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## Who has housing affordability problems? Disparities in Housing Cost burden by Race, Nativity and Legal Status in Los Angeles

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### Abstract

Housing costs are a substantial component of U.S. household expenditures. Those who allocate a large proportion of their income to housing often have to make difficult financial decisions with significant short-term and long-term implications for adults and children. This study employs cross-sectional data from the first wave of the Los Angeles Family and Neighborhood Survey (L.A.FANS) collected between 2000 and 2002 to examine the most common U.S. standard of housing affordability, the likelihood of spending thirty percent or more of income on shelter costs. Multivariate analyses of a low-income sample of U.S. born Latinos, Whites, African Americans, authorized Latino immigrants and unauthorized Latino immigrants focus on baseline and persistent differences in the likelihood of being cost burdened by race, nativity and legal status. Nearly half or more of each group of low-income respondents experience housing affordability problems. The results suggest that immigrants' legal status is the primary source of disparities among those examined, with the multivariate analyses revealing large and persistent disparities for unauthorized Latino immigrants relative to most other groups. Moreover, the higher odds of housing cost burden observed for unauthorized immigrants compared with their authorized immigrant counterparts remains substantial, accounting for traditional indicators of immigrant assimilation. These results are consistent with emerging scholarship regarding the role of legal status in shaping immigrant outcomes in the United States.

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Housing is the largest annual expenditure for households in the United States (Bureau of Labor Statistics 2009). Housing affordability is traditionally measured using a ratio of housing costs to income, with those spending more than thirty percent of income on housing costs considered to be housing cost burdened (e.g., Jewkes and Delgadillo 2010). This allocation of income to shelter expenditures has become increasingly widespread in recent years. For example, thirty percent of all U.S. households were cost burdened in 2001, rising to thirty-six percent by 2009 (Joint Center for Housing Studies 2011). Although households at any income level may be cost burdened, it is far more prevalent among those earning lower incomes. For example, in 2001, sixty-eight percent of U.S. households in the lowest income quartile were cost burdened compared with less than six percent in the top income quartile (Joint Center for Housing Studies 2011). Cost-burdened households often have to spend less money on food, health care, insurance/pensions, and savings than those who are not cost burdened (Lipman 2005; Joint Center for Housing Studies 2012). There are also significant links between housing affordability problems and health and educational outcomes for children (Brennan 2011; Cohen 2011).

Descriptive data indicate that housing affordability problems in the United States vary by race/ethnicity, nativity, and citizenship. For instance, Black and Latino-headed households are more likely to be cost burdened than those headed by Non-Hispanic Whites (hereafter,

Whites) (Owens and Tegeler 2007).<sup>1</sup> Immigrants are more likely than natives to dedicate a higher proportion of income to housing costs (Lipman 2003). Citizenship also appears to be linked with housing affordability problems. For example, in Los Angeles, noncitizen immigrants are more likely to report being unable to pay shelter costs than naturalized citizen immigrants (Capps, Ku et al. 2002).

The U.S. social, economic, and political context in recent decades suggests that whether immigrants have legal permission to live in the country is an increasingly significant factor impacting their lives. Immigrants with this authorization include naturalized citizens, legal permanent residents, and non-citizen immigrants with valid visa; unauthorized immigrants do not have this permission.<sup>2</sup> There is more state-level legislation focused on immigrants in the latter half of the 2000s compared with earlier years, often directed towards the unauthorized immigrant population rather than the non-citizen immigrant population (Chavez and Provine 2009; National Conference of State Legislatures 2011). Legislation targeting unauthorized immigrants is particularly relevant to Mexican and other Latin American immigrants, as they are estimated to comprise the majority of unauthorized immigrants in the U.S. (Passel 2006). A growing body of research emphasizes how unauthorized legal status negatively affects shapes the experiences of contemporary Mexican and Central American migrants in the United States (e.g., Abrego 2006; Chavez 1992; Espenshade 1995; Gonzalez 2011; Gonzalez and Chavez 2012; Menjívar 2006; Massey and Bartley 2005; Massey and Pren 2012).<sup>3</sup>

Housing cost burden is a fruitful area for examining how legal status is connected with immigrant outcomes in the United States.<sup>4</sup> Legal permission to reside in the United States is connected with access to housing, housing costs, and income. For instance, dozens of communities have passed ordinances that impact the housing options of unauthorized immigrants, such as fining landlords who rent properties to unauthorized immigrants (Oliveri 2009; Bender 2010). Low-income naturalized citizens and eligible non-citizens (e.g., permanent residents) are eligible for federal housing vouchers to subsidize rents; unauthorized immigrants are ineligible for housing assistance (Basolo and Nguyen 2009). Income and immigrants' legal status also are connected. For example, unauthorized Mexican immigrants earn lower incomes than their authorized Mexican immigrant counterparts, net of other factors (e.g., Hall, Greenman et al. 2010). Such simultaneous constraints on access to housing, housing costs, and income suggest that there are likely important intra-immigrant disparities in the incidence of housing cost burden based on legal status. Indeed, one study reports that undocumented immigrants in Los Angeles are the most likely to report difficulties in paying for housing or having to move in with others because of housing costs, relative to naturalized citizens, legal permanent residents, refugees and other legally present immigrant families (Capps, Ku et al. 2002). Some research has explored the housing outcomes of unauthorized immigrants (e.g., Chavez 1990; Capps, Ku et al. 2002; McConnell and Marcelli 2007; McConnell 2012; Standish, Nandi et al. 2010). However, to date, no study has carried out multivariate analyses of housing cost burden that explicitly contrast immigrants by authorization to be in the United States.

<sup>1</sup>In this study, Latinos are an ethnic group that can be of any race; Whites and Blacks/African Americans refer to those who are not Hispanic. Differences between these three groups are referred to as race/racial differences.

<sup>2</sup>This definition of unauthorized immigrants follows the "unauthorized residents" terminology used by the U.S. Department of Homeland Security (Hoefer, Rytina, et al. 2012).

<sup>3</sup>See Donato and Armenta (2011) for a recent literature review of unauthorized migration.

<sup>4</sup>This study treats immigrants' legal status as a characteristic of individuals, but recognizes that legality/illegality and authorized/unauthorized are complicated, transitory, and socially constructed concepts based on immigration policy and actions of the U.S. state (e.g., De Genova 2004; Menjívar 2011).

The present study focuses on whether there are race, nativity, and legal status differences in housing cost burden, the most common standard of housing affordability (Jewkes and Delgadillo 2010). The data used to investigate these relationships come from the first wave of the Los Angeles Family and Neighborhood Survey (L.A.FANS) collected between April 2000 and January 2002 in Los Angeles County. The study concentrates on the three largest U.S. groups in the country: Whites, African Americans, and Latinos (U.S. Census Bureau). Latinos surveyed in L.A.FANS are primarily of Mexican origin or ancestry (Peterson, Sastry, et al. 2004), as is true for Los Angeles County and the nation as a whole (U.S. Census Bureau). Analyses examine whether there are initial and residual differences by race among U.S. born Whites, Latinos, and African Americans, by nativity between U.S. and foreign-born Latinos, and by legal status between authorized and unauthorized Latino immigrants.<sup>5</sup>

One critique of housing cost burden as a standard of housing affordability is that it does not differentiate between those who have sufficient income to meet household needs after shelter expenditures and those who do not (e.g., Stone 2006). Another critique is that spending a large proportion of income on housing does not necessarily reflect a housing affordability problem. For higher-income households, spending thirty percent of income on housing may be a deliberate decision based on preferences for more spacious and higher-quality housing (Kutty 2005). On the other hand, for lower-income households, spending thirty percent or more of income on housing likely represents an involuntary allocation of what are already limited economic resources. The present analyses focus on lower-income respondents, which make it more likely that spending thirty percent or more of income on housing represents a “true” housing affordability problem that constrains other non-housing expenditures. An additional benefit of this approach is that it offers more conservative contrast between groups, such as between unauthorized Latino immigrants—nearly all of whom are low income—and their authorized immigrant counterparts, who generally display more income variability.

