Why are Chinese Homeownership Rates so High?

Assimilation, Ethnic Concentration, and Nativity

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Abstract

Traditional assimilation theory suggests immigrant adaptation into society as a function of catching up to the status of the host society. Recent Chinese immigrants, rather than climbing socioeconomic ladders over time, may have achieved a socioeconomic status comparable to that of native-born whites soon after arrival, as measured by their homeownership rates (Painter et al, forthcoming). The characteristics of Chinese communities in this analysis more closely fit the description of ethnic communities described in Alba et al (2002) than ethnic enclaves Borjas (2000).

Chinese homeownership rates adjusted by socioeconomic and housing market characteristics are on average 18 percentage points higher than those of native white households. The results of this study find that none of this gap can be explained by the English proficiency of households. On the other hand, the cultural influence of home-owning peers may have partially contributed to the higher homeownership of Chinese households. Finally, we find that there is great diversity among Chinese subgroups with respect to their likelihood of owning a home, but very little diversity with respect to the education and income level of Chinese households.

Introduction

In recent years, issues of the importance of and access to homeownership have triggered substantial academic research and policy debate. This is appropriate given residential real estate's significance within a portfolio of household assets and importance in the national economy. In addition, it has been suggested that, relative to renting, homeownership generates neighborhood benefits related to property upkeep, public safety, school quality, and the like (e.g., Green and White, 1997; McCarthy, Van Zandt, and Rohe, 2000).

The research on access to homeownership (e.g., Coulson, 1999; Gyourko and Linneman, 1996) is, in part, motivated by sizable and persistent gaps in homeownership attainment between white and minority households.[1] While the U.S. homeownership rate rose perceptibly over recent years to a record 67.1 percent in mid-2000, the longstanding white-minority homeownership gap of about 28 percentage points was little changed (Simmons, 2001). By late 1999, close to 74 percent of whites had achieved homeownership status, compared with only about 46 percent of African-American and Latino households (Gabriel, 2001).

The past decade has also witnessed a large increase in minority population. Results from the 2000 Census in the United States suggest that Latino populations have increased by 58 percent and that Asian populations have increased by about 76 percent over the past decade.[2] Within the Asian minority group, Chinese immigrants now well exceeded two million -- the largest Asian immigrant group in the United States (The

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[1] References to white refer to persons of white and non-Hispanic origin.
[2] References to Latino refer to persons of Hispanic origin, who may be of any race. A person is counted as Asian if he/she chose Asian as the race option in the Census 2000.

Bureau of Census, 2002).   More recently, mainland China has become the second largest immigrant sending country next to Mexico (Office of Policy and Planning, 2002). These changing demographics have the potential to create an adverse impact on overall homeownership rates, because ethnic minorities have homeownership rates that are much below that of white, non-Hispanic households (e.g., Alba and Logan, 1992; Coulson, 1999; Krivo, 1995; Painter, Gabriel, and Myers, 2001).

Unlike evidence concerning homeownership gaps between African Americans and whites (Bianchi, Reynolds, and Spain, 1982; Wachter and Megbolugbe, 1992), recent evidence suggests that the national gaps between whites and Latinos and Asians are largely due to income differences, residence in high cost metropolitan areas, and the high mobility rates among recent immigrants (Coulson, 1999; Painter, et al., 2001; Wachter, et al., 1992). Two recent studies (Painter, et al., 2001; Painter, Yang, and Yu, forthcoming) of large gateway metropolitan areas suggest that there exists very little differential between Asians and whites in the likelihood of homeownership. Further, Painter, Yang, and Yu (forthcoming) found that Chinese households were much more likely to own homes than whites and Asians other than Chinese.

This finding would be surprising to proponents of the traditional assimilation literature (Alba and Nee, 1997; Gordon, 1964), as that theory is oriented to explaining the process of immigrant adaptation into society as a function of catching up to status of native white households. Recent Chinese immigrants, rather than climbing socioeconomic ladders over time, may have achieved a socioeconomic status comparable to that of native-born whites soon after arrival. While higher Chinese homeownership rates are surprising, Alba, Logan, and Zhang (2002) propose a conception of emerging

ethnic communities among immigrants that may provide insights into the mechanism for why Chinese homeownership rates are so high.[3] This notion of immigrants choosing to live together even with elevated socioeconomic status may suggest that these groups have unique socioeconomic ties and are opting for close access to ethnic resources rather than immersing into white majority neighborhoods through spatial assimilation. Further, if groups are choosing to live together, and these groups have both high initial preferences for homeownership and large ethnic resources for sharing, there could be peer influence among Chinese households to buy homes that could greatly reinforce homeownership attainment among these households (Glaeser, Sacerdote, and Scheinkman, 1996; Manski, 1995).

The primary aim of this paper is to better understand why Chinese immigrants have higher endowment-adjusted homeownership rates than do the native white populations (Painter, et al., forthcoming) and how much of a difference in homeownership attainment there is across Chinese immigrants with different nativities. We proceed by testing two primary hypotheses using 1990 Public Use Microdata (PUMS) data from the Census. First, we examine the role of language proficiency, as an indicator of assimilation, in enabling households to own a home (Alba, et al., 1992; Myers and Lee, 1998a). Second, we examine the role of peer influence to own homes among Chinese households in communities with a large presence of Chinese and relatively high Chinese homeownership rates. Next, we examine the role of different nativities among Chinese households to examine if households coming from places with different national wealth possess different likelihoods of owning a home. Finally, we

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[3] Meanwhile, Fong (1996; 1997) suggests that many immigrants prefer to remain in ethnic communities because they would experience relatively small gains in neighborhood quality by dispersing into majority white communities.

examine the role of socioeconomic status and time since first immigration and its interaction with nativity. This enables us to test whether, for example, Chinese immigrants that are highly educated have similarly high homeownership rates when compared to white households, as do households of lower education levels.

Past Research and Theory

Assimilation

Assimilation is originally theorized as a straight-line process of adaptation and acculturation, leading immigrants to a state of structural integration into the host society (Alba, et al., 1997; Gordon, 1964). Assimilation theories arose as a conception derived from the experience of earlier European immigration. A similar assimilation process is hypothesized to be generalizable to successive immigrant groups.

Many scholars have challenged the validity of this "melting pot" theory of assimilation in the cotemporary context. Immigrants after 1965, mostly coming from Asia and Latin America, have been characterized by their drastic diversity of socioeconomic backgrounds and national origins. Instead of convergence over time and forming a unified group, many recent immigrants have experienced different adaptation processes, and sometimes even, shown a pattern of perpetual ethnic differences (Portes, 1995). The literature has recognized that the importance of contextual effects in immigrants' assimilation, which underpin socioeconomic stratification in the host society (Zhou, 1997a). The high homeownership attainment of Chinese immigrants may be an additional case for the notion of "segmented assimilation" (Portes and Zhou, 1993; Zhou, 1997b). Many recent Chinese immigrants may have skipped the stages of accumulative upward mobility. While a large number of studies have studied disadvantaged immigrant

groups (e.g. Hirschman, 2001; Zsembik and Llanes, 1996), few studies have focused on how immigrants with higher educations or incomes, such as Chinese immigrants from Taiwan or Hong Kong, have participated in process of assimilation.

Assimilation is manifested in many socioeconomic characteristics, such as the cultural norms, beliefs, and behavior patterns. In practice, English proficiency has been widely used as an indicator of the assimilation process (e.g., Alba, et al., 1992; Krivo, 1995; Myers, et al., 1998a). Assimilation theory suggests that immigrants with higher English language ability are able to adapt better to the host society. English language ability is also a necessary skill for communicating with other people and negotiating the transactions necessary for purchasing a home. Consequently, English language ability should be positively associated with spatial assimilation, socioeconomic well being, and homeownership attainment (Alba, Logan, Stults, Marzan, and Zhang, 1999; Carliner, 2000; Fang and Brown, 1999; Fong and Kumiko, 2000; Krivo, 1995; Park, 1999).

