Federal Reserve Bank of Chicago

**Tenure Choice with Location Selection:
The Case of Hispanic Neighborhoods
in Chicago**

*Maude Toussaint-Comeau and
Sherrie L.W. Rhine*

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Maude Toussaint-Comeau
Sherrie L.W. Rhine
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Abstract

A notable feature of immigration into the U.S. is the high degree of spatial concentration of different immigrant groups. We ask the question whether residing in areas with a large proportion of a co-ethnic group influence the decision to own a home for Hispanics in the Chicago Metropolitan area. The results show that Hispanics choose to live in Hispanic enclaves based on relatively homogeneous characteristics such as recent migration, less English language fluency, and lower income. More years in the U.S., higher education attainment and English language fluency remain strong predictors of homeownership. Individuals are less likely to be homeowners in communities with a larger co-ethnic concentration, foreign-born residents, or lower-income families. (JEL C35, J1, R12)

TENURE CHOICE WITH LOCATION SELECTION:
THE CASE OF HISPANIC NEIGHBORHOODS IN CHICAGO

MAUDE TOUSSAINT-COMEAU and SHERRIE L.W.RHINE*

I.   INTRODUCTION

The tendency for immigrant groups to locate where other co-ethnic groups have already settled (in *ethnic enclaves*) is a common process resulting from the need (or preference) to reunify with family members and other co-ethnic members and from initial unfamiliarity with the country's labor and housing markets (Bartel, 1989). Immigrants may also settle where they have the best opportunities for employment or where they can best use their skills, which may or may not be in an ethnic enclave. Evidence suggests that an immigrant's location choice (whether in or outside an enclave, within the destination country) depends on his/her human capital characteristics. Specifically, immigrants who choose to live in enclaves tend to have less education, shorter periods of residency in the U.S., less general experience in the destination country, and lower English proficiency (Funkhouser and Ramos, 1993).

The implications of spatial concentration for immigrant groups on various aspects of their economic adjustments have spurred much interest among researchers. The impact of spatial concentration has been analyzed for the labor market earnings of immigrant groups, their propensity to be self-employed (Light et al., 1993), their investment in post-migration human capital (Chiswick and Miller, 2002), and their participation in the political process (Portes and Mozo, 1985). Although less studied, homeownership is another important aspect of immigrant financial assimilation and the social/economic adjustment process that deserves attention (Alba and Logan, 1992).

Ethnic enclaves may influence homeownership attainment of immigrant groups in several ways. Rising housing prices in increasingly dense neighborhoods can encourage homeownership

as an investment (Borjas, 2002). Ethnic enclaves may also foster homeownership to the extent that ethnic networks within enclaves can more effectively channel information flows about house-ownership opportunities (Krivo, 1995). Conversely, if an immigrant group is concentrated in an ethnic neighborhood where the supply of housing is more limited and possibly where housing stock is of poor quality, this will likely result in lower homeownership gains for the group (Krivo, 1995). Or, if an immigrant group is concentrated in a central city where housing prices are relatively higher, these residents may be less likely to own a home due to affordability constraints (Coulson, 1999). In particular, the more recently an immigrant group has migrated and the poorer the immigrants are who reside in enclaves, the greater are the affordability constraints and difficulties faced in meeting down payment requirements (McArdle, 1995).

The impact of ethnic spatial concentration on homeownership is unclear and previous empirical research has shown somewhat conflicting evidence. Comparing various ethnic/racial groups, Alba and Logan (1992) find that, as the proportion of Mexicans and Cubans in a metropolitan area becomes larger, the likelihood of homeownership increases; while for other groups such as Puerto Ricans and Vietnamese, the likelihood of homeownership decreases. Similarly, Krivo (1995) maintains that the "immigrant context" decreases the likelihood of homeownership among Hispanics--although the negative effect is more subdued for Mexicans than non-Mexicans. In contrast, Borjas (2002) finds that in several major American cities ethnic clustering increases the probability that immigrant households own their homes.

These studies suggest that the ethnic enclave context will have a direct impact on the determination of tenure choice. At the same time, it is reasonable to assume that the decision to reside in an ethnic enclave is not a random process. A number of factors are likely to influence an immigrant's decision to choose an "enclave" rather than a location with only a sparse number

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of residents from its co-ethnic group. Enclaves offer an alternative means of cushioning the relatively higher cost of integration that some immigrants may face (Chiswick and Miller, 2002). Immigrants with less human capital may have greater difficulty in adapting or assimilating to the new culture and therefore may have a greater reliance on living in an ethnic enclave. For similar reasons, older immigrants also may choose such a location. Immigrants with less incentive to invest in learning to speak a new language, such as those who plan to repatriate at some point in the future, would tend to prefer to live with others who speak their language and share a similar culture. To summarize, location choice is likely to be a function of immigrant status and human capital characteristics --factors that at the same time impact the tenure decision. An immigrant's location choice and tenure decision is likely to be simultaneously (or endogenously) determined.

This paper is concerned with the issue of spatial concentration, an immigrant's decision to reside in an ethnic enclave and the impact of these conditions on homeownership. We propose a framework for testing the hypothesis of the potential joint relationship between ethnic enclave location choice and tenure choice. Specifically, we ask the question whether residing in areas with a large proportion of a co-ethnic group influences the decision to own a home.

The analysis is applied to Hispanic households in distinct communities in the Chicago metropolitan area. Similar to the trend in several other major U.S. cities, Hispanics are one of the fastest growing populations in the Chicago metropolitan area, with distinct and growing neighborhood concentrations throughout the area. Yet they have the lowest rate of homeownership of all other racial/ethnic groups. Our analysis determines the factors affecting homeownership for this group and in particular looks at the influence of residential segregation (ethnic concentration) on homeownership.

The Chicago MSA is divided into 47 Public Use Micro Areas (PUMAs). PUMAs are the smallest geographical units defined by the 1990 U.S. Census Public Use Micro Statistics, public version of the data. Within the Chicago metropolitan area, PUMAs that are heavily populated by Hispanics are identified and compared with other PUMAs that have an intermediate proportion of Hispanics, and others where there are only few Hispanic residents. These smaller geographical units allow us to identify specific Hispanic areas and potentially to capture some *ethnic enclave* o*r ethnic affinity effects*. This is in contrast to previous studies that have typically considered only cross-metropolitan variation effects in analyzing the tenure decision.

From a policy perspective, the stability and population growth in these neighborhoods is of much concern because of the likely changes in housing prices, neighborhood amenities and community development needs. An important objective of this research is to also identify potential ways to help better serve the housing needs in these ethnic communities.

This study is organized as follows: Section 2 provides a discussion about the survey data and a description of the sample analyzed. Section 3 suggests the theoretical/econometric model. Section 4 reports the findings from the empirical investigation. In the final section, we discuss the potential implications from the analysis.

