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Caught in the housing bubble:

Immigrants' housing outcomes in traditional gateways

and newly emerging destinations

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ABSTRACT

It is now widely recognized (e.g., Lichter and Johnson 2009; Painter and Yu 2010) that immigrants are moving in large numbers to almost every metropolitan area and select rural areas in the country. This transformation has happened rapidly, and research is only beginning to assess the extent of immigrant integration and outcomes in these newer destinations. In the midst of these changes, the country has experienced a profound recession. To date, there has been little research on the impact of the recession on immigrants across the country. In this paper, we assess how the recent economic crisis has affected immigrants with respect to three housing outcomes--residential mobility, homeownership, and household formation. Although immigrants have been rapidly expanding their presence in newly emerging destinations and making fast in-roads into the housing markets, they may also be likely to be vulnerable because of the economic downturn. Because the impacts are likely to be diverse, we examine how the effects of the housing downturn vary by geography and by immigrant group. These effects will then be compared to U.S.-born residents to determine whether immigrants that live in metropolitan areas with different immigrant networks experience different effects that do the native populations.

We use the 2006 and 2009 American Community Survey microdata to compare housing outcomes at two important time points in the recent economic cycle. After summarizing trends between groups and between metropolitan areas, we use multivariate models to control for individual characteristics and a number of important contextual variables at the metropolitan level. The results suggest the early impact of the recession has not been as hard on immigrants as one might expect. In particular, the places where immigrant populations are newest have not experienced reductions in homeownership as those in the large immigrant gateways. Even in the established gateways, the decline in homeownership has been smaller for immigrants than for native born households. Regression results suggest that the negative impacts from the recession are strongest in the gateway metropolitan areas, and that have to controlling for residence in the hardest hit areas, changes in unemployment rates and increases in metropolitan level default rates have a negative impact on homeownership rates.

Introduction

Immigrants and their children, who make up the lion's share of U.S. population growth (Passel and Cohn 2008; Frey et al. 2009), are a growing component of housing and labor markets in the United States (Myers and Liu 2005 ; Borjas 2001). While new immigrants continue to arrive in traditional gateways and replace people who moved away, immigrant have begun to disperse from immigrant gateways and settle directly in newly emerging destinations from their countries of origin (Singer 2004; Frey et al. 2009). As a result, immigrants are playing an increasing role in determining housing demand across the heartland of America (Painter and Yu 2010). Accordingly, the recent immigration literature has now shifted its focus toward newly emerging immigrant destinations (e.g., Zúñiga and Hernández-León 2005; Gozdziak and Martin 2005; Waters and Jimenez 2005; Massey 2008 ; McConnell 2008).

While the Great Recession that occurred at the end of the 2000s has officially ended, the negative impact on the well-being of many Americans persists. While the housing boom in the early 2000s pushed up housing prices to an unprecedented level (Office of Federal Housing Enterprise Oversight 2007; Myers and Ryu 2008), the subsequent bust of the housing bubble has, in a relatively short time, caused a substantial decline in housing values and imposed economic stress on households. The economic crisis, in turn, has led to the loss of jobs and the risk of future job losses and the intensification of the housing downturn. Despite multiple policy interventions, home foreclosure rates continue at high levels, and national housing prices are still trying to find a bottom (Standard and Poor's 2011).

Immigrants, especially those who came to the U.S. recently, may be especially vulnerable to the negative impacts of the current economic crisis. Immigrants tend to have low

socioeconomic status and a higher rate of poverty and unemployment than native-born residents (Kochhar 2009). Immigrants are also, on average, younger than their native born counterparts, and they are disproportionately new labor and housing market entrants. Latino immigrants, in particular, are concentrated in many metropolitan areas in the construction sector, which has suffered greatly in the recent downturn. The economic downturn is made worse for the immigrant populations because many of them are not eligible for social welfare programs that help soften the blow of economic downturn (Fix and Passel 2001).

Because of the increasing geographic and ethnic diversity of the immigrant population leading up to the recession, there are a number of research questions that this analysis will answer. First, we will assess how the housing outcomes of Asian and Latino immigrants changed from 2006 and to 2009. Focusing on how homeownership rates, household formation, and residential mobility have changed since 2006, we will compare how these changes differ by geography. As past literature has shown (Painter and Yu 2008; 2010), the immigrant population varies quite a bit across the country in the newness of the population in those metropolitan areas and in the United States. Second, we will analyze how the role of that the economic environment and immigrant network strength has on a household's decisions to form a household and to own a home. This analysis will use the house prices and rents and changes in the mortgage delinquency rates at the metropolitan level to capture housing market conditions, and changes in the metropolitan employment rate to capture the job market conditions. We then use metropolitan level indicators for the strength of an immigrant network to determine whether immigrants living in places with stronger immigrant communities may have experienced smaller impacts on their housing outcomes due to the support of the networks.

The results suggest that while the housing market outcomes of most households declined, immigrants, as a group, did not experience worse housing outcomes in some of the smaller metropolitan areas in the country. The reason that this was the case was likely due to a less severe recession in these areas, and to an immigrant population that had become more mature. Households living in metropolitan areas which experienced higher rates of delinquency and higher unemployment rates were less likely to own a home, signifying the importance of the weakness in the job and housing market. Immigrants living in metropolitan areas with stronger networks were more likely to be a homeowner. In contrast to the findings of previous research investigating the impact of economic conditions on household formation (Painter, 2010), the impact of the changing economic conditions did not have a larger impact on headship rates in this recession.

Background

Immigrant growth outside traditional gateways

The immigrant population has grown rapidly in the U.S. Immigrants and their U.S.-born descendants are expected to grow by 117 million in the next four decades, making up 82 percent of the U.S. population growth of the period (Passel and Cohn 2008). This population growth will have important implications for housing demand at a time when aging baby boomers may be expected to retire and leave the housing market (Frey and DeVol 2000; Myers 2007). However, there are reasons to believe that the recent economic downturn may be particularly detrimental to the housing demand of immigrants.

Immigrants tend to have worse housing outcomes, in part, because they are younger and move more often than the native-born population (Martin and Midgely 2003; McConnell and

Akresh 2008). However, as the time that an immigrant is in the country increases, their economic and housing outcomes improve housing careers (Myers and Lee 1998; Massey 1985 ; Alba, Rumbaut, and Marotz 2005). Immigrants have also begun to move in large numbers from established gateways to emerging gateways and small metropolitan areas (Gozdziak and Martin, 2005; Hempstead, 2007). Because of economic uncertainties and the rapid increase in immigrant population in emerging areas, immigrants are facing new challenges and growing hostility. The Great Recession may have interrupted the process of immigrant adaptation and possibly put a permanent dent on immigrant adaptation (Frey 2009).

While the effect of the Great Recession lingers, we have only recently begun to assess its effect on the housing outcomes of immigrants. Moving to emerging gateways and small metropolitan areas, where housing is more affordable, helps immigrants improve their housing outcomes (Painter and Yu, 2008). At the same time, the Great Recession has significantly reduced residential mobility and the rate of migration, which may have made it more difficult for immigrants to access the housing and labor markets that are best suited to immigrant population.