Dispersion or Concentration

As one important element in the theory of assimilation, spatial assimilation refers to the process through which succeeding cohorts of newcomers gradually disperse over time from their initial clustering and settlement into more attractive neighborhoods where natives tend to be in the majority (Adelman, Tsao, Tolnay, and Crowder, 2001; Massey and Denton, 1987). This *spatial dispersion* is largely driven by upward socioeconomic mobility and acculturation (Borjas, 1998; Gans, 1999). Acculturation is a process of gradual acquisition of the language, values and manners of the host society (Gans, 1992).

Many studies have found that ethnic concentration is negatively associated with socioeconomic mobility (e.g.Alba, Logan, and Stults, 2000; Allen and Turner, 1996;

Massey, 1985). In the labor economics literature, Borjas (1998; 2000) suggests that residential concentration of immigrants hampers their economic prospects, and the clustering of immigrants into ethnic enclaves is likely to lead to low rate of wage growth. Toussaint-Comeau and Rhine (2000) find that living in enclaves limits the probability that Latino households will become homeowners. Despite a relatively restrictive definition of ethnic enclave in their study, the findings provide early insights into the impacts of ethnic concentration on homeownership attainment.[4]

Meanwhile *concentration* reinforces ethic enclaves.[5] Rogers and Henning (1999) identify that ethnic networks have as always played a vital role in helping new immigrants through their socioeconomic adaptation to the host society. Spatial concentration provides immigrants with access to ethnic networks and resources, which would otherwise unavailable to them. Empirical work by Zhou (1992) shows that there are advantages for immigrants to work in ethnic enclaves, such as Chinatown in the New York City. Li (1998) recognizes the emerging of "ethnoburbs" or suburban ethnic community which represents a new type of immigrant settlement by which socioeconomic stratification is self evident within itself. Instead of dispersion into ethnic majority neighborhoods, immigrants with elevated socioeconomic status would move to another ethnic community with a higher living standard. In many of those suburban ethnic communities, ethnic businesses cater to the needs of the community. As a result, concentration implies that English proficiency and spatial assimilation become less vital for having access to valuable resources (Fong and Wilkes, 1999). Logan, Alba, and

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[4] While Toussaint-Comeau and Rhine (2000) find living in a high Latino concentration neighborhood itself lowers homeownership rates for all households in that neighborhood, the effect is somewhat mitigated if the household is Latino.
[5] Ethnic concentration refers to areas with a large share of residents who came from the same race/ethnic backgrounds (Allen, et al., 1996; Funkhouser, 2000).

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Zhang (2002) rightfully highlight that there is an emerging distinction between ethnic concentration by constraint and by preference. They find that living in ethnic communities does not always relate to economic constraints, but instead reflect residential preferences of many recent immigrants for those ethnic neighborhoods. The establishment of "ethnic communities" in the suburbs may have facilitated their homeownership attainment through ethnic resources sharing and peer influences.

While many recent studies have revealed ambiguities in the assimilation theory with respect to the socioeconomic outcomes of assimilation, few have focused on the role of ethnic concentration and assimilation on homeownership attainment. On the one hand, forced concentration may restrict housing availability for certain ethnic groups (Flippen, 2001; Galster, 1987; Massey, Gross, and Shibuya, 1994; White, 1987). On the other hand, concentration my provide better access to ethnic resources, such as an informal financial system, credit sharing, and neighborhood support (Fong and Gulia, 2000; Schoeni, McCarthy, and Vernez, 1996). Further, contextual effects, as discussed by Manksi (1995) and others, may arise among ethnic groups that reinforce strong initial preferences to own homes. Haurin, Dietz, and Weinberg (forthcoming) provide a thorough review of the effects of neighborhood homeownership rates, through social interactions, on the residents of a community and an adjacent community. Through feedback mechanisms or social multiplier effects, neighborhood context can strengthen mutually supported social behavior such as religion, poverty, or homeownership attainment. This conception of contextual effects presents additional explanations of peer influences on homeownership attainment, particularly within immigrant communities whose residents share cultural preferences and social network. Peer influence could thus

lead to higher homeownership rates than native white populations among some groups, if these initial preferences for homeownership were particularly strong. In other words, residing in immigrant communities may bolster homeownership rates of immigrants, if the community is particularly predisposed to homeownership.

Chinese subgroups

Another important issue concerns the heterogeneous background of Chinese immigrants in the U.S. The Chinese population in the U.S. has experienced significant changes in composition with respect to national origin and reasons for immigration. For example, while immigrants from mainland China chose to come to the U.S. mainly because of economic prospects, most Chinese immigrants born in Vietnam were forced to leave their county and came as refugees after the Vietnam War (Chang, 1999). Meanwhile, recent immigration from Taiwan and Hong Kong was largely due to concerns over economic security and heavily influenced by the relationship with mainland China (Li, 1998; Tseng, 1995; Wachman, 1994).

While it is a rather recent phenomenon to have a large number of immigrants directly from mainland China, immigration from Hong Kong and Taiwan began soon after the passage of the immigration reform law in 1965 (Ng, 1998; Skeldon, 1995). Economically, Chinese immigrants from Vietnam and Mainland China are relatively impoverished, while those from Taiwan and Hong Kong have higher educations and income before their immigration (Tseng, 2000; Zhou, 1992). While Chinese immigrants come from regions with different socio-economic and political conditions, they also possess a common cultural identity (Chang, 1999; Takaki, 1994). Natural questions arise as to what extent that heterogeneity exists in homeownership attainment across different

Chinese groups and, how such differences fare in comparison to the homeownership rates of native-born whites.

The varied experiences of Chinese immigrants provide a unique setting for research on immigration, as they represent a group of people with cultural connections yet economically and politically diverse backgrounds. Bifurcations are evident in recent Chinese immigrants, who are clustered at both ends of the socioeconomic spectrum (Chang, 1988; Cheng and Yang, 1996; Li, 1998; Zhou and Gatewood, 2000). Despite wide acknowledgement of internal diversity of Asian immigrants (White, Biddlecom, and Guo, 1993), the existing body of work has largely treated Chinese immigrants as an internally coherent group. This research will be able to highlight the differences that exist with respect to one socioeconomic outcome, namely homeownership, and the role played by different nativities -- Mainland China, Taiwan, and Hong Kong, different initial socioeconomic status, and different timing of immigration.

Data

This analysis primarily uses data from the 5% Public Use Microdata Sample (PUMS) file of the 1990 decennial Census.[6] The 1980 5% PUMS data and the recently released Census 2000 Supplementary survey (C2SS) sample data will also be used to compare trends in Chinese homeownership rates from 1980 to 2000.[7] The analysis

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[6] The sample size is much larger than comparable data available from the American Housing Survey (AHS) or the Current Population Survey (CPS). Because of the relatively small share of Chinese in the total population, the sample size is critical for this analysis, enabling detailed analysis of Chinese subgroups. The PUMS data file provides detailed information about both the housing units and individuals who reside in, which is sufficiently numerous to identify separate marginal effects for each of the groups studied here. In addition, these datasets do not have specific information on migration histories and detailed race categories among Asians.

[7] The C2SS was conducted concurrent with the 2000 Census. The main objective of the C2SS is to test the differences between the Census long form data and the American Community Survey (ACS) in an attempt to replace the Census long form with the American Community Survey in the year 2010. The microdata

focuses on Chinese households in Los Angeles Consolidated Metropolitan Statistical Area (CMSA), which comprises four Primary Metropolitan Statistical Areas (PMSA). The four PMSAs include Los Angeles–Long Beach PMSA, Anaheim–Santa Ana PMSA, Riverside–San Bernardino PMSA, and Oxnard–Ventura PMSA. The Los Angeles region has the largest Asian population among all metropolitan areas, and it is also a gateway metropolitan area for Chinese immigrants (Waldinger and Bozorgmehr, 1996).

