Exploring Recent Trends in Immigrant Suburbanization

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Abstract

Central cities historically have been viewed as "ports of entry" welcoming new immigrants to the United States. Beginning in the 1970s, new immigrants began to settle in areas outside traditional ports of entry as economic opportunities moved to the suburbs and new suburban immigrant enclaves emerged. By the end of the 20th century, foreign-born suburbanites outnumbered foreign-born central city residents.

This article relies on microdata from the U.S. Current Population Survey to identify the determinants of suburban location choice among foreign-born U.S. residents. The analysis includes a variety of controls for household-level socioeconomic characteristics, metropolitan area characteristics, and country of origin. Graphs displaying trends in suburbanization and location choice among U.S. immigrants, along with logit regression models of suburban destination, suggest that recent waves of foreign-born immigrants choose residential locations in conformance with spatial assimilation theory. The study also finds evidence that native and immigrant groups place a different value on the consumer amenities found in the central city and the transportation access and owner-occupied housing supply found in the suburbs. Trends in immigrant suburbanization follow trends in housing and gas prices. These trends have interacted with metropolitan-specific conditions to affect rates of suburbanization among foreign-born residents.

Introduction

Since the work of Park (1950), sociologists, economists, and geographers have been interested in explaining the assimilation of new immigrants into American society. Suburbanization is often taken as a sign of spatial assimilation and status attainment, given that suburbanization is often associated with homeownership in areas away from traditional immigrant enclaves. Whereas most European immigrants moving to the United States during the early portion of the past century tended to initially locate in the central city and move out of central cities following increases in

socioeconomic status and cultural assimilation, many newer Asian and Latino immigrants are choosing suburban residential locations immediately upon relocating to the United States (Waters and Jimenez, 2005). This change is due in part to the recent decentralization of immigrant locations, which creates opportunities for location in suburban immigrant enclaves (Frey, 2006). Rising housing costs during the past decade have also increased the appeal of suburban locations, which tend to offer more affordable housing opportunities. By the 1990s, 48 percent of immigrants recently arriving in the United States chose to locate in suburban areas (Alba and Nee, 2003).

Apart from aggregate U.S. Census statistics that report net annual international migration flow estimates by county, no studies have examined the rate and determinants of immigrant suburbanization since 2000. The few studies that examined suburbanization of foreign-born residents in the 1990s tended to focus on individual metropolitan areas. This study is the first to provide information about the determinants of suburbanization among recent waves of U.S. immigrants. The study also includes a more robust set of controls not found in previous studies, including household-level socioeconomic controls, country of origin fixed effects, year fixed effects, and characteristics of the surrounding metropolitan statistical area.

Descriptive statistics on trends in suburbanization and location choice among U.S. immigrants, along with logit regression models of suburban destination, suggest that recent waves of foreign-born immigrants choose residential locations in conformance with spatial assimilation theory. The study also finds evidence that native and immigrant groups place a different value on the consumer amenities found in the central city and the transportation access and owner-occupied housing supply found in the suburbs. Trends in immigrant suburbanization follow trends in housing and gas prices. These trends have interacted with metropolitan-specific conditions to affect rates of suburbanization among foreign-born residents, particularly since 2005.

The next section of this article describes the data and methodology used in the study and is followed by sections that discuss results of the analysis and summarize the findings. The final section discusses the implications of these findings for smart growth policies and federal fair housing policy.

Data and Methodology

The data used in this analysis come from the U.S. Current Population Survey (CPS). The CPS is a U.S. household survey administered by the U.S. Census Bureau for the Bureau of Labor Statistics. The survey asks a variety of questions on labor force characteristics, demographic characteristics, residential location, mobility, and migration. The survey is conducted monthly. In addition, each year in March, the survey includes a detailed set of supplemental questions on a variety of more detailed demographic variables. Total sample sizes range from around 64,000 to more than 97,000 U.S. households, depending on the year.

