residents to play an active role in self-governance of land and housing markets. This is particularly true because most *colonias* remain unincorporated, are located in counties with limited financing capacity, and have few realistic avenues for active political representation (Anderson, 2008). Moreover, recent research suggests that *colonias* are unlikely to be annexed by neighboring municipalities, who have a clear financial incentive to exclude these areas given the low property values and poor quality of housing and infrastructure conditions (Anderson, 2010; Durst, 2014b).

Thus we view the establishment of a CLT as an important opportunity to promote housing access, affordability, and self-governance in *colonias* and informal settlements in Texas. In short, a CLT could both facilitate access to affordable housing for would-be buyers as well as allow would-be sellers to liquidate their largest single asset. This is a crucial goal given the widespread lack of financing available for home purchase in *colonias*.

Conclusion

Unlike much of the literature that has sought to analyze housing abandonment and withdrawal of investment in “shrinking cities”, this article sheds light on the apparent paradox of relatively high rates of lot vacancy and even abandonment in the rural hinterlands of expanding cities where there is high ongoing demand for access to low income housing. The market—even the low-income self-help housing market of *colonias* and informal subdivisions—ought to be able to be to meet this demand. This paradox of high overall demand and high need, yet low effective demand is in large part a result of a lack of formal financing to assist low-income would-be home owners to buy-out existing owners. Moreover, a significant segment of the land supply is

locked out of the market and is held by absentee owners, some of whom already carry an unpaid tax liability on their properties and could likely be persuaded to sell or give up their claims. Thus the paradox is also an outcome of the inability to release unused vacant land back into the marketplace or into productive alternative land uses on behalf of the community.

Land banks, land pooling and community land trusts are some of the existing mechanisms that we propose would help to address this problem, but they are unlikely to evolve in a vacuum. As in the past, state-level policy making and intervention will be an essential element in creating the local governance architecture and guarantees to make more effective self-management of land housing resources a reality. Nor is this solely a border *colonia* issue, but rather it is one with much wider repercussions across the growing number of informal homestead subdivisions that exist in the county hinterlands of many cities in Texas. Unlike the 1990s where the primary challenge of the state was to bring much needed infrastructure into the *colonias*, the primary issue today is not one that requires an injection of large-scale resources and infrastructure, but is more about how to facilitate counties, non-government organizations, and the residents themselves to manage the housing portfolios in their communities.

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Figures 1a-1c. Unoccupied Lots: Vacant (A), and those with Unfinished (B) and Abandoned Structures (C)

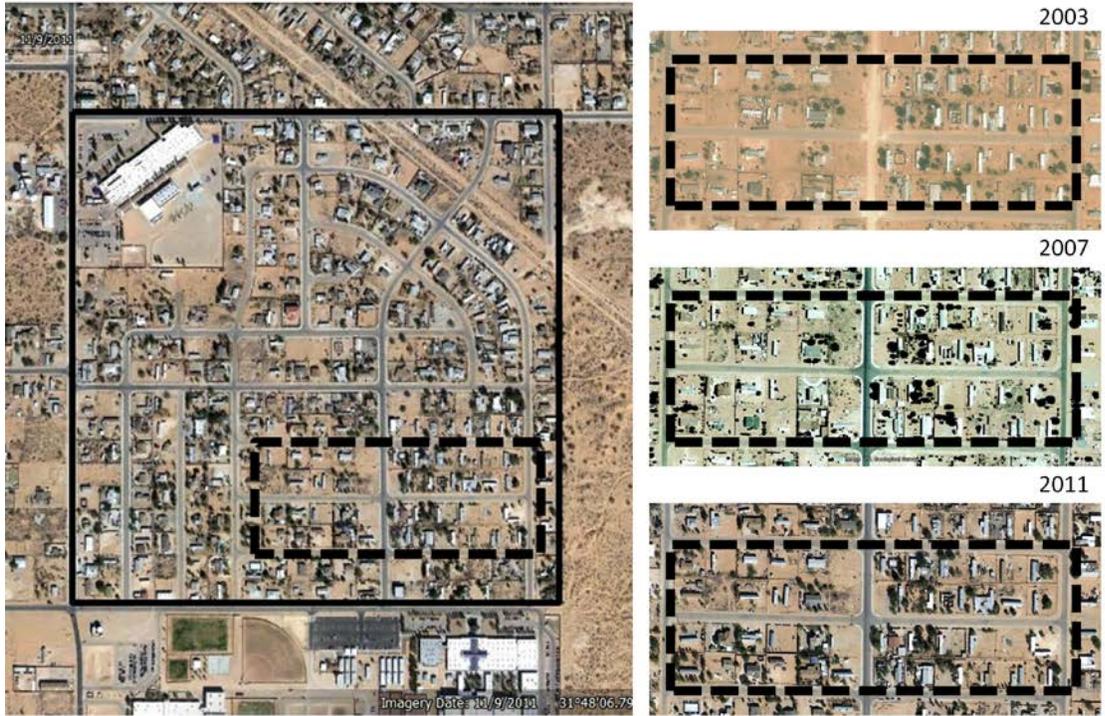


Figure 2. Satellite Images of a Section of Deerfield Park Colonia, El Paso County, Texas: 2003, 2007, & 2011