Short term gaps or persistent housing deficits

Most researchers agree that immigrants have in general worse housing outcomes than native-born, non-Hispanic white residents, while they disagree on how long the housing gaps will last and the extent to which the gaps can be explained by the unique characteristics of immigrants. Krivo (1995) and Coulson (1999) find that household attributes and metropolitan characteristics explain much of the lower homeownership rates of immigrants. However, immigrants still have significant housing gaps after accounting for other relevant factors. Borjas (2002) notes that immigrants' homeownership gap has grown from 1980 to 2000. The growing

housing deficit is largely due to immigrants' residential location choice and changes in their national origins over the past two decades. Immigrants from Latin America tend to have the largest homeownership gaps that cannot be explained by other confounding factors. On the other hand, research has also shown that immigrant reach levels of housing attainment comparable to natives once they are settled in the U.S. (Myers and Lee, 1998; 1996). The housing outcomes of both Asian and Latino immigrants have steady improvement over time.

Other studies have shown that the part of the literature has failed to account for the fact that new immigrants are more mobile and tend to cluster in immigrant gateways (Painter, Gabriel, and Myers 2001; Painter, Yang, and Yu 2003). After controlling for this sample selection bias, most immigrants catch up rapidly (within 5 years) in immigrant gateways and would have homeownership probabilities similar to native-born white residents in other parts of the U.S. within a decade after their arrival (Painter and Yu, 2008). The literature, however, has not examined the impact of the Great Recession on residential mobility and housing outcomes among immigrants. The Great Recession may have fundamentally changed the dynamics of the housing markets due to increases in foreclosures and dramatic differences in the size of the housing downturn across the country. On the one hand, the Great Recession has curtailed the flow of new immigrants to the U.S. and stabilized the immigrant population in the U.S. On the other hand, the Great Recession may have been especially disruptive to immigrants who are economically vulnerable and especially sensitive to changes in changes in the unemployment rate.

Household formation

While the Great Recession has clearly hurt housing markets, the national homeownership rate (measured at the household level) in 2009 has only declined by about three percentage

points from its peak in 2005, merely returning to the pre-bubble levels in 2002. The decline in homeownership does not seem to fully correspond to the level of devastation in the housing market. In fact, almost all birth cohorts have seen an increase in homeownership from 2000 to 2009 (Pitkin 2011 ; Kochhar and Gonzalez-Barrera 2009).

The apparent disconnection between homeownership rates and economic conditions is nothing new. Until the Great Recession, entry costs to homeownership have been rising over time. Housing prices reached the peak in 2006 at almost the same time as the homeownership rate achieved the record level. Despite high housing prices, homeownership rates have been rising in most decades since the WWII. While researchers have not fully explained the apparent contradiction in the housing market (e.g., Glaeser, Gottlieb, and Gyourko 2010), recent studies have pointed to the role of household formation (e.g., Yu and Myers 2010; Haurin and Rosenthal 2007).

It is especially important to examine household formation during the downturn (Painter, 2010), because immigrants are facing multiple challenges in the housing markets (Yu and Myers 2010; Pitkin 2011). The largest issue is the sharp increase in the unemployment rate among immigrants, in general, and among Latino immigrants in particular (Kochhar 2009; U.S. Bureau of Labor Statistics 2009). At the household level, immigrants are more flexible and transitional in their living arrangements than the native-born, which may have allowed them to adjust housing consumption and reduce the rate of household formation more promptly (Blank 1998; Hughes 2003). This implies that we may have observed changes in household formation even if they homeownership rate has not changed as much.

Data

This analysis relies on the 2006 and 2009 microdata file of the American Community Survey (ACS), which are downloaded from Integrated Public Use Microdata Series (Ruggles et al. 2008). The 2000 Decennial Census 5% Public Use Microdata Sample (PUMS) are used to cross-tabulate trends of migration and to provide other comparisons.

We compare the housing outcomes in three types of metropolitan areas: traditional immigrant gateways, emerging gateways and mid-size metropolitan areas. We follow previous studies such as Singer (2004) and Painter and Yu (2010) to create the three types of metropolitan areas based on population size, immigrant ratio to the total metropolitan population, and the relative size of the new immigrant population. As discussed in previous research, immigrants are likely to have different housing outcomes in the three types of metropolitan areas. In addition, the recession has had quite different impacts across these different types of metropolitan areas.

Dependent variables: In order to access the impact of the recession on housing outcomes, we will first summarize three specific residential outcomes: homeownership, household formation, and residential mobility. While these three measures are not completely independent from each other, studying more than one housing outcome will provide a more nuanced view of how immigrants have fared during the recent economic crisis. We will then focus on homeownership and household formation in the subsequent multivariate analysis.

The first measure is homeownership, which is measured at the household level. Homeownership has been used as a sign of achievement and a principal indicator of immigrant residential assimilation in the U.S. (Rossi and Weber 1996; Rohe, Van Zandt, and McCarthy 2002; Alba and Logan 1992; Rosenbaum 1996). Research also shows that homeownership has a long lasting impact on the well-being of residents (Boehm and Schlottmann 1999; Rohe, Van

Zandt, and McCarthy 2002). However, using homeownership as the lone indicator has its disadvantages. Because homeownership is usually measured at the household level, the homeownership rate has important limitations since it ignores household formation (Yu and Myers forthcoming; Miron 1988). Ignoring household formation may be especially problematic during economic crisis, since people, especially those who lost their jobs are more likely to save money by staying with friends and families. Immigrants may also be doubling up to cope with the downturn. It is therefore not surprising that homeownership studies have yet detected any significant decline in homeownership rates despite the severity of the recent housing downturn (e.g., Correa 2009; Kochhar and Gonzalez-Barrera 2009).

While we are not able to directly assess household formation in the cross-sectional data, we are able to assess changes in the headship rate, which is reflective of changes in household formation. Headship is measured at the individual person level, and is defined as the ratio of actual household head over 18 divided by the total population over age 18. While the recession may have only lowered homeownership rates slightly, there may have been far fewer households. The decline in headship rates may vary between age groups and have varying impacts on homeownership rates. Young people who have faced higher unemployment may delay household formation and double up with friends and family members (Painter, 2010). Since young people are primarily renters, declining household formation is likely to cause a decline in the number of young renter households. In contrast, homeowners are facing the pressure of home foreclosure. Homeownership rate may have declined significantly among middle aged adults. Because the housing market is losing both young renters and slightly older owners, the effect on homeownership may have been muted.

The final measure that we focus on in this research is residential mobility, defined as the probability that households moved over the past year. In the multivariate analysis, we will separately identify those who moved within the respective metropolitan area and those who migrated across metropolitan areas. Is so doing, we will examine whether the immigrant effect on mobility vary by geography and by group. This in turn may have led to population shifts in the location of immigrant households over the recessionary period. As previous research has demonstrated (Painter et al, 2001), recent movers are likely to make different housing choices as do non-movers. Therefore, it is critical to account for recent moves in the multivariate analysis of homeownership choice.