It is important to understand more about the housing affordability challenges that natives and immigrants encounter, as they have widespread implications for adults and children alike. For instance, the connection between housing affordability problems and child outcomes (Brennan 2011; Cohen 2011) is particularly relevant for immigrants. Indeed, forty percent of authorized immigrants and nearly fifty percent of unauthorized immigrants in the United States are estimated to live with minor children (Taylor, Lopez et al. 2011). This study also makes empirical contributions to several literatures. For example, the disaggregation of Latinos by nativity and legal status advances previous scholarship exploring how legal presence in the country affects the lives of U.S. immigrants and their children. The focus on housing cost burden builds on the small number of housing studies that explicitly considering differences between authorized and unauthorized immigrants. Finally, the simultaneous investigation of whether race, nativity, and legal status are linked with housing cost burden offers insights about contemporary social stratification, particularly immigrants’ legal status as a source of inequality in the United States.

## Context

Los Angeles County is an important site to consider these issues. Housing affordability is especially problematic in Los Angeles (Los Angeles Housing Crisis Task Force 2000; Brennan and Lipman 2008), particularly for low-income earners. Two adults sharing a

<sup>5</sup>Although this study focuses on nativity and legal status differences among Latinos, other sources of intra-Latino heterogeneity include country of origin/descent, skin tone, social class, and location in the United States (e.g., Espino and Franz 2002; Rodriguez, Sáenz, et al., 2008; Telles and Ortiz 2008; Frank, Akresh, et al. 2010).

household and working full time at the California minimum wage in 2001 (\$6.25 per hour) would gross approximately \$2,000 a month before taxes. Given the 30 percent rule of thumb regarding the housing cost to income ratio, they would be cost burdened if they spent more than \$600 of pre-tax income on monthly housing costs. Yet, in 2000, monthly median rent in Los Angeles County topped \$700 (U.S. Census Bureau). Indeed, high housing costs help explain why more than half of earners in this income bracket (\$20,000–34,999) in Los Angeles County spent more than 30 percent of household income on rent (U.S. Census Bureau). Although housing is costly in Los Angeles, with higher median rents and home prices than in many U.S. urban areas (Brennan and Lipman 2008), it is an ideal place to examine disparities by race, nativity, and legal status. Los Angeles County is the most populous county in the United States (Mackun and Wilson 2011). Further, Los Angeles County had the largest Latino population (Guzmán 2001), the largest foreign born population (Suchan, Perry et al. 2007) and the largest unauthorized immigrant population in the nation in 2000 (Fortuny, Capps et al. 2007).

## PRIOR RESEARCH

### Race

As noted earlier, descriptive data indicates race differences in housing cost burden. However, multivariate analyses of housing cost burden have presented inconsistent results about *which* groups are most likely to allocate more than thirty percent of income to housing, net of other variables.<sup>6</sup> For example, one national study of renters and homeowners shows that Whites are less likely to be housing cost burdened than persons of “Other races” such as Latinos, Asians, or Native Americans, but are equally likely to be cost burdened as African Americans (DeVaney, Chiremba et al. 2004). A study of New York City renters also finds that Whites are about as likely to be cost burdened as African Americans but are more likely to be cost burdened than Puerto Ricans (Elmelech 2004). Still other work reports no differences in cost burden for any race group or category (Combs and Park 1994; Oh 1995; Chi and Laquatra 1998; Luea 2008). Variations across these studies may be due to geographic location of the study, classification of groups (e.g., aggregating all non-Whites in an “other” category), and covariates included in the analyses.

The present study examines whether there are baseline and residual racial disparities among native-born Whites, Blacks, and Latinos. The study is limited to a low-income sample, which partially addresses minority groups’ lower overall incomes and purchasing power in Los Angeles compared with their White counterparts (Farley 2001). However, given the significant racial inequalities documented for housing/neighborhood outcomes in previous studies of Los Angeles (e.g., Charles 2006), I expect that U.S. born Latinos and African Americans have higher cost burdens than native Whites. Descriptive data for Los Angeles County also point to this outcome: Latino and African American homeowners spent a higher proportion of 1999 household income on owner costs (26.7 percent and 25.5 percent, respectively) than White homeowners (21.0 percent) in 2000 (U.S. Census Bureau). Thus, the results are expected to show baseline differences in the incidence of housing cost burden between these three native-born groups.

However, I expect no residual differences in the incidence of housing cost burden between Whites, Blacks, and Latinos. This expectation is partly due to the inclusion of a comprehensive set of individual, household, and contextual characteristics. Many of these characteristics vary by race (Simms, Fortuny et al. 2009) and are linked with the outcome. The focus on a low-income sample is another potential explanation for this hypothesis:

<sup>6</sup>See Krivo (1995) and Charles (2006) for studies examining absolute housing costs and Stone (1993, 2006), Kutty (2005) and McConnell (2012) for studies examining less-common standards of housing affordability.

multivariate analyses failing to find variation in housing cost burden between Whites, African Americans, and Latinos control for income (Chi and Laquatra 1998; Luea 2008). The lack of residual disparities is also expected because of the explicit contrast of native-born members of each group, which might reduce unobserved sources of heterogeneity that might otherwise be present.

### Nativity

Prior housing research yields more consistent results about differences by nativity. For example, compared with U.S. natives, immigrants are more likely to bear higher housing costs, are more likely to be cost burdened, and are more likely to report difficulty paying for housing (McArdle and Mikelson 1994; Schill, Friedman et al. 1998; Capps, Ku et al. 2002; Lipman 2003; Joint Center for Housing Studies 2008). With respect to Latinos specifically, U.S. born Latinos have more education and earn higher incomes than U.S.-born Latinos (Pew Hispanic Center 2008); which may provide Latino natives with more information and resources to find and afford housing than their foreign-born counterparts. For these reasons, I expect baseline differences by nativity, with Latino natives expected to have a lower incidence of cost burden than Latino immigrants. A second set of analyses that incorporates a full set of individual, household and contextual characteristics, including education, is expected to reduce, but not eliminate, the higher incidence of housing cost burden of Latino immigrants compared with their native Latino counterparts. This expectation of residual differences is consistent with previous work reporting unexplained disparities between immigrants and natives in housing outcomes such as homeownership rates and housing wealth, controlling for background characteristics (e.g., Krivo 1995; Myers and Lee 1998; Painter, Gabriel et al. 2001; Borjas 2002; Krivo and Kaufman 2004).

Researchers often use the classical assimilation theoretical framework to explain variation in outcomes among immigrants. Classic assimilation suggests that over time, immigrants take on the culture, behaviors, values, and language of the host society (Gordon 1964), which ultimately proves advantageous for upward mobility. Housing studies often bear out this view: as immigrants become more integrated in the United States, their demographic and housing profiles approach those of the native born (Alba and Logan 1992; Krivo 1995; Myers and Lee 1998; Alba and Nee 2003; Rosenbaum and Friedman 2007). Traditional measures of immigrant assimilation, such as years in the United States and English fluency, are linked with immigrant housing affordability. For instance, immigrants with decades of U.S. experience have a similar incidence of cost burden to natives, while more recently-arrived immigrants are more likely to be cost burdened (Elmelech 2004). Among immigrants recently becoming legal permanent residents, those with longer residence in the U.S. or better English skills have lower cost burdens than more recent arrivals or those lacking English proficiency (McConnell and Akresh 2010). In line with this work, immigrants with characteristics consistent with higher levels of assimilation to the U.S. are expected to be less likely to have housing affordability problems than their less-assimilated counterparts.

### Legal Status

Housing research with immigrants typically stratifies by citizenship rather than by legal authorization. This is because large-scale data sources, such as the American Housing Survey and the American Community Survey, can identify only whether foreign-born individuals are naturalized citizens or are not U.S. citizens. Analyses using such sources document that citizenship shapes immigrant home equity and other housing domains. For instance, citizen immigrants generally outperform non-citizen immigrants in a range of housing outcomes, such as homeownership and housing wealth (Coulson 1999; Clark 2003; Krivo and Kaufman 2004; Toussaint-Comeau and Rhine 2004). Non-citizen immigrants are

a heterogeneous group that includes legal permanent residents on the path to citizenship, refugees, migrants with temporary visas, and persons who are illegally present in the country. As such, there is likely to be substantial intra-group heterogeneity among non-citizen immigrants in terms of country/region of origin, length of U.S. residence, income, and other features relevant to housing outcomes.