The sample includes all households that either own or rent their primary residence, excluding persons who reside in group quarters. The samples are also limited to those household heads that are aged between 18 and 64. Based on place of birth, Chinese immigrants are divided into four groups, which are those born in Taiwan, Hong Kong and Macau, Mainland China, and other places. In addition, U.S.-born Chinese, Asian other than Chinese, and non-Hispanic white households are included to provide a useful benchmark.[8] Even though this categorization is not precise in all cases, the place of birth provides a consistent grouping scheme based on the information available.[9]

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sample size of the C2SS in LA CMSA is almost thirty times smaller than that of the Census 2000 PUMS, which may not be sufficient enough to study small groups of population.

[8] Taiwanese immigrants are defined as those persons who were born in Taiwan and chose either Chinese or Taiwanese as their race on the U.S. Census form. Tseng (1995) argues that, by relying on birthplace in the 1990 Census, one would underestimate Taiwanese immigrants. She suggests that country of last residence is a better way to define Taiwanese immigrants. Unfortunately, the U.S. Census does not provide such information. In addition, less than 15 percent of all the residents in Taiwan were in-migrants from mainland China after the Second World War. The vast majority of people who were born in Taiwan were decedents of the "local people" who moved from the mainland China centuries ago (Ng, 1998). Thus, very few persons are likely to have been born in mainland China and emigrated from Taiwan. The characteristics of immigrants who were born in Taiwan should be representative of that of Taiwanese. Moreover, Taiwanese identity is socially constructed and deeply rooted in socioeconomic and political evolution of the island. It is also not immediately clear whether the majority of those who were born in mainland China and later immigrated to the United States would consider themselves as Taiwanese.

[9] A typical example is that some Chinese moved from the mainland to Taiwan in 1949 and then immigrated to the United States. In terms of initial endowment, those persons may be better assigned to the Taiwan subgroup given the income difference between mainland and Taiwan. But using place of birth may still include them into the mainland Chinese subgroup.

Table 1 shows the homeownership rate for all ethnic groups in 1990. Asians and whites have similar homeownership rates in 1990 (57 and 61 percent, respectively), while Latinos and African-Americans have substantially lower homeownership rates (43 and 37 percent, respectively). The Chinese subgroup has substantially higher homeownership rates at 68 percent. Table 2 displays the rates for each Chinese subgroup based on the place of birth and extends the time frame from 1980-2000. While the information for subgroups of Chinese households is not available in 2000 due to insufficient sample size, the overall rate of Chinese homeownership is been between 61 and 68 percent (say differently). Within the Chinese subgroup, the nativities with the highest homeownership rates are Taiwan and Mainland China, with over 70 percent homeownership in 1990. The Chinese nativities with the lowest homeownership rates – approximately 50 percent – are households of Chinese ancestry from Vietnam and other parts of Southeast Asia.

To determine how much of the differences in homeownership rates can be explained by socioeconomic characteristics and other factors, we include demographic factors (race-ethnicity, age group, marital status, number of persons in the household, number of workers in the household, migration origin, and migration history), economic factors (income, education level of the head of household), and variables to capture local housing market conditions (housing price and rent levels).[10] These variables enable the researcher to capture factors that influence homeownership choice based on the user cost of homeownership and factors related to preferences of households correlated with demographic characteristics such as the life cycle (e.g., Myers, Megbolugbe, and Lee,

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[10] This paper uses PUMA as the geographical unit of local housing market. The information regarding the housing price and rent is based on this unit. Housing price is measured as the 25th percentile home price and rent as the median rent in one PUMA. The use of these proxies follows Gyourko and Linneman (1996).

1998b; Skaburskis, 1996). Instead of simply including household income, we use

measures of permanent and transitory household income. Using the method of Goodman

and Kawai (1982), permanent income is the predicted value of a regression of household

income on a set of demographic and human capital characteristics.[11] Transitory income is

calculated as the residual of observed household income and predicted income. In

addition, a household's dividend and interest income is included to partially capture

wealth requirements that are needed to meet mortgage downpayment requirements. No

direct measures of wealth are available in these data. Education attainment of the head of

household can also be considered as a proxy to indicate the future earning potential of

households. The impact of immigrant status and immigration length of stay as well as

migration origin are also examined because much research has highlighted their

importance (e.g. Krivo, 1995; Myers, et al., 1998b).

     Appendix I reports the mean values of all independent variables used in the study.

Rather than discuss all of the differences in detail, we focus on some of the larger

differences concerning income and immigrant status in Figures 1 and 2. Figure 1

presents the difference in permanent incomes by groups. U.S. born Chinese and whites

have the highest household income while those from other places or Taiwan have the

lowest household income.[12] Figure 2 reveals that there had been substantial growth in

Chinese population in Los Angeles during the 1980s. For instance, Taiwanese

immigrants increased by almost two-fold during the 1980s, while immigrants from

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[11] Results of these household income regressions are available upon request.

[12] Taiwanese have a higher average wage income per worker than those from Mainland Chinese. However, Taiwanese in general have far fewer workers per household than those from mainland. Therefore, aggregate household income of Taiwanese is lower than those from mainland.

mainland China grew by almost fifty thousand. New immigrants who came in the last 10 years have contributed to most of the growth in the Chinese population.

As shown in Figure 2, Chinese subgroups are also diverse with respect to immigrant status. This study is particularly concerned with the implications of ethnic concentration and assimilation on Chinese high homeownership rates. In addition to the independent variables discussed above, this paper uses two additional sets of variables. The first set is English proficiency and its interaction variable with the Chinese ethnicity categorical variable. This enables a test of the independent effect of language, and its relative importance for Chinese households. The definition of English proficiency is based on the self-assessment of household heads in the Census data. The second set of variables, intended to capture peer influence, is designed to examine whether the homeownership rates of any individual Chinese household is in part influenced by homeownership rates of Chinese households in the same area. This peer influence variable is constructed by multiplying the difference in homeownership rates between Chinese and white households in the same area by the categorical variable for Chinese ethnicity. It is presumed that higher values of peer influence exist if a household is surrounded by greater numbers of Chinese homeowners.

The delineation of each area is primarily based on the Public Use Micro Area (PUMA) in the PUMS data. When there are not sufficient Chinese households residing in some PUMA's, we aggregate surrounding PUMA's based on spatial adjacency and similar socioeconomic conditions.[13] As a result, the Los Angeles metropolitan area consists of 27 aggregated areas. Appendix 2 shows the corresponding municipalities in

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[13] To avoid the misleading values in Chinese homeownership rate due to too few Chinese observations, we require that each PUMA must have at least 100 Chinese households to be an individual area, or it will be combined with other PUMAs to meet the standard.

each area. Figure 3 shows that for most areas, Chinese homeownership rates are at least 10 percentage points higher than whites.

Model

Most recent studies of homeownership evaluate cumulative attainment of homeownership (tenure status) among a sample of existing households (Alba, et al., 1992; Coulson, 1999; Gyourko, et al., 1996). The cumulative approach has been justified by the view that homeownership is a long-term decision based as much upon anticipated future needs as on present needs (Edin and Englund, 1991). However, among households who are age 45 or older, cumulative attainment of homeownership may largely reflect the lagged effects of past choices. A second approach assumes that homeownership decisions of recent movers more closely reflect equilibrium conditions and avoid that lagged effect (Boehm, Henry W. Herzog, and Schlottmann, 1991; Ihlanfeldt, 1981).[14]

A key drawback to basing analysis of homeownership choice on a sample of recent movers concerns possible sample selection bias. Renters and others predisposed to not settling into long-term owner-occupancy, such as immigrants, are over-represented in a sample of recent movers. For that reason, estimates of the determinants of homeownership choice could be biased. Although Census data do not report the tenure status of households prior to their move, one can estimate a model of their likelihood of

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[14] Cohort analysis may be employed as an alternative to cumulative attainment in static, cross-sectional samples (Myers, et al., 1998b). A focus on mover households achieves dynamic analysis of cross-sectional samples by a means different than the cohort method.

entering the mover sample. To address possible sample selection bias, this study uses a Heckman-style correction described by Painter (2000).[15]

The homeownership choice model with correction for selection bias is adapted from Van de Ven and Van Pragg (1981), in which both the selection equation and the tenure choice equation have binary dependant variables. The selection equation uses a probit model with the choice to move as the dependent variable with controls for socioeconomic factors that may affect the moving propensity of households. Homeownership choice is assumed to be observed only if a household moves. It is assumed that the error terms in both models are jointly normally distributed with correlation coefficient Δ. The resulting model is estimated using a maximum-likelihood procedure to obtain the parameters of each equation and the correlation between each choice.[16]

Results

While Tables 1&2 highlight how much greater Chinese homeownership rates are than whites or other Asians, we now consider how large these gaps would be after controlling for a variety of socioeconomic and local characteristics. Three model specifications are presented in Table 3. The first includes Chinese and Asians other than Chinese separately, with white households as the reference groups. The second and third specifications add two sets of additional variables based on English proficiency and

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[15] This modeling procedure has been applied in two recent papers, Painter *et. al.* (Painter, et al., 2001) and Painter et al (forthcoming). The results are particularly sensitive with respect to the age profile and immigrant length of stay.