The study presented in this article relies on a pooled sample of March CPS surveys conducted from the years 1994 through 2008. Sample sizes for this study are smaller than those for the entire United States, because the study eliminated those respondents not reporting suburban residential location status, metropolitan area location status, or foreign-born status. For this study, we chose the year 1994 as the base year, because the CPS first identified foreign-born status in that year. The

CPS data are acquired from the Integrated Public Use Microdata Series project, administered by the Minnesota Population Center.

The primary analysis reported in this study is a logit regression model explaining the probability of locating in a suburban residential location versus a central city location. For the period under investigation, the CPS identifies each household's residential location by U.S. metropolitan statistical area (MSA) and within metropolitan statistical areas by central city and suburban residential location status. The central city/suburban status variable, provided by the U.S. Census Bureau, links survey respondent records to the residential location of the respondent.

The literature points to several factors that are important in shaping suburban location destinations among foreign-born and native residents. These factors include the following characteristics:

- **Household income.** In the monocentric model of urban residential location (Muth, 1969), households make tradeoffs between housing costs and transportation cost savings when choosing a location within any given metropolitan area. Assuming the income elasticity of demand for housing exceeds the income elasticity of demand for leisure time, increases in household income are associated with an increased propensity to move outward to consume larger homes at lower prices. Margo (1992) found that 43 percent of postwar suburbanization could be attributed to rising U.S. household incomes. Alba et al. (1999) found that the positive effect of income on suburbanization is larger for immigrants than for native non-Hispanic Whites.

- **Education.** Controlling for income, education status has been shown to be negatively correlated with a suburban location choice. Glaeser, Kolko, and Saiz (2000) and Sander (2005) attributed this finding to the importance of consumer amenities found in urban areas, which tend to be attractive to highly mobile workers with high levels of human capital. Consumer amenities are important as both a residential amenity and as a venue for knowledge sharing among high-human-capital workers. Alba et al. (1999) found that, among many immigrant households, education is positively associated with suburbanization, possibly due to occupational differences between natives and immigrants that differentially affect the importance of consumer amenities.

- **Race.** Non-White households have been shown to be less likely to choose suburban destinations due to lower relative household incomes and discriminatory barriers to housing choice found in the suburbs. For example, Gabriel and Rosenthal (1989) found that large simulated changes in household characteristics have little effect on patterns of African-American suburbanization, which suggests that such households face discriminatory barriers that impede their location choices.

- **Family characteristics.** Households requiring more space for large families will tend to choose housing in suburban areas, where spacious homes are more plentiful. Among immigrant households, cultural differences influencing tastes for multifamily versus single-family residential environments, along with differences in family sizes and the age of family members, contribute to differences in the observed spatial patterns of foreign-born households relative to native-born residents.

- **Occupation.** Controlling for income, occupation may exert an independent influence on a household's propensity to choose a suburban location if different occupations require different degrees of access to central business districts or if jobs in different occupations are spatially

distributed in different ways. Those working professional and service jobs requiring high degrees of repeated face-to-face interaction may choose to locate in centralized areas that are in close proximity to other similar workers. Similarly, the decentralization of low-skilled service and retail jobs may pull workers in those occupations to suburban locations to reduce commuting costs.