There are also potential differences across immigrant groups, who may have responded to the economic recession differently. In the large immigrant gateways, Asian immigrants have been found to have equal or higher rates of homeownership than native born households (e.g., Light 2006; Painter, Yang, and Yu 2003), while at the same time, Asian immigrants in other cities do not have the same advantage (Painter and Yu, 2010). Many Asian immigrants are "human capital" immigrants and come to the U.S. through the channel of employment (Nee and Sanders 2001). As a result, Asian immigrants may be less subject to the negative impacts of economic crisis.

In contrast to Asian immigrants, Latino immigrants have typically been found to have worse housing outcomes than white populations across the country (e.g., Coulson 1999; Krivo 1995). In the past, time in country was a strong predictor of increasing homeownership, but time in country did not change overcrowding (Painter and Yu, 2008). Many Latino immigrants are "labor" immigrants who engage in labor intensive activities (U.S. Bureau of Labor Statistics 2009; Suárez-Orozco and Páez 2002). Due mainly to a slump in the construction industry, the

unemployment rates for Latinos have been substantially higher than non-Latinos in recent years (Kochhar 2008; U.S. Bureau of Labor Statistics 2009 ; Bean and Bell-Rose 2003). Furthermore, Latino homeowners relied more heavily on subprime loans to finance home purchases than whites and Asians (Kochhar and Gonzalez-Barrera 2009). Therefore, Latino immigrants may have suffered more from the recent downturn than other groups.

***Independent variables*:** Housing outcomes are determined by a household's needs, preferences, and socioeconomic constraints. These characteristics shift over time, reflecting changes in age, educational attainment, marital status, family size, income, and other life course characteristics. The variable housing outcomes between groups are in part due to the differences in their individual characteristics. It is therefore necessary to control for these covariates in the study of housing outcomes.

The independent variables include demographic factors (age group, immigrant groups, marital status, migration history) and economic factors (household income, education level of the householder) Since immigrants are included in the model, it is necessary to include a duration of stay in the U.S. variable and an indicator to measure English proficiency. Because the impacts of the recession have not been homogenous across the country, we separately identify intra-metropolitan movers from inter-metropolitan movers and include migration origin as a control variable (Painter and Yu, 2008).

In this analysis, we focus on how three factors influence the housing outcomes of immigrants across the United States after controlling for household characteristics. First, we include variables to describe the current housing market conditions and the changes in these markets over the period of the recession. These include the twenty-fifth percentile housing price

and median rent in the area in the metropolitan area, and changes in the mortgage delinquency rate within a metropolitan area.[1] The later measure captures the extent of the severity of the housing downturn in the area. It would be expected that lower house prices, higher rents, and smaller changes in delinquency rates at the metropolitan level would lead to better housing outcomes. Second, we include changes in the unemployment rate in each metropolitan rate to capture how the macroeconomic environment has changed in the metropolitan areas. Finally, we include variables that capture the strength of an immigrant's network in a metropolitan area. These include the percentage of immigrants in the metropolitan area that have been in the United States more than 10 year, and the percentage of immigrants who speak English well and who are not linguistically isolated.

Methodology

We first present summary data on homeownership rates, headship rates, and trends in migration to demonstrate how the recession has impacted immigrants and native born households across the nation. We then use multivariate probit models to examine the determinants of homeownership and headship in 2009 in the nation as a whole, and in the gateway metropolitan areas, the emerging gateways, and a group of smaller metropolitan areas, separately.[2] These estimates will be compared to similar models in 2006 if certain factors have become more important in determining housing outcomes after the recession.

The homeowner choice and headship models will be estimated using the full sample of households. In past research (e.g., Painter et al. 2001) on homeownership choice, models have

[1] Data on county level mortgage delinquency rates were obtained from the Federal Reserve Bank of New York's Credit Conditions website, available online at http://www.newyorkfed.org/creditconditions/, and are based on data from Lender Processing Services. The data include only first-lien mortgages.
[2] For definitions of gateways and emerging gateways, see Painter and Yu (2010).

used sample of recent movers while controlling for selection bias that might exist in that sample. Unfortunately, these models could not be estimated in the ACS because of the small sample of movers during the past year in many metropolitan areas.[3] Instead, a careful accounting of the origin of recent mover households is included in the models. Specifically, we include variables that indicate whether a move was within the same metropolitan area, a gateway metropolitan area, an emerging gateway, a foreign country, or some other part of the United States.

Because homeownership is estimated on a sample of households, it can provide an incomplete picture of the impact of the recession (e.g., Yu and Myers 2011; Leppel 1991; Ermisch and Di Salvo 1997; Painter 2010). In contrast, some individuals may have chosen to delay entry into the housing market or join another household to economize on expenses. Therefore, the entire population from age 18-65 is used in the study of household formation. To estimate the impacts of socioeconomic, regional, and macroeconomic characteristics on household formation, we use a standard binomial logit model to estimate the probability of someone becoming a householder. While as a group, immigrants have lower rates of household formation than native borns (Painter, 2010), this behavioral model will provide insights into how immigrants have changed their headship rates as a result of the recession.

Additional hypothesis testing: While we first document the differences by immigrant group and geographic context, we are particularly interested in the extent to which metropolitan context and changing context are affecting housing outcomes. After running models that control individual characteristics discussed above, we will separately include contextual variables and test a number of hypotheses to explain the differences in housing outcomes.

[3] Much of the past research by Painter and his coauthors used the decennial Census, which classified recent movers as households that moved within the past 5 years. The ACS only reports mobility for the past year. This, in combination with the fact that mobility fell during the recession, makes Heckman style correction models proposed by Painter (2000) intractable.

First, we test the role of housing price and rent and differential trends in housing price in explaining variable housing outcomes. Lower housing prices increase housing affordability and increase the chance of household overleveraging, but lower house prices could also signal a slower expected appreciation in the future. Higher rents would be expected to lower both homeownership rates and headship rates. We also investigate how the change in default rates over the 2006-2009 period impact homeownership and headship rates. It is expect that metropolitan areas with higher default rates would have both lower homeownership rates due to households losing their homes, and lower headship rates due to the potential increase in doubling up. Second, we include changes in the unemployment rate in each metropolitan rate to capture how the macroeconomic environment has changed in the metropolitan areas.

Finally, we investigate the effect of social networks as in Painter and Yu (2010) to study whether social networks have helped cushion the housing downturn among immigrants and to examine whether the social network effect varies by immigrant group and by metropolitan type. We expect to see that stronger social networks will help lessen the negative impacts of the housing bust especially in the year 2009 when the damage of the economic crisis is most evident. Two variables are used to measure the strength of social networks. The first one is the percent of immigrants in each metropolitan areas that have been in the U.S. for more than 10 years. The assumption is that metropolitan areas with more long-time immigrants will have stronger social networks. The second one is the percent of immigrant group who speaks English well and who are not linguistically isolated[4]. Stronger networks should have a positive effect on immigrants' homeownership in the metropolitan areas (Painter and Yu, 2010). However, the effect on

[4] According to the Census Bureau, linguistically isolated households refer to those in which either no person age 14+ speaks only English at home, or no person age 14+ who speaks a language other than English at home speaks English "Very well". All members of such a household are considered linguistically isolated, even though children under 14 who speak only English may live there.

headship rates is not clear. Immigrants may more able to find roommates and relatives to share living space in places where ethnic network is stronger.