[16] Formally, the log likelihood function that is estimated is the following,

$$L = \sum_{i \in S}^{yi=1} \ln[\Phi_2(Xi\,\beta, Z_i\,\gamma, \rho)] + \sum_{i \in S}^{yi=0} \ln[\Phi_2(-Xi\,\beta, Z_i\,\gamma, \rho)] + \sum_{i \notin S} \ln[1 - \Phi_1(Z_i\,\gamma)]$$

where *S* is the set of observations for which OWN_i is observed, M_1 is the standard cumulative normal and M_2 is the cumulative bivariate normal distribution function.

homeownership rate difference between Chinese and white households. Overall, being married, higher education, higher income, lower housing prices, higher rents, and moving within Los Angeles all lead to higher homeownership rates. The impact of these variables is consistent across model specifications. In addition, the correlation coefficients between the tenure choice equation and the mobility equation are significant in all of three model specifications, suggesting the importance of controlling for mobility explicitly in estimating the model.

The results in Table 3 (Model I) mirror the results in Painter et al. (forthcoming). Chinese homeownership rates are significantly above those of whites and other Asians. The difference translates into a marginal difference in the probability of homeownership of 18 percentage points.[17] Two new variables are introduced in Model II of Table 3: a categorical variable denoting English proficiency and its interaction variable with Chinese ethnicity. As is common in the literature (e.g. Alba, et al., 1992; Krivo, 1995), better English skills increase the likelihood of owning a home. The importance of English proficiency is less salient for Chinese households, although the difference is not statistically significant. The addition of these variables has no effect upon the independent likelihood of a Chinese household owning a home.

The final model specification in Table 3 (Model III) includes the difference in homeownership rates between Chinese and whites in an area and its interaction with the Chinese ethnicity, which is intended to capture the importance of peer influence on Chinese homeownership attainment. The results suggest that living in an area with a higher homeownership differential between Chinese and white households will lower a household's homeownership rate. On the other hand, the large and positive parameter on

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[17] Explain dp/dx here.

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the interaction variable suggests that the Chinese households behave differently. Chinese households are much more likely to have higher homeownership rates if they opt to live in ethnic community with a high Chinese homeownership rate. Though the parameters on most variables remain consistent over the three models, there are two additional noticeable changes in the Model III. First, the parameter on the categorical variable for Chinese ethnicity is reduced by about 30 percent. This reduces the marginal probability of homeownership based on being Chinese from 18 to 13 percentage points. Secondly, the impact of English proficiency on Chinese homeownership attainment is further diminished, indicated by the large and negative parameters on the interaction variable between the English ability and Chinese ethnicity.

Decomposing the Chinese into five subgroups

Research by a number of scholars (e.g. Brown and Pannell, 2000; Chang, 1999) suggests that Chinese immigrants have diverse immigration experiences, coming from different countries and regions and bringing different initial endowments to the United States. Thus, we investigate next how the reported impacts of English proficiency and peer pressure on Chinese homeownership vary across different Chinese subgroups.

The first model specification in Table 4 demonstrates that all five Chinese subgroups have higher homeownership likelihoods relative to whites when controlling other household and housing market characteristics. Among Chinese groups, those households from Taiwan have the highest homeownership likelihood, followed by households from mainland China and Hong Kong. These adjusted differences are different from the unadjusted differences reported in Table 2. The calculated difference relative to whites in marginal probabilities is 30 percentage points for households from

Taiwan, 16 percentage points for households born in Mainland China or Hong Kong, 12 percentage points for U.S. born Chinese, and 8 percentage points for Chinese households born in other regions.

The importance English proficiency (Table 4:Model II), while important for Asians in general, differs significantly in each Chinese subgroup. For Chinese households from Taiwan, English proficiency does not contribute to homeownership attainment at all. For those from mainland China, its importance is smaller than for other Chinese groups. Finally, there is no interactive effect of English ability for native Chinese or those from Hong Kong.

As in Table 3, the impact of Chinese/white homeownership differentials is negative for the full population of Asians and whites (Table 4: Model III), but is positively related to homeownership for all Chinese sub-groups except those from Hong Kong or Macau. After controlling for both the language variables and peer influence variables together, the unexplained homeownership differences between the whites and Chinese households from Hong Kong/Macau and other regions, as indicated by the categorical variables, are not significant. On the other hand, unexplained homeownership differentials between households from Taiwan and Mainland China remain at 25 and 17 percentage points, respectively.

Other Model Tests

We next examine whether the findings reported above are consistent for different education groups, different income groups, and different immigration groups, and over time (Table 5). First, we separate the whole sample into two sub-samples based on the level of education attainment of household head as a means of distinguishing between

alternative hypotheses for why Chinese homeownership rates are higher than that of whites. It would be expected that highly educated Chinese households would only differ from whites due to preferences for homeownership, as highly educated households would have fewer unmeasured wealth differences that might constrain lower educated households from obtaining a down payment. In the "high education" sample, the household heads have college degree or higher, and the "low education" sample contains households with high school diploma or less.

Contrary to expectation, there is actually a higher unexplained probability of Chinese homeownership among the highly educated group when compared to the lower educated group. The difference is 20 percentage points for the highly educated group in comparison to 11 percentage points for the low education group. Part of this difference can be attributed to the variable that captures peer influence, which is more important for the low education sample. When we decomposed the sample into higher than median and lower than median income, the results mirror the decomposition by educational attainment.

Since most Chinese Americans are immigrants, we also tested whether there were differences in unexplained homeownership based on the period of immigration. In this test, we group the Chinese households coming to the United States after 1980 census as "new immigrants." Surprisingly, English proficiency has less impact on Chinese new immigrants than their counterparts who had arrived many years before, but the new immigrants are much more affected by peer influence than the others. In addition, both the new and old Chinese immigrants have similar unexplained homeownership rates when compared to whites in their specific group, which is contrary to other Asians which

are less likely to own in the "new immigrants" group but are slightly more likely to own in the "old immigrants" group. One possible explanation for these results is the large number of Chinese immigrants during 1980s from Taiwan and Hong Kong/Macau that went through rapid economic growth in that period. Some of the new immigrants accumulated wealth in their origination areas before immigration, which enabled them to meet any downpayment constraints easier than similar households born in the United States. Because the data have no direct wealth measures, we cannot determine the extent to which the remaining gaps are attributable to wealth differences.

Next, we considered how robust the results on Chinese homeownership are across the decades from 1980 to 2000. Because of data limitations, we cannot test the relative importance of peer influence over the decades, and we can only use a simple probit specification to estimate the model.[18] Comparing these three time periods, the gap on the likelihood of own between Chinese and white households broadened for all Chinese subgroups during 1980s, but went away for most Chinese subgroups except for those from Hong Kong and Taiwan during 1990s. (I think we should not break this into subgroups) Thus, the group of immigrants that arrived in the 1980s may have had unusually high levels of unmeasured wealth, but in every period Chinese homeownership rates are higher than native populations. Since the 2000 C2SS data does not contain a large number of observations by subgroup, the change over the 1990s may not accurately reflect the changes over this period. More precise results will emerge upon the release of PUMS data from 2000 census.