II.   DATA AND SAMPLE DESCRIPTION

The data used in this analysis are drawn from the Public Use Micro Statistics (PUMS) of the 1990 U.S. Census, which represent a sample of 5 percent of the U.S. population. The data is advantageous because it provides a sample of Hispanics that is larger than other surveys such as the American Housing Survey and the Current Population Survey. More importantly this data includes a wealth of information on immigration status, mobility history and language proficiency that are important for our analysis.

Table 1 provides the definition and means of variables used in the analysis. For this study, we restrict the sample to cover Hispanic households living in the Chicago MSA, with heads of household 18 to 64 years of age, who either own or rent their primary residence, and who had positive income. Educational attainment for heads of households in the total sample was rather low, as the majority (54 percent) had less than 12 years of schooling. Close to 30 percent reported that they do not speak English well or very well. Close to 70 percent are foreign-born (while about 30 percent are born U.S. citizens). Consistent with the nation, the homeownership rate for Hispanics in the Chicago metropolitan area sample was 46 percent (Joint Center for Housing Study, 1999).

Typical of immigrant groups and low-income households, mobility was fairly high (Kan, 2000). Forty-six percent moved from a different state in the U.S; 4 percent moved from a different area within the State of Illinois; and 9 percent came from a foreign country. Households in ethnic enclaves seem to be much less mobile than those in other locations; 45 percent of households in ethnic enclaves were non-movers compared to 38 percent of those who resided in other locations. In general, one expects non-movers to be more prone to homeownership. To the extent that this is true, the longer-term (non-movers) residents in the Hispanic neighborhoods might be a source of favorable prospect for homeownership gains in the Hispanic ethnic enclaves.

Surprisingly, movement across PUMA locations within the Chicago metropolitan area was a fairly uncommon occurrence –only 2 percent undertook such a move. Typically, looking at movement or the mobility of households has been used as an approach to understand location choice (Boehm et al., 1991). Mobility is viewed as reflective of households' responses to variations in local labor market opportunities or differences in neighborhood amenities (e.g.

school quality). The fact that individual Hispanic households experienced such little mobility within the Chicago area precludes us from testing the determinants of these households' movement within this urban area. This raises an important question. What are the factors that drive the "initial" location choice of the Hispanics within the Chicago metropolitan area? And how does this choice influence and interact with tenure choice? Some plausible explanations are offered looking more closely at the pattern of location for the group.

While the Hispanic population in the sample made up 10 percent of the population in the entire Chicago MSA, one of the total of 47 PUMAs had an 86 percent population of households who were of Hispanic origin. (It combines South Lawndale, known as Little Village and the neighboring Lower West Side, known as Pilsen; two communities located on the southwest side of the City of Chicago). This PUMA can be considered as the *primary location* of Hispanics in the Chicago MSA. Another PUMA had 58 percent of its household population of Hispanic origin. (It includes Rogers Park and Uptown, two areas on the north side of the City of Chicago). This PUMA was considered the *secondary location* for Hispanics in the Chicago MSA for that decennial. We combine the *primary* and *secondary locations* as enclaves with a majority Hispanic population, referred to as HISPLOC for Hispanic locations or ethnic enclaves.[1] All the remaining PUMAs had a population of less than 26 percent Hispanic with most having 10 percent or less Hispanic households --they are classified as *other locations*. The clear concentration of Hispanic households in these specific locations, while being sparsely populated in each of the remaining locations of the Chicago metropolitan area, is consistent with the pattern of *inside-enclave/outside-enclave choice* observed for many other immigrant groups (Funkhouser and Ramos, 1993).

Table 1 also reports the mean characteristics of Hispanics based on the two distinctly different residential locations; the predominantly Hispanic locations, HISPLOC, and the *other* locations. A striking result is that Hispanics with the most human capital tend to locate outside the areas with the largest concentration of Hispanics. Specifically, households in the HISPLOC locations have on average less education and less proficiency in English, and have been in the U.S. for a shorter period of time. These households also tend to have less income and lower homeownership rates. The larger household size reported in HISPLOC is consistent with findings reported for Hispanics in the Los Angeles metropolitan area (Krivo, 1995).

In the next section, we examine the question of whether the deliberate choice of inside-enclave/outside-enclave locations, as promulgated by individuals' socioeconomic characteristics and immigrant status, also affects the tenure choice or homeownership attainment for the group.

III.   THEORETICAL/ECONOMETRIC FRAMEWORK

Economic theory suggests that an individual maximizes utility through decisions made based on marginal cost, marginal benefit calculations. Since the net benefit of the choice taken is not directly observable, the resulting outcome of the choice is modeled as an unobservable variable (y*). In the case of a tenure choice model, it is assumed that there is a latent variable (y*) that measures the tendency of an individual toward ownership. Building from a consumer choice theoretical framework, we propose to model the household's decision of whether or not to own a home with a binomial probit model.

Prob[own a home| **x**] = **Φ(β' x)**

where **Φ** (*t*) denotes the CDF of the normal distribution and **x** denotes those covariates that influence the choice made. The decision of owning is influenced by an individual's socioeconomic, demographic, and life-cycle covariates as well as the location choice. The

dependent variable, y_1 = OWNHOME, is equal to one if the household owns his home and equals zero otherwise.

An important consideration is the possibility that an individual's initial decision to reside in an enclave as opposed to outside an enclave influences tenure choice. Studies that focus on native groups have used a multinomial/nested logit technique to model the location choices that tend to span across many places (e.g. Deng et al, 2003). Our study draws upon the immigrant location choice literature. We consider the choice of location to fall within an *inside-enclave/outside-enclave* choice set. As such, the probit specification is appropriate to model this binary decision. Specifically, the variable, y_2 = HISPLOC, is equal to one if the household chooses to reside in an enclave and equals zero otherwise.