Results

Summary Statistics

While the focus of this paper is discovering how housing outcomes for foreign born and native born households have been affected by the housing and economic downturn, we first need to understand how population shifts and mobility have impacted metropolitan areas differently. Table 1 displays the change in one year mobility rates over the 2006-2009. The data are displayed across the three types of metropolitan areas that we are focusing on in this analysis. As is evident, mobility rates declined across the nation, and that these declines were much more pronounced among the immigrant population. Mobility rates for native born populations fell about one percentage point nationwide, but mobility rates for immigrants fell from 2.4 percentage points to 3.3 percentage points. In the gateway metropolitan areas, the one year mobility rates of immigrants fell lower than that of native born households.

Next, Table 2 presents the change in population in these metropolitan areas over the past decade and since 2006. The growth rate of the native born population slowed considerably; some of which is likely due to the decline in birth rates during the recession.[5] More interestingly, the population of immigrants stopped growing in the gateway metropolitan areas, while continuing to grow (albeit more slowly) in other parts of the country. The combined evidence in Table 1 and 2 suggests that intra-metropolitan mobility fell a great deal across the country. For immigrants, there was an increase in movement out of the gateway metropolitan

[5] This report documents the decline in the rate of population growth http://www.pewsocialtrends.org/files/2011/10/REVISITING-FERTILITY-AND-THE-RECESSION-FINAL.pdf.

areas to other parts of the country that was not compensated by inflows into these areas from other parts of the US and abroad.

Given the context of the changes in mobility and population flows over the period from 2006-2009, Table 3 presents the changes in the homeownership and headship rates from 2006-2009. As is documented in Table 3 and is well appreciated, homeownership rates rose from 2000-2006, and then fell after 2006 in all areas for native born households. While the homeownership rates of immigrants are lower than native born household throughout the United States, the recession has seen a smaller drop in the homeownership rates of immigrants than among native born households. Interestingly, the homeownership rate of immigrants in small metros was unchanged from 2006-2009.

Table 4 examines the changes in homeownership rates for Asian and Latino Immigrants separately. In contrast to native born households (Table 3), many of the gains in homeownership rates experienced during the first part of the decade remained after the recession. Homeownership rates for Asian immigrants fell one half of one percentage point across the country, and about 2 percentage points for Latino immigrants. However, the homeownership rates for Latino immigrants in smaller metropolitan areas actually increased slightly during the recession.

As was argued above, despite only small declines in homeownership rates after the recession, housing outcomes may have worsened for households if more households have been forced to live together. To determine whether this might be happening, we present headship rates for both native born and immigrant households from 2000 until 2009, which gives a snap shot of headship rates before the current recession, and during it (Table 5). In general, headship

rates are lower for immigrants than for native born households, but the declines during the recession have been largest for native born households (up to 1.5 percentage points). Overall, there has been very little change in the headship rate for immigrants. In fact, as Table 6 shows there have been some places throughout the country where headship rates have risen slightly for Asian and Latino immigrants. Overall, the trends in headship over the past decade demonstrates declines for native born households, and slight increases for immigrants from 2000-2006, and relatively no change after 2006.

Multivariate Analysis

Table 7 presents probit model estimates of the determinants of homeownership using a pooled sample of 80 metropolitan areas (Column 1), followed by samples of the gateways metropolitan areas, emerging gateways, and smaller metropolitan areas. These four samples are compared because the impact of the housing downturn and the economic crisis that has followed has been very different across the country. The estimation sample includes Asian and Latino foreign born households with native born white and black households as reference groups. As has been found in the literature, minority and immigrant households have lower rates of homeownership even after controlling for their socioeconomic status differences. New immigrant households are less likely to own than black households, and the relatively likelihood for Asian and Latino immigrants differs across the types of metropolitan areas. After immigrants have been in the country 10 years or more, their probability of owning a home increases. Asian immigrants are more likely to own in the gateway metropolitan areas, and Latino immigrants are more likely to own in the smaller metropolitan areas. This finding might signal selective migration of Asian immigrants within the United States.

After controlling for housing market and individual characteristics, homeownership rates are actually highest in the gateway cities signaling the important role of house prices in depressing homeownership there. However, immigrants are more likely to own in the emerging gateways and small metros. Recent movers are much less likely to own their homes, although there are not large differences between the origins of the move. The movers with the smallest reduction in the probability of buying a home came from smaller metropolitan areas in our sample, and the movers with the largest penalty came from areas outside of our analysis sample.

Turning to the economic drivers of the decision to own, higher house prices and lower rents reduce the probability of owning a home. These effects are largest in the gateway metropolitan areas. Next, Table 7 displays how changes in mortgage delinquency rates impact the likelihood of buying a home. In metropolitan areas where the changes in delinquency are greater, households are less likely to own a home. Again, these effects are largest in the immigrant gateways where the housing downturn has been most severe. Changes in the unemployment rates had similar impacts on the likelihood of owning a home. In places where unemployment rose the fastest, households were least likely to own a home. The impact of unemployment rates was not evident in the smaller metropolitan areas where the economic downturn was not as great.

Table 8 present similar models estimated for the year 2006 in order to assess if coefficients may have changed over the period. Most of the coefficients of the models are qualitatively similar. The largest differences are in the gateways, which is not surprising since the housing and economic crisis was greatest there. We note that movers to and within the gateways were more likely to buy a home in 2006 than 2009. Households were more sensitive to the housing price and rent in 2006 than in 2009. We also observe that changes in the mortgage

delinquency rate over the past 3 years did not predict homeownership, which is not surprising because the period had so few delinquencies. Changes in unemployment were only important in predicting homeownership in the gateway metropolitan areas. Finally, the time in country was a slightly stronger predictor of immigrant homeownership in 2009, when compared to 2006.

In Table 9, we present the results for Asian and Latino immigrants. As is evident, there are a number of changes in the magnitude of the estimated effects over the 4 year period. Immigrants in small metros are more likely to rent than own in 2006 after controls for other characteristics. However, this effect became positive for Latino immigrants by the end of the decade, and the negative effect for Asian immigrants fell. The immigrant network effects became more important for Asian immigrants. The percent of Asian immigrants in the metropolitan area and the percent that are not linguistically isolated is a positive predictor of homeownership. For Latinos, both of these variables are also significant in 2009, although the percent of the Latinos in the metropolitan area in the country more than 10 years fell in its importance.

The biggest change concerns the sensitivity of immigrant to the housing market. In 2009, the estimated sensitivity of immigrants to house prices and rents rose dramatically. As in the general population, increases in the delinquency rate lower the probability of owning a home. However, the effects were very small for Latino immigrants. Changes in the metropolitan unemployment rate lowered the probability of owning a home for Latino immigrants, but this characteristic did not have an impact on the probability that an Asian immigrant is a homeowner.