Finally, we considered an alternative measure of the set of variables intended to capture peer influence. This analysis has focused on the proximity of Chinese

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[18] For 1980, we use the 5% PUMS data from 1980 census. For 2000, we use micro data from the C2SS.

homeowners, and the resulting peer effects as a mechanism for explaining high Chinese homeownership. Alternatively, the same peer influence may exist in areas where there are large numbers of Chinese households, whether they may be renters or owners. If cultural preference is reinforced in either setting, then we would expect higher homeownership rates for Chinese in places that have a relatively large number of Chinese households. In contrast to the results based on homeownership differentials discussed above, the results based on population differences are weaker. This could imply that peer effects are weaker, or that our previous results related to peer influence are overstated due to the endogeneity of location choice (Deng, Ross, and Wachter, forthcoming; Manski, 1993).

Conclusion

Only recently has research begun to explore homeownership choice among immigrant groups. Some of this research (e.g., Painter, et al., forthcoming) has found that Asian homeownership rates are similar to that of whites and Chinese homeownership rates are substantially higher than other ethnic groups. In this research, we have tested a variety of hypotheses that can possibly explain why Chinese homeownership rates are substantially higher.

We found that language proficiency, while important for in the general population of Asians, was not more important for Chinese households, and for Taiwanese and households from mainland China, language had no effect. This finding suggests that for homeownership attainment, language assimilation is not as important as important for Chinese immigrants as it is for other immigrant groups (Alba, et al., 1992; Krivo, 1995)

On the other hand, we found evidence that the presence of ethnic Chinese communities can partially explain why Chinese groups own homes at higher rates than the native white population. Whether this is due to the presences of shared resources or to peer influence, this research design cannot distinguish, but future research is needed to sort out the relative importance of each.

We also found significant differences based on the nativity of Chinese households. Groups from Taiwan had the highest unexplained rates (25 percentage points), which may be partially due to initial wealth that is unmeasured in the data. At the same time, households from Mainland China and Vietnam without high initial levels of wealth had significantly higher, adjusted rates of homeownership than white households (17 and 8 percentage points, respectively). These households may be accessing informal networks of wealth, but this is again unmeasured in the data. Finally, we found no difference in a household's likelihood of owning a home based on differential education levels or "newness" of immigration.

One important topic for future research is to simultaneously model the location choices of immigrant households with their homeownership choice. In this study, we estimated the factors that influence homeownership choice conditional on a household's choice of location. While there are controls for location characteristics such as the price of housing, rents, and the concentration of Chinese households in an area, there is a relatively new literature (Deng, et al., forthcoming; Gabriel and Painter, 2001) that suggests that dual consideration of location choice and homeownership choice can yield important insights into how households make these decisions. To the extent that

households make both decisions simultaneously, future research will investigate how sensitive the results of this study are to the endogeneity of location choice.

A topic not discussed in this research is whether higher homeownership observed among Chinese households is a good thing for the community and the individual households. While higher homeownership may have neighborhood benefits (Green, and White, 1997; McCarthy, Van Zandt, and Rohe, 2000), it has been suggested that homeownership may have negative effects on households under certain circumstances. For low-income households, owning one's home causes the household to be more vulnerable to the idiosyncratic risk of the real estate market, because housing usually comprises the largest portion in their investment portfolio (McCarthy, et al., 2000). More importantly, homeownership may limit household mobility, since the cost associated with moving for homeowners is much higher than renters (Quigley and Weinberg, 1977). This restriction in mobility may hamper the labor market opportunities of households (Boehm, 1981; Green and Hendershott, 2001). This is likely to be particularly important for new immigrants who are usually less settled and more responsive to the shifts in the labor market (Borjas, 2001). Future research should explore the impact that elevated homeownership plays on these other outcomes.

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Table 1. Homeownership Rates by Race and Region, 1980 and 1990 (18-64)

Percentage	1980		1990	
	Full	Mover Only	Full	Mover Only
All	54.5	40.8	56.1	43.0
White	58.2	43.8	61.4	47.6
Black	39.0	22.7	37.3	21.8
Latino	44.2	32.0	43.1	30.1
Asian (all)	52.6	44.9	57.3	49.6
Chinese	60.9	56.3	68.2	64.1
Non-Chinese Asian	50.6	42.3	54.2	45.5
No. of Households	92,033	56,106	163,657	93,974

Source: 5% Public Use Microdata Samples of the US Census, 1980, 1990

Table 2. Homeownership Rates by Race and Birthplace, Los Angeles CMSA, 1980-2000

Homeownership Rates	1980	1990	2000
White	0.582	0.614	0.633
Chinese	0.614	0.666	0.628
Who were born in			
Mainland China	0.687	0.707	
Taiwan	0.586	0.750	
Hong Kong and Macau	0.550	0.637	
U.S.	0.610	0.674	
Other places	0.465	0.514	

Note: The homeownership rate in one ethnic group is the ratio of homeowners to the total households within that group.

Source: 5% Public Use Microdata Samples of the US Census, 1980, 1990; Public Use Microdata Samples of Census 2000 Supplementary Survey.

Table 3. Estimation Results for White-Asian Sample with All Chinese as One Group

Variable	Model I Coeff.	Model I Std. Error	Model II Coeff.	Model II Std. Error	Model III Coeff.	Model III Std. Error
Intercept	3.456**	0.180	3.140**	0.186	2.397**	0.198
Age 18-24	-0.423**	0.028	-0.427**	0.028	-0.400**	0.027
Omitted: Age 25-34						
Age 35-44	0.081**	0.015	0.085**	0.015	-0.017	0.014
Age 45-54	0.096**	0.020	0.107**	0.021	-0.087**	0.018
Age 55-64	0.186**	0.025	0.196**	0.026	-0.085**	0.022
Not Married, Male Head Of Household	-0.451**	0.018	-0.452**	0.018	-0.402**	0.017
Not Married, Female Head	-0.314**	0.022	-0.319**	0.022	-0.284**	0.021
Omitted: Married						
No High School Diploma	-0.196**	0.021	-0.179**	0.021	-0.158**	0.020
Omitted: High School Dip. W/ College						
College Degree or Better	0.022	0.019	0.021	0.019	0.032	0.018
Number Of People In Household	0.002	0.005	0.005	0.005	-0.003	0.004
Number Of Workers In Household	-0.254**	0.013	-0.255**	0.013	-0.239**	0.012
Permanent Income (1000s)	0.024**	0.001	0.024**	0.001	0.022**	0.001
Transitory Income (1000s)	0.012**	0.000	0.012**	0.000	0.011**	0.000
Dividend Icnome (1000s)	0.012**	0.001	0.012**	0.001	0.011**	0.001
The 25th Percentile Housing Price (Log)	-1.035**	0.021	-1.028**	0.021	-0.982**	0.020
Puma Median Rent(Log)	1.262**	0.041	1.255**	0.041	1.293**	0.040
Ethnicity-Chinese	0.601**	0.034	0.708**	0.070	0.425**	0.071
Ethnicity-Other Asians	0.000	0.024	0.022	0.024	0.007	0.023
Good English	-	-	0.281**	0.040	0.263**	0.038
Interaction with Chinese	-	-	-0.087	0.077	-0.182*	0.075
Homeownership Rate Difference	-	-	-	-	-0.595**	0.067
Interaction with Chinese	-	-	-	-	3.184**	0.341
Moved From Within Same State(s)	-0.182**	0.018	-0.182**	0.018	-0.173**	0.017
Moved From Within U.S	-0.683**	0.016	-0.682**	0.016	-0.646**	0.015
Moved From A Foreign Country	-0.603**	0.038	-0.593**	0.038	-0.564**	0.036
Omitted: Moved From Within CMSA						
Immigrant	0.065	0.045	0.102*	0.045	0.257**	0.043
Came To U.S 5-10 Years Ago	0.096*	0.045	0.087	0.045	0.016	0.043
Came To U.S 10-15 Years Ago	0.327**	0.048	0.298**	0.048	0.168**	0.046
Came To U.S 15-20 Years Ago	0.231**	0.056	0.193**	0.056	0.049	0.054
Came To U.S 20-30 Years Ago	0.208**	0.056	0.167**	0.056	-0.018	0.053
Came To U.S More Than 30 Years Ago	0.109	0.065	0.069	0.065	-0.131*	0.061
Omitted: Came To U.S. In The Past 5 Yrs.						
Correlation Coefficient (rho)	0.195**	0.014	0.194**	0.015	0.554**	0.005
Log Likelihood	-108,241		-108,210		-108,168	
Number of Observations	124,626		124,626		124,626	