The full model is

$$y_1^* = \boldsymbol{\beta}' \mathbf{x_1} + \gamma y_2 + \epsilon_1, \qquad y_1 = 1 \text{ if } y_1^* > 0, \quad 0 \text{ otherwise}, \qquad (1)$$

$$y_2^* = \boldsymbol{\alpha}' \mathbf{x_2} + \epsilon_2, \qquad y_2 = 1 \text{ if } y_2^* > 0, \quad 0 \text{ otherwise}, \qquad (2)$$

where $\mathbf{x_1}$ includes the characteristics described by $\mathbf{x}$ and $\mathbf{x_2}$ represents the factors that influence the location decision. The disturbances are jointly normally distributed with

$$E[\epsilon_1] = E[\epsilon_2] = 0,$$

$$Var[\epsilon_1] = Var[\epsilon_2] = 1,$$

$$Corr[\epsilon_1, \epsilon_2] = \rho,$$

The joint decision is described by the probability model,

$$Prob \; [y_1 = 1, \; y_2 = 1] = Prob \; [y_1 = 1 \,|\, y_2 = 1] \times Prob \; [y_2 = 1]$$

$$= \{BVN(y_1=1, y_2 = 1)/Prob[y_2 = 1]\} \times Prob[y_2 = 1], \qquad \textbf{(3)}$$

where BVN denotes the CDF of the bivariate normal distribution. If we insert the variables of our model and include the two parameter vectors, the preceding can be rewritten as

Prob $[y_1 = 1, y_2 = 1] = [\text{BVN} (\boldsymbol{\beta}'\mathbf{x_1} + \gamma, \boldsymbol{\alpha}'\mathbf{x_2}, \rho) / \Phi(\boldsymbol{\alpha}'\mathbf{x_2})] \times \Phi(\boldsymbol{\alpha}'\mathbf{x_2})$.   (4)

After canceling terms, this produces the bivariate probability

Prob$[y_1=1, y_2=1] = \text{BVN}(\boldsymbol{\beta}'\mathbf{x_1} + \gamma, \boldsymbol{\alpha}'\mathbf{x_2}, \rho)$

where β, γ, α, ρ are the parameters to be estimated. The three remaining cases are:

Prob $[y_1 = 1, y_2 = 0] = \text{BVN}(\boldsymbol{\beta}'\mathbf{x_1}, -\boldsymbol{\alpha}'\mathbf{x_2}, -\rho)$,

Prob $[y_1 = 0, y_2 = 1] = \text{BVN}(-\boldsymbol{\beta}'\mathbf{x_1} - \gamma, \boldsymbol{\alpha}'\mathbf{x_2}, -\rho)$, and

Prob $[y_1 = 0, y_2 = 0] = \text{BVN}(-\boldsymbol{\beta}'\mathbf{x_1} - \gamma, -\boldsymbol{\alpha}'\mathbf{x_2}, \rho)$.

Therefore, despite initial appearances, these terms enter the usual likelihood function for the bivariate probit model. Contrary to what intuition might suggest, the result shows that the presence of y_2 in the first equation does not cause a "simultaneity" problem. The model can be consistently and efficiently estimated as the bivariate probit model, as stated, by maximum likelihood as if there were no joint determination in the first equation.[2]

The bivariate probit technique is estimated to ascertain whether the probability of choosing a location (HISPLOC = 1) is jointly determined with tenure choice (OWNHOME). The model includes a correlation between the latent (unobserved) effects in the HISPLOC and OWNHOME equations. Should the correlation coefficient, ρ, be statistically different from zero, we conclude that the tenure decision is not only directly affected by the location decision but also is indirectly influenced through household effects (such as unmeasured preference, culture effects, or neighborhood-specific effects) which are not explicit in the model. We do note that our specification is an extension of the standard probit model where $\rho = 0$. However, even if ρ equals 0, the two household's decisions are not viewed as independent since y_2 appears in the y_1 equation. The next section explains the motivations behind inclusion of specific covariates in the empirical estimate counterpart of the theoretical model and discusses the results.

IV.   EMPIRICAL INVESTIGATION

Life-cycle and Demographic Variables

There is agreement in the literature that tenure choice depends on life-cycle (including family structure) and demographic variables (Goodman, 1990). Following this convention, marital status, MARRIED, size of the household, HHSIZE, and whether or not dependent children are present, DEPENDENT, are included. They serve as indicator variables of the *tastes* and *preference* for homeownership. Age of the head of household is controlled for in a nonlinear fashion using a series of dummy variables for selected age groups. For example, AGE24 is equal to 1 if the head of household is 18 to 24 years of age, zero otherwise. The remaining age categories are defined in a similar way. Finally, the indicator variable, MEXICO, is equal to 1 if the head of household's place of birth is Mexico or zero otherwise. This characteristic controls for differences in homeownership between those of Mexican and non-Mexican national origin.

Immigration, Assimilation, and Mobility Variables

The immigrant experience of Hispanics has important implications for homeownership outcomes for several reasons. First, the intricacies of the home purchase process require a certain level of financial acumen and mastery of the English language which may be more difficult for some non-native English speaking immigrants (Cheney and Cheney, 1997; Ratner, 1997; Hamilton and Cogswell, 1997). Acquired English language fluency is an important human capital attribute for immigrants and is an indicator of potentially greater assimilation and integration into the mainstream financial system. It might be expected that immigrants with greater English language fluency are more likely to be a homeowner. Conversely, in a Hispanic neighborhood context where transactions may be conducted in Spanish, a lack of English language fluency may not necessarily hamper ownership. NOENGL, whether the head of

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household reported that he/she speaks English "not well" or "not at all" is included to determine the influence that this lack of human capital has on homeownership.

Second, unfamiliarity with the U.S. credit system may result in households being less informed about opportunities that could increase their ability to purchase a home. It has been suggested that a limited understanding of the U.S. credit system may also cause some immigrants to be less willing to absorb the debt necessary in the home purchase process (Gerlin, 1996). Therefore, the length of time a person has resided in the U.S. is important. From a lender's point of view, the length of time a person has resided at a particular address in the U.S. can be considered for lending qualification or underwriting purposes (Warren, 1995). Hence the longer a person has lived in the U.S., the less his/her immigrant status should influence the likelihood of homeownership. Length of time since migration is controlled for in a nonlinear fashion with dummies for incremental years since migration. Numerical suffixes are used to denote the number of years. For example, YSM5 is equal to 1 if the head migrated less than 5 years prior to the survey. We also include an indicator variable for whether the head is an U.S. born citizen, USCIT (note, in which case, years since migration is equal to zero). Whether the head of household is a naturalized citizen, NATRL_CIT, is included as an indicator variable for integration or assimilation potential.

Following previous research that has shown that mobility is important to the tenure decision (Painter, 2000; Kan, 2000), the model also controls for geographic mobility by including relevant indicator variables. MOVE_US indicates whether the head of household's residence 5 years earlier was in another state. MOVE_IL indicates whether the individual moved from a different location within the state of Illinois to the Chicago metropolitan area, while, MOVE_PUMA denotes whether a move was made across PUMAs in the Chicago metropolitan

area. The relationship between mobility and homeownership is expected to be negative given the transactions and moving costs associated with selling a home (Boehm et al., 1991).

Socioeconomic Variables

Household income has been used as an indicator for the effects of nominal housing affordability on household tenure choice. As is customary, both permanent and transitory components of household income are included (Goodman and Kawai, 1982). Permanent income, PERMANINC, is the predicted value of the measured income estimated by a regression on a set of instrumental variables related to human capital and other characteristics, while transitory income, TRANSINC, is the difference between the observed measured household income and predicted income. Permanent income is expected to have a positive influence on homeownership. Transitory income may be less important as the typical costs associated with the home purchase process (*i.e.*, transactions, search and moving costs) are so substantial that they may not be covered by transitory income (Goodman, 1990).

