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# Tenure and Location Choice among Hispanic Households

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This paper was originally presented at a national **Symposium on Housing Tenure and Financial Security**, hosted by the Harvard Joint Center for Housing Studies and Fannie Mae in March 2019. A decade after the start of the foreclosure crisis, the symposium examined the state of homeownership in America, focusing on the evolving relationship between tenure choice, financial security, and residential stability.

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**Tenure and location choice among Hispanic households**

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*Persistently large gaps in homeownership between whites and Hispanics are a major contributor to wealth inequality. This article considers whether Hispanics and whites are becoming homeowners in different types of neighborhoods, introducing an understudied potential driver of homeownership and wealth inequality. Specifically, this study models the determinants of joint tenure and location choice for Hispanic and white households. This study finds that the Hispanic-white homeownership gap is predominantly a suburban gap and that traditional drivers of suburban homeownership are less strong for Hispanic families. These results suggest lingering barriers to homeownership among Hispanic families and that further research is needed to observe the impact of differing residential location on wealth-building and other homeownership outcomes.*

The wealth gap between whites and Hispanics is staggering: the typical Hispanic family has just 12 cents for every dollar of wealth of the typical white family. This, in part, has to do with differing rates of homeownership. In 2018, the Hispanic homeownership rate stood at 47.1 percent, nearly 26 percentage points below that of white households. Homeownership remains the primary form of wealth accumulation for American families, in addition to serving as a point of entry for advantaged neighborhoods, school districts, and social networks. As a result, gaps in homeownership and different homeownership experiences exacerbate socioeconomic inequality, both in the present and for future generations.

The vast majority of studies on Hispanic homeownership have examined barriers to entry or the influence of immigration on homeownership. Much less research focuses on how the ways in which Hispanic families experience homeownership may also be contributing to inequalities. This paper focuses on where Hispanics buy homes and how these trends compare with those of whites. This is especially important as spatial patterns of Hispanic settlement, housing construction, and poverty have shifted in recent decades.

In the American cultural imagination, homeownership takes place in a suburban, single-family home. Indeed, in the US those often go hand in hand. But homeownership can take many forms, both in terms of structure type and location. And given the history of residential segregation for both African Americans and Hispanics, tenure and location decisions may differ substantially by racial/ethnic group. The interaction of location and tenure can provide clues as to the structure and extent of residential inequality. The neighborhoods in which homeownership occurs can be just as crucial for providing opportunity as homeownership itself. Neighborhoods matter in terms of schools, safety, and social networks, and they are also important points of variation for home prices and wealth-building.

The literature comparing homeownership across racial/ethnic groups often controls for location. Similarly, research on the suburbanization of immigrants and Hispanics often accounts for the growth of rental opportunities in the suburbs. However, the interaction between tenure and

suburbanization remains assumed. The goal of this paper is to disentangle these two concepts by explicitly modeling tenure and location together. This paper is guided by the questions: what are the drivers of a joint tenure-location choice? How do these drivers differ between Hispanics and non-Hispanic whites?[1] I find that factors known to influence both homeownership and suburbanization typically affect homeownership more strongly than suburbanization. But variations by race/ethnicity in the interaction of these factors on both tenure and location result in a Hispanic-white homeownership gap that is predominantly a suburban gap.

This paper begins with a review of the literature on Hispanic-white homeownership gaps. It follows with a description of the data and geographic definitions used in the analysis, and then discusses the methodological approach. The next section presents empirical findings from regression models, followed by an exploration of what these results may imply in terms of wealth-building opportunities through homeownership for Hispanic households. It ends with a discussion of the results, implications, and questions for further research.

## Literature Review

For all households, theories of homeownership attainment start with a focus on financial endowments and lifecycle factors which heavily influence the decision to own or rent. Financial endowments affect both the ability to own and the financial incentives for homeownership. Owning is generally more expensive than renting and requires a substantial upfront investment. In the US, it also requires a good credit history to obtain a mortgage. As a result, financial constraints act as a barrier to homeownership (Gyourko, Linneman, & Wachter, 1999; Linneman & Wachter, 1989). Financial endowments also influence preferences for tenure and types of investment, and change incentives for homeownership, such as making the mortgage interest deduction more worthwhile than the standard deduction (Linneman, 1985; Mills, 1990; Sinai & Souleles, 2005).

Lifecycle factors also affect tenure decisions. Transitions to homeownership are associated with demand for single-family dwellings, larger unit size, and residential stability (Clark & Dieleman, 1996). These demands, in turn, are correlated with age, marriage, and family status. Mobility peaks in the early twenties, and declines gradually with age (Clark & Dieleman, 1996; Long, 1992), and married individuals are generally less mobile than unmarried ones (Clark & Dieleman, 1996; Long, 1992). These mobility trends alone suggest that younger and unmarried households are more likely to rent, while older or married ones are more likely to own. But additionally, marriage or childbearing can serve as triggers prompting a move, especially to single-family and owner-occupied units, while divorce can trigger a homeownership exit (Clark & Dieleman, 1996; Deurloo, Clark, & Dieleman, 1994; Dieleman & Everaers, 1994; Withers, 1998).

These financial and lifecycle factors affect all households, though the size of the effect may vary by racial/ethnic group. When considering the tenure trajectories of Hispanic households, however, it is important to also incorporate frameworks that account for Hispanics' history of immigration and potential stratification as a result of ethnicity. Two dominant theories have emerged to explain the residential attainment of Hispanics – spatial assimilation and place

[1] Throughout the paper, I use "white" as shorthand for "non-Hispanic white." Hispanics may be of any race.

stratification – and this study draws on contributions from both in understanding Hispanic tenure and location choice.

First, assimilation theory broadly refers to the process of bringing ethnic minorities into the "mainstream" (Alba & Nee, 2003). A classical assimilation framework understands immigrant experiences as incorporating with the host society over time. As immigrants become more integrated socially and financially (acquisition of English, banking at US institutions, labor market mobility, etc.), homeownership becomes more attainable (Davila, Mendez, & Mora, 2003; McConnell & Akresh, 2008). This integration also lessens the need and desire for an ethnic neighborhood, so immigrants and their descendants move to suburban neighborhoods that offer more amenities (Alba, Logan, & Stults, 2000; Iceland, 2009; Lichter, Parisi, & Taquino, 2015; Lichter, Parisi, Taquino, & Grice, 2010). Spatial assimilation refers to residential proximity with whites or higher income households, and is used in understanding the residential attainment of both immigrant and native-born minorities. Spatial assimilation directly ties the idea of socioeconomic mobility to residential mobility. Within this framework, socioeconomic mobility corresponds with moves to higher quality housing, higher income (and often whiter) neighborhoods, and a move from renting into homeownership as assimilating families "convert socioeconomic and assimilation progress into residential gain by 'purchasing' residence in places with greater advantages and amenities than are typically found in center-city ethnic enclaves" (Alba & Logan, 1992, p. 1318). In the context of immigration, spatial and social assimilation can operate in concert as immigrants or their children move from ethnic enclaves to more ethnically integrated communities.

A second model, place stratification, asserts that assimilation is not enough to understand the differences between minority and white residential outcomes. Disparate residential outcomes arise not just from the characteristics of minority or immigrant families, but from institutional barriers that prevent Hispanics from translating economic gains into residential improvements. Due to these barriers, the place of Hispanics within communities "reflects their subordinate and often racialized position" (Lichter et al., 2010, p. 217). These barriers to homeownership serve as both a cause and effect, as homeownership is both a signifier of social status and a gatekeeper into certain social strata (Alba & Logan, 1992). These social strata then translate geographically by residential sorting on the basis of social stratification, which leads to geographic concentrations of high- and low-status groups (McConnell, 2015). Minority disadvantage can come from overt discrimination or steering on the part of real estate agents, bankers, and other actors in the housing market (Turner, Freiberg, et al., 2002; Turner et al., 2013; Turner, Ross, Galster, & Yinger, 2002). But it can also result from structural inequalities related to nativity, forms of employment, credit background, or wealth and knowledge networks.