Next, we present evidence of the impacts of changes in the economic environment on the likelihood that someone will be an independent head (Table 10). After controlling for

socioeconomic characteristics, African Americans are more likely to be a household head, and Asian immigrants are less likely to be a household head. Latinos are less likely than whites to be a household head in the established gateways, but more likely in our sample of smaller metropolitan areas. The likelihood of being a household head is highest outside the gateways, and higher for immigrants outside the gateways. Mobility predicts headship, particularly if the move is within the same metropolitan area.

After controlling for the individual characteristics, the changes in the economic environment have a smaller additional impact than the changes did for homeownership. Namely, changes in the unemployment rate and mortgage delinquency rate at the metropolitan level do not impact headship. The most important housing market characteristic in predicting headship rates is the rent in the metropolitan area. As would be expected, higher rents lower headship.

Rather than display the 2006 headship results for the whole sample, we display the changes in the estimated coefficient for Asian and Latino immigrants over the 2006-2009 period (Table 11). The biggest changes in the period were the importance of the immigrant networks. In 2009, living in a metropolitan area with more immigrants that had been in the country more than 10 years or with fewer linguistically isolated immigrants lowers the headship rate. This suggests that there was more doubling up in these metropolitan areas after the recession than before. Prior to the recession, Latino immigrants were more likely to be an independent head if there were more immigrants in the area that had been in the country more than 10 years. There were also small changes in the sensitivity of headship rates to rents, but the changes in the unemployment rate and metropolitan level delinquency rate was not predictive of headship rates after controlling for household demographic characteristics.

Discussion

The recession has clearly lowered housing outcomes for native born households. Not only have homeownership rates fallen across the country, but the headship rate has also fallen, increasing the housing burden to existing households. After controlling for household characteristics, metropolitan areas with bigger changes in the unemployment rate and the delinquency rate are predicted to have lower homeownership rates. In many ways, these findings are not unexpected.

In contrast to the findings for the native born population, the housing outcomes of immigrants did not fall as much in the recession as might have been expected. The declines in homeownership and headship rates were smaller for immigrants, and in some metropolitan areas, the declines did not happen from 2006-2009. The presence of strong immigrant networks predicts higher homeownership, but lower headship rates, after controlling for other characteristics of the household and housing market. Immigrants were much more sensitive to metropolitan rents after the recession. Taken together, these results, however, do not explain why immigrants appeared to fare better than their native born counterparts during the recession.

The biggest difference in the immigrant population before and after the recession is the length of time that an average immigrant has steadily fallen. As is evident in Table 12, the percent of the population in our study that is a new immigrant has steadily fallen over the decade. In 2000, the percent of the population that was immigrant was around 20 percent. This number increased to 22.5 percent in 2006, and there was no change in the immigrant population during the recession. However, there was a change in the location of the immigrant population and in the time in the U.S. As noted earlier, the immigrant population fell in the gateway metropolitan

areas from 2006-2009, and grew from 2006-2009 in the emerging gateways and smaller metropolitan areas.

More importantly, the percent of the population that was a new immigrant fell across the country. In 2000, 41% of the immigrants in our sample had been in the country less than 10 years. This number declined to 35% in 2009. The biggest declines were in the gateway and emerging gateways, with declines ranging from 38-31% and 47-40%, respectively. In the overall population, the percent that was new immigrant in emerging gateways and small metros rose from 2000-2006, but fell from 2006-2009, even as the percent of the population that was an immigrant in those areas continued to rise.

Overall, the immigrant population was more settled at the end of the decade, than at the beginning. This was true both in terms of the duration in country (Table 12), and in mobility rates (Table 4). Both of these facts combine to predict better housing outcomes. The downturn in the housing market may have even provide opportunities as house prices fell for immigrants that kept their jobs because research has clearly demonstrated the upward trajectory of the immigrant population (e.g., Myers and Lee, 1996; Painter and Yu, 2008). The recession undoubtedly hurt immigrants as well as native born households, but one of the largest impacts of the recession was the cut-off of the flow of new immigrants to the U.S. (Frey, 2009).

Concluding remarks

The findings of this analysis clearly show that the housing outcomes for most households fell during the recession. The primary exception was for immigrant population in small metropolitan areas. The reason that this was the case was likely to a less severe recession in these areas, and to an immigrant population that had become more mature. Households living in

metropolitan areas which experienced higher rates of delinquency and higher unemployment rates were less likely to own a home, signifying the importance of the weakness in the job and housing market.

One of the biggest changes in the housing market that this analysis did not explicitly model is the change in mobility. There was a clear reduction in mobility rates across the country. This reduction was larger for immigrants that native born households, but the reduction for immigrants was likely partially due to the lack of new foreign migration to the United States. As research has shown, recent movers are less likely to own (Painter, 2000). This might suggest that as people begin to move and leave their homes, homeownership rates may fall further.

Another avenue for future research would be to explore how changes in particular segments of the job market have impacted the location choice and housing outcomes of immigrants. Because immigrants tend to concentrate in particular industries, we would expect them to be more adversely impacted when their employment is concentrated in the sectors like construction that were most devastated in the current recession. At the same time, immigrants are more geographically mobile if they do not have strong ties to particular areas, and may therefore move when the job market conditions change.

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Table 1. Percent Moved in the Last Year by Geography and Immigrant Status, 2006 and 2009

	2006	2009	Differences
Native Born Households			
The U.S.	16.8	15.8	-1.0
The Three Areas	16.5	15.4	-1.1
Established Gateways	13.7	13.3	-0.4
Emerging Gateways	17.5	16.2	-1.3
Small Metros	17.6	16.1	-1.5
Immigrants			
The U.S.	19.9	16.7	-3.3
The Three Areas	19.3	16.2	-3.1
Established Gateways	16.4	13.7	-2.7
Emerging Gateways	23.2	19.7	-3.4
Small Metros	22.2	18.1	-4.2

Source: 2000 Decennial Census Public Use Microdata Sample, 2006 and 2009 ACS data and based on authors' calculation

Note: The native-born household sample includes only non-Hispanic Whites and Blacks, while the immigrant sample is limited to Asian and Latino Immigrants.

Table 2. Percent Changes in Population, 2000-2006 and 2006-2009

	2000-2006	2006-2009
The Native-born		
The Three Areas	4.0	1.4
Established Gateways	-1.0	0.2
Emerging Gateways	6.5	2.0
Small Metros	5.6	1.6
Immigrants		
The Three Areas	23.8	1.7
Established Gateways	13.3	0.0
Emerging Gateways	43.8	3.9
Small Metros	35.8	3.6

Source: 2000 Decennial Census Public Use Microdata Sample, 2006 and 2009 ACS data and based on authors' calculation

Note: The native-born household sample includes only non-Hispanic Whites and Blacks, while the immigrant sample is limited to Asian and Latino Immigrants.