Educational attainment is controlled for with a series of indicator variables reflecting whether the head of household completed college or beyond, COLLEGE, or graduated from high school, HIGHSCHOOL. Schooling level is viewed in the literature as one potential indicator of wealth prospect and is used here as a proxy for wealth-related *taste* for homeownership.

Housing Prices

To the extent that homeownership is viewed as an investment, greater expectations for future increases in housing value for a given area will induce an individual toward homeownership in that area. As such, we might expect individuals located in areas with higher housing values to have a greater propensity for owner-occupied housing than individuals who reside in areas where housing values are lower. On the other hand, higher housing prices may

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lead to greater affordability constraints, especially for lower-income and more recent immigrant groups. Studies have shown that Hispanics have lower income levels relative to other ethnic/racial groups. Therefore, home affordability is likely to be relevant for their tenure choice. Gyourko and Linneman (1996) used the 25th percentile of the log housing value in an MSA as an indicator variable to capture the costs of a typical inexpensive home and median rent value to capture local housing prices. We follow their approach by including HOMEVAL, the 25th percentile of the log housing value in each PUMA to control for local housing affordability. The median rent in the PUMA, MEDRENT, also is included to control for the typical cost of renting in the PUMA. Areas with relatively high housing values or low rents may be expected to lengthen the transition to homeownership (Painter et al., 2000).

Location Variables

In the empirical analysis, HISPLOC, the indicator variable for Hispanic locations, is included to measure the direct impact of residing in an ethnic enclave on the likelihood of homeownership attainment.

An index of ethnic concentration is also developed to capture the effect of ethnic clustering or ethnic networks within a location, independent of Hispanic location housing market fixed effects. This variable, ETHNAFF, or ethnic affinity is defined by

$$ETHNAFF = N_{lp} / N_p$$

Where N_{lp} is the total number of persons born in the same country of origin, ethnicity or ancestry (l) as the householder and who live in his/her PUMA (p). Np is the total number of persons who live in the PUMA (p) using the entire population of persons enumerated by the U.S. Census as residing in the PUMA area. In essence, this variable is included to capture the extent to which a higher proportion of people who share the same ethnic background within these defined areas influence the likelihood of homeownership. ETHNAFF is similar to the *Exposure*

Index concept used in Borjas (2002) to measure ethnic clustering within metropolitan areas. The index used in this study, however, is a more concise measure since it is defined at the PUMA level.[3] In addition, unlike previous studies we include a quadratic term to investigate potential non-linearity in the relationship between ethnic concentration and homeownership.[4]

A priori, the directional influence of ETHNAFF on homeownership is uncertain. One hypothesis is that the higher the value of the ETHNAFF index the greater the affinity or sense of belonging and thereby a heightened potential for ethnic networks to help promote homeownership. The potential benefits of ethnic affinity, however, may be somewhat offset by the hampering effect of higher concentrations of individuals who face relatively greater economic and financial constraints. If true, as ethnic concentration rises, there may be a lower likelihood for homeownership (McArdle, 1995). To investigate these possibilities, we also add indicator variables to control for resident-location characteristics including the percent of households with low income (PCT_POOR), the percent of households who are foreign-born (PCT_FORGN), and the percent of households who are not fluent in English (PCT_NOENGL).[5]

Empirical Results

The decision to locate in a predominantly Hispanic enclave, HISPLOC, is expected to influence the household's tenure choice (OWNHOME). The results from Table 2 for the HISPLOC equation concur that life-cycle and demographic characteristics such as marital status and the number of persons in the household significantly influence this decision for Hispanics. In addition, assimilation indicator variables such as English language fluency and whether an individual is a naturalized citizen influence where a household chooses to live. Socioeconomic factors such as permanent income and transitory income also have a significant influence on the location decision. Access to ethnic networks has a positive influence on the decision to reside in

a Hispanic enclave. Individuals who are more mobile, those who had moved from a different location within the U.S, the State of Illinois, or PUMA have a decreased tendency to choose to reside in Hispanic enclaves.

The bivariate probit model estimates for the tenure decision are reported in Table 3. We develop these OWNHOME models by initially considering a simple specification that excludes mobility. The first specification determines that the choice of location (HISPLOC) significantly influences the homeownership decision. As expected, the second specification, which includes controls for mobility shows that more mobile households are significantly less likely to be homeowners than their less mobile or non-mover counterparts. Interestingly, the coefficient of HISPLOC becomes statistically insignificant, suggesting that to a great extent the positive influence of Hispanic location was promulgated by the ownership-prone, non-mover residents in these locations.

We then introduce ethnic affinity and resident-location (neighborhood) effects into the model to gain a clearer understanding about how these characteristics influence the Hispanic enclave and homeownership decisions. This step-wise approach allows us to determine whether these decisions are also affected by potential unmeasured household preference or other latent effects not explicit in the model, yet captured by the correlation coefficient, ρ. In the third specification, the estimated coefficients for ethnic networks and its square term have a significant influence on the homeownership decision.

How important neighborhood characteristics are to the homeownership decision are explored in the fourth model reported in Table 3. The findings from this model suggest that homeownership is less likely for those who also choose to reside in a Hispanic enclave and when the location is more heavily represented by lower-income (PCT_POOR) or foreign-born

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(PCT_FORGN) individuals. Conversely, living in areas where there is a higher percentage of residents who do not speak English well (PCT_NOENGL) increases the likelihood of homeownership. Consistent with the ethnic enclave hypothesis, a higher concentration of individuals who do speak English well does not directly impede the potential for homeownership. After controlling for neighborhood effects, the estimated coefficient on ρ is insignificant, suggesting that the model has aptly controlled for potential latent effects influencing the enclave and homeownership decisions. A compelling result is that the effect of ethnic affinity is largely offset (becomes statistically insignificant) when the model includes the neighborhood characteristics, suggesting that part of the negative effect of ethnic affinity can be explained by its interaction with a larger concentration of immigrant households with financial constraints in ethnic enclaves. This result gives added insights into nuances in the dynamics of neighborhood characteristics that are implicated in the treatment of ethnic concentration in the analysis.