- **Metropolitan characteristics.** Suburban residential locations may be more or less desirable in different metropolitan areas, depending on the amenities offered by the city versus the suburbs. Suburban areas may be easier to access if road networks are sufficiently dense to facilitate travel to the central city. As Cutler, Glaeser, and Vigdor (2008) pointed out, immigrants may value proximity to roads differently if they rely on transit more heavily due to cultural affinities to this particular transportation mode or relatively lower incomes, which render public transit the only feasible transportation option. This study captures this effect by including a measure of the meters of major roads per hectare (100 acres) found outside the central city. Central cities also offer consumer amenities, such as those found in large retail and recreation conglomerations. To capture this effect, the study includes a measure of the number of bars and restaurants per 1,000 people in the metropolitan area. This measure is metrowide but, because such amenities are traditionally concentrated in the central city, the variable effectively captures intermetropolitan differences in the availability of central city consumer amenities. The availability of owner-occupied housing in the suburbs is also included as a control to capture intrametropolitan differences in housing stock characteristics. The percentage of intergovernmental transfers as a percentage of local revenue sources is included to capture the intrametropolitan fiscal capacity of local governments. The availability of increased revenue from nonlocal sources may alleviate the intrametropolitan fiscal disparities and increase the relative attractiveness of central cities, which tend to face fiscal pressures from their relatively lower tax base and higher public service needs. Because immigrant households have been shown to locate in areas where other immigrant households are more highly concentrated, the study also includes a measure of the relative size of the foreign-born population in the surrounding suburban area. Remaining metropolitan controls include the total metropolitan area population and the percentage of the population residing in suburban areas.

Spatial assimilation theory asserts that foreign-born residents will choose suburban residential locations after assimilating culturally and socioeconomically (Massey, 1985). As a result, additional factors likely influence suburban destination among U.S. immigrants, including citizenship status, year of immigration, and generation of immigration. All other things being equal, U.S. citizens with a longer history of residence in the United States are assumed to exhibit a higher likelihood of choosing a suburban residential location. Furthermore, first generation immigrants born abroad are assumed to be less likely to suburbanize than second generation immigrants whose parents were born abroad.

Country of origin is also likely to be an important determinant of suburbanization among foreign-born households. Country-specific heterogeneity may result from intercountry differences in the value placed on automobile transportation modes, intercountry differences in the value placed on suburban housing amenities, and intercountry differences in the average socioeconomic characteristics of in-migrating workers.

The source for all household-level variables is the 1994 through 2008 March CPS. Samples from all years are pooled to ensure sufficient sample sizes for estimation. This pooled model assumes that the influence of household and MSA characteristics on suburbanization is constant over time. To capture time-varying effects, such as rising housing costs, the recent credit crunch, and gas price fluctuations, the study includes year-specific dummy variables.

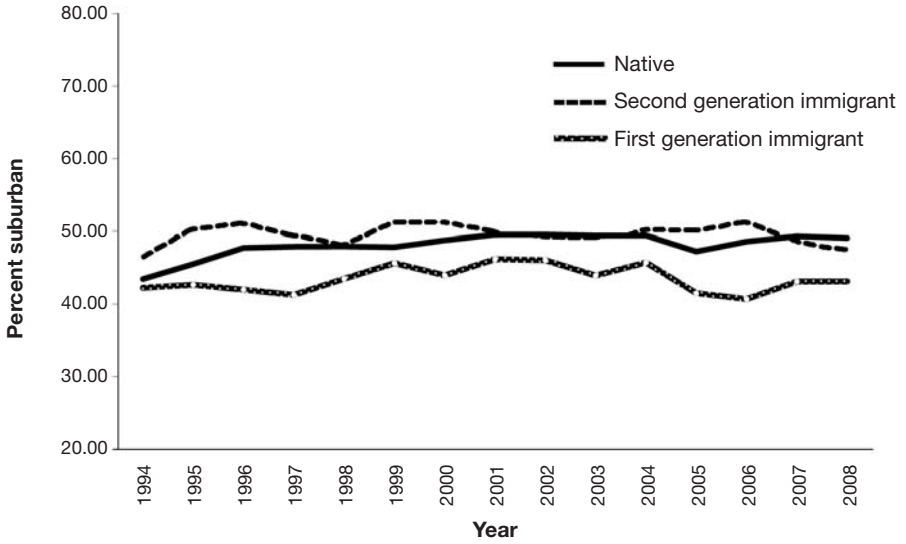
MSA variables are constructed from a variety of sources. Data on urban fringe road density, restaurants and bars per capita, and intergovernmental transfers were provided by Burchfield et al. (2006) available on line at http://diegopuga.org/data/sprawl. All other MSA-level data, provided by the American Communities Project (presented jointly by the Initiative in Spatial Structures in the Social Sciences, Brown University, and the Lewis Mumford Center, University at Albany), are available at http://mumford1.dyndns.org/cen2000/data.html. MSA boundaries are defined as of 1999. All variables are lagged to avoid endogeneity between MSA characteristics and suburbanization outcomes.