Within these frameworks, both the movement into suburbs and the tenure shift to homeownership are considered assimilative. Suburban settings are generally higher income and majority white, both characteristics of the American "mainstream." Similarly, homeownership is the dominant form of tenure in the United States, is more common among white and higher income households, and often serves as an indicator of socioeconomic success. But implicit in the assimilation literature is the assumption that homeownership occurs in a suburban setting – residential assimilation occurs through homeownership because homeowner neighborhoods look different from renter ones. Suburbanization and homeownership among Hispanics both surged in the 1990s (Housing Vacancy Survey, 2018; Singer, 2004; Suro & Singer, 2002), but it is unclear

whether the new suburbanites purchased homes or rented, and if the new homeowners owned in the suburbs or in the city. Drivers of both suburbanization and homeownership among Hispanics are similar – income, education, nativity and citizenship, and English ability, among others (Alba & Logan, 1991, 1992; Alba, Logan, Stults, Marzan, & Zhang, 1999; Coulson, 1999; DeSilva & Elmelech, 2012; Flippen, 2010; Krivo, 1995; Massey & Tannen, 2017), so it is possible that they occurred in tandem. However, there is little research on whether or how these drivers for homeownership and suburbanization interact, and research on the residential locations of African American homeowners suggest that homeownership does not guarantee residential integration with whites (Fischer, 2013; Gabriel & Painter, 2012).

Only two papers have explicitly examined disparities in city-suburb tenure by race/ethnicity. Gyourko, Linneman, and Wachter (1999) used the 1983 Survey of Consumer finances and found that minorities with sufficient wealth to own were much more likely to own in center cities than suburbs, the exact reverse of whites. For the purposes of their analysis, they used an exclusively racial classification (rather than a joint racial/ethnic one), where white Hispanics were grouped with whites, and nonwhite Hispanics were grouped with all other minorities. As a result, this study cannot be used to distinguish patterns among Hispanic households. Fong and Shibuya (2000) test a spatial assimilation model for suburban homeownership using the 1990 Census. They found that while increasing socioeconomic attainment increased the likelihood of suburban homeownership compared to renting in the city, it also increased the likelihood of owning in the city over renting in the suburbs for Asians and Hispanics, suggesting an interaction of the tenure and suburbanization decision and competing assimilative outcomes. I expand on these papers by comparing the drivers of joint location and tenure on Hispanic and non-Hispanic white households, while controlling for a broader array of socioeconomic and assimilation-related characteristics.

## Data and Geography

This study uses data from the Public Use Microdata Sample of the 2012-2016 American Community Survey, provided by the IPUMS (Ruggles et al., 2018). I limit the analysis to the 100 largest metropolitan areas (MSAs), where the difference between city/urban and suburban areas is likely to be most distinct.[2] The final analysis is conducted on 89 MSAs after removing areas that are not mostly urban or suburban. The process for determining which areas to include is described below.

The lowest level of geography available in the PUMS data are Public Use Microdata Areas (PUMAs), which by definition contain at least 100,000 residents. PUMAs do not necessarily align with MSA boundaries. In my sample, PUMAs that cross MSA boundaries are dropped

[2] Though smaller metropolitan and micropolitan areas still have cities at their center, the residential densities in these locations may be more akin to suburban densities in larger locations. Additionally detailed geography is limited to the Public Use Microdata Area in the PUMS data, which by definition has a population of at least 100,000. For smaller metropolitan and micropolitan areas, it is impossible to distinguish between the city and its suburbs when the city is too small to have its own PUMA.

unless at least 75 percent of the housing units within the PUMA lie in the MSA[3], or unless the PUMA is wholly contained in MSAs that are part of the 100 largest MSAs. Within MSAs, PUMAs do not align with municipal boundaries. I use the Missouri Population Center's MABLE/Geocorr tool to determine what share of a PUMA's housing units lie within a municipal boundary and vice versa.

I follow Kneebone and Berube's (2013) approach to defining cities and suburbs:

- Census principal cities appearing first in a MSA name are considered a city;
- subsequent principal cities appearing in a MSA name with at least 100,000 people are also considered a city;
- all remaining areas within a MSA are considered suburbs.

For example, the Minneapolis-St. Paul-Bloomington, MN MSA has 6 Census-designated principal cities, but only two have more than 100,000 residents. Under this definition, Minneapolis and St. Paul are considered "cities" and the remaining principal cities in the MSA are "suburbs," along with all other areas in the MSA.

I consider a PUMA to be "urban" if at least 75 percent of its housing units are within a city; conversely a PUMA is "suburban" if at least 75 percent of its housing units are within suburbs. PUMAs that have between 25 and 75 percent of their housing units in a "city" are neither urban nor suburban under this definition and are removed from the analysis. After classifying PUMAs in this way, 9 MSAs did not have any "urban" PUMAs (because their central cities are too small to occupy most of a PUMA without suburbs),[4] and an additional 2 MSAs had no PUMAs that were suburban (because no PUMAs in the MSA were at least 75 percent suburban).[5] The final analysis includes 1,383 PUMAs in 89 MSAs.

Though city/suburb is a relatively coarse definition of location, especially when applied uniformly to the nation's largest MSAs, it remains a useful distinction for both theoretical and empirical reasons. Theoretically, the city/suburb divide is an important component of the history of American cities, and in its current form was heavily driven by a combination of government investment in suburbs, white flight from urban cores, and segregationist and exclusionary zoning in suburbs (Jackson, 1987; Rothstein, 2017). Meanwhile, suburbs also have cultural meaning, as a marker of middle-class status and as safe and wholesome places to raise a family (Wright, 1983).

Empirically, cities and suburbs have distinct demographic profiles and built environments, as can be seen in Table 1 (p.15). Suburban areas are typically white spaces and dominated by married households, while cities are more diverse. The median suburb also has more socioeconomically advantaged residents, with higher levels of education, significantly lower poverty rates, and high

[3] I use MABLE/Geocorr to obtain allocation rates for housing units between PUMAs and MSAs.
[4] Charleston-North Charleston, SC; Columbia, SC; Deltona-Daytona Beach-Ormond Beach, FL; Greenville-Anderson-Mauldin, SC; Harrisburg-Carlisle, PA; Lakeland-Winter Haven, FL; North Port-Sarasota-Bradenton, FL; Ogden-Clearfield, UT; Scranton--Wilkes-Barre--Hazleton, PA.
[5] Madison, WI and Wichita, KS.

rates of homeownership. While single-family, detached units make up the plurality of building types in both cities and suburbs, they are a clear majority in suburbs, while cities also include significant shares of multifamily housing. The housing in cities also tends to be older, and cars play a smaller (though still very significant) role.

## Methodology

Most studies of Hispanic homeownership treat location as a control, not as an outcome. However, the interaction between the two can only be observed by modeling them together; this analysis employs a multinomial logit model to evaluate the joint tenure-location decision. The dependent variable is one of four possible location-tenure alternatives: urban renter, urban owner, suburban renter, suburban owner. To capture variation in the effects of tenure-location drivers by ethnicity, one can either run identical multinomial logit models on separate samples of Hispanics and whites, or one can run a model where all independent variables are also interacted with a Hispanic dummy variable. Because interaction terms are more difficult to interpret in multinomial logit models, I present results from separate modeling of Hispanic and white outcomes, while also identifying which coefficients are statistically significantly different by ethnicity in the fully-interacted model.

The analysis takes place at the household level, using household characteristics or individual characteristics of the head or spouse when household data is unavailable. Among married households, I randomly select the head or spouse to avoid disproportionately dropping female observations. The analysis is limited to households whose sampled member is aged 18-64. Households in their retirement years are unlikely to become owners if they are renters, and among owners, late-in-life tenure transitions will be driven by different factors (like mobility, financial, and medical needs) that are distinct from those of younger households.

The independent variables include both individual and household level predictors of homeownership and suburbanization and metropolitan characteristics. Lifecycle characteristics, such as age, marriage, and the presence children are included as they are both predictors of homeownership and suburbanization, and, in the cases of marriage and childbirth, can act as triggers for a move. An age squared term is included to account for nonlinearities in the effect of age, even among households aged younger than 65. Gender of the sampled person is also included as a control.