Marginal Effects

Marginal effects for the final model are computed to determine the magnitude of influence that the covariants have on the probability that individuals who choose an enclave own a home. The conditional probability, Prob[OWNHOME=1|HISPLOC=1], includes both a direct and an indirect effect. From the model structure in equation (4), the probability is

Prob[OWNHOME=1|HISPLOC=1] = Prob $[y_1 = 1 | y_2 = 1]$

$$= \text{Prob } [y_1 = 1, y_2 = 1] / \text{Prob}[y_2 = 1].$$

A variable of interest can appear in both probabilities. The direct and indirect effects can be seen by assuming that the variable is continuous and differentiating the probability. Denoting the influence by z, we have

$$\partial \text{Prob}[y_1=1, y_2=1]/\partial z = \frac{\partial \text{Prob}(y_1=1, y_2=1)/\partial z}{\text{Prob}(y_2=1)} - \frac{(\partial \text{Prob}(y_2=1)/\partial z)\text{Prob}(y_1=1, y_2=1)}{[\text{Prob}(y_2=1)]^2}$$

$$= \text{direct} + \text{indirect effect}.$$

An attribute's total marginal effect in the homeownership model is the sum of its direct and indirect effects. The direct effect is produced by the attribute's presence in the first equation, OWNHOME. The indirect effect is also produced if this same attribute is included in the second equation, HISPLOC. Accordingly, the total marginal effect on OWNHOME is the sum of the direct and indirect effects for those attributes that are specified in both equations. Attributes that are included in the second equation directly influence the probability of choosing a Hispanic enclave. This effect is transmitted back to the first equation through the attribute, HISPLOC, which appears in the OWNHOME equation, thus exerting the secondary, or indirect effect. For the variables on the right-hand side of the OWHHOME equation that are binary, the marginal effects are computed by evaluating the conditional probability with these set equal to one then zero, with other variables fixed at the sample means, so the decomposition is implicit.

The total marginal effects reported in Table 4 are based on the condition that a householder chooses a Hispanic enclave (HISPLOC = 1). For ease of interpretation, this condition will not be repeated but holds nonetheless throughout the discussion in this section. As shown in Table 4, homeownership increases by 12.6 percentage points due to higher educational attainment, COLLEGE; and by 6.3 percentage points due to HIGHSCHOOL. The positive influence of higher educational attainment, COLLEGE and HIGHSCHOOL, on homeownership is somewhat lessened when we consider the indirect effect. Moreover, the negative effect of English language deficiency on homeownership is less substantial (direct effect = -11.5; indirect

effect = 3.7; total effects –7.8 when we account for location selection's indirect effect). Hence these human capital factors exert a somewhat lessened impact on homeownership in the context of an immigrant/ethnic enclave.

The influence of being in a particular age group reveals expected life-cycle effects. For example, younger householders (AGE24 and AGE34) are less likely than those in the 35 to 44 age category (AGE44) to own a home. Conversely, older householders are more likely than those in the 35 to 44 age group to own a home.

Years since migration show a similar cycle. The likelihood of being a homeowner for those with shorter stays in the U.S. (YSM5 and YSM10) is less than for those who have lived in the U.S. 11 to 20 years (YSM20). On the other hand, those who have remained in the U.S. from 21 to 40 years are more likely to be a homeowner than those who have been in the U.S. 11 to 20 years. Being a naturalized or U.S. born citizen increases the likelihood of owning a home by 1.5 and 4.4 percentage points, respectively. These results are consistent with the proposition that more years residing in the U.S. or being a citizen signal a greater commitment and incentive to invest in homeownership in this country.

An increase in permanent income significantly increases the probability of owning a home by 2.7 percentage points. By comparison, an increase in average home prices in a PUMA lowers the likelihood of homeownership for this Hispanic sample. Recalling that this variable is defined as a proportion, an increase by 10 percent in home values in a PUMA decreases the probability of homeownership by 2.4 percentage points.

Whether or not households are mobile plays a strong role in the decision to purchase a home. Relative to non-movers, those who move from another part of the state of Illinois or from another state in the U.S. are less likely to be homeowners by 14.7 and 32.9 percentage points,

respectively. This finding is consistent with Painter (2000) who determines that recent movers are much less likely to own, while homeowners tend to be less mobile.

As for the neighborhood characteristics, the results show that a 10 percent increase in the proportion of low-income or foreign-born families in the PUMA decreases the likelihood of homeownership by 1.4 and 0.3 percentage points. Finally, an increase in the concentration of individuals who do not speak English fluently increases the likelihood of homeownership, albeit the influence is negligible.

The second alternative, Prob[OWNHOME=1|HISPLOC=0] was also considered.[6] Generally, the estimated marginal effects mirror those reported in Table 3 where HISPLOC = 1. This suggests that regardless of location choice, whether inside-enclaves or outside-enclaves, these characteristics remain important to the homeownership decision.

V. POLICY DISCUSSION AND RECOMMENDATIONS

Purchasing a home is one of the largest and most important financial investment decisions made by a household. For many families, homeownership is a foundation for financial asset building and future wealth accumulation. Increased homeownership also has been linked to improved property maintenance, higher property values, greater community involvement and enhanced neighborhood stability (Rohe and Stewart, 1996; Cox, 1982). The opportunity to become a homeowner, therefore, contributes to a community's overall economic stability and growth.

Homeownership is an indication of immigrant integration into the U.S. labor, financial and credit markets and shows a commitment to invest in a particular neighborhood. Although Hispanics are the fastest growing minority group in the U.S., they are among those groups with the lowest homeownership rates. This study determines that homeownership is less likely for

individuals if they are younger, lack English proficiency, are less educated, have resided in the U.S. for shorter periods of time, or tend to be mobile. They are also less likely to be homeowners in communities with larger proportions of co-ethnic, foreign-born residents or lower-income families.

The findings point to the tendency for human capital attributes to exert a somewhat lower impact on homeownership in the context of an ethnic enclave. A number of explanations could support the results that not speaking English fluently or being an immigrant is somewhat less of an impediment for Hispanics when a mostly Hispanic residential location is selected. Intuitively, it is possible that individuals in Hispanic neighborhoods may have greater opportunities to conduct home purchase transactions in Spanish. Also, financial service providers may be taking steps (e.g., having Spanish-speaking loan officers) toward removing language barriers from the home purchase or financial intermediation process in neighborhoods where there is a visibly larger Hispanic market (Kelderhouse, 2002).

Notwithstanding, we found that limited education and language difficulties may serve as serious constraints for this group in terms of becoming homeowners. In the short term, a potentially important policy response might be to offer credit and home financing information in Spanish so that individuals can make informed financial decisions concerning a home purchase. Distributing product and information brochures in Spanish is becoming more a common practice by some financial institutions and may help provide useful information to Hispanics. To help bridge language/cultural differences, financial institutions also have become more proactive in employing a culturally diverse staff (e.g., Spanish-speaking loan officers). Moreover, a greater number of community leaders, government agencies and financial institutions are partnering to create and offer financial education programs to Hispanic immigrants in their communities.[7]

Our analysis finds that the likelihood of homeownership is lower when housing prices/values are higher. Given that housing prices affect the ability of these lower-income Hispanic households to consider homeownership, this finding speaks to the need for policy makers to continue to direct their efforts toward promoting affordable housing initiatives and community economic development.[8] Toward a longer-term remedy, the low-income Hispanic communities in this metropolitan area could benefit from active community development and housing development initiatives. According to a recent study for the Fannie Mae Foundation, successful practices for promoting affordable homeownership include low downpayment, absence of mortgage insurance, higher qualifying ratios, consideration of alternative or nontraditional credit qualification proofs, latitude in proof of immigrant status, closing cost assistance programs, and in-language homeownership education or counseling.[9] There is also an innovative sweat equity practice that has apparently created sustainable homeownership for very-low income immigrant buyers.[10]

The Community Reinvestment Act (CRA) of 1977 encourages financial institutions to help meet the credit needs of their local communities, including low- and moderate-income neighborhoods, consistent with the institutions' safe and sound banking practices. According to a study by Haag (2000), CRA has contributed to the recent gains in the rate of mortgage lending among lower-income and minority households. In addition, greater availability of affordable housing has resulted from various programs offering low down payment and/or government-secured mortgage loans (e.g., FHA lending and low-interest mortgage financing).