In the current social, economic, and political context, it is worthwhile to consider variation among immigrants by legal status rather than citizenship. Earlier, I offered examples of constraints on unauthorized immigrants relative to their authorized immigrant counterparts: reduced housing access, housing assistance, and earnings. Such obstacles could be especially challenging in areas with high housing costs such as Los Angeles. Few studies of U.S. housing or residential mobility outcomes have been able to focus on more detailed contrasts among immigrants by legal status (e.g., Capps, Ku et al. 2002; McConnell and Marcelli 2007; Cort 2012; McConnell 2012). Although none are multivariate analyses of housing cost burden, they offer hints about how legal status may shape housing cost burden in the present work. For instance, undocumented immigrant families in Los Angeles are more likely to report difficulties in paying for their housing than families headed by naturalized citizens and other legal immigrants (Capps, Ku et al. 2002). Another study finds that, although low-income authorized and unauthorized Latino immigrants are equally likely to experience a poverty standard of living after housing expenditures, the two groups vary in characteristics that may be indirectly linked with housing cost burden, such as age, homeownership, and U.S. financial access (McConnell 2012). Moreover, non-housing research documents how immigrants lacking legal status with no path to citizenship may be permanently segmented to the bottom of the U.S. society (e.g., Chavez 1992; Menjívar 2006; Gonzales and Chavez 2012). This work supports the segmented assimilation framework, which emphasizes differentiated assimilation trajectories for immigrants and their children based on variability in the context of reception (such as immigration policies) and other factors (Portes and Zhou 1993; Portes, Fernández-Kelly et al. 2005; Zhou, Lee et al. 2008). Indeed, without options leading to citizenship, contemporary unauthorized immigrants experience insurmountable barriers to traditional avenues of upward mobility, even for those who arrived in the country as children, are English fluent, and have been in American schools for most of their lives (Abrego 2006; Gonzalez 2011).

For these reasons, unauthorized Latino immigrants are expected to be significantly more likely to have higher cost burdens than authorized Latino immigrants, in both baseline analyses and analyses with the full set of covariates. Controlling for differences in observed characteristics may reduce legal gaps between authorized and unauthorized Latino immigrants. Nevertheless, net of other factors, unauthorized Latino immigrants are expected to be more likely to allocate thirty percent or more of their income to housing costs than their authorized immigrant peers. Additional analyses are carried out with the Latino immigrant sample to incorporate indicators of assimilation. Consistent with the classic assimilation model and previous migration research outlined earlier, these immigrant-only analyses will likely confirm that indicators of assimilation help explain the incidence of housing cost burden. Yet, in line with the segmented assimilation perspective and research to date on unauthorized immigrants, exhibiting more signs of incorporation in the United States is not expected to eliminate the negative impact of lacking legal status. Thus, persistent residual differences in the odds of housing cost burden between authorized and unauthorized immigrants is expected, net of background variables and indicators of assimilation.

### Other Predictors

Previous research has outlined many factors linked with housing affordability. Stage in the life course (e.g., Elder Jr., Johnson et al. 2003) is one example. Persons in later stages of the

life course, such as households headed by older persons and married couples versus households headed by younger people or of other marital statuses, tend to allocate a lower proportion of income to housing (Oh 1995; DeVaney, Chiremba et al. 2004; Elmelech 2004; Luea 2008). Households with children tend to have higher housing costs (Charles 2006) and are more likely to be cost burdened than those without children (Elmelech 2004). More educated persons are less likely to be cost burdened than lesser-educated persons (DeVaney, Chiremba et al. 2004; Elmelech 2004); the former's higher incomes likely offset the impact of housing costs relative to those with less education. The complete set of background variables incorporated in the analyses is described in the section outlining the analytic approach.

## DATA

This study employs data from the first wave of the Los Angeles Family and Neighborhood Survey (L.A.FANS), cross-sectional data collected between April 2000 and January 2002 from about 3,000 households in Los Angeles County (Sastry and Pebley 2003). The time period occurs during the latest housing boom, which began in approximately 1999 and peaked in 2005 (Goldman, Smith et al. 2005). L.A.FANS provides recent data to examine the relationships between neighborhoods and outcomes for children and adults (Sastry, Ghosh-Dastidar et al. 2006) and have been used to investigate a variety of housing-related outcomes (e.g., Clark and Ledwith 2006; Clark and Ledwith 2007; Cort 2012; McConnell 2012). The research design of L.A.FANS called for oversampling poor and very poor census tracts, used to represent neighborhoods, and oversampling households with children. Approximately forty randomly selected households completed the survey in each of sixty-five census tracts. In-person interviews were conducted with respondents using computer assisted interviews in English and Spanish, depending on the language preferred by the respondent. L.A.FANS data are generally representative of Los Angeles (Goldman, Smith et al. 2005; Clark and Ledwith 2006). Respondents were assured of the confidentiality of their responses and the privacy protocols established to protect their identities (Pebley and Sastry 2004); these procedures likely encouraged respondents to be more forthcoming regarding nativity, authorization to reside in the United States, and other potentially sensitive topics.

The present study employs the public and restricted versions of the household roster listing demographic information about the household, the adult file, the household file, and other modules. Randomly selected adults (RSAs) selected from the roster of full-time adult household residents provided information about their education, nativity, residential history, and other data; this information is contained in the Adult file.<sup>7</sup> The household file was completed by a member of the RSA's immediate family who was the most informed about finances and includes information about income, assets, and housing characteristics. The analyses use a restricted-version of L.A.FANS data that identifies respondents' census tract of residence and is linked with the L.A. Neighborhood Services and Characteristics database (L.A.NSC), a publicly available database of census-tract level information created by L.A.FANS staff (Peterson, Pebley et al. 2007). All data files are linked so that each record includes information about the respondent and immediate family, household, and census tract. The complex sampling design of L.A. FANS is addressed in multivariate analyses with the appropriate strata and cluster option in Stata 11.

<sup>7</sup>In households with children under 18, the mother of a randomly selected child was designated the primary care giver (PCG) and completed a parent questionnaire. In most households, the PCG and the RSA were the same person (RSA/PCG) or in the same nuclear family. In other households, more than one nuclear family resided in the home, and the RSA and the PCG could be from different nuclear families and both families could have filled out the household survey depending on respondent selection criteria. See Peterson et al., (2004) for more details about respondent selection. Due to concerns about correlated errors and inadvertent double-counting of housing cost, income, and other information in households with two different nuclear families, this study excludes respondents who were in a "second" nuclear family.

The analyses are carried out with a low-income sample of respondents. The classification of respondents as low income follows the Department of Housing and Urban Development's (HUD) income limits, as these limits are used to determine eligibility for federal aid for many housing assistance programs. HUD defines "low-income" as incomes that are 80 percent or less of the median area family income, depending on family size. For example, median family income for the Los Angeles-Long Beach metropolitan statistical area in 2000 is \$52,100; low income limits range from \$29,200 for one person up to \$55,000 for families of eight or more persons.<sup>8</sup> Annual family income, total family size, and reference year for income are used with the appropriate income limits to categorize respondents and their families as low income or not low income. The analytic sample is limited in several additional ways. For example, only native-born Whites, Blacks/African Americans, and native and foreign-born Latinos are included.<sup>9</sup> The total analytic sample size is 876. The final sample size of immigrants is comparable to the numbers of immigrants in other specialized surveys collected in Los Angeles (Capps, Ku et al. 2002; McConnell and Marcelli 2007; Zhou, Lee et al. 2008).