*: significant at 5% confidence level   **: significant at 1% confidence level

Table 4. Estimation Results for White-Asian Sample with Different Chinese Subgroups

Variable	Model I Coeff.	Model I Std. Error	Model II Coeff.	Model II Std. Error	Model III Coeff.	Model III Std. Error
Intercept	3.483**	0.179	2.817**	0.186	2.384**	0.209
Age 18-24	-0.428**	0.028	-0.423**	0.027	-0.434**	0.028
Omitted: Age 25-34						
Age 35-44	0.08**	0.015	0.071**	0.014	0.084**	0.015
Age 45-54	0.097**	0.020	0.077**	0.019	0.106**	0.020
Age 55-64	0.19**	0.025	0.159**	0.023	0.199**	0.025
Not Married, Male Head Of Household	-0.45**	0.018	-0.444**	0.017	-0.45**	0.018
Not Married, Female Head	-0.313**	0.022	-0.319**	0.022	-0.319**	0.022
Omitted: Married						
No High School Diploma	-0.186**	0.021	-0.163**	0.021	-0.165**	0.021
Omitted: High School Dip. W/ College						
College Degree or Better	0.022	0.019	0.027	0.018	0.021	0.019
Number Of People In Household	0.003	0.005	0.007	0.005	0.007	0.005
Number Of Workers In Household	-0.253**	0.013	-0.248**	0.013	-0.253**	0.013
Permanent Income (1000s)	0.024**	0.001	0.023**	0.001	0.024**	0.001
Transitory Income (1000s)	0.012**	0.000	0.011**	0.000	0.012**	0.000
Dividend Icnome (1000s)	0.012**	0.001	0.011**	0.001	0.011**	0.001
The 25th Percentile Housing Price (Log)	-1.03**	0.021	-1.012**	0.021	-0.994**	0.021
Puma Median Rent(Log)	1.248**	0.041	1.273**	0.041	1.322**	0.042
Subgroup-Mainland	0.539**	0.059	0.719**	0.101	0.575**	0.107
Subgroup-Taiwan	1.036**	0.062	1.445**	0.129	0.862**	0.158
Subgroup-Hong Kong and Macau	0.521**	0.098	0.284	0.338	0.391	0.331
Subgroup-Native	0.388**	0.090	0.207	0.676	-0.037	0.745
Subgroup-Other	0.268**	0.060	0.113	0.112	-0.093	0.119
Ethnicity-Other Asians	0.006	0.024	0.028	0.024	0.029	0.024
Good English	-	-	0.281**	0.040	0.275**	0.040
Interaction-Mainland	-	-	-0.168	0.121	-0.229	0.127
Interaction-Taiwan	-	-	-0.494**	0.143	-0.467**	0.149
Interaction-Hong Kong and Macau	-	-	0.258	0.352	0.088	0.338
Interaction-Native	-	-	0.196	0.682	0.171	0.746
Interaction-Other	-	-	0.309	0.130	0.212	0.135
Homeownership Rate Difference	-	-	-	-	-0.630**	0.071
Interaction-Mainland	-	-	-	-	2.012**	0.664
Interaction-Taiwan	-	-	-	-	5.268**	0.794
Interaction-Hong Kong and Macau	-	-	-	-	0.327	1.095
Interaction-Native	-	-	-	-	2.359*	1.054
Interaction-Other	-	-	-	-	3.273**	0.701
Moved From Within Same State(s)	-0.181**	0.018	-0.181**	0.018	-0.184**	0.018
Moved From Within U.S	-0.684**	0.016	-0.675**	0.016	-0.686**	0.016
Moved From A Foreign Country	-0.613**	0.038	-0.564**	0.038	-0.606**	0.038
Omitted: Moved From Within CMSA						
Immigrant	0.045	0.045	0.040	0.045	0.074	0.046
Came To U.S 5-10 Years Ago	0.107*	0.045	0.150**	0.045	0.101*	0.045
Came To U.S 10-15 Years Ago	0.346**	0.048	0.359**	0.048	0.324**	0.049
Came To U.S 15-20 Years Ago	0.246**	0.056	0.256**	0.056	0.222**	0.056
Came To U.S 20-30 Years Ago	0.229**	0.056	0.231**	0.056	0.195**	0.057
Came To U.S More Than 30 Years Ago	0.130*	0.065	0.137*	0.064	0.095	0.065
Omitted: Came To U.S. In The Past 5 Yrs.						
Correlation Coefficient (rho)	0.192**	0.013	0.265**	0.008	0.190**	0.014
Log Likelihood	-108,191		-108,191		-108,078	
Number of Observations	124,626		124,626		124,626	

*: significant at 5% confidence level   **: significant at 1% confidence level

Table 5. Estimation Results for Different Education, Income and Immigration Groups

Variable	College Degree or Higher		High School Diploma or Lower	
	Coeff.	Std. Error	Coeff.	Std. Error
Ethnicity-Chinese	0.748**	0.149	0.382**	0.089
Ethnicity-Other Asians	0.048	0.032	0.051	0.036
Good English	0.23**	0.067	0.367**	0.050
Interaction with Chinese	-0.395**	0.147	-0.126	0.104
Homeownership Rate Difference	-0.592**	0.106	-0.627**	0.096
Interaction with Chinese	3.051**	0.498	3.642**	0.528

Variable	High Income		Low Income	
	Coeff.	Std. Error	Coeff.	Std. Error
Ethnicity-Chinese	0.627**	0.160	0.390**	0.084
Ethnicity-Other Asians	0.133**	0.038	-0.055	0.031
Good English	0.207**	0.082	0.249**	0.045
Interaction with Chinese	-0.216	0.165	-0.159	0.090
Homeownership Rate Difference	-0.626**	0.112	-0.592**	0.090
Interaction with Chinese	2.519**	0.687	3.475**	0.417

| Variable	New Immigrants (<= 10 yrs)		Old Immigrants (> 10 yrs)	
	Coeff.	Std. Error	Coeff.	Std. Error
Ethnicity-Chinese	0.431**	0.096	0.453**	0.169
Ethnicity-Other Asians	-0.163**	0.044	0.077	0.046
Good English	0.219**	0.053	0.361**	0.089
Interaction with Chinese	-0.099	0.094	-0.093	0.171
Homeownership Rate Difference	0.214	0.255	-0.025	0.249
Interaction with Chinese	3.45**	0.522	1.353	0.618*

*: significant at 5% confidence level   **: significant at 1% confidence level

Note: The estimation results for other variables in each model are omitted here.
They are available on request.