What can be said however of the specific case of Hispanic neighborhoods in the Chicago area? First and foremost, community development opportunities to promote flexible home loan programs have been an important strategy to increase homeownership for low-income Hispanics.

It is instructive to illustrate the actual experience of the South Lawndale area, one of the Hispanic enclaves in the City of Chicago. In many ways, the actual experience in this community's housing market underscores the importance of developing clear targeted economic development initiatives to meet the special needs of emerging Hispanic communities.

South Lawndale (commonly referred to as Little Village) is a relatively stable residential and business community. The profusion of advertising signs that are written in Spanish along its main business strip (26th street) mirrors the culture of that community. Eighty-three percent of the community residents are Hispanic, primarily from Mexico. Thirty-seven percent of all housing units are owner-occupied. The housing units are very old. For example, as of 1990, more than half of the housing structures were built prior to 1940. While the total housing units in Little Village remained virtually unchanged from its 1960 level, the population has substantially increased (e.g., 33 percent between 1960 and 1990). Because the Hispanic population has outpaced the creation of new housing stock, this created severe overcrowding in the area. This community had in fact the highest rate of overcrowded housing among the communities in the City of Chicago, with four times the rate experienced in the City as a whole in 1990 (Chicago Fact Book Consortium, 1995). Because of very high increases in housing prices in the later part of the 1990s and early 2000s, housing affordability remains a challenge.

Nonetheless, Little Village experienced a steady increase in the number of home sales and mortgage-related loans in the 1990's.[11] The continued strength in home sales and mortgage financing has contributed to this community's vitality. The latest 2000 Census data shows that homeowner housing units vacancy rate is only 1.5 percent, compared to 7 percent in 1990. What has been done in this community to sustain its robust housing market? In 1994, Little Village was designated as an empowerment zone to help meet its unique housing and economic

development. This spawned several innovative housing and economic development programs and initiatives.[12] Projects such as those led by non-profit organizations and or in partnerships with banks typify initiatives that are being taken to address the housing and economic development needs of the community. For example, the Resurrection Project, a non-profit organization whose main service area is Little Village and neighboring Pilsen produced 160 housing units between 1992 and 1999 in these communities. Among ways they have approached these projects include partnering with over 12 financial institutions to provide end financing at low rates with down payments of as low as 5 percent.[13] According to a report about the Resurrection Project, 80 percent of the homeowners in those new units had previously lived in the community and 63 percent are low-income. This fact is consistent with the study's finding that long-term residents in this primary Hispanic enclave in the Chicago area may serve as a catalyst for homeownership gains in the community. Overall, while listing the scope of projects that has been done and their impact is beyond the scope of the paper, it is nevertheless encouraging that efforts are being made to successfully promote homeownership and community development in a targeted fashion in the community.

In conclusion, the methodology developed in this paper could be applied to other metropolitan areas. Indeed, it is hoped that this paper will encourage researchers to conduct similar analyses for other areas, other racial/ethnic groups, and other time periods. Doing so will not only test the robustness of our approach but will also help us to better understand the determinants of immigrant homeownership in diverse settings. This study focuses on a single metropolitan area. The fact that the actual choice of a primary Hispanic location is not necessarily an impediment for homeownership possibly due to its long term-residents who choose to own in that community may not be typical of other Hispanic neighborhoods in other

metropolitan areas. Nevertheless, our discussion of the actual activities in one of the Hispanic areas illustrates the importance of targeted housing development projects to help increase access to affordable housing in low-income Hispanic communities. This is likely to be relevant for many other Hispanic neighborhoods across other metropolitan areas in the U.S.

As an additional consideration, we recognize that the financial integration of households and whether households have a relationship with the formal financial sector (that is, have a transaction accounts at a bank) will likely play an important role in determining whether households have access to credit for a home mortgage. Given that Hispanic households are much less likely to be banked, this may be a consideration for future immigrant homeownership. Future research may also benefit from an investigation of other potential factors that may be important toward addressing issues related to access to credit and financial services. These include attitudes toward borrowing and preferences for or access to alternative and/or informal credit sources.

The results show that an increase in ethnic concentration dampens the prospect of homeownership. From an immigration policy perspective, do these findings suggest that ethnic concentration should be discouraged? We propose that the answer to this question is no. Concentrations of immigrants tend to be a first-generation or at most a second-generation phenomenon. New data from the 2000 U.S. Census points to a strikingly large dispersion of Hispanic communities across the Chicago metropolitan area. This suggests that Hispanic immigrant populations are mobile over time. Gains in human capital such as English language proficiency and education, socioeconomic integration and mobility outside of concentrated enclaves are likely to occur naturally over time. As such, we expect future homeownership rates to rise for Hispanics, potentially more so in locations outside of the traditional Hispanic enclave.

The most effective policy for Hispanics may be to allow the self-correcting mechanism already underway to continue.

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Table 1: Descriptive Statistics