## ANALYTIC APPROACH

Logistic regression specifications are carried out to examine the relationships between the independent variables and housing cost burden. In analyses with the pooled sample of low-income respondents, two specifications are estimated to identify the presence of initial differences and residual disparities by race, nativity, and legal status. The first specification is a baseline model estimating main effects and the second model adds the full set of covariates. Three sets of identical analyses with the pooled sample are carried out; the only change is the reference category. In the first set, the omitted group is U.S. born Whites, which allows for direct contrasts by race among natives; in the second, U.S. born Latinos is the reference group to formally compare Latinos and African Americans and to examine nativity differences from Latino immigrants; in a third, unauthorized Latino immigrants are omitted to focus on legal status differences from authorized Latino immigrants and how the omitted group compares to all others in the sample. Additional analyses are executed only with Latino immigrants: the baseline model that contrasts authorized and unauthorized immigrants, a model with the "full" set of covariates used with the pooled sample, and a third specification that adds indicators of immigrant assimilation. The goal of the immigrant-only analyses is to identify whether there are persistent differences in immigrants' housing affordability by legal status, controlling for background variables and indicators of immigrant assimilation. The complete set of variables used in the analyses are presented in Table 1.

### Dependent Variable

Housing cost burden is calculated using a ratio of housing costs to income. It is a binary variable with a value of one signifying spending 30 percent or more of income on housing and a value of zero indicating spending less than 30 percent of income on housing. Income includes salary and wages earned from employment, public assistance, and assets such as rental property, stocks and bonds. L.A.FANS collected information only about family income, that is, income earned by the RSA and RSA's immediate family (spouse/partner and/or children) rather than household income (Peterson, Sastry et al. 2004).<sup>10</sup> To the extent

<sup>8</sup>HUD income limits are calculated for metropolitan areas and for non-metropolitan counties of every state and vary by size. Income limits for each fiscal year are available at: [http://www.novoco.com/low\\_income\\_housing/facts\\_figures/income\\_limits.php](http://www.novoco.com/low_income_housing/facts_figures/income_limits.php).

<sup>9</sup>2,543 RSAs fully completed the Adult module (Peterson et al. 2004: Table 2.8). The analytic sample is substantially smaller because of the exclusion of higher-income respondents, White and Black immigrants (due to small sample size), and U.S. and foreign-born Asians and Pacific Islanders (due to small sample size and heterogeneity). Finally, the sample also excludes the few respondents who reported housing cost burdens of one hundred percent or more, based on concerns about the quality of their housing cost and/or income data.

that there are other income-earning members in the household that contribute towards housing expenditures, the housing cost burden measure could be overestimated. However, in most cases, the households appear to be comprised of nuclear families.<sup>11</sup>

L.A.FANS asked renters and owners with mortgages to provided information about the cost of rent or mortgage payments.<sup>12</sup> For renters, housing costs comprise the annual total of rent payments. The survey asked homeowners with mortgages about whether their mortgage payments include property taxes and property insurance. L.A.FANS did not ask homeowners without mortgages about their shelter costs. Therefore, some adjustments were needed for homeowners to better reflect housing costs.<sup>13</sup> L.A.FANS did not ask renters or homeowners about utility or other housing-related expenditures; therefore, like studies using other data sources (DeVaney, Chiremba et al. 2004; Luea 2008), housing costs may be underestimated.

### Independent Variables

**Race, Nativity, and Legal Status**—Native respondents are those born in the United States who identify as Latino/Hispanic/Latin American (of any race) and non-Hispanic respondents who identify as “White” or “Black/African-American.” Contrasts to assess nativity differences are most appropriate between U.S. born Latinos and Latino immigrants not born in the country or outlying areas.<sup>14</sup> Latino immigrants are further differentiated by legal status, a topic that was not directly asked in the survey. Authorized Latino immigrants are respondents born in Mexico, Central America, or other parts of Latin America who identify as a naturalized citizen, permanent resident, or reported having asylum, refugee status, temporary protected status, or a valid visa. Unauthorized Latino immigrants responded negatively to those questions or stated that they have an expired visa. This is an accepted approach for identifying unauthorized immigrants in survey research (Capps, Ku et al. 2002; Goldman, Smith et al. 2005) and shares similarities with the “residual” methodology to identify unauthorized immigrants used in federal reporting (e.g., Hoefer, Rytina et al. 2010).

**Other Predictors**—In addition to the indicators of stage in the life course (age of respondent, married, presence of children) and education noted earlier, the analyses include additional variables that previous work indicates are linked with housing cost burden. For instance, housing tenure is included because studies show that homeowners are less likely to cost burdened than renters (Chi and Laquatra 1998; DeVaney, Chiremba et al. 2004). An indirect measure of housing unit size, number of rooms in the unit, addresses differences in housing consumption that may be linked with the outcome. An indicator for receives public

<sup>10</sup>Nearly thirty percent of L.A.FAN’s respondents are missing one or more components of income (Peterson, Sastry, et al. 2004); the imputed income file is used when income data are missing.

<sup>11</sup>About ninety percent of the pooled sample live in households where the RSA or RSA/PCG is the household head, the head’s spouse/partner or the biological, step, adopted or foster children of the head.

<sup>12</sup>Imputed data for rent and mortgage payment from the imputed income file created for L.A.FANS (Bitler and Peterson 2004) were employed when housing cost data were missing.

<sup>13</sup>L.A.FANS asked homeowners about the value of their home and asked homeowners with mortgages whether the mortgage amount included taxes or property insurance. For homeowners who reported that their mortgage payment excluded one or both of these items, their housing costs were increased to reflect both their mortgage and these other items based on alternate information. For homeowners who reported that their mortgage payment does not reflect property taxes, their housing costs also include annual property taxes of 1.16 percent, the average property tax rate for Los Angeles County (Christensen and Esquivel 2010) based on the self-assessed value of their home provided to L.A.FANS. Housing costs for respondents who reported that their mortgage payments did not reflect homeowners’ insurance premiums were increased to include the average homeowners’ annual premium for California from U.S. Census Bureau data for the year that the respondent was surveyed. Finally, housing costs for homeowners without mortgages are the sum of estimated property taxes and homeowners’ insurance based on the value of their home.

<sup>14</sup>Approximately 76 percent of Latinos in the final analytic sample identify as “Mexican/Mexicano” or “Mexican American, about the same proportion of Latinos identifying as Mexican in Los Angeles County (72 percent) (U.S. Census Bureau). The remainder indicate birth/descent in countries of Central America or other Latin American countries.

assistance income is also controlled in the full model. Many public assistance programs target low-income persons, who are also likely to be cost burdened. Other work indicates that receiving public assistance is linked with a lower incidence of housing affordability problems among renters (Kutty 2005). Another variable taps into U.S. financial access; more specifically, whether respondents have a bank account. Racial/ethnic minorities and immigrants are less likely than Whites and natives to have checking and savings accounts (Osili and Paulson 2004; Hogarth, Anguelov et al. 2005; Blank and Barr 2009); and unauthorized Latino immigrants are less likely to have U.S. bank accounts than authorized Latino immigrants (McConnell 2012). Persons who are “banked” may simply have more financial resources, more access to mortgage and credit that reduce housing costs, or have more flexible options for paying for housing. A recent study of new legal immigrants finds that those with bank accounts are less likely to be cost burdened than peers lacking such access (McConnell and Akresh 2010), a relationship that may also hold for the analytic sample examined here.

Housing studies typically include contextual variables to directly address variation in the housing and economic context, such as housing costs and values (Alba and Logan 1992; Painter, Gabriel et al. 2001; Myers, Painter et al. 2005; Rosenbaum and Friedman 2007; McConnell and Akresh 2010), and those pertaining to immigrant, co-ethnic, or racial composition of the area (Elmelech 2004; Krivo and Kaufman 2004; Woldoff and Ovadia 2009). Neighborhood contexts differ significantly in Los Angeles (Charles 2006). The present analyses incorporate two census-tract level indicators to capture intra-neighborhood variation. The first, median home prices, taps into the cost of housing in the neighborhood, and the second, the concentration of recent immigrants. Following previous analyses of L.A.FANS data (e.g., Frank and Bjornstrom 2011; McConnell 2012), both contextual variables are represented as location quotients (LQs), which provides measures of relative concentration. Using 2000 census data, LQs compare the respondent's tract to the average for all census tracts in Los Angeles County. LQs range from 0 to more than 1. For example, a value of less than 1 for the LQ of median home prices indicates that a respondent lives in a census tract with a median home price in 2000 that is lower than the average home price for L.A. County in 2000; an LQ of 1 represents a census tract with the same median home price as the county average; and LQ of more than 1 means that the respondent lives in an area with higher priced homes than the county average.