Financial endowments are crucial to the transition to homeownership. They are measured here in three ways. The first is the log of current income. The second is education, which serves as a proxy for permanent income. The third is the log of income received from an estate or trust, interest, dividends, royalties, and rents received. Investment income is included as a proxy for non-housing wealth, which is necessary to purchase a home.

Of particular interest to this analysis are measures of assimilation and socioeconomic integration among all Hispanics and Hispanic immigrants in particular. Four measures of assimilation and integration are used in this study; three are common in the tenure choice literature (though not all factors are consistently used) and one is unique to this study. This analysis controls for two

factors of the immigrant experience: number of years since arrival to the US (for those born outside the 50 states and Washington, DC) and citizenship status. Each of these may individually influence tenure and location, as immigrants, and especially recent arrivals, may prefer to live in ethnic neighborhoods and may be less residentially stable (both intentionally and unintentionally), which increase the likelihood of renting. Citizenship status both reflects an intention to remain in the US long term (increasing residential stability) and easier access to financial institutions (though non-citizens are able to obtain mortgage credit, many Hispanics are misinformed about this option, and lack of legal status is a barrier for those who are undocumented (Cortes, Herbert, Wilson, & Clay, 2007)). The analysis includes linguistic isolation as a measure of socioeconomic integration of the household.

Unique to this study, the regression controls for whether married individuals are married to someone of a different race/ethnicity. Though this is not a common control in the tenure choice literature, there are several reasons it may influence tenure and location choice. Ellis, Wright, and Parks (2006) find that intermarriage can affect household preferences for the racial composition of a neighborhood. Additionally, intermarried couples, especially those with a white partner, may have greater access to networks with knowledge of the homebuying process and families with sufficient assets to provide downpayment assistance or act as a financial safety net. Conversely, whites who are intermarried are less likely to be able to access privileged family networks than those with white partners.

In addition to individual factors, regional variation in urban morphology may affect the likelihood of living in suburbs or of owning a home. For this reason, I include several controls at the MSA level, in addition to controlling for region of the US. MSA controls include: population; MSA price to rent ratio (median home value compared to annual median contract rent); MSA median home value; the share of MSA residents that are white, Hispanic, and immigrants; the share of housing in the MSA that was built since 2010, and the share of MSA residents who do not use a car to commute to work.

Both tenure and residential settlement patterns may differ in places that have long-standing Hispanic communities or those that have experienced very rapid growth in their Hispanic populations in a short period of time. Established communities may promote homeownership through lessened discrimination or established knowledge networks (Borjas, 2002; Haurin & Rosenthal, 2009). However, established communities may be located in historically segregated neighborhoods, especially in the inner city. Conversely, areas with few Hispanics may promote settlement into a broad array of communities, but rapid growth in new locations can trigger a sense of "group threat" from other local populations that can trigger discrimination (Ayers, Hofstetter, Schnakenberg, & Kolody, 2009; Hall & Krysan, 2017). In order to capture this variation, I classified MSAs by observing the Hispanic population in 1990 and the change in the Hispanic population from 1990-2016. MSAs are classified as having a historic Hispanic base if in 1990 the Hispanic share of the population was greater than 9 percent (the Hispanic share of the population nationwide). Disproportionate growth in an area's Hispanic populations happened in two ways. Areas with the largest growth in percent terms typically had minimal Hispanic populations in 1990 and experienced large growth but still have relatively small Hispanic

populations compared to the national Hispanic share of the population. Alternatively, some MSAs had relatively slower Hispanic growth but Hispanics came to represent a much larger share of the population in those locations. As a result, after determining MSAs which are historic Hispanic places, I identify MSAs which had a growth rate at least one standard deviation above the mean as new destinations, and MSAs with a percentage point change in Hispanics at least one standard deviation above the mean as those undergoing demographic shift. The result is five types of MSAs (a full list of the MSAs in each category is available in the appendix):

- Average Hispanic places – no historic base, no remarkable growth in Hispanic populations – 53 MSAs – e.g. Boston, Milwaukee, and Little Rock
- New Hispanic destinations – no historic base, fast growth rate – 10 MSAs – e.g. Atlanta and Durham-Chapel Hill
- New demographic shift – no historic base, large percentage point change – 2 MSAs – Cape Coral-Fort Myers and Orlando-Kissimmee-Sanford
- Historic Hispanic places – Hispanic base, but unremarkable growth – 14 MSAs – e.g. Albuquerque and Los Angeles
- Hispanic demographic shift – Hispanic base and large percentage point change – 10 MSAs – e.g. Bakersfield and Miami

Descriptive statistics for each of the regression variables are presented in Table 2 (p.17). The statistics are presented separately for white and Hispanic households since the models are run separately on each population.

## Results

### *Where owners live*

The majority of households in PUMAs included in this study are homeowners (56.4 percent[6]) and two thirds live in suburbs. It is unsurprising, then, that a plurality of households in this study are suburban owners (Table 3, p.19). Suburban renters outnumber urban renters, and urban owners represent a relatively small share of the population. While the share of urban owners remains roughly constant between whites and Hispanics, the distribution across other tenure/location outcomes is quite different. White households are much more likely both to own their homes than Hispanics (66.6 percent vs. 41.5 percent) and to live in the suburbs, though the majority of both groups live in suburbs (73.9 percent vs. 57.5 percent). Within suburbs, white households are much more likely to own their homes than Hispanic households, for whom renting is more common than homeownership. Hispanics are roughly evenly divided between urban renting, suburban renting, and urban owning, while white households are disproportionately suburban owners and are relatively unlikely to be urban renters.

[6]This number is lower than national estimates of the homeownership rate because the present analysis encompasses only households in 89 large PUMAs. Large metros, and particularly urban areas, typically have lower homeownership rates than smaller metros and rural areas.

Where households are likely to be urban or suburban owners differs by ethnicity and by metropolitan area. The metros with the highest urban and suburban homeownership rates for whites and Hispanics are shown in Table 4 (p.19). Some areas, like Palm Bay-Melbourne-Titusville, Albuquerque, and Jackson have high urban or suburban homeownership rates for both whites and Hispanics. These MSAs have relatively modest home values, making homeownership more accessible. However, beyond these MSAs, there is no overlap between these lists. The majority of places with high Hispanic homeownership are those where Hispanics have had a significant presence since before the 1990s. This may be due to the composition of the Hispanic population in these locations (fewer immigrants, for example) or due to the existence of real estate and banking institutions who are used to catering to Hispanic households, making homeownership more accessible to Hispanics.

*Factors in joint tenure-location choice*

The lower levels of suburbanization and homeownership among Hispanics are driven in part by population-level differences in the socioeconomic, demographic, and immigration-related factors suggested in the literature. But it is also possible that these factors complement or offset each other in a joint tenure-location decision, or differ in their magnitude between Hispanics and whites, amplifying the effect of the population-level differences between these groups. The regression results in Table 5 (p.20) illuminate these interactions.

Lifecycle factors, like age, marriage, and having children, predict both homeownership and suburbanization, meaning that each of these increases the probability of being an urban owner, suburban renter, and suburban owner relative to being an urban renter. However, most of these factors predict homeownership more strongly, increasing the probability of owning in either the city or the suburbs more than the probability of being a suburban renter. The exception is the presence of children, which more strongly predicts suburban locations. It is also notable that marriage and children predict suburban ownership over urban rental much more strongly for white households than for Hispanic households.

Similarly, income is correlated with homeownership and suburban residence, but is more strongly correlated with homeownership in either location than with suburban renting over urban renting. Although the difference is small, the effect of income on both homeownership and suburbanization is stronger for Hispanics than whites, consistent with prior literature that suggests it "costs" more to spatially assimilate for Hispanics (Alba & Logan, 1992; DeSilva & Elmelech, 2012; Krivo, 1986, 1995; Wachter & Megbolugbe, 1992).

Measures of social or immigrant assimilation affect residential attainment. Lack of US citizenship and linguistic isolation are most strongly correlated with being an urban renter over the other outcomes, suggesting either barriers to spatial integration or a strong preference for urban ethnic enclaves among those with the most limited access to nonethnic networks. However, both of these factors have a more negative influence on owning (in either location) than on being a suburban renter, likely a reflection of the growth of Hispanic immigrants in the suburbs in recent decades (Hardwick, 2008; Singer, 2004, 2008).