Table 3. Homeownership Rates by Geography and Immigrant Status, 2000-2009

	2000	2006	2009	Diff. 00-06	Diff. 06-09
Native Born Households					
The U.S.	66.7	67.9	64.5	1.1	-3.4
The Three Areas	64.5	66.7	64.5	2.2	-2.2
Established Gateways	59.9	62.8	60.3	2.9	-2.5
Emerging Gateways	65.1	67.6	65.4	2.5	-2.2
Small Metros	67.4	68.7	66.5	1.3	-2.2
Immigrants					
The U.S.	44.5	49.8	48.9	5.3	-1.0
The Three Areas	44.1	50.0	48.8	5.9	-1.2
Established Gateways	42.5	47.7	46.0	5.2	-1.7
Emerging Gateways	46.0	53.3	51.8	7.3	-1.5
Small Metros	47.8	52.6	53.3	4.8	0.7

Source: 2000 Decennial Census Public Use Microdata Sample, 2006 and 2009 ACS data and based on authors' calculation

Note: The native-born household sample includes only non-Hispanic Whites and Blacks, while the immigrant sample is limited to Asian and Latino Immigrants.

Table 4. Homeownership Rates by Geography and Immigrant Group, 2000-2009

	2000	2006	2009	Diff. 00-06	Diff. 06-09
Asian Immigrants					
The U.S.	51.5	59.0	58.7	7.5	-0.3
The Three Areas	52.3	59.8	59.4	7.5	-0.5
Established Gateways	51.7	56.9	56.8	5.1	-0.1
Emerging Gateways	54.3	64.8	63.4	10.4	-1.3
Small Metros	51.0	61.5	60.9	10.5	-0.5
Latino Immigrants					
The U.S.	40.7	45.1	43.5	4.4	-1.6
The Three Areas	39.5	44.8	43.1	5.3	-1.7
Established Gateways	37.6	42.7	40.0	5.1	-2.7
Emerging Gateways	41.0	47.1	45.4	6.1	-1.6
Small Metros	45.9	48.2	49.4	2.3	1.2

Source: 2000 Decennial Census Public Use Microdata Sample, 2006 and 2009 ACS data and based on authors' calculation

Table 5. Headship Rates by Geography and Immigrant Status, 2000-2009

	2000	2006	2009	Diff. 00-06	Diff. 06-09
Native Born Households					
The U.S.	48.0	47.4	46.8	-0.5	-0.6
The Three Areas	48.2	47.3	46.3	-0.9	-1.0
Established Gateways	47.6	46.0	44.9	-1.6	-1.1
Emerging Gateways	48.8	47.5	46.4	-1.3	-1.1
Small Metros	48.3	48.1	47.3	-0.2	-0.8
Immigrants					
The U.S.	38.3	40.3	40.2	1.9	-0.1
The Three Areas	38.2	40.0	40.0	1.8	0.0
Established Gateways	37.9	39.7	39.6	1.8	-0.1
Emerging Gateways	38.5	40.0	40.2	1.6	0.1
Small Metros	38.7	41.1	41.0	2.4	0.0

Source: 2000 Decennial Census Public Use Microdata Sample, 2006 and 2009 ACS data and based on authors' calculation

Note: The native-born household sample includes only non-Hispanic Whites and Blacks, while the immigrant sample is limited to Asian and Latino Immigrants.

Table 6. Headship Rates by Geography and Immigrant Group, 2000-2009

	2000	2006	2009	Diff. 00-06	Diff. 06-09
Asian Immigrants					
The U.S.	40.3	41.9	41.9	1.6	0.0
The Three Areas	40.1	41.5	41.6	1.4	0.2
Established Gateways	39.6	41.0	41.4	1.4	0.4
Emerging Gateways	41.1	42.2	42.3	1.1	0.1
Small Metros	40.4	42.2	41.3	1.9	-0.9
Latino Immigrants					
The U.S.	37.4	39.5	39.3	2.1	-0.2
The Three Areas	37.2	39.3	39.1	2.1	-0.1
Established Gateways	37.1	39.0	38.6	2.0	-0.4
Emerging Gateways	37.0	39.0	39.1	1.9	0.1
Small Metros	37.8	40.6	40.9	2.8	0.3

Source: 2000 Decennial Census Public Use Microdata Sample, 2006 and 2009 ACS data and based on authors' calculation

Table 7. Probit Estimates of Homeownership, 2009

	Full Sample		Established Gateways		Emerging Gateways		Small Metros	
Number of obs =	41,747,206		13,222,272		13,974,290		14,549,876	
Pseudo R2 =	0.303		0.293		0.300		0.315	
Variables	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.
Race and Immigrant Status (Omitted: Non-Hispanic Whites)								
Blacks	-0.242 ***	0.000	-0.266 ***	0.000	-0.203 ***	0.000	-0.223 ***	0.000
Asian Immigrants	-0.356 ***	0.001	-0.294 ***	0.001	-0.331 ***	0.001	-0.345 ***	0.001
Latino Immigrants	-0.414 ***	0.001	-0.402 ***	0.001	-0.366 ***	0.001	-0.308 ***	0.001
Immigrant Status (Omitted: Come To U.S. in the Past 10 Yrs.)								
Came To U.S 10-19 Years Ago	0.203 ***	0.000	0.212 ***	0.001	0.211 ***	0.001	0.187 ***	0.001
Came To U.S 20+ Years Ago	0.265 ***	0.000	0.313 ***	0.001	0.251 ***	0.000	0.231 ***	0.001
Metropolitan Status (Omitted: Established Gateways)								
Emerging Gateways	-0.020 ***	0.000						
Small Metros	-0.008 ***	0.000						
Immigrants in Emerging Gateways	0.054 ***	0.000						
Immigrants in Small Metros	0.075 ***	0.001						
Moved in the Last Year (Omitted: Those Who Did Not Move)								
Moved within the Metros	-0.361 ***	0.000	-0.316 ***	0.001	-0.380 ***	0.000	-0.369 ***	0.000
Moved from Traditional Gateways	-0.362 ***	0.001	-0.298 ***	0.001	-0.451 ***	0.002	-0.425 ***	0.002
Moved from Emerging Gateways	-0.433 ***	0.001	-0.435 ***	0.001	-0.405 ***	0.001	-0.476 ***	0.002
Moved from Small Metros	-0.214 ***	0.010	-0.060 **	0.021	-0.080 ***	0.011	-0.104 ***	0.013
Moved from Other Places	-0.447 ***	0.000	-0.438 ***	0.001	-0.449 ***	0.001	-0.455 ***	0.001
Moved from Foreign Countries	-0.313 ***	0.001	-0.311 ***	0.002	-0.301 ***	0.002	-0.314 ***	0.002
Housing Price and Rent								
The 25th Percentile Housing Price (log)	-0.167 ***	0.000	-0.415 ***	0.001	-0.051 ***	0.001	-0.044 ***	0.001
Puma Median Rent (log)	0.319 ***	0.001	0.769 ***	0.002	-0.008 ***	0.002	0.056 ***	0.002
Changes 2006-2009								
Mortgage Delinquency Rates	-0.017 ***	0.000	-0.058 ***	0.001	-0.001 **	0.000	-0.018 ***	0.000
Unemployment Rates by Metropolitan Areas	-0.012 ***	0.000	-0.026 ***	0.002	-0.018 ***	0.001	0.002 ***	0.000
Socioeconomic Characteristics	X		X		X		X	
Metropolitan level fixed effects	X		X		X		X	

*p < .05; **p < .01; ***p < .001

Notes: Other control variables include age, marital status, number of workers in household, children at home, household income, educational attainment, and English proficiency.