Figure 1. Permanent Household Income by Race and Nativity in Los Angeles CMSA, 1980-1990
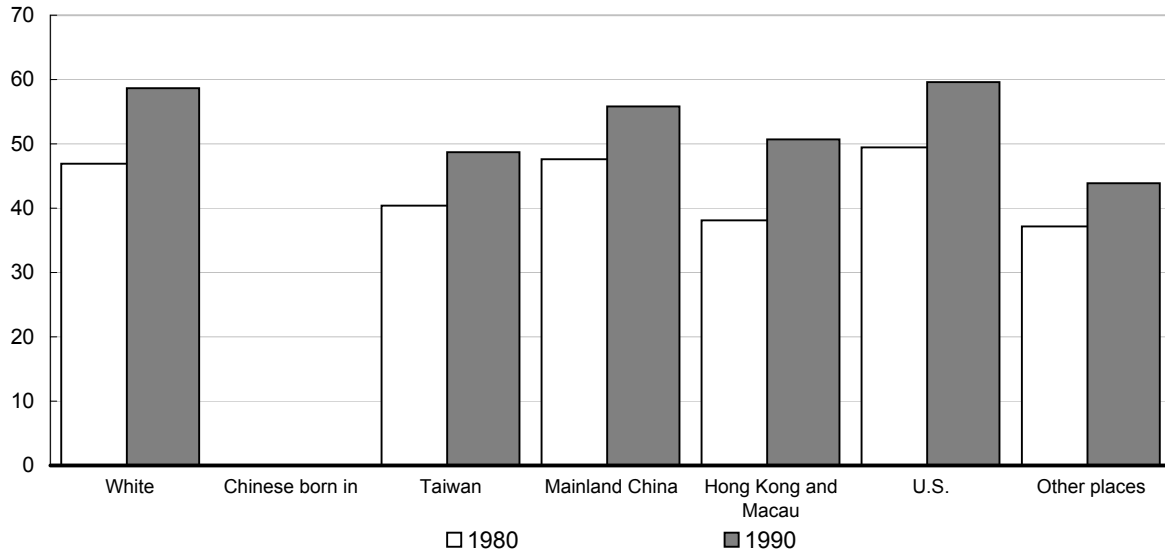
Note: The vertical axis shows the mean value of permanent income in 1000s. All dollar figures are in 1989 dollars.

Source: 5% Public Use Microdata Samples of the US Census, 1980, 1990; Public Use Microdata Samples of Census 2000 Supplementary Survey.

Figure 2. Foreign-Born Chinese by Immigrant Status and Nativity in Los Angeles CMSA, 1980-1990
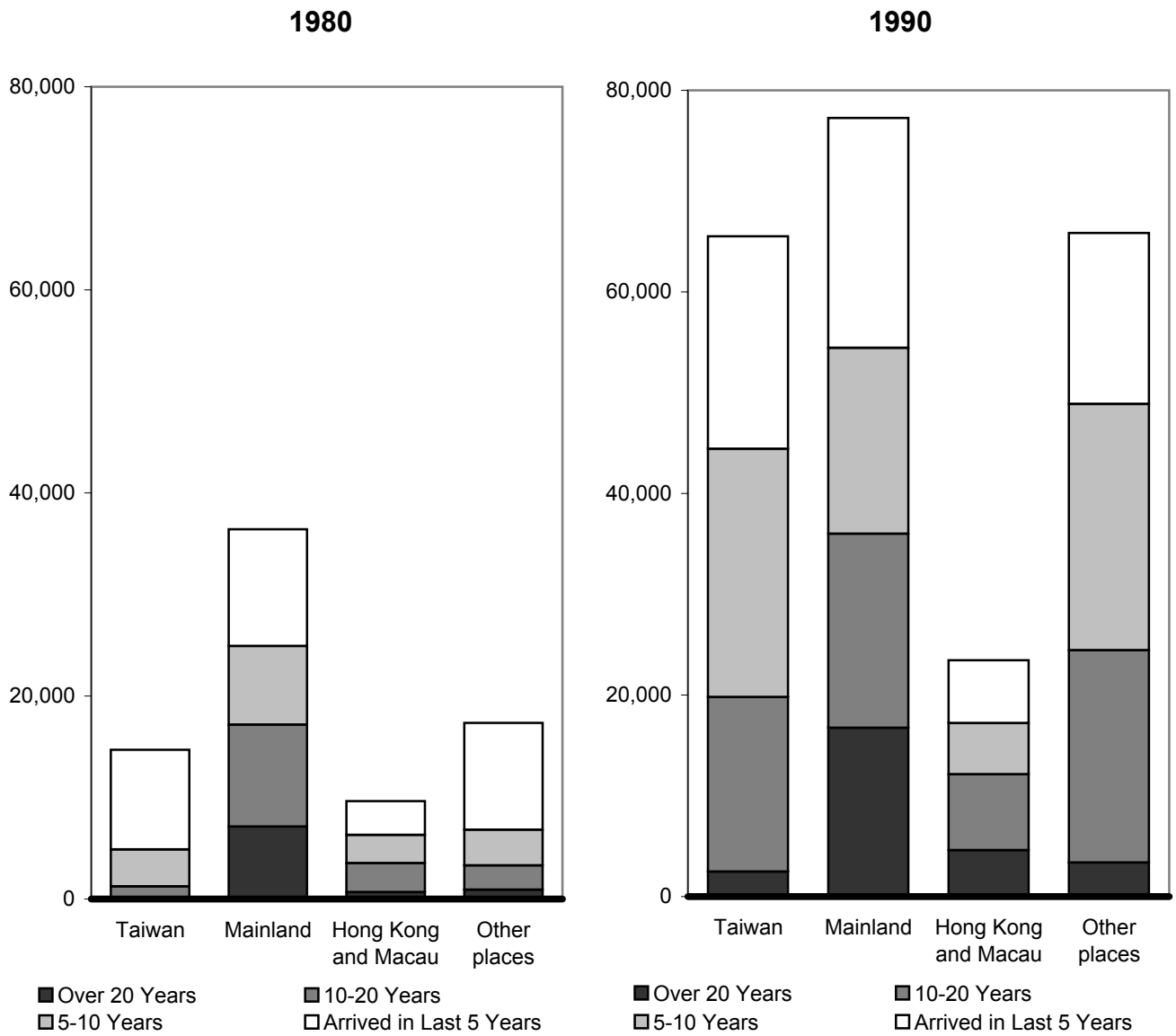
1980

1990

Note: Chinese immigrants from other places refer to foreign-born Chinese who were not born in Taiwan, mainland China, Hong Kong, or Macau.

Source: 5% Public Use Microdata Samples of the US Census, 1980, 1990.