But measures of social assimilation suggest that more nuance is needed in spatial assimilation models. Like income and lifecycle factors, social assimilation predicts homeownership for Hispanics more strongly than suburbanization, suggesting that some households either prefer to live in the city or choose to own in the city if owning in the suburbs is unachievable. New Hispanic immigrants are much less likely to own than their native-born counterparts, as predicted by the spatial assimilation literature. Consistent with the literature (Borjas, 2002; DeSilva & Elmelech, 2012; Flippen, 2010; Krivo, 1995), as Hispanic immigrants increase their length of residence in the US, they are more likely to be homeowners. But longer-term immigrants are not necessarily suburbanizing as expected by the spatial assimilation model: they are less likely to be suburban renters than urban renters, and those with the longest stays in the US are more likely to own in the city than in the suburbs.

The case of intermarriage is particularly interesting in examining the effects of social assimilation. White sampled persons who are married to someone of another race/ethnicity are more likely to be urban renters than owners or suburban renters compared to their intramarried counterparts. This effect is particularly pronounced for suburban ownership. Conversely, for Hispanics, spatial assimilation, whether measured through homeownership or suburbanization, is more likely for those with a non-Hispanic spouse (a white spouse in more than 80 percent of cases). Having a non-Hispanic partner most strongly predicts suburban ownership over renting in the city. These results suggest that non-Hispanic (and predominantly white) kin networks provide important resources, either financial or knowledge-based, that facilitate homeownership, especially in suburban neighborhoods.

After controlling for other characteristics of metropolitan areas, classification of MSAs into different types of Hispanic destinations capture otherwise unobserved characteristics of those metropolises that can help explain differences the national tenure/location patterns of these two groups, both in metros where the effect is similar for both groups and where it differs. In historic Hispanic bases, urban rentership has a higher likelihood than all other outcomes, all else equal, for both whites and Hispanics, though the effect is more pronounced among Hispanics. Hispanics not only make up a large share of the population in historic Hispanic bases, but nearly half of the Hispanic households in the sample live in a historic base, compared to around a quarter of white households (Table 6, p.23). As a result, higher rates of urban living and rentership among Hispanics compared to whites are due at least in part to their relative overrepresentation in metros where urban rentership is more likely. In Hispanic bases that are undergoing a demographic shift, Hispanics are much more likely to be urban than suburban, regardless of tenure status; 29.2 percent of Hispanics live in these metros, contributing to the overall urban living trend of Hispanics.

### Geography and wealth-building

When it comes to wealth-building, not all homeownership is created equal. The potential of homeownership to generate wealth depends not only on the home itself, but on the market it is located in (and the timing of the market cycle in that area). Though MSA and city/suburb are

coarse ways of measuring location, they are still useful indicators of market trends and the potential risks and rewards of homeownership.

The previous section notes that living in historic Hispanic destinations results in lower probabilities of homeownership for both Hispanics and whites. This reflects the composition of these places – mainly large, expensive MSAs like Los Angeles, New York, and San Francisco, where homeownership rates are generally low. Indeed, across all Hispanic destination types, Hispanic bases have the highest median home values, and are often locations where median home prices are higher than the national median home value (Table 7, p.23). Nearly half (47.7 percent) of the Hispanic population living in the 89 MSAs in this study live in these high cost metros. For Hispanics living in these metros, it may be difficult to afford these high home values. On the other hand, those who are able to attain homeownership are able to accumulate substantial wealth, assuming prices remain stable in their areas. For these families, homeownership may be high risk, high reward, as they also stand to lose more in the event of foreclosure or price declines, and may have limited ability to save using other financial products (like 401ks) after paying high housing costs.

Within metropolitan areas, there is also a large amount of variability in home prices. In order to capture price variations between cities and suburbs through the boom and bust surrounding the Great Recession and the recovery since the recession, I use Zillow home value data for 10 MSAs. These MSAs were selected to highlight the possible variation during this time period (including both Atlanta, which was hard hit by the recession, and Boston, which was relatively stable, for example) and to include areas where Hispanics are both over- and under-represented. I mimic my prior definition of city/suburb by labeling principal cities with at least 100,000 and in the MSA name as "cities" and all remaining places assigned to the metro by Zillow as "suburbs." I then tracked price gains in the annual median price from 2000 to the peak for that MSA, the decline from peak to trough, and the recovery since the trough. The results are presented in Table 8 (p.24).

These results highlight both the importance of location on the wealth-building potential and the wide variation that comes with location. Across these 10 metros, half had higher median values in the city, and half in the suburbs. However, in most cases, volatility in home prices was greater in the cities, which experienced both more appreciation during the boom years and the recovery, and greater loss during the bust. Like with high cost metros, this volatility can mean large payoffs for homeowners. But, as the foreclosure crisis reminds us, there is also a substantial risk of loss. The findings from this study indicate that Hispanics owners are more likely to be urban than white owners. Given the large recovery in many major cities, those who survived the foreclosure crisis or who have purchased on the upswing stand to profit substantially. At the same time, this price recovery has also impacted rents, generating gentrification and displacement for large swaths of urban renters. More research (and longitudinal data) is needed to study the impact of this type of volatility on Hispanic households.

## Discussion & conclusions

These results illustrate the ongoing disparities in homeownership between white and Hispanic families. The findings also suggest a need to question our underlying assumptions around the connectedness of homeownership and suburban living, and for nuance in the spatial assimilation model. This paper serves as a reminder that homeownership is not an exclusively suburban phenomenon, and that, as is often the case, residential decisions play out differently by race/ethnicity. Much of the literature on the benefits of homeownership does not distinguish benefits based on location, and most likely reflects the benefits of suburban homeownership, given its ubiquity. It is an open question to what extent the benefits of homeownership depend on location, and may depend on neighborhood contexts defined at a more micro level than in this study.

This study is roughly consistent with national surveys in finding a Hispanic-white homeownership gap of around 25 percentage points. Unique to this study, however, is the finding that this gap is predominantly a suburban homeownership gap. In aggregate, Hispanics are slightly more likely to be urban owners than whites. This also indicates that the population of homeowners is different by ethnic group: roughly one-third of Hispanic homeowners own in the city, compared to less than one-in-five white owners. Spatial assimilation theory views both homeownership and suburbanization as assimilative, but differences in the location of homeownership suggests stratification for Hispanics within an assimilative outcome.

A major finding of this study is that household characteristics that typically predict both homeownership and moves to suburbia for all groups – age, marriage, increasing income – predict homeownership more strongly than suburbanization. Though suburban homeownership is often correlated most strongly with these factors, these findings suggest that many households are prioritizing homeownership even if it comes at the cost of suburban living. Though homeownership is typically important for asset accumulation, variations in price trajectories between urban and suburban areas can influence both the financial risks and rewards associated with homeownership. At the same time, urban homeowners may be giving up some suburban amenities, including higher performing schools and neighborhoods with lower levels of poverty. Further research is needed to explore how urban homeowners fare in comparison to suburban ones.

This tradeoff between tenure and location also has an ethnic dimension. Homeownership and suburbia are more likely to go hand in hand with demographic factors – age, marriage, and children – for white households than for Hispanic ones. Hispanic families with the same compositional characteristics are less likely to be homeowners, and particularly suburban owners. These demographic factors are often considered "triggers" into homeownership and suburban moves. The fact that these triggers have weaker effects on Hispanic households suggests that barriers to homebuying, particularly in suburban markets, are keeping Hispanics from owning.

This is related to another finding: the greater importance of income in predicting Hispanic homeownership than white homeownership. While this theoretically means that sustained improvements in income will elevate Hispanic homeownership, it also suggests that Hispanic homeownership will be more sensitive to income volatility. Furthermore, while the larger effect of income will predict homeownership for higher income Hispanic families, the relative lack of

impact from demographic characteristics suggests that low-income white families are more able to overcome financial barriers to homeownership than low-income Hispanic ones.