Hispanics in the Chicago MSA

Variables	Definition of Variables	Total Sample	HISPLOC Locations	Other Locations
OWNHOME	1 if owns with mortgage or own free and clear, = 0 if rent.	0.48	0.37	0.53
PERMANINC	Predicted values of log of income.	9.36	9.26	9.40
TRANSINC	Residuals of log of income.		-0.06	0.02
MARRIED	1 if married, =0 otherwise.	0.57	0.54	0.59
AGE24	1 if age is 18 to 24, = 0 otherwise.	0.23	0.25	0.23
AGE34	1 if age is 25 to 34, = 0 otherwise.	0.31	0.33	0.35
AGE44	1 if age is 35 to 44, = 0 otherwise.	0.28	0.25	0.25
AGE54	1 if age is 45 to 54, = 0 otherwise.	0.12	0.12	0.11
AGE64	1 if age is 55 to 64, = 0 otherwise.	0.06	0.05	0.06
COLLEGE	1 if college degree and beyond, = 0 otherwise.	0.03	0.01	0.03
HIGHSCHOOL	1 if HS diploma or equivalent, = 0 otherwise.	0.43	0.37	0.45
ENGLWELL	1 if speak English "well" or "very well," = 0 otherwise.	0.60	0.58	0.60
NOENGL	1 if speak English "not well" or "not at all," = 0 otherwise.	0.27	0.36	0.24
USCIT	1 if born in U.S. or is of American parents, = 0 otherwise.	0.31	0.23	0.34
NATRL_CIT	1 if was born abroad and is naturalized, = 0 otherwise.	0.17	0.16	0.18
YSM5	1 if years since migration is 5 years or less, = 0 otherwise.	0.12	0.14	0.12
YSM10	1 if years since migration is 6 to 10, = 0 otherwise.	0.27	0.32	0.25
YSM20	1 if years since migration is 11 to 20, = 0 otherwise.	0.51	0.43	0.53
YSM30	1 if years since migration is 21 to 30, = 0 otherwise.	0.04	0.04	0.04
YSM40	1 if years since migration is 31 to 40, = 0 otherwise.	0.05	0.06	0.05
YSM50	1 if years since migration is over 40, = 0 otherwise.	0.01	0.01	0.01
HHSIZE	1 Number of persons in household.	4.66	4.96	4.55
DEPENDENT	1 if dependent children present, = 0 otherwise.	0.20	0.20	0.20
MEXICO	1 if place of birth is Mexico, = 0 otherwise.	0.48	0.56	0.45
HOMEVAL	25th quartile of log value of home in PUMA.	5.91	5.78	5.96
MEDRENT	Median value of rent in PUMA.		393.2	517.5
ETHNAFF	Ratio of people in PUMA with same place of birth, ethnic origin, or ancestry with respondent to total number of population in the PUMA.	0.20	0.27	0.18
HISPLOC	1 for PUMAs with 86 percent and 58 percent Hispanic, respectively, = 0 for all other PUMAs.	0.27	1.0	---
MOVE_PUMA	1 if moved from within PUMAs, = 0 otherwise.	0.02	0.00	0.02
MOVE_IL	1 if moved from within Illinois, = 0 otherwise.	0.46	0.42	0.47
MOVE_US	1 if moved from within U.S., = 0 otherwise.	0.04	0.03	0.05
MOVE_FORGN	1 if moved from a foreign country, = 0 otherwise.	0.10	0.10	0.09
NON MOVERS	1 if did not move in the last 5 years, = 0 otherwise.		0.45	0.38
PCT_POOR	Percent of family household in PUMA who have low income (less than 80 percent of the MSA median income)	46.41	56.30	42.12
PCT_FORGN	Percent of family household in PUMA who are foreign born.	59.50	60.35	59.19
PCT_NOENGL	Percent of family households in PUMA who do not speak "not well or not at all".	30.09	39.17	26.81
	Sample size	14126	3752	10374

Table 2: Bivariate Probit Results of Ethnic Enclave Location Choice
Dependent variable, HISPLOC

Variables	Coefficient Estimates	Standard Errors
Intercept	-0.66*	0.16
Socioeconomic Variables		
PERMANINC	-0.07*	0.02
TRANSINC	-0.00*	0.00
COLLEGE	-0.36*	0.10
HIGHSCHOOL	-0.10*	0.03
Life-cycle and Demographic Variables		
MARRIED	-0.20*	0.03
HHSIZE	0.01*	0.01
DEPENDENT	-0.01	0.03
AGE24	0.01	0.04
AGE34	0.01	0.03
AGE54	0.06	0.04
AGE64	-0.14**	0.06
Immigration, Assimilation and Mobility Variables		
ENGLWELL	0.76*	0.04
NO_ENGL	0.94*	0.05
USCIT	-0.78*	0.03
NATRL_CIT	-0.13*	0.04
MOVE_PUMA	-0.85*	0.14
MOVE_IL	-0.18*	0.03
MOVE_US	-0.23*	0.07
MOVE_FORGN	-0.28*	0.05
ETHNAFF	2.09*	0.06

* significant at less than 0.01. ** significant at less than 0.05.
Note: The omitted education category is less than high school level education; the omitted age category is age44 (ages 35 to 44); the omitted language category is "speak only English at home"; the omitted mobility category is NON_MOVERS.

Table 3: Bivariate Probit Models
Dependent variable, OWNHOME

Variables	Simple Model	Mobility Effects	Ethnic Affinity Effects	Ethnic Affinity & Neighborhood Effects
Intercept	2.93*	3.18*	2.76*	4.43*
	(0.43)	(0.44)	(0.45)	(0.47)
Socioeconomic Variables				
PERMANINC	0.09*	0.09*	0.08*	0.08*
	(0.01)	(0.01)	(0.01)	(0.02)
TRANSINC	-0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
COLLEGE	0.26*	0.32*	0.33*	0.36*
	(0.07)	(0.08)	(0.08)	(0.07)
HIGHSCHOOL	0.20*	0.20*	0.19*	0.17*
	(0.02)	(0.03)	(0.03)	(0.03)
Housing Prices Variables				
HOMEVAL	-0.94*	-0.94*	-0.83*	-0.64*
	(0.08)	(0.08)	(0.08)	(0.09)
MEDRENT	0.22*	0.24*	0.19*	0.01
	(0.02)	(0.02)	(0.02)	(0.02)
Life-cycle and Demographic Variables				
MARRIED	0.21*	0.21*	0.21*	0.17*
	(0.02)	(0.03)	(0.03)	(0.03)
HHSIZE	0.13*	0.13*	0.13*	0.13*
	(0.00)	(0.00)	(0.00)	(0.00)
DEPENDENT	0.04	0.04	0.04	0.03
	(0.03)	(0.03)	(0.03)	(0.03)
AGE24	-0.15*	-0.12*	-0.12*	-0.14*
	(0.04)	(0.04)	(0.04)	(0.04)
AGE34	-0.18*	-0.15*	-0.14*	-0.15*
	(0.03)	(0.03)	(0.03)	(0.03)
AGE54	0.25*	0.22*	0.22*	0.22*
	(0.03)	(0.04)	(0.04)	(0.04)
AGE64	0.37*	0.30*	0.29*	0.30*
	(0.05)	(0.05)	(0.06)	(0.06)
MEXICO	0.01	0.02	0.12*	-0.04*
	(0.03)	(0.03)	(0.03)	(0.03)
Immigration, Assimilation and Mobility Variables				
NO_ENGL	-0.36*	-0.32*	-0.32	-0.29
	(0.03)	(0.03)	(0.03)	(0.03)
USCIT	0.22*	0.18*	0.21*	0.05*
	(0.04)	(0.04)	(0.05)	(0.08)
NATRL_CIT	0.15*	0.12*	0.12*	0.12**
	(0.03)	(0.03)	(0.03)	(0.06)
YSM5	-0.83*	-0.70*	-0.71*	-0.69*
	(0.05)	(0.06)	(0.06)	(0.06)
YSM10	-0.44*	-0.42*	-0.42*	-0.40*
	(0.03)	(0.03)	(0.03)	(0.03)
YSM30	0.18*	0.18*	0.19*	0.16*
	(0.06)	(0.06)	(0.06)	(0.07)
YSM40	0.26*	0.26*	0.27*	0.22*
	(0.06)	(0.06)	(0.06)	(0.06)
YSM50	0.13	0.15	0.16	0.13
	(0.15)	(0.15)	(0.15)	(0.16)
MOVE_PUMA		0.12	0.04	-0.01
		(0.09)	(0.09)	(0.09)
MOVE_IL		-0.32*	-0.31*	-0.36*
		(0.03)	(0.03)	(0.03)
MOVE_US		-0.79*	-0.76*	-0.82*
		(0.06)	(0.06)	(0.06)
MOVE_FORGN		-0.46*	-0.44*	-0.46*
		(0.06)	(0.06)	(0.06)