Table 1. Vacancy, Infill, and Outflow for Selected Colonias: 2002-2010

| Year* | Total Lots | Vacant Lots | | Infill Since Prior Time Period | | Outflow Since Prior Time Period | |
|-------|------------|-------------|-------|--------------------------------|------|---------------------------------|------|
| | (n) | (n) | (%) | (n) | (%) | (n) | (%) |
| 2002 | 11,085 | 3,162 | 28.5% | -- | -- | -- | -- |
| 2006 | 11,085 | 2,638 | 23.8% | 627 | 5.7% | 103 | 0.9% |
| 2010 | 11,085 | 2,294 | 20.7% | 447 | 4.0% | 103 | 0.9% |

Notes: *Year may vary slightly depending upon the date for which satellite images were available.

Table 2. Lot Vacancy and Abandonment in Colonias and Informal Subdivisions in Eight Texas Counties: 2012

| County | Colonias Surveyed (n) | Total Lots Visited (n) | Unoccupied Lots | | Status of Unoccupied Lots | | | |
|-----------|-----------------------|------------------------|-----------------|-----|---------------------------|--------------------------|-------------------------|---------------------|
| | | | (n) | (%) | Vacant (%) | Unfinished Structure (%) | Abandoned Structure (%) | Unoccupied Home (%) |
| Hidalgo | 12 | 874 | 125 | 14% | -- | -- | -- | -- |
| El Paso | 12 | 695 | 72 | 10% | -- | -- | -- | -- |
| Cameron | 11 | 845 | 218 | 26% | -- | -- | -- | -- |
| Starr | 10 | 1,074 | 263 | 24% | -- | -- | -- | -- |
| Webb | 7 | 769 | 135 | 18% | -- | -- | -- | -- |
| Maverick | 7 | 1,078 | 327 | 30% | 67% | 9% | 13% | 6% |
| Guadalupe | 4 | 384 | 43 | 11% | 44% | 5% | 26% | 26% |
| Hays | 2 | 369 | 91 | 25% | 66% | 8% | 15% | 11% |
| Total | 65 | 6,088 | 1,274 | 21% | 65% | 9% | 15% | 9% |

Table 3. Tax Delinquency and Arrears Status: Occupied and Unoccupied Lots

| Property and Owner Characteristics | Tax Status as of: | | | |
|--|-------------------------------|-----------------------------|-------------------------------|-----------------------------|
| | 3/1/2013 | | 8/1/2013 | |
| | Unoccupied Lots (n=181) | Occupied Lots (n=100) | Unoccupied Lots (n=181) | Occupied Lots (n=100) |
| Owner Address | | | | |
| Cameron County | -- | -- | 66% | 91% |
| Adjacent County | -- | -- | 4% | 3% |
| Elsewhere in Texas | -- | -- | 13% | 4% |
| Elsewhere in the United States | -- | -- | 14% | 2% |
| Missing / Unavailable | -- | -- | 3% | 0% |
| Property Value | | | | |
| Mean | -- | -- | \$25,230 | \$39,553 |
| Median | -- | -- | \$17,828 | \$30,497 |
| Minimum | -- | -- | \$394 | \$6,414 |
| Maximum | -- | -- | \$102,644 | \$168,830 |
| Tax Delinquency | | | | |
| Percent Delinquent | 34.8% | 22.2% | 15.4% | 14.1% |
| <hr/> | | | | |
| Arrears Status | (n=63) | (n=21) | (n=28) | (n=14) |
| Amount in Arrears | | | | |
| Mean | \$956 | \$897 | \$1,712 | \$791 |
| Median | \$421 | \$577 | \$743 | \$453 |
| Minimum | \$9 | \$55 | \$8 | \$118 |
| Maximum | \$7,169 | \$4,125 | \$7,250 | \$2,807 |
| Tax Liability Ratio (amount in arrears/property value) | | | | |
| Mean | 6.1% | 3.9% | 11.7% | 3.0% |
| Median | 2.0% | 2.0% | 3.0% | 1.8% |
| Months since Last Recorded Payment | | | | |
| Mean | 20.3 | 8.2 | 42.0 | 15.0 |
| Median | 5 | 7 | 13 | 11 |