The existence of large differences between the tenure and residential locations of inter- and intra-married couples suggest possible sources for the observed differences between whites and Hispanics in the effect of demographic and financial characteristics. There are several pathways through which the race/ethnicity of a spouse could affect the probability of homeownership and location of residence – these avenues are made most obvious in intermarried couples, but their effects are compounded when two partners are of the same ethnicity. The first is through preference for the racial composition of neighborhoods: Ellis et al. (2006) find that immigrants married to someone from a different country of origin are less likely to live in immigrant neighborhoods. It stands to reason that the reverse may also be true – that white individuals married to a nonwhite partner may be more likely to live in an ethnically mixed neighborhood than an all-white one. However, the findings of the current analysis suggest this is not the only avenue, since the coefficients for urban renting compared to urban owning, or for suburban renting to suburban owning, are not the same, indicating there is a tenure component layered into the spatial component. The effect of a partner's race/ethnicity on homeownership outcomes is likely operating through several channels: familial financial support, knowledge networks, and access to credit. Many first-time homebuyers rely on assistance from family members to form a downpayment (Charles & Hurst, 2002; Shapiro, 2004). Even in the absence of direct financial assistance, family wealth may increase the chances of homeownership by providing a sense of financial security for the homebuyer through the knowledge that they can lean on family for assistance in the case of financial hardship (Hall & Crowder, 2011). Given the lower median household wealth of Hispanic families compared to white families (Cortes et al., 2007; Kochhar & Fry, 2014), Hispanic homebuyers have more limited family financial networks to tap into, and receive downpayment assistance at one-third the rate of white families (Lee, Myers, Painter, Thunell, & Zissimopoulos, 2018). Beyond financial assistance, information networks can both affect the probability of homeownership (Haurin & Rosenthal, 2009) and its location (Herbert, Rieger, & Spader, 2017; Krysan & Bader, 2009). Finally, continued disparities in access to credit by race/ethnicity (Cortes et al., 2007; Goodman, Zhu, & George, 2015; Li, 2014; Turner, Freiberg, et al., 2002) mean that having white co-borrowers may be beneficial while minority co-borrowers may be detrimental.

Finally, this study confirms the continued impact of an immigrant history on Hispanic housing outcomes. Immigrant households make up 60 percent of Hispanic households in this study, so immigrant characteristics have a large influence on Hispanic homeownership and location patters. The geographic distribution of immigrants has changed in recent decades, as immigrants move to new regions and the suburbs. Today, Hispanic immigrants are just as likely to be renters in the city as in the suburbs, allowing them to access suburban amenities but also keep connections to ethnic neighborhoods (Hardwick, 2008). Though some of these suburban movers are living in less advantageous neighborhoods than their native, white counterparts (Friedman & Rosenbaum, 2007), they are still often better off than their urban, immigrant neighbors (Farrell & Firebaugh, 2016). But despite moves to suburbia, being an immigrant, lack of citizenship, and limited English limit Hispanic homeownership. And among immigrants who are more likely to become homeowners - like those who have lived in the US for more than fifteen years - it is more likely that they own in the city, suggesting that full spatial assimilation may take more than one generation. These findings further point to a need for nuance in our understanding of spatial

assimilation. There is evidence of a dichotomy among Hispanic immigrants, between those who access the benefits of homeownership but do so in the city, potentially in neighborhoods with fewer socioeconomic advantages, and those accessing suburban locations as renters, without the stability and wealth-building potential of homeownership. Further research is needed to determine whether one of these outcomes clearly supersedes the other in terms of long-term benefits for families who make this choice.

This study highlights both the need for further research on this topic and the dearth of detailed data on Hispanics, especially at small geographies. As Hispanics become an increasingly large share of the population, coupled with their migration into new regions and neighborhoods, this type of research and data will become even more crucial. Though this study demonstrates differences between cities and suburbs, it uses a broad definition for each. But neighborhood conditions, both in terms of neighborhood quality and of potential price appreciation, vary between different urban and suburban neighborhoods. However, public microdata from the Census Bureau is limited to the PUMA level, which are large areas that encompass at least 100,000 individuals. Furthermore, the current study can only capture tenure and location outcomes, not the decision-making processes that lead to these outcomes. Both longitudinal and qualitative data are needed to fill gaps in our knowledge of how Hispanic families make tenure and location decisions and the impacts of these choices on socioeconomic outcomes and mobility.

## Tables

### Table 1: Profiles of Cities and Suburbs

| | Median Share among PUMAs | | |
|---|---|---|---|
| | Suburbs | Cities | All |
| **Race/Ethnicity** | | | |
| White | 67% | 41% | 58% |
| Black | 5% | 12% | 7% |
| Hispanic | 11% | 19% | 14% |
| Asian | 4% | 5% | 4% |
| **Household composition** | | | |
| Married, with children | 24% | 16% | 22% |
| Married, no children | 29% | 19% | 27% |
| Single Parent | 10% | 13% | 10% |
| Other family, no children | 6% | 8% | 7% |
| Live alone | 24% | 32% | 26% |
| Non-family household | 5% | 7% | 5% |
| **Education** | | | |
| Less than high school | 9% | 16% | 11% |
| High school graduate | 26% | 24% | 25% |
| Some college | 29% | 26% | 29% |
| College or more | 33% | 29% | 32% |
| **Poverty** | | | |
| Below poverty line | 10% | 20% | 12% |
| 100-200% of poverty line | 15% | 21% | 17% |
| 200+% of poverty | 75% | 58% | 71% |
| **Nativity** | | | |
| Native-born | 88% | 81% | 86% |
| Foreign-born | 12% | 19% | 14% |
| **Tenure** | | | |
| Owner | 70% | 48% | 64% |
| Renter | 30% | 52% | 36% |
| **Units in Structure** | | | |
| Single-family, detached | 68% | 48% | 63% |
| Single-family, attached | 6% | 5% | 5% |
| 2-4 units | 5% | 9% | 6% |
| 5 or more units | 15% | 27% | 18% |
| **Year Built** | | | |
| 2010-2016 | 2% | 1% | 2% |
| 2000-2010 | 13% | 8% | 11% |
| 1990-1999 | 15% | 6% | 11% |
| 1980-1989 | 14% | 8% | 13% |
| 1970-1979 | 15% | 12% | 14% |
| 1960-1969 | 11% | 11% | 11% |

| | | | |
|---|---|---|---|
| 1950-1959 | 9% | 13% | 10% |
| 1940-1949 | 3% | 8% | 4% |
| Built before 940 | 5% | 14% | 6% |
| **Means of Transportation to Work** | | | |
| Automobile | 90% | 83% | 89% |
| Public transportation | 2% | 6% | 3% |