Finally, the analyses carried out with the Latino immigrant sample include two domains typically used to measure immigrant assimilation: length of residence in the receiving country and language.<sup>15</sup> Latino immigrants in the analytic sample have extensive U.S. experience; with most having arrived before the mid-1980s. Consequently, length of U.S. residence is operationalized as living in the United States for fifteen years or more (arriving before the mid-1980s).<sup>16</sup> Linguistic incorporation is typically operationalized as self-reports of immigrants' proficiency in the host country's language. The L.A.FANS survey did not ask immigrant respondents about their proficiency in English; but the data do include whether respondents selected the English or Spanish version of the survey. The analyses include a binary indicator that the respondent used the English version. Although not a direct measure of English proficiency, it suggests that respondents can communicate in English and likely feel comfortable with the language.<sup>17</sup>

<sup>15</sup>Correlation analyses and multicollinearity diagnostics, not shown, indicate that these two variables are weakly associated; thus reducing concerns that including both variables in the specification biases the results.

<sup>16</sup>Ancillary analyses, not shown, indicate significant variation in this variable between authorized and unauthorized Latino immigrants. Alternative operationalizations of U.S. experience were explored, such a continuous variable for years in the United States and percent of life spent in the United States (a la Greif 2009 and McConnell 2012), neither are linked with cost burden.

## Descriptive Results

Table 2 provides weighted descriptive statistics for the pooled sample and for each of the five groups. As would be expected, low-income respondents in Los Angeles are very likely to experience housing affordability problems. Sixty percent of the pooled sample is housing cost burdened; spending thirty percent or more of income on housing. The percent of those who are cost burdened ranges from 48.3 percent of African Americans to 76.2 percent of unauthorized Latino immigrants.<sup>18</sup> Descriptive information on income and housing costs, used to construct the outcome variable, suggest that the high incidence of housing cost burden is due to low annual incomes (averaging \$19,089 for the pooled sample) coupled with relatively high yearly housing costs (\$6,526). This breakdown also highlights the constraints that housing costs impose on the non-housing expenditures on lower-income households emphasized in other research (e.g., Lipman 2005; Joint Center for Housing Studies 2012; Stone 1993, 2006).

Table 2 shows that nearly 61 percent of the analytic sample is Latino, of varying nativity/legal statuses. Respondents are likely to be renters (a 32.4 percent homeownership rate for the pooled sample), are young (about 63 percent are 44 years old or under), live without minor children, and live in fairly small housing units (mean of 3.4 rooms in the unit). Half the sample is married and less than half have a U.S. bank account. The pooled sample tends to live in neighborhoods with a higher than average concentration of recent immigrants (LQ of 1.2, where 1 is equal to the Los Angeles County average) and lower than average median home price (LQ of 0.8). Many of these characteristics, such as the low homeownership rate, low mainstream financial participation, and low neighborhood home prices, are to be expected given the sample limitation to low-income respondents. Statistical tests of differences by group, not shown, achieve significance at the .05 level for many descriptives. Characteristics varying between groups include age distribution, presence of children, receipt of public assistance income, being a homeowner, having a bank account, and having nine years or more of education. Neighborhood context differs across groups, as well. For instance, Latino immigrants live in census tracts that have significantly higher concentrations of recent immigrants than all three native groups.

This observed intra-group heterogeneity implies that housing cost burden differentially impacts low-income respondents by group. For example, nearly half of native-born Whites are over sixty years old and nearly eighty percent do not have children present; for African Americans, about thirty-one percent are over sixty and forty-five percent do not live with children. Low-income Latinos are much younger (72 percent are under forty-four years old) and less than half live without minor children. Latino immigrants, particularly those lacking legal status, have even younger age distributions (more than ninety percent are under forty-four) and the majority have minor children at home. These patterns suggest that among low-income earners, housing affordability problems among Latinos, especially immigrants, are especially likely to occur at fairly early stages of life and, consequently, to affect the daily lives of children, relative to White or Black natives.

Table 2 and related statistical tests, not shown, compare the descriptives of authorized and unauthorized Latino immigrants. Both groups are similar in annual housing costs, education level, marital status, and the presence of children. However, there is variation by immigrants' legal status in many other characteristics. For instance, authorized Latino

<sup>17</sup>L.A.FANS data include a home language variable, indicating whether the respondent and other household members speak English or Spanish. Ancillary analyses show that using survey language or home language produce nearly identical descriptive and multivariate results.

<sup>18</sup>The mean ratio of housing costs to income for the pooled sample is 38.8 percent, with unauthorized Latino immigrants having the highest allocation of income to housing, averaging 42.4 percent of income on housing costs.

immigrants earn higher incomes than unauthorized immigrants; these differences coupled with similar housing costs suggest that the incidence of housing cost burden likely varies, as well. Authorized Latino immigrants have higher rates of homeownership, financial access, and receipt of transfer income than their unauthorized immigrant counterparts. Legal status differences in these characteristics are not surprising, as they can require documentation of identity, substantial paperwork, and, in the case of transfers, proof of eligibility.<sup>19</sup> Both sets of Latino immigrants have extensive U.S. experience: about 83 percent of authorized immigrants and 93 percent of unauthorized immigrants first came to the United States fifteen or more years earlier.<sup>20</sup> The long period of U.S. residence for Latino immigrants, particularly those who are unauthorized, has been noted in other work (Taylor, Lopez et al. 2011), and makes sense for Los Angeles, a long-term destination for Mexican immigrants. Finally, Table 2 shows that only a small proportion of immigrant respondents completed the survey in English, suggesting a comfort level with/preference for Spanish over English. Statistical testing, not shown, indicates that authorized Latino immigrants are more likely to have used the English version of the survey than their unauthorized immigrant counterparts.

## Regression Results

Table 3 provides the odds ratios and robust standard errors for regression results for different reference groups: U.S. Whites (top panel), U.S. Latinos (middle panel), and unauthorized Latino immigrants (bottom panel). Column 1 is the baseline model and column 2 is the model with the full set of variables.<sup>21</sup> The focus is whether there are baseline disparities by race, nativity, and legal status in the outcome and whether such disparities remain after accounting for a comprehensive set of covariates.<sup>22</sup>

**Contrasts with White natives**—The lack of significance for the main effect of U.S. born Black in the baseline and full models indicates that African Americans are equally likely as White natives to be cost burdened (columns 1 and 2, top panel, Table 3). U.S.-born Latinos also are equally likely to be cost burdened as the reference group in both specifications. Thus, these results indicate no racial differences in the likelihood of housing affordability problems between Whites and the other two native-born groups. Although not formally comparing nativity and legal status differences, results for other main effects presented in this panel offer the first hint of important distinctions between unauthorized Latino immigrants and other groups. Unauthorized Latino immigrants are nearly three times as likely to be cost burdened as the omitted group in both regressions (odds ratio of 2.7627 and 2.5769, columns 1–2, top panel).<sup>23</sup> Authorized Latino immigrants do not have significantly different odds of housing cost burden than White natives.

**Contrasts with Latino natives**—The middle panel of Table 3 presents the parameter estimates comparing U.S. born Latinos with other groups, which allows for explicit comparisons of Latino natives with African Americans and Latino immigrants. The baseline model indicates no significant difference in the incidence of housing cost burden between

<sup>19</sup>For example, unauthorized immigrants are not eligible for most transfer/public assistance programs; but their U.S.-citizen children may be eligible for some programs. See Capps, Ku and colleagues (2002) for more information.