Fig. Homeownership Differentials between Chinese and Whites by PUMA Groups

N
W E
S

Chinese-White Percentage Differentials in Homeownership Rates
-8.6 - 0 Whites higher
0 - 10 Chinese-slightly higher
10 - 20 Chinese-moderately higher
over 20 Chinese-much higher
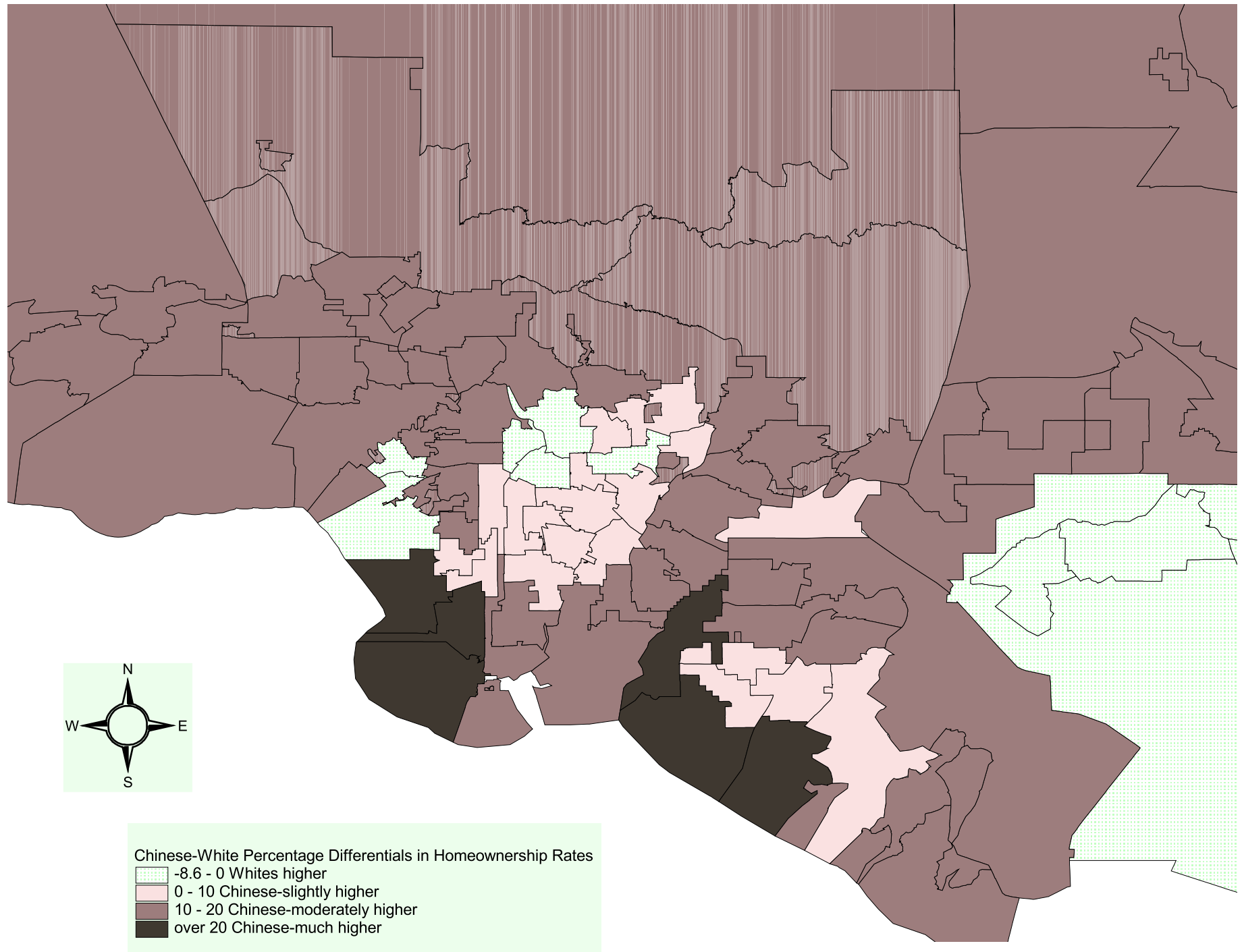
Appendix 1. Variable Summary Statistics in Full and Movers-Only Sample in LA

Variable	LA Full Sample		LA Movers Sample	
	Mean	Std Dev.	Mean	Std Dev.
Ownership Rate	0.6112	0.487	0.4788	0.500
Age 18-24	0.0466	0.211	0.0742	0.262
Age 25-34	0.2611	0.439	0.3719	0.483
Age 35-44	0.2916	0.454	0.3022	0.459
Age 45-54	0.2189	0.414	0.1591	0.366
Age 55-64	0.1817	0.386	0.0926	0.290
Not Married, Male Head Of Household	0.1912	0.393	0.2264	0.419
Not Married, Female Head	0.2169	0.412	0.2259	0.418
No High School Diploma	0.0930	0.290	0.0899	0.286
High School Dip. W/ College	0.4454	0.497	0.4420	0.497
College Degree or Better	0.4616	0.499	0.4680	0.499
Number Of People In Household	2.7818	1.484	2.7355	1.486
Number Of Workers In Household	1.7232	0.903	1.6748	0.839
Permanent Income (1000s)	57.8201	22.568	54.2844	21.868
Transitory Income (1000s)	-0.0003	39.802	-0.3565	38.198
Dividend Income (1000s)	2.7818	9.430	1.9163	7.677
The 25th Percentile Housing Price (log)	12.0890	0.444	12.0732	0.458
Puma Median Rent (log)	6.4995	0.202	6.4935	0.209
Ethnicity-White	0.8746	0.331	0.8582	0.349
Ethnicity-Chinese	0.0320	0.176	0.0369	0.189
Ethnicity-Mainland	0.0098	0.099	0.0097	0.098
Ethnicity-Taiwan	0.0084	0.091	0.0112	0.105
Ethnicity-Hongkong and Macau	0.0030	0.055	0.0038	0.062
Ethnicity-Native	0.0043	0.065	0.0039	0.062
Ethnicity-Other Chinese	0.0068	0.082	0.0085	0.092
Ethnicity-Other Asian	0.0933	0.291	0.1049	0.306
Good English	0.9700	0.171	0.9629	0.189
Interaction-Chinese	0.0248	0.155	0.0284	0.166
Interaction-Mainland	0.0067	0.081	0.0063	0.079
Interaction-Taiwan	0.0067	0.082	0.0089	0.094
Interaction-Hong Kong and Macau	0.0028	0.053	0.0036	0.060
Interaction-Native	0.0041	0.064	0.0038	0.062
Interaction-Other Chinese	0.0047	0.068	0.0059	0.076
Homeownership Rate Difference	0.1213	0.086	0.1182	0.088
Interaction-Chinese	0.0031	0.023	0.0035	0.024
Interaction-Mainland	0.0009	0.013	0.0008	0.012
Interaction-Taiwan	0.0010	0.013	0.0013	0.015
Interaction-Hong Kong and Macau	0.0003	0.007	0.0003	0.007
Interaction-Native	0.0005	0.009	0.0004	0.009
Interaction-Other Chinese	0.0005	0.010	0.0007	0.011
Moved From Within Same State(s)	0.0513	0.221	0.0887	0.284
Moved From Within U.S	0.0874	0.282	0.1511	0.358
Moved From A Foreign Country	0.0340	0.181	0.0588	0.235
Immigrant	0.1846	0.388	0.2066	0.405
Came To U.S. In The Past 5 Yrs.	0.0329	0.178	0.0539	0.226
Came To U.S 5-10 Years Ago	0.0425	0.202	0.0566	0.231
Came To U.S 10-15 Years Ago	0.0372	0.189	0.0415	0.199
Came To U.S 15-20 Years Ago	0.0201	0.140	0.0188	0.136
Came To U.S 20-30 Years Ago	0.0292	0.168	0.0223	0.148
Came To U.S More Than 30 Years Ago	0.0227	0.149	0.0135	0.115
Number of Observations	124,626		72,061	

Appendix 2. Cities and Counties in Each Area

Group	Cities or Counties
1	Burbank,Santa Clarita,Lancaster, Palmdale,North Hollywood,Semi Valley
2	Glendale,Pasadena,La Canada
3	Calabasas,Malibu,Santa Monica,Brentwood
4	Van Nuys,Northbridge,Encino
5	Pomona,Azusa,Baldwin Park,Irwindale,La Verne,Claremont
6	Covina,West Covina,City of Industry
7	Diamond Bar,La Habra Heights
8	Whittier
9	El Monte,Arcadia,San Marino,San Gabriel,Temple City
10	Montery Park,Rosemead
11	Alhambra,South Pasadena
12	Eagle Rock
13	Beverly Hills,Hollywood
14	Downtown LA,Westlake
15	East LA,Vernon,South Gate,Lynwood,Compton,Downey,Gardena,Hawthorn
16	Venice,Westwood
17	Torrance,El Segundo--Manhatton--Redondo Beaches,Palos Verdes--Rolling Hill Estates
18	Carson,Lakewood,Bell Flower,Harbor City, Long Beach
19	Santa Fe Springs,La Mirada,Cerritos,Artesia
20	Ventura County
21	Riverside County
22	San Bernadino County
23	Santa Ana,Westminster,Garden Grove
24	Laguna Beach,Laguna Niguel,San Juan Capistrano, La Habra,Yoba Linda
25	Irvine city, Tustin City
26	Buena Park, Huntington Beach,Newport Beach,Costa Mesa
27	Anaheim,Fullerton

Note: The designation of these spatial areas is based on PUMA unit from Census data. When one PUMA does not have enough Chinese households, other spatially-adjacent PUMAs with similar social and economics characteristics will be combined together.