## Table 2: Descriptive statistics

| | White | | Hispanic | |
|---|---|---|---|---|
| | Mean | SE | Mean | SE |
| **Tenure/Location** | | | | |
| Urban renter | 0.129 | (0.000315) | 0.288 | (0.000794) |
| Urban owner | 0.132 | (0.000273) | 0.137 | (0.000576) |
| Suburban renter | 0.205 | (0.000583) | 0.297 | (0.00100) |
| Suburban owner | 0.534 | (0.000571) | 0.277 | (0.000997) |
| **Gender** | | | | |
| Male | 0.478 | (0.000507) | 0.451 | (0.000880) |
| Female | 0.522 | (0.000507) | 0.549 | (0.000880) |
| **Age** | 45.39 | (0.0110) | 41.77 | (0.0160) |
| **Age squared** | 2201.9 | (0.931) | 1869.9 | (1.362) |
| **Married** | | | | |
| Unmarried | 0.452 | (0.000834) | 0.481 | (0.00113) |
| Married | 0.548 | (0.000834) | 0.519 | (0.00113) |
| **Children** | | | | |
| No Children | 0.647 | (0.000402) | 0.444 | (0.000999) |
| Has Children | 0.353 | (0.000402) | 0.556 | (0.000999) |
| **Household income (logged)** | 11.06 | (0.00181) | 10.55 | (0.00331) |
| **Investment income (logged)** | 1.560 | (0.00338) | 0.458 | (0.00394) |
| **Education** | | | | |
| Less than high school | 0.0405 | (0.000196) | 0.292 | (0.000873) |
| High school | 0.199 | (0.000505) | 0.260 | (0.000794) |
| Some college | 0.310 | (0.000468) | 0.269 | (0.000691) |
| College or more | 0.450 | (0.000598) | 0.178 | (0.000957) |
| **Intermarriage** | | | | |
| Not intermarried | 0.958 | (0.000273) | 0.912 | (0.000623) |
| Intermarried | 0.0417 | (0.000273) | 0.0878 | (0.000623) |
| **Years in US** | | | | |
| NA (born in US) | 0.921 | (0.000272) | 0.401 | (0.000978) |
| 0-5 years | 0.0103 | (0.000104) | 0.0407 | (0.000330) |
| 6-10 years | 0.00800 | (0.0000929) | 0.0664 | (0.000464) |
| 11-15 years | 0.0106 | (0.000111) | 0.104 | (0.000627) |
| 16-20 years | 0.0103 | (0.000101) | 0.0917 | (0.000559) |
| 21+ years | 0.0396 | (0.000185) | 0.296 | (0.000852) |
| **Citizenship** | | | | |
| Citizen | 0.972 | (0.000176) | 0.663 | (0.00107) |
| Noncitizen | 0.0280 | (0.000176) | 0.337 | (0.00107) |
| **Linguistic isolation** | | | | |
| Not linguistically isolated | 0.989 | (0.000108) | 0.804 | (0.000902) |
| Linguistically isolated | 0.0112 | (0.000108) | 0.196 | (0.000902) |
| **Hispanic Destination** | | | | |

| | | | | |
|---|---|---|---|---|
| Average Hispanic places | 0.517 | (0.000245) | 0.183 | (0.000469) |
| New Hispanic destinations | 0.0894 | (0.000138) | 0.0333 | (0.000203) |
| Demographic shift, no Hispanic base | 0.0135 | (0.0000700) | 0.0185 | (0.000205) |
| Historic Hispanic base | 0.264 | (0.000211) | 0.489 | (0.000536) |
| Demographic shift, Hispanic base | 0.116 | (0.000146) | 0.277 | (0.000486) |
| **Region** | | | | |
| New England | 0.0732 | (0.000101) | 0.0379 | (0.000200) |
| Middle Atlantic | 0.171 | (0.000163) | 0.150 | (0.000420) |
| East North Central | 0.163 | (0.000159) | 0.0706 | (0.000269) |
| West North Central | 0.0601 | (0.0000977) | 0.0131 | (0.000154) |
| South Atlantic | 0.175 | (0.000170) | 0.160 | (0.000442) |
| East South Central | 0.0392 | (0.0000711) | 0.00777 | (0.000118) |
| West South Central | 0.0892 | (0.000132) | 0.172 | (0.000470) |
| Mountain | 0.0727 | (0.000120) | 0.0888 | (0.000358) |
| Pacific | 0.157 | (0.000193) | 0.299 | (0.000518) |
| **MSA characteristics** | | | | |
| MSA population (100,000s) | 42.90 | (0.0188) | 61.95 | (0.0465) |
| MSA price-rent ratio | 22.94 | (0.00285) | 24.05 | (0.00691) |
| MSA median home value ($10,000s) | 26.18 | (0.00654) | 30.47 | (0.0152) |
| MSA percent white | 58.59 | (0.00761) | 44.70 | (0.0159) |
| MSA percent Hispanic | 17.23 | (0.00639) | 31.89 | (0.0189) |
| MSA percent immigrant | 15.32 | (0.00444) | 22.60 | (0.00928) |
| MSA percent of buildings built 2010 or later | 2.208 | (0.000586) | 2.369 | (0.00171) |
| MSA percent Non-car commute | 12.51 | (0.00681) | 13.55 | (0.0161) |
| *N* | 1,498,822 | | 387,705 | |
| *Weighted N* | 30,566,356 | | 9,437,936 | |

### Table 3: Tenure and Location

| | All households | | White | | Hispanic | |
|---|---|---|---|---|---|---|
| | Count | Share | Count | Share | Count | Share |
| Urban Renter | 10,561,835 | 20.0% | 3,942,687 | 12.9% | 2,716,288 | 28.8% |
| Urban Owner | 7,224,439 | 13.7% | 4,034,014 | 13.2% | 1,296,961 | 13.7% |
| Suburban Renter | 12,474,766 | 23.6% | 6,275,463 | 20.5% | 2,805,746 | 29.7% |
| Suburban Owner | 22,550,427 | 42.7% | 16,314,192 | 53.4% | 2,618,941 | 27.7% |

### Table 4: Top MSAs for urban and suburban homeownership

**Top 5 urban homeownership rate**

| **White (MSA and homeownership rate)** | | **Hispanic (MSA and homeownership rate)** | |
|---|---|---|---|
| Palm Bay-Melbourne-Titusville, FL | 72% | Bakersfield, CA | 57% |
| Springfield, MA | 69% | Palm Bay-Melbourne-Titusville, FL | 57% |
| Louisville/Jefferson County, KY-IN | 66% | El Paso, TX | 56% |
| Cape Coral-Fort Myers, FL | 66% | McAllen-Edinburg-Mission, TX | 54% |
| Little Rock-North Little Rock-Conway, AR | 65% | Albuquerque, NM | 51% |

**Top 5 suburban homeownership rate**

| **White (MSA and homeownership rate)** | | **Hispanic (MSA and homeownership rate)** | |
|---|---|---|---|
| Bridgeport-Stamford-Norwalk, CT | 81% | El Paso, TX | 77% |
| Albuquerque, NM | 81% | Albuquerque, NM | 76% |
| Jackson, MS | 79% | Jackson, MS | 76% |
| Minneapolis-St. Paul-Bloomington, MN-WI | 79% | San Antonio-New Braunfels, TX | 69% |
| Baton Rouge, LA | 78% | McAllen-Edinburg-Mission, TX | 67% |

**Table 5: Multinomial Logit Results of Tenure and Location Choice**

| | White (baseline: Urban Renter) | | | Hispanic (baseline: Urban Renter) | | |
|---|---|---|---|---|---|---|
| | **Urban Owner** | **Suburban Renter** | **Suburban Owner** | **Urban Owner** | **Suburban Renter** | **Suburban Owner** |
| Female | 1.033*** | 1.065*** | 1.072*** | 1.002 | **0.986** | **1.001** |
| | (0.00728) | (0.00693) | (0.00659) | (0.0113) | (0.00935) | (0.0100) |
| Age | 1.217*** | 1.037*** | 1.246*** | **1.145***** | **1.018***** | **1.148***** |
| | (0.00306) | (0.00214) | (0.00263) | (0.00467) | (0.00307) | (0.00408) |
| Age squared | 0.999*** | 1.000*** | 0.998*** | **0.999***** | 1.000*** | **0.999***** |
| | (0.0000288) | (0.0000247) | (0.0000245) | (0.0000466) | (0.0000364) | (0.0000410) |
| Married | 2.849*** | 1.288*** | 4.676*** | **2.411***** | 1.264*** | **2.827***** |
| | (0.0239) | (0.0103) | (0.0345) | (0.0310) | (0.0133) | (0.0321) |
| Has Children | 1.614*** | 1.982*** | 2.334*** | **1.240***** | **1.293***** | **1.475***** |
| | (0.0148) | (0.0170) | (0.0188) | (0.0158) | (0.0137) | (0.0166) |
| Log household income | 1.262*** | 1.018*** | 1.291*** | **1.402***** | **1.042***** | **1.544***** |
| | (0.00362) | (0.00163) | (0.00280) | (0.00854) | (0.00267) | (0.00852) |
| Log investment income | 1.102*** | 0.965*** | 1.073*** | **1.180***** | **1.002** | **1.155***** |
| | (0.00137) | (0.00136) | (0.00125) | (0.00390) | (0.00383) | (0.00366) |
| Less than high school | 0.629*** | 0.791*** | 0.487*** | **0.849***** | **0.845***** | **0.770***** |
| | (0.0126) | (0.0125) | (0.00786) | (0.0135) | (0.0105) | (0.0107) |
| Some college | 1.083*** | 0.846*** | 1.016 | **1.167***** | **1.017** | **1.234***** |
| | (0.0122) | (0.00819) | (0.00962) | (0.0185) | (0.0131) | (0.0170) |