<sup>20</sup>Immigrant respondents surveyed in L.A.FANS generally report long-term U.S. residence; about 59 percent arrived in the United States in the 1970s or the 1980s (Peterson, Sastry, et al. 2004: 212).

<sup>21</sup>The general rule of thumb is that multicollinearity can be a serious problem when **variance inflation factors (VIF)** are 10 or higher (Menard 1995). Collinearity diagnostics for both models indicate **variance inflation factors (VIF)** below 2.6 for every variable, with a mean VIF of 2.1 for the baseline model and 1.53 for the full model.

<sup>22</sup>The specifications presented in Table 3 were carried out with a pooled sample of higher income respondents. A comparison of the main effects of interest from those specifications, not shown, with the main effects presented in Table 3 reveal that the primary conclusions drawn in this paper are robust.

<sup>23</sup>Taking the reciprocal of the odds ratio is another standard interpretation. For example, Whites have odds that are 36 percent lower than unauthorized Latino immigrants in the baseline model and 39 percent lower in the full model (top panel, Table 3).

native Latinos and Blacks. However, in the fully specified model, African Americans have 70.2 percent lower odds of being cost burdened than U.S. born Latinos (1- odds ratio of 0.2981, column 2, middle panel). Taken together, the logistic regression analyses contrasting the three native groups do not support the expectation of persistent disparities between U.S. born Whites and other natives. Among low-income respondents, Whites and African Americans are equally likely to have housing affordability problems, as are Whites and Latinos. Surprisingly, the only source of residual disparity is between non-White groups. This result suggests that low-income African American possess observed characteristics linked with higher and lower odds of housing cost burden; once these characteristics are controlled, they are less likely to be cost burdened than similarly low-income Latinos.

The middle panel of Table 3 contrasts Latino natives with Latino immigrants, which allows for formal testing about the role of nativity in shaping housing affordability among Latinos. The results do not support the hypothesis that U.S. born Latinos experience a sweeping nativity advantage relative to Latino immigrants.<sup>24</sup> For example, the main effect of authorized Latino immigrant is insignificant in both specifications, which indicates that they have similar odds of housing cost burden as native Latinos (columns 1 and 2, middle panel). The main effect of unauthorized Latino immigrants suggests that they have nearly twice the odds of being cost burdened as U.S. born Latinos in the baseline model, but it fails to reach statistical significance (odds ratio of 1.9609, p value=.08, first column). Latino natives and unauthorized Latino immigrants have equal odds of being cost burdened, controlling for the full set of variables (column 2, middle panel).

**Contrasts with Unauthorized Latino Immigrants**—The bottom panel of Table 3 presents regression results that explicitly compare Latino immigrants by legal status. Turning first to the main effect for authorized Latino immigrant, the baseline specification indicates that authorized Latino immigrants have about 58.3 percent lower odds of being cost burdened than their unauthorized counterparts (1- odds ratio of 0.4176, column 1). Controlling for variation in background variables, authorized Latino immigrants have 46.2 percent lower odds of housing cost burden than the omitted group (1- odds ratio of 0.5378, column 2, bottom panel). The small reduction in the main effect between models suggests that differences in background variables explains some, but not most, of the initial gap between authorized and unauthorized immigrants. These results support the stated hypothesis about the importance of legal status in shaping immigrant outcomes in the United States. Lacking legal status is detrimental to unauthorized immigrants relative to their authorized immigrant peers, over and above differences in observed characteristics that are linked with the outcome. Analyses presented later explore whether these disparities persist after accounting for indicators of immigrant assimilation. Finally, as could be discerned from earlier contrasts, unauthorized Latino immigrants experience residual disadvantages in the odds of housing cost burden relative to U.S. born Whites and Blacks, but not U.S. born Latinos (column 2, bottom panel).

**Other Predictors**—Table 4 presents the results of the full specification when White natives are the reference group (same specification as column 2, top panel, Table 3). The parameter estimates for the background variables are the same irrespective of which group is omitted from the specification. Table 2 indicated that many characteristics vary across groups; Table 4 confirms that many are associated with cost burden. For example, consistent with prior scholarship, respondents who are married, homeowners, or have bank accounts

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<sup>24</sup>Additional logistic regressions analyses (baseline and full model) with the pooled sample using alternative categorizations of Latinos that do not explicitly focus on nativity and legal status, such as a single indicator for Latino (versus White or Black) or three indicators for Latino ethnicity (Mexican, Central American, Other Latino) reveal that neither one is significantly associated with housing cost burden.

have lower odds of being cost burdened than their married, renting, or “unbanked” counterparts (Table 4).<sup>25</sup> Respondents who are between forty-five and fifty-nine years old, live in housing units with more rooms, or reside in neighborhoods with higher than average home prices have higher odds of housing cost burden. Residents of areas with higher than average concentrations of recent immigrants have lower odds of housing cost burden relative to those in neighborhoods with lower than average immigrant concentrations. The indicators for education and presence of children are not linked with housing cost burden, perhaps because variables such as homeownership, marital status, and age are included in the specification.<sup>26</sup> The design-based *F*-adjusted mean residual test (Archer and Lemeshow 2006) is provided for this specification.<sup>27</sup>

### Immigrant-only Analyses

Table 5 presents three logistic regression analyses with the Latino immigrant sample: a baseline model, a model with all covariates used in the earlier analyses (“Controls Model”), and a third specification that adds two indicators of immigrant assimilation (“Immigration Model”).<sup>28</sup> Several results are notable. First, the legal status gap observed in the baseline model declines slightly but remains substantial once additional independent variables are included (significant odds ratios of 0.4176 and 0.5357, respectively, first and second columns, Table 5). This pattern echoes results for the pooled sample in Table 3 (bottom panel), showing that most of the legal status “penalty” among Latino immigrants is not explained by variation in background variables. Second, the immigration model supports the hypothesis regarding the benefits of immigrant assimilation for improved housing outcomes, consistent with classic assimilation theory. Indeed, Latino immigrants with fifteen years or more U.S. experience have sixty percent lower odds of housing cost burden than more recently arriving immigrants, net of other covariates (1- odds ratio of 0.4003, column 3, Table 5). Similarly, immigrant respondents using the English version of the L.A.FANS survey have less than half the odds of being cost burdened than immigrants using the Spanish survey (odds ratio of 0.3904, column 3). Although survey language is not a direct indicator of English fluency, the results coincide with the positive impacts of linguistic incorporation on housing outcomes observed in prior research (e.g., Alba and Logan 1992; Krivo 1995; Elmelech 2004; McConnell and Akresh 2010).

A third pattern, observed from comparisons of the second and third specifications, suggests that the benefits of immigrant assimilation do not alleviate the detrimental effect of lacking legal status. Indeed, the main effect size of authorized Latino immigrant is nearly identical in the second and third models (odds ratios of 0.5357 and 0.5046, respectively, Table 5). This indicates that, only a small part of the legal status gap among low-income Latino immigrants is explained by controlling for length of residence and survey language. Unauthorized Latino immigrants, most with at least a decade of U.S. experience, are still more likely to experience housing affordability problems relative to immigrant peers with documents. Thus, for low-income unauthorized immigrants, being more “assimilated” in these domains does not yield great reductions in the likelihood of housing cost burden. This

<sup>25</sup>Estimates of the fully standardized coefficients developed by Long and Freese (2003), not shown, indicate that homeownership and marital status are especially powerful predictors of the outcome.

<sup>26</sup>Ancillary logistic regression analyses, not shown, using a continuous variable of education indicates that it is not independently associated with housing cost burden, net of covariates. Given the inclusion of Latino immigrants in the sample, operationalizing education using a binary indicator tapping into Latino immigrants’ average level of education is more useful.

<sup>27</sup>The significant *F*-adjusted mean residual goodness-of-fit statistic suggests that model lacks fit with the data ( $p=0.0165$ ). A simulation study suggests that the *F*-adjusted mean residual goodness of fit test has a higher rate of a Type I error with data comprised of small numbers of clusters (Archer, Lemeshow, and Hosmer 2007). This result may be due to the relatively few clusters, sixty-five, in the L.A.FANS data.