TABLE 3 continued

Variables	Simple Model	Mobility Effects	Ethnic Affinity Effects	Ethnic Affinity & Neighborhood Effects
Location Variables				
HISPLOC	0.25*	-0.08	0.20	-0.20
	(0.08)	(0.09)	(0.14)	(0.15)
ETHNAFF			-2.44*	-0.32
			(0.29)	(0.32)
ETHNAFF**2			3.65*	0.38
			(0.42)	(0.45)
PCT_POOR				-0.04*
				(0.00)
PCT_FORGN				-0.041
				(0.00)
PCT_NOENGL				0.01*
				(0.00)
ρ (1,2)	-0.33*	-0.14*	-0.21*	-0.13
	(0.04)	(0.05)	(0.08)	(0.08)
Log likelihood	-15,435.71	-15,304.33	-15,265,03	-15,004.63

*Significant at less than .01 level. ** Significant at less than .05 level. Standard errors are in parentheses

Table 4: Marginal Effects
PROBABILITY (OWNHOME = 1 | HISPLOC = 1)

	Direct Effect	Indirect Effect	Total Effect
PERMANINC	0.030	-0.003	0.027*
TRANSINC	-0.000	-0.000	0.000
HOMEVAL	-0.245	---	-0.245*
MEDRENT	0.004	---	0.004
MARRIED	0.068	-0.008	0.060*
HHSIZE	0.051	-0.000	0.051*
DEPENDENT	0.013	-0.000	0.013
AGE24	-0.054	-0.000	-0.054*
AGE34	-0.059	-0.000	-0.059*
AGE54	0.084	0.002	0.082*
AGE64	0.117	-0.005	0.112*
COLLEGE	0.140	-0.014	0.126*
HIGHSCHOOL	0.067	-0.004	0.063*
NOENGL	-0.115	0.037	-0.078
USCIT	0.046	-0.031	0.015*
NATRL_CIT	0.049	-0.005	0.044*
YSM5	-0.272	---	-0.272*
YSM10	-0.152	---	-0.152*
YSM30	0.062	---	0.062*
YSM40	0.087	---	0.087*
YSM50	0.053	---	0.053
MEXICO	-0.015	---	-0.015
MOVE_PUMA	-0.002	0.033	0.031
MOVE_IL	-0.140	-0.007	-0.147*
MOVE_US	-0.320	-0.009	-0.329*
MOVE_FORGN	-0.182	-0.011	-0.193*
ETHNAFF	-0.026	0.082	0.056
ETHNAFF**2	0.148	---	0.148
PCT_POOR	-0.014	---	-0.014*
PCT_FORGN	-0.003	---	-0.003*
PCT_NOENGL	0.003	---	0.003*

*Significant at less than .01 level.

[1] A beta test determined that the calculated proportions for the variables between these two locations were not statistically different in most cases.

[2] See Greene (2003), page 716, Chapter 21.

[3] Also, see Cutler and Glaeser (1997) for similar measures of residential clustering.

[4] This thoughtful suggestion was made by an anonymous referee.

[5] Models that included interaction terms for the affinity index and other location-specific characteristics were also estimated. We report the findings from the more parsimonious model because the conclusions drawn from the specifications remained virtually the same.

[6] The results are available upon request from senior author.

[7] With the 2000 census data showing that the Hispanic population is one of the fastest growing population, financial institutions have recognized that the population represents a potentially lucrative, untapped market. A vast literature is providing advise on how to reach this market (e.g. Federal Reserve Bank of St. Louis, 2002). Recently, there has been a number of forums or workshops to bring together bank representatives, researchers and Hispanic community leaders to discuss ways to reach the Hispanic market. An example is the *Hispanic Banking Forum*, which was co-sponsored by the Federal Reserve Bank of Chicago, the Office of the Comptroller (OCC) and the Federal Deposit Insurance Corporation (FDIC) on June 2002. Information about the Hispanic Banking Forum can be accessed by selecting "Banker Education" on the OCC Internet home page, www.occ.treas.gov, and choosing "Conferences/Seminars." Another example is the *Lending Avenues for Latino Immigrants*, a workshop cosponsored by the FDIC, the OCC and the Small Business Administration, December 2002).

[8] A comprehensive review of more than 100 state and local government-sponsored affordable housing programs nationwide is provided and evaluated in Stegman (1999).

[9] For a comprehensive guide to the specific ways by which homeownership opportunities can be created for the immigrant market, see Shoenholtz and Stanton (2001), a study completed for the Fannie Mae Foundation.

[10] Sweat equity or mutual self-help housing programs bring together groups of families to help build each other's home under the supervision of a skilled construction supervisor. Typically, a non-profit organization acts as developer, construction supervisor, loan facilitator, participant screener, and educator (Schoenholtz and Stanton, 2001).

[11] The trend in mortgage-related lending includes home purchase (conventional plus government-insured, FHA/VA/FmHA-insured), refinance loans and home improvement loans

and is drawn from the Federal Financial Institutions Examination Council, Home Mortgage Disclosure Act data, 1994-1999. The Chicago Association of Realtors provided us with the 1994-1999 trend in home sales for Little Village and the City of Chicago.

[12] The Empowerment Zone/Enterprise Community program was established under the Federal Omnibus Budget Reconciliation Act in 1994. The program was designed to empower people and communities across the U.S to work together to develop a strategic plan designed to create jobs and opportunities in the nation's most impoverished urban and rural areas. For detail information go to www.cichi.il.us/planandDevelopment/ …s/ EmpowermentZone/EmpowermentZone2.htm.

[13] For more information, go to www.fanniemaefoundation.org/grants/sea/rp/recordshtml.

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