| | | | | | | |
|---|---|---|---|---|---|---|
| College or more | 1.351*** | 0.472*** | 0.818*** | **1.543*** ** | **0.794*** ** | **1.354*** ** |
| | (0.0144) | (0.00448) | (0.00743) | (0.0274) | (0.0124) | (0.0213) |
| Intermarried | 0.812*** | 0.835*** | 0.589*** | **1.125*** ** | **1.286*** ** | **1.662*** ** |
| | (0.0144) | (0.0152) | (0.00950) | (0.0257) | (0.0287) | (0.0337) |
| Immigrant x Years in US | | | | | | |
| 0-5 years in US | 0.293*** | 0.676*** | 0.180*** | **0.520*** ** | **0.992** | **0.464*** ** |
| | (0.0132) | (0.0221) | (0.00662) | (0.0216) | (0.0250) | (0.0155) |
| 6-10 years in US | 0.695*** | 0.648*** | 0.391*** | 0.735*** | **0.974** | **0.732*** ** |
| | (0.0272) | (0.0215) | (0.0131) | (0.0239) | (0.0212) | (0.0192) |
| 11-15 years in US | 0.919* | 0.679*** | 0.550*** | 1.002 | **1.026** | **0.992** |
| | (0.0305) | (0.0208) | (0.0161) | (0.0256) | (0.0199) | (0.0213) |
| 16-20 years in US | 1.052 | 0.600*** | 0.572*** | **1.287*** ** | **0.955*** | **1.182*** ** |
| | (0.0334) | (0.0188) | (0.0164) | (0.0313) | (0.0190) | (0.0249) |
| 21+ years in US | 1.167*** | 0.674*** | 0.755*** | **1.471*** ** | **0.914*** ** | **1.302*** ** |
| | (0.0207) | (0.0125) | (0.0122) | (0.0231) | (0.0131) | (0.0182) |
| Noncitizen | 0.678*** | 0.938* | 0.657*** | **0.574*** ** | 0.961** | **0.515*** ** |
| | (0.0189) | (0.0240) | (0.0161) | (0.00961) | (0.0134) | (0.00753) |
| Linguistically isolated | 0.740*** | 0.769*** | 0.460*** | 0.709*** | **0.930*** ** | **0.697*** ** |
| | (0.0233) | (0.0198) | (0.0126) | (0.0119) | (0.0115) | (0.0102) |
| New Hispanic destinations | 1.125*** | 0.793*** | 0.787*** | 1.215*** | **1.031** | **1.024** |
| | (0.0187) | (0.0123) | (0.0116) | (0.0552) | (0.0368) | (0.0393) |
| Demographic shift, no Hispanic base | 1.066 | 2.626*** | 2.005*** | **0.771*** ** | **2.016*** ** | **1.463*** ** |
| | (0.0462) | (0.0967) | (0.0736) | (0.0607) | (0.104) | (0.0790) |

| | | | | | | |
|---|---|---|---|---|---|---|
| Historic Hispanic base | 0.908*** | 0.520*** | 0.542*** | 0.844*** | **0.324*** ** | **0.304*** ** |
| | (0.0172) | (0.00948) | (0.00927) | (0.0289) | (0.0101) | (0.00966) |
| Demographic shift, Hispanic base | 1.225*** | 1.033 | 0.939** | **0.988** | **0.360*** ** | **0.387*** ** |
| | (0.0279) | (0.0229) | (0.0195) | (0.0373) | (0.0115) | (0.0127) |
| Constant | 0.000197*** | 2.107*** | 0.00157*** | **0.000380*** ** | **13.54*** ** | **0.00164*** ** |
| | (0.0000204) | (0.184) | (0.000137) | (0.0000792) | (2.177) | (0.000298) |
| Observations | 1498822 | | | 387705 | | |
| Pseudo $R^2$ | 0.174 | | | 0.157 | | |

Exponentiated coefficients; Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Bolded Hispanic coefficients are statistically significantly different from White coefficients at the 1% level based on a fully interacted model.

Note: also includes controls for US Census Division and the following MSA characteristics: MSA population (100,000s), MSA price-rent ratio, MSA median home value ($10,000s), MSA percent white, MSA percent Hispanic, MSA percent immigrant, MSA percent of buildings built 2010 or later, MSA percent non-car commute. Full regression results available upon request.

### Table 6: White and Hispanic distributions in Hispanic destination types

| | Share of sampled White population in destination | Share of sampled Hispanic population in destination |
|---|---|---|
| **Average Hispanic places**<br>Most US cities | 50.8% | 17.9% |
| **New Hispanic destinations**<br>Large, recent increases in Hispanic population | 9.3% | 3.4% |
| **Demographic shift, no Hispanic base**<br>Demographic transformation without history of Hispanic settlement | 1.3% | 1.9% |
| **Historic Hispanic base**<br>Large Hispanic base in 1990, no above average population shifts | 26.1% | 47.5% |
| **Demographic shift, Hispanic base**<br>Demographic transformation with history of Hispanic settlement | 12.5% | 29.2% |
| **All MSAs** | 100.0% | 100.0% |

### Table 7: Median home value by destination type

| | Median MSA home value | Share of MSAs with median higher than national median ($184,700) |
|---|---|---|
| Average Hispanic places | $164,500 | 43% |
| New Hispanic destinations | $166,000 | 20% |
| Demographic shift, no Hispanic base | $168,700 | 0% |
| Historic Hispanic base | $256,850 | 64% |
| Demographic shift, Hispanic base | $200,650 | 70% |

**Table 8: Price variations in cities and suburbs**

| | 2018 price | | 2000-Peak, Percent Change | | Peak-Trough, Percent Change | | Trough-2018, Percent Change | |
|---|---|---|---|---|---|---|---|---|
| | City | Suburb | City | Suburb | City | Suburb | City | Suburb |
| Atlanta-Sandy Springs-Roswell | $361,525 | $186,500 | 34% | 31% | 31% | 39% | 70% | 75% |
| Boston-Cambridge-Newton | $684,100 | $432,050 | 54% | 64% | 9% | 21% | 81% | 43% |
| Chicago-Naperville-Elgin | $227,750 | $218,875 | 75% | 54% | 39% | 36% | 42% | 36% |
| Dallas-Fort Worth-Arlington | $194,050 | $230,600 | 20% | 14% | 12% | 6% | 72% | 59% |
| Houston-The Woodlands-Sugar Land | $179,450 | $204,000 | 25% | 22% | 13% | 8% | 55% | 49% |
| Los Angeles-Long Beach-Anaheim | $590,950 | $660,200 | 174% | 150% | 40% | 33% | 65% | 60% |
| Miami-Fort Lauderdale-West Palm Beach | $311,400 | $297,350 | 178% | 163% | 57% | 54% | 108% | 99% |
| Minneapolis-St. Paul-Bloomington | $234,900 | $248,550 | 74% | 58% | 33% | 30% | 64% | 53% |
| New York-Newark-Jersey City | $460,850 | $403,750 | 172% | 102% | 40% | 28% | 95% | 24% |
| San Francisco-Oakland-Hayward | $739,550 | $1,071,450 | 108% | 71% | 45% | 29% | 134% | 99% |