<sup>28</sup>Collinearity diagnostics for the immigrant-only analyses indicate VIFs of 1.0, 1.33, and 1.35 (first, second, and third columns, respectively, Table 5).

provides additional support for the hypothesis that legal status strongly shapes Latino immigrants' housing affordability, even for those exhibiting signs of immigrant assimilation. The *F*-adjusted goodness of fit test produced for the third model shows that the model fit was improved by the addition of the two assimilation variables.

## DISCUSSION AND CONCLUSION

This study focuses on the housing affordability problems experienced by low-income earners in Los Angeles County, the most populous county in the nation. Sixty percent of the analytic sample is housing cost burdened, spending thirty percent or more of their income on housing. Moreover, their low incomes and fairly high housing costs leaves them with limited economic resources, likely imposing substantial constraints on the respondents in terms of meeting other daily needs. Multivariate analyses investigate whether there are race differences in the incidence of housing cost burden among U.S.-born Whites, Latinos, and Blacks and whether there are nativity and legal status disparities among Latinos. Of these hypotheses, the empirical results provide the most support for the expectation of initial and persistent disparities by immigrants' legal status. As hypothesized, unauthorized Latino immigrants experience persistent and unexplained disadvantages vis-à-vis housing cost burden relative to authorized Latino immigrants. Additional analyses reveal that this "penalty" for unauthorized Latino immigrants persists even after controlling for indicators of immigrant assimilation, such as duration of U.S. residence. In addition, the relative consistency of the main effect size for authorized Latino immigrant across the immigrant-only analyses indicates that observed characteristics do not meaningfully reduce the higher odds for unauthorized Latino immigrants relative to their authorized immigrant counterparts. This persistent residual disadvantage for undocumented immigrants exists relative to similarly low-income native Whites and Blacks, as well.

The study also considers whether there is a nativity gap in housing affordability among Latino natives and immigrants. Prior housing scholarship noted earlier offers many examples of natives having better housing outcomes than immigrants. The present multivariate analyses reveal that, contrary to expectations, U.S. born Latinos are *not* consistently advantaged compared with their Latino immigrant counterparts. In fact, low-income Latino natives and Latino immigrants, authorized and unauthorized, have similar odds of housing cost burden in both specifications. The finding of no significant persistent and residual advantage for Latino natives compared with Latino immigrants, although contrary to expectations, is in line with recent research in Los Angeles. Indeed, a long-term study reveals that third and fourth-generation Mexican Americans in Los Angeles have experienced economic stagnation compared with first and second generations (Telles and Ortiz 2008). The uneven economic integration and downward mobility for the children and grandchildren of Mexican immigrants compared with the first generation observed in that work is consistent with the segmented assimilation perspective. Although indicators of this theoretical perspective are not tested in this work, it offers a way to interpret the results. Low-income Latino natives, particularly, may be disadvantaged in unmeasured ways relative to their similarly low-income immigrant peers, which may explain why they do not outperform Latino immigrants vis-à-vis housing cost burden.<sup>29</sup> This possibility requires further investigation.

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<sup>29</sup>Supplementary analyses with a sample including higher-income respondents (not shown) indicates that in the baseline model, U.S. born Latinos are less likely to be cost burdened than both immigrant groups. Net of the background variables used in the fully-specified model in Tables 3 and 4, U.S.born Latinos are equally likely to be housing cost burdened as authorized immigrants but less likely to cost burdened than unauthorized immigrants.

Regression results also offer little support for hypotheses about the relationship between race and housing cost burden; specifically expectations of initial differences but no residual differences between U.S. born Whites, Blacks and Latinos. Results vary by group. For example, there is neither baseline nor residual variations in the odds of housing cost burden between White and Latino natives. This indicates that prior studies of cost burden revealing no differences between these groups (Combs and Park 1994; Oh 1995; Luea 2008) also extends to low-income natives in Los Angeles. On the other hand, African Americans are significantly less likely to be cost burdened than Latino natives in the full specification. This suggests that African Americans possess characteristics that are positively (or negatively) associated with housing cost burden; controlling for background characteristics is beneficial when it comes the incidence of housing affordability relative to Latino natives. Again, additional analyses that can tap into unmeasured sources of variation between low-income Latinos and Blacks may be able to eliminate this gap.

Taken together, the results indicate that immigrants' legal status more consistently predicts housing affordability problems among low-income earners in Los Angeles than race or nativity. More than three-quarters of unauthorized Latino immigrants, including those with more than a decade of U.S. experience, allocate a large proportion of income to shelter costs. They are also more likely to be cost burdened than either White or Black natives. In the present sociopolitical climate, unauthorized immigrants continue to be excluded from paths to U.S. citizenship. Other studies document the low pay, limited occupational mobility, and challenging working conditions that many unauthorized immigrants live with in the United States (Bernhardt, Milkman et al. 2009). These realities, when coupled with high housing prices in Los Angeles, suggest that unauthorized Latino immigrants will be unlikely to attain more affordable living situations in the future, even if showing other signs of immigrant incorporation.

This is the first multivariate analyses of the role of legal status in shaping immigrants' housing cost burden in the United States. The results support the expanding academic literature documenting how legal status divides immigrants. Clearly; however, more scholarship is needed. For example, analyses in other U.S. contexts and with a wider array of Latino groups are advisable. Although Mexicans and Mexican Americans comprise the majority of Latinos in the United States, as they do in Los Angeles, distributions of specific Latino groups vary widely across the United States (Ennis, Ríos-Vargas et al. 2011). Investigations with "other" Latino groups, in more recent destinations for Latino immigrants, and for more recently-arriving immigrants might reveal different associations between housing affordability, nativity and legal status than those uncovered in the present work. Studies with larger samples of non-Mexican immigrants may reveal that lacking legal status operates differently for Mexican and non-Mexican immigrants, when it comes to housing affordability. Similarly, analyses that include more comprehensive measures of immigrant assimilation would be useful for identifying whether/how immigrant assimilation mediates the impact of legal status on housing cost burden. Recent work pointing to the heterogeneity in the experiences of "authorized" immigrants (e.g., Capps, Ku et al. 2002; Menjívar 2006; Brown 2011) suggests that scholars using larger data sources might be able to disaggregate authorized immigrants into more nuanced categories. Another direction for research is whether the race, nativity, and legal status patterns noted here extend to groups not studied, such as Asian Americans, Asian immigrants, and immigrants born in other regions of the world.

Finally, although this study provides an illuminating snapshot of the challenges of housing affordability for low-income earners in Los Angeles County, much has changed in the economic, social, and legal context in recent years. For example, there is growing housing debt, declining housing prices, and the increasing unaffordability of housing in the United

States (Joint Center for Housing Studies 2009). Consequently, housing affordability problems continue to expand to more sectors of U.S. households, with especially powerful impacts on low income households (Joint Center for Housing Studies 2012; Williams 2012). The current financial and housing crisis has particular relevance for Latinos and African Americans, given the concentration of subprime loans and foreclosures to minority borrowers and minority neighborhoods and their higher unemployment rates relative to Whites (Hinojosa Ojeda, Jacquez et al. 2009; Nelson 2010). Since 2000, local and state-level legislation increasingly focused on unauthorized immigrants (Chavez and Provine 2009). This dynamism points to the need for additional investigations of the associations between housing affordability and race, nativity, and legal status.