Table 8. Probit Estimates of Homeownership, 2006

	Full Sample		Established Gateways		Emerging Gateways		Small Metros	
Number of obs =	41,812,201		13,421,544		13,925,689		14,464,968	
Pseudo R2 =	0.280		0.259		0.283		0.295	
Variables	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.
Race and Immigrant Status (Omitted: Non-Hispanic Whites)								
Blacks	-0.237 ***	0.000	-0.290 ***	0.000	-0.213 ***	0.000	-0.216 ***	0.000
Asian Immigrants	-0.356 ***	0.001	-0.316 ***	0.001	-0.306 ***	0.001	-0.342 ***	0.001
Latino Immigrants	-0.393 ***	0.001	-0.391 ***	0.001	-0.329 ***	0.001	-0.331 ***	0.001
Immigrant Status (Omitted: Come To U.S. in the Past 10 Yrs.)								
Came To U.S 10-19 Years Ago	0.180 ***	0.000	0.176 ***	0.001	0.191 ***	0.001	0.185 ***	0.001
Came To U.S 20+ Years Ago	0.238 ***	0.000	0.265 ***	0.001	0.237 ***	0.000	0.218 ***	0.000
Metropolitan Status (Omitted: Established Gateways)								
Emerging Gateways	-0.021 ***	0.000						
Small Metros	-0.051 ***	0.000						
Immigrants in Emerging Gateways	0.075 ***	0.000						
Immigrants in Small Metros	0.071 ***	0.001						
Moved in the Last Year (Omitted: Those Who Did Not Move)								
Moved from Foreign Countries	-0.344 ***	0.001	-0.298 ***	0.002	-0.349 ***	0.002	-0.376 ***	0.002
Moved from Traditional Gateways	-0.230 ***	0.001	-0.166 ***	0.001	-0.304 ***	0.001	-0.265 ***	0.002
Moved from Emerging Gateways	-0.356 ***	0.001	-0.368 ***	0.002	-0.336 ***	0.001	-0.376 ***	0.002
Moved from Small Metros	-0.387 ***	0.009	-0.142 ***	0.014	-0.549 ***	0.023	-0.601 ***	0.009
Moved within the Metros	-0.276 ***	0.000	-0.223 ***	0.001	-0.282 ***	0.000	-0.301 ***	0.000
Moved from Other Places	-0.415 ***	0.000	-0.367 ***	0.001	-0.431 ***	0.001	-0.422 ***	0.001
Housing Price and Rent								
The 25th Percentile Housing Price (log)	-0.050 ***	0.000	-0.619 ***	0.006	-0.047 ***	0.001	-0.003 ***	0.001
Puma Median Rent (log)	0.031 ***	0.002	2.201 ***	0.024	-0.020 ***	0.003	-0.026 ***	0.002
Changes 2003-2006								
Mortgage Delinquency Rates	0.001 ***	0.000	0.013 ***	0.000	-0.001 ***	0.000	0.000 ***	0.000
Unemployment Rates by Metropolitan Areas	0.012 ***	0.000	-0.060 ***	0.001	0.032 ***	0.000	0.011 ***	0.000
Socioeconomic Characteristics	X		X		X		X	
Metropolitan level fixed effects	X		X		X		X	

*p < .05; **p < .01; ***p < .001

Notes: Other control variables include age, marital status, number of workers in household, children at home, household income, educational attainment, and English proficiency.

Table 9. Probit Estimates of Homeownership by Immigrant Groups, 2006 and 2009

	2006				2009			
	Latino Immigrants		Asian Immigrants		Latino Immigrants		Asian Immigrants	
Number of obs =	4,809,761		2,555,876		4,853,611		2,638,661	
Pseudo R2 =	0.209		0.246		0.251		0.265	
Variables	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.
Immigrant Status (Omitted: Come To U.S. in the Past 10 Yrs.)								
Came To U.S 10-19 Years Ago	0.211 ***	0.001	0.234 ***	0.001	0.203 ***	0.001	0.283 ***	0.001
Came To U.S 20+ Years Ago	0.332 ***	0.001	0.355 ***	0.001	0.322 ***	0.001	0.390 ***	0.001
Metropolitan Status (Omitted: Established Gateways)								
Emerging Gateways	0.038 ***	0.001	0.047 ***	0.001	0.018 ***	0.001	0.005 ***	0.001
Small Metros	-0.047 ***	0.001	-0.025 ***	0.002	0.048 ***	0.001	-0.011 ***	0.002
Moved in the Last Year (Omitted: Those Who Did Not Move)								
Moved from Foreign Countries	-0.246 ***	0.002	-0.455 ***	0.002	-0.251 ***	0.002	-0.414 ***	0.002
Moved from Traditional Gateways	-0.055 ***	0.002	-0.214 ***	0.002	-0.240 ***	0.002	-0.349 ***	0.002
Moved from Emerging Gateways	-0.215 ***	0.003	-0.362 ***	0.003	-0.288 ***	0.002	-0.373 ***	0.003
Moved from Small Metros	-0.123 ***	0.001	-0.423 ***	0.027	-0.299 ***	0.001	0.347 ***	0.005
Moved within the Metros	-0.156 ***	0.001	-0.183 ***	0.001	-0.190 ***	0.000	-0.256 ***	0.001
Moved from Other Places	-0.193 ***	0.001	-0.399 ***	0.002	-0.294 ***	0.001	-0.416 ***	0.002
Housing Price and Rent								
The 25th Percentile Housing Price (log)	-0.099 ***	0.001	-0.034 ***	0.002	-0.319 ***	0.001	-0.192 ***	0.002
Puma Median Rent (log)	0.006	0.006	0.004	0.009	0.399 ***	0.003	0.336 ***	0.004
Immigrant Presence at the Metro Level								
Percent in the U.S. for More than 10 Years	0.529 ***	0.005	-0.002	0.011	0.261 ***	0.005	0.237 ***	0.011
Percent Networkers**	-0.097 ***	0.021	0.362 ***	0.022	1.075 ***	0.018	0.357 ***	0.022
Changes 2003-2006 (2006) or 2006-2009 (2009)								
Mortgage Delinquency Rates	-0.010 ***	0.000	-0.001 **	0.000	-0.002 ***	0.001	-0.019 ***	0.001
Unemployment Rates by Metropolitan Areas	0.040 ***	0.001	-0.023 ***	0.001	-0.008 ***	0.001	0.004 *	0.002
Socioeconomic Characteristics	X		X		X		X	
Metropolitan level fixed effects	X		X		X		X	

*p < .05; **p < .01; ***p < .001

** percent who speak english well or speak Englishly very wellAND not linguistically isolated.

Notes: Other control variables include age, marital status, number of workers in household, children at home, household income, educational attainment, and English proficiency.