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## Appendix

### Table A1: Hispanic Destination Types

| | Percent Hispanic, 1990 | Percent Change in Hispanic, 1990-2016 | Percentage Point Change in Hispanic, 1990-2016 |
|---|---|---|---|
| **Average Hispanic places - most US cities** | | | |
| Akron, OH | 0.6% | 234.6% | 1.2% |
| Albany-Schenectady-Troy, NY | 1.5% | 244.1% | 3.3% |
| Allentown-Bethlehem-Easton, PA-NJ | 4.2% | 336.1% | 11.0% |
| Augusta-Richmond County, GA-SC | 1.3% | 408.4% | 3.7% |
| Baltimore-Columbia-Towson, MD | 1.3% | 385.3% | 4.0% |
| Baton Rouge, LA | 1.4% | 247.6% | 2.3% |
| Boise City, ID | 6.1% | 348.5% | 7.1% |
| Boston-Cambridge-Newton, MA-NH | 4.6% | 155.5% | 5.7% |
| Bridgeport-Stamford-Norwalk, CT | 8.6% | 147.8% | 10.1% |
| Buffalo-Cheektowaga-Niagara Falls, NY | 2.0% | 114.8% | 2.6% |
| Chattanooga, TN-GA | 0.6% | 775.3% | 3.5% |
| Cincinnati, OH-KY-IN | 0.5% | 555.3% | 2.4% |
| Cleveland-Elyria, OH | 2.3% | 123.5% | 3.0% |
| Colorado Springs, CO | 8.5% | 213.5% | 7.3% |
| Columbus, OH | 0.8% | 557.2% | 3.0% |
| Dayton, OH | 0.8% | 215.8% | 1.7% |
| Des Moines-West Des Moines, IA | 1.6% | 542.2% | 5.4% |
| Detroit-Warren-Dearborn, MI | 2.0% | 117.0% | 2.2% |
| Grand Rapids-Wyoming, MI | 3.0% | 287.7% | 6.0% |
| Hartford-West Hartford-East Hartford, CT | 6.8% | 119.5% | 7.1% |
| Jackson, MS | 0.5% | 467.4% | 1.7% |
| Jacksonville, FL | 2.5% | 397.2% | 5.5% |
| Kansas City, MO-KS | 2.8% | 293.9% | 5.8% |
| Knoxville, TN | 0.5% | 775.3% | 2.9% |
| Little Rock-North Little Rock-Conway, AR | 0.8% | 744.4% | 4.2% |
| Memphis, TN-MS-AR | 0.8% | 723.0% | 4.4% |
| Milwaukee-Waukesha-West Allis, WI | 3.6% | 213.2% | 6.6% |
| Minneapolis-St. Paul-Bloomington, MN-WI | 1.5% | 411.7% | 4.1% |
| New Haven-Milford, CT | 6.3% | 183.4% | 10.4% |
| New Orleans-Metairie, LA | 4.2% | 95.8% | 4.3% |
| Oklahoma City, OK | 3.5% | 386.5% | 8.9% |
| Omaha-Council Bluffs, NE-IA | 2.4% | 428.9% | 7.4% |
| Palm Bay-Melbourne-Titusville, FL | 3.1% | 325.4% | 6.2% |

| | | | |
|---|---|---|---|
| Philadelphia-Camden-Wilmington, PA-NJ-DE-MD | 3.5% | 182.4% | 5.3% |
| Pittsburgh, PA | 0.6% | 171.8% | 1.0% |
| Portland-Vancouver-Hillsboro, OR-WA | 3.3% | 428.5% | 8.1% |
| Providence-Warwick, RI-MA | 3.9% | 215.7% | 7.7% |
| Provo-Orem, UT | 3.2% | 640.5% | 7.9% |
| Richmond, VA | 1.0% | 640.5% | 4.6% |
| Rochester, NY | 3.1% | 134.8% | 3.8% |
| Salt Lake City, UT | 6.2% | 331.5% | 11.2% |
| Seattle-Tacoma-Bellevue, WA | 3.0% | 364.7% | 6.6% |
| Spokane-Spokane Valley, WA | 1.9% | 256.3% | 3.1% |
| Springfield, MA | 8.2% | 136.7% | 10.5% |
| St. Louis, MO-IL | 1.0% | 200.2% | 1.8% |
| Syracuse, NY | 1.4% | 187.8% | 2.5% |
| Tampa-St. Petersburg-Clearwater, FL | 6.7% | 274.5% | 11.1% |
| Toledo, OH | 3.3% | 92.7% | 3.2% |
| Tulsa, OK | 2.0% | 485.8% | 7.1% |
| Urban Honolulu, HI | 6.8% | 62.8% | 2.6% |
| Virginia Beach-Norfolk-Newport News, VA-NC | 2.2% | 226.2% | 4.0% |
| Washington-Arlington-Alexandria, DC-VA-MD-WV | 5.5% | 294.6% | 9.5% |
| Worcester, MA-CT | 4.6% | 163.3% | 5.9% |
| **New Hispanic destinations - large, recent increases in Hispanic population** | | | |
| Atlanta-Sandy Springs-Roswell, GA | 1.9% | 892.5% | 8.5% |
| Birmingham-Hoover, AL | 0.4% | 1070.4% | 3.8% |
| Charlotte-Concord-Gastonia, NC-SC | 0.9% | 1871.0% | 8.8% |
| Durham-Chapel Hill, NC | 1.2% | 1369.1% | 10.0% |
| Greensboro-High Point, NC | 0.8% | 1306.6% | 7.2% |
| Indianapolis-Carmel-Anderson, IN | 0.9% | 923.1% | 5.5% |
| Louisville/Jefferson County, KY-IN | 0.6% | 802.4% | 3.7% |
| Nashville-Davidson--Murfreesboro--Franklin, TN | 0.7% | 1393.5% | 6.1% |
| Raleigh, NC | 1.3% | 1736.4% | 9.0% |
| Winston-Salem, NC | 0.7% | 1744.9% | 9.1% |
| **Demographic shift, no Hispanic base - demographic transformation without history of Hispanic settlement** | | | |
| Cape Coral-Fort Myers, FL | 4.5% | 786.1% | 15.1% |
| Orlando-Kissimmee-Sanford, FL | 8.2% | 549.7% | 19.9% |
| **Historic Hispanic base - large Hispanic base in 1990, no above average population shifts** | | | |
| Albuquerque, NM | 37.1% | 95.6% | 11.0% |
| Austin-Round Rock, TX | 20.9% | 250.8% | 11.0% |

| | | | |
|---|---|---|---|
| Chicago-Naperville-Elgin, IL-IN-WI | 11.0% | 129.6% | 10.6% |
| Denver-Aurora-Lakewood, CO | 12.8% | 196.0% | 9.9% |
| El Paso, TX | 69.6% | 65.5% | 12.2% |
| Los Angeles-Long Beach-Anaheim, CA | 34.7% | 51.5% | 10.2% |
| McAllen-Edinburg-Mission, TX | 85.2% | 131.7% | 6.2% |
| New York-Newark-Jersey City, NY-NJ-PA | 15.6% | 75.7% | 8.2% |
| Sacramento--Roseville--Arden-Arcade, CA | 11.6% | 173.4% | 9.4% |
| San Antonio-New Braunfels, TX | 46.9% | 93.5% | 7.9% |
| San Diego-Carlsbad, CA | 20.4% | 110.7% | 12.6% |
| San Francisco-Oakland-Hayward, CA | 13.7% | 97.5% | 8.1% |
| San Jose-Sunnyvale-Santa Clara, CA | 21.6% | 60.1% | 5.7% |
| Tucson, AZ | 24.5% | 121.9% | 11.6% |
| **Demographic shift, Hispanic base - demographic transformation with history of Hispanic settlement** | | | |
| Bakersfield, CA | 28.0% | 195.9% | 23.6% |
| Dallas-Fort Worth-Arlington, TX | 13.1% | 272.1% | 15.1% |
| Fresno, CA | 35.5% | 111.8% | 16.6% |
| Houston-The Woodlands-Sugar Land, TX | 20.7% | 203.6% | 15.6% |
| Las Vegas-Henderson-Paradise, NV | 11.2% | 658.1% | 19.2% |
| Miami-Fort Lauderdale-West Palm Beach, FL | 27.8% | 128.0% | 15.6% |
| Oxnard-Thousand Oaks-Ventura, CA | 26.4% | 99.6% | 15.4% |
| Phoenix-Mesa-Scottsdale, AZ | 17.0% | 256.8% | 13.2% |
| Riverside-San Bernardino-Ontario, CA | 26.5% | 219.5% | 23.0% |
| Stockton-Lodi, CA | 23.4% | 156.8% | 17.0% |