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**Table 1**

## Description of Variables Used in the Analyses

Variable label	Operationalization
<b>Dependent Variable</b>	
Housing Cost Burden	1 if annual housing costs are 30% or more of annual income, 0 otherwise
<b>Independent Variables</b>	
U.S. born Black	1 if respondent born in U.S. and Non-Hispanic Black, 0 otherwise
U.S. born White	1 if born in U.S. and Non-Hispanic White, 0 otherwise
U.S. born Latino	1 if born in U.S. and Latino, 0 otherwise
Authorized Latino immigrant	1 if born in Latin America, not U.S. citizen and authorized to be in country
Unauthorized Latino immigrant	1 if born in Latin America, not U.S. citizen and not authorized to be in country
Bank account	1 if family has checking, savings, or money market account, 0 otherwise
Receives public assistance	1 if family receives transfer/public assistance income
Own home	1 if home is owned, 0 otherwise
Number of rooms	Number of rooms in house/apartment excluding bathrooms and kitchen
Nine or more years of education	1 if respondent has nine years or more education,
Age between 18 and 29	1 if respondent is between 18 and 29 years of age, 0 otherwise
Age between 30 and 44	1 if respondent is between 30 and 44 years of age, 0 otherwise
Age between 45 and 59	1 if respondent is between 45 and 59 years of age, 0 otherwise
Age 60 years or older	1 if respondent is 60 years of age or older, 0 otherwise
Married	1 if respondent is married or living with a partner, 0 otherwise
Children present	1 if minor children in respondent's family, 0 otherwise
LQ recent immigrant	Location quotient: percent of census tract are immigrants arriving after 1995
LQ median price	Location quotient: median price of homes in tract, year before surveyed
<i>Immigrant-only analyses</i>	
15 years or more in U.S.	1 if immigrant respondent has lived in U.S. for 15 years or more, 0 otherwise
English	1 if respondent used the English version of the survey, 0 used Spanish version

**Table 2**  
Weighted Descriptives of Analytic Sample

	Pooled Sample	U.S. born Whites	U.S. born Blacks	U.S. born Latinos	Authorized Latino immigrants	Unauthorized Latino immigrants
<b>Dependent variable</b>						
Housing Cost burdened (%)	60.0	53.7	48.3	62.0	57.2	76.2
Mean annual family income (\$)	19,089	18,308	20,233	20,064	20,221	17,523
Mean annual housing costs (\$)	6,526	5,790	6,468	6,774	7,071	6,629
Mean ratio of housing costs to income (%)	38.8	36.0	35.9	40.0	39.6	42.2
<b>Independent Variables</b>						
Race/nativity/legal status (%)	100.0	26.8	12.3	9.4	29.0	22.4
Bank account (%)	46.1	68.2	38.4	64.8	45.2	17.4
Receives public assistance (%)	44.0	78.2	74.2	41.1	27.8	8.8
Own home (%)	32.4	52.6	37.6	44.8	29.6	4.0
Mean number of rooms	3.4	4.3	3.8	3.7	3.2	2.5
Nine years or more education (%)	72.8	97.0	98.6	85.9	50.0	54.0
Age (%)						
18–29 years	27.0	18.4	18.6	50.0	17.5	44.9
30–44 years	35.7	23.4	36.8	22.0	42.4	46.7
45–59 years	15.2	12.0	14.0	8.8	26.7	7.7
60 years or older	22.1	46.3	30.6	19.2	13.4	1.0
Married (%)	50.0	42.9	21.6	50.2	61.9	58.9
Children Present (%)	42.7	21.5	42.0	44.7	55.4	51.1
Location quotient of recent immigrants	1.2	0.7	1.1	1.0	1.4	1.5
Location quotient of median home price	0.8	0.9	0.7	0.8	0.8	0.8
15 years or more in U.S. (%)	----	----	----	----	82.7	93.0
English survey Total N	----	----	----	----	16.0	2.1
Total N	876	105	97	96	339	239

Source: Los Angeles Family and Neighborhood Survey, Wave 1. Percents may not equal 100.0 due to rounding.

**Table 3**

Logistic Regression Analyses of the Effects of Variables on Housing Cost Burden: Odds Ratios

<b>US born White (reference)<sup>a</sup></b>	<b>(1)</b> <b>Baseline</b>	<b>(2)</b> <b>Full model</b>
U.S. born Black	0.8058 (0.2824)	0.5250 (0.1910)
U.S. born Latino	1.4089 (0.4665)	1.7612 (0.6732)
Authorized Latino immigrant	1.1538 (0.3624)	1.3858 (0.5083)
Unauthorized Latino immigrant	2.7627 ** (1.0000)	2.5769 * (1.2033)
<b>US born Latino (reference)</b>	<b>(1)</b>	<b>(2)</b>
U.S. born White	0.7098 (0.2350)	0.5678 (0.2171)
U.S. born Black	0.5719 (0.2004)	0.2981 ** (0.1208)
Authorized Latino immigrant	0.8189 (0.2870)	0.7869 (0.3145)
Unauthorized Latino immigrant	1.9609 (0.7501)	1.4632 (0.6563)
<b>Unauthorized Latino immigrant (reference)</b>	<b>(1)</b>	<b>(2<sup>b</sup>)</b>
U.S. born White	0.3620 ** (0.1310)	0.3881 * (0.1812)
U.S. born Black	0.2917 *** (0.0982)	0.2037 *** (0.0922)
U.S. born Latino	0.5100 (0.1951)	0.6835 (0.3066)
Authorized Latino immigrant	0.4176 *** (0.0736)	0.5378 * (0.1322)

Source: Los Angeles Family and Neighborhood Survey, Wave 1.

Notes: Standard Errors in parentheses. Baseline specification: main effects of race and nativity/legal status; Full model: main effects of race and nativity/legal status and bank account, receives public assistance income, own home, number of rooms, nine years or more education, married, categorical indicators of age, minor children present, LQs for median home prices and proportion recent immigrant.

<sup>a</sup>The complete results for the Full Model (top panel) are presented in Table 4.

\*  
p<.05,

\*\*  
p < .01,

\*\*\*  
p<.001

**Table 4**

Logistic Regression Analyses of the Effects of Variables on Housing Cost Burden: Odds Ratios

	Full Model <sup>a</sup>
U.S. born White	---
U.S. born Black	0.5250 (0.1910)
U.S. born Latino	1.7611 (0.6732)
Authorized Latino immigrant	1.3858 (0.5083)
Unauthorized Latino immigrant	2.5769 * (1.2033)
Bank account	0.4734 * (0.1344)
Receives public assistance	1.8431 (0.6065)
Own home	0.1817 *** (0.0625)
Number of rooms	1.2931 * (0.1295)
Nine years or more education	0.9705 (0.2831)
Age (30–44 years omitted)	
18–29 years	1.6396 (0.5175)
45–59 years	2.0233 * (0.6019)
60 years or older	0.7206 (0.3897)
Married	0.3983 *** (0.0904)
Children present	1.4167 (0.4575)
LQ median price	3.3771 ** (1.5139)
LQ recent immigrants	0.6921 * (0.1101)
F-adjusted test statistic	2.557 *

Source: Los Angeles Family and Neighborhood Survey, Wave 1.

Notes: Standard Errors in parentheses.

<sup>a</sup>Identical specification as the full model in the top panel of Table 3. Analyses when the reference group is U.S. born Latino or Unauthorized Latino immigrant (column 2, middle and bottom panels of Table 3) rely on the same specification, and odds ratios and standard errors are identical beginning with the independent variable in the sixth row ("Bank account").

\*  
p<.05,

\*\*  
p < .01,

\*\*\*  
p<.001

**Table 5**

Logistic Regression Analyses of the Effects of Variables on Housing Cost Burden for Latino Immigrants:  
Odds Ratios

Unauthorized Latino immigrant (reference)	(1) Baseline Model	(2) Controls Model <sup>a</sup>	(3) Immigration Model <sup>a</sup>
Authorized Latino immigrant	0.4176 *** (0.0734)	0.5357 * (0.1346)	0.5046 ** (0.1301)
15 years or more in U.S.	----	----	0.4003 * (0.1579)
English survey	----	----	0.3904 * (0.1399)
F-adjusted test statistic		20.628 ***	2.069

Source: Los Angeles Family and Neighborhood Survey, Wave 1.

Notes: Standard Errors in parentheses.

<sup>a</sup>Specification includes indicators of bank account, receives public assistance income, own home, number of rooms, nine years or more education, categorical indicators of age, married, minor children present, LQs for median home prices and proportion recent immigrant.

\*  
p<.05,

\*\*  
p < .01,

\*\*\*  
p<.001