Table 10. Probit Estimates of Headship, 2009

	Full Sample		Established Gateways		Emerging Gateways		Small Metros	
Number of obs =	92,798,794		30,684,777		30,860,180		31,253,837	
Pseudo R2 =	0.135		0.136		0.136		0.137	
Variables	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.
Race and Immigrant Status (Omitted: Non-Hispanic Whites)								
Blacks	0.051 ***	0.000	0.042 ***	0.000	0.049 ***	0.000	0.064 ***	0.000
Asian Immigrants	-0.088 ***	0.000	-0.082 ***	0.001	-0.087 ***	0.001	-0.086 ***	0.001
Latino Immigrants	-0.022 ***	0.000	-0.034 ***	0.001	-0.005 ***	0.001	0.013 ***	0.001
Immigrant Status (Omitted: Come To U.S. in the Past 10 Yrs.)								
Came To U.S 10-19 Years Ago	0.059 ***	0.000	0.049 ***	0.000	0.070 ***	0.001	0.046 ***	0.001
Came To U.S 20+ Years Ago	0.089 ***	0.000	0.074 ***	0.000	0.084 ***	0.001	0.085 ***	0.001
Metropolitan Status (Omitted: Established Gateways)								
Emerging Gateways	0.012 ***	0.000						
Small Metros	0.024 ***	0.000						
Immigrants in Emerging Gateways	0.015 ***	0.000						
Immigrants in Small Metros	0.002 ***	0.000						
Moved in the Last Year (Omitted: Those Who Did Not Move)								
Moved from Foreign Countries	-0.014 ***	0.001	-0.038 ***	0.001	-0.033 ***	0.001	0.039 ***	0.001
Moved from Traditional Gateways	0.043 ***	0.001	0.066 ***	0.001	0.032 ***	0.001	0.020 ***	0.001
Moved from Emerging Gateways	0.043 ***	0.001	0.059 ***	0.001	0.047 ***	0.001	0.019 ***	0.001
Moved from Small Metros	0.096 ***	0.006	0.050 ***	0.001	0.049 ***	0.001	0.060 ***	0.001
Moved within the Metros	0.079 ***	0.000	0.077 ***	0.012	0.164 ***	0.012	0.095 ***	0.009
Moved from Other Places	0.058 ***	0.000	0.086 ***	0.000	0.067 ***	0.000	0.081 ***	0.000
Housing Price and Rent								
The 25th Percentile Housing Price (log)	0.013 ***	0.000	0.035 ***	0.000	-0.002 **	0.001	0.002 ***	0.000
Puma Median Rent (log)	-0.121 ***	0.001	-0.165 ***	0.001	-0.111 ***	0.002	-0.069 ***	0.001
Changes 2006-2009								
Mortgage Delinquency Rates	0.000 ***	0.000	-0.001 ***	0.000	-0.001 ***	0.000	0.000 ***	0.000
Unemployment Rates by Metropolitan Areas	-0.001 ***	0.000	0.013 ***	0.000	0.002 ***	0.000	-0.005 ***	0.000
Socioeconomic Characteristics	X		X		X		X	
Metropolitan level fixed effects	X		X		X		X	

*p < .05; **p < .01; ***p < .001

Notes: Other control variables include age, marital status, number of workers in household, children at home, household income, educational attainment, and English proficiency.

Table 11. Probit Estimates of Headship by Immigrant Groups, 2006 and 2009

	2006				2009			
	Latino Immigrants		Asian Immigrants		Latino Immigrants		Asian Immigrants	
Number of obs =	12,275,454		6,166,073		12,425,263		6,336,965	
Pseudo R2 =	0.097		0.096		0.094		0.096	
Variables	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.	dF/dx	Std. Err.
Immigrant Status (Omitted: Come To U.S. in the Past 10 Yrs.)								
Came To U.S 10-19 Years Ago	0.061 ***	0.000	0.012 ***	0.001	0.065 ***	0.000	0.014 ***	0.001
Came To U.S 20+ Years Ago	0.093 ***	0.000	0.034 ***	0.001	0.106 ***	0.000	0.047 ***	0.001
Metropolitan Status (Omitted: Established Gateways)								
Emerging Gateways	0.008 ***	0.001	0.010 ***	0.001	0.006 ***	0.001	0.016 ***	0.001
Small Metros	0.015 ***	0.001	0.012 ***	0.001	-0.009 ***	0.001	0.005 ***	0.001
Moved in the Last Year (Omitted: Those Who Did Not Move)								
Moved from Foreign Countries	-0.102 ***	0.001	-0.015 ***	0.001	-0.100 ***	0.001	-0.044 ***	0.001
Moved from Traditional Gateways	-0.001	0.001	0.087 ***	0.001	-0.014 ***	0.002	0.090 ***	0.002
Moved from Emerging Gateways	0.034 ***	0.002	0.098 ***	0.002	-0.023 ***	0.002	0.072 ***	0.002
Moved from Small Metros	0.269 ***	0.018	-0.056 **	0.017	0.031 *	0.015	0.461 ***	0.010
Moved within the Metros	0.041 ***	0.000	0.078 ***	0.001	0.047 ***	0.000	0.078 ***	0.001
Moved from Other Places	0.045 ***	0.001	0.098 ***	0.002	0.020 ***	0.001	0.102 ***	0.002
Housing Price and Rent								
The 25th Percentile Housing Price (log)	-0.007 ***	0.001	0.019 ***	0.001	0.010 ***	0.001	0.039 ***	0.001
Puma Median Rent (log)	-0.117 ***	0.003	-0.115 ***	0.005	-0.161 ***	0.002	-0.176 ***	0.002
Immigrant Presence at the Metro Level								
Percent in the U.S. for More than 10 Years	0.071 ***	0.003	-0.030 ***	0.006	-0.087 ***	0.004	-0.043 ***	0.006
Percent Networkers**	-0.053 ***	0.012	-0.133 ***	0.013	-0.261 ***	0.011	-0.163 ***	0.013
Changes 2003-2006 (2006) or 2006-2009 (2009)								
Mortgage Delinquency Rates	0.000 ***	0.000	0.000	0.000	-0.001 ***	0.000	0.000 ***	0.000
Unemployment Rates by Metropolitan Areas	0.008 ***	0.000	0.002 ***	0.000	0.003 ***	0.000	0.002 ***	0.000
Socioeconomic Characteristics	X		X		X		X	
Metropolitan level fixed effects	X		X		X		X	

*p < .05; **p < .01; ***p < .001

** percent who speak english well or speak Englishly very wellAND not linguistically isolated.

Notes: Other control variables include age, marital status, number of workers in household, children at home, household income, educational attainment, and English proficiency.

Table 12. The Distribution of Immigrant Population

	Percent Immigrant	Percent new Immigrant	Of the Immigrants, the percent new
2000			
The Three Areas	20.7	8.5	41.3
Traditional Gateways	33.4	12.8	38.2
Emerging Gateways	16.6	7.8	47.4
Small Metros	9.4	4.1	44.0
2006			
The Three Areas	22.5	8.6	38.0
Traditional Gateways	34.3	11.5	33.4
Emerging Gateways	19.9	8.9	44.9
Small Metros	11.2	4.7	41.7
2009			
The Three Areas	22.3	7.8	35.1
Traditional Gateways	33.9	10.5	31.1
Emerging Gateways	20.1	8.1	40.2
Small Metros	11.4	4.5	39.2

Source: 2000 Decennial Census Public Use Microdata Sample, 2006 and 2009 ACS data and based on authors' calculation