Results

This section begins with a discussion of trends in suburbanization for native-born U.S. residents, first generation immigrants, and second generation immigrants.[1] Exhibit 1 calculates the percentage of households residing in the suburbs by immigration status and year. The estimates rely on CPS household weights.

Exhibit 1

Suburbanization Trends, 1994–2008



Source: U.S. Current Population Survey

[1] For ease of exposition, second generation immigrants—native-born citizens with foreign-born parents—are distinguished from other native-born households.

As this exhibit suggests, suburbanization among native-born households has been slowly increasing over time, from 43.36 percent in 1994 to 49.07 percent in 2008. Second generation immigrants initially suburbanized at rates higher than natives until 2007, when their rate of suburbanization dipped slightly. First generation immigrants have been suburbanizing more slowly than natives and second generation immigrants. Among all groups, suburbanization dipped in 2005, a year in which gas prices had risen to historical highs, and housing price inflation was just beginning to level off. These two factors together likely increased the relative attractiveness of central city locations due to their closer proximity to employment.

Exhibit 2 provides a slightly different perspective on the differences in location choice among natives and immigrants. This exhibit displays, for recent movers, the stated reasons for choosing a residential location. Among natives, the most frequently cited reason for choosing a residential location is "wanted new or better housing." The second and third most frequently cited reasons also reference housing-related causes. Among second generation immigrants, housing-related reasons are likewise important. First generation foreign-born residents exhibit slightly different responses, however, with a relatively higher share of respondents citing "new job or job transfer" as a primary reason for moving. The 14 percent of respondents citing this reason is the highest among all household types. One possible explanation for this finding is that foreign-born moves are more likely to have occurred over longer distances. Evidence suggests that intermetropolitan area moves, particularly among different countries, are more likely to occur for employment-related reasons, whereas intrametropolitan area moves occur primarily for housing-related reasons. Apart from

Exhibit 2

Reasons for Moving Among Recent Movers, by Immigration Status

Reason for Moving	Natives		First Generation Immigrants		Second Generation Immigrants	
	Number	Percent	Number	Percent	Number	Percent
Change in marital status	2,728,212	6.3	281,140	4.6	172,358	5.8
To establish own household	4,568,337	10.6	446,444	7.3	254,559	8.6
Other family reason	3,930,151	9.1	563,226	9.2	264,067	8.9
New job or job transfer	4,422,697	10.2	855,843	14.0	294,152	9.9
To look for work or lost job	533,014	1.2	233,118	3.8	30,736	1.0
For easier commute	1,710,595	4.0	234,679	3.8	108,068	3.6
Retired	258,937	0.6	17,383	0.3	20,774	0.7
Other job-related reason	937,351	2.2	159,551	2.6	62,353	2.1
Wanted to own home, not rent	3,910,490	9.0	572,725	9.3	256,173	8.6
Wanted new or better housing	7,802,490	18.0	1,080,163	17.6	496,590	16.7
Wanted better neighborhood	1,837,680	4.3	215,570	3.5	151,608	5.1
For cheaper housing	2,745,676	6.4	476,580	7.8	216,380	7.3
Other housing reason	4,464,907	10.3	434,661	7.1	344,025	11.6
Attend or leave college	1,538,597	3.6	310,611	5.1	133,877	4.5
Change of climate	351,708	0.8	51,664	0.8	45,809	1.5
Health reasons	531,926	1.2	40,724	0.7	47,471	1.6
Other reasons	883,603	2.0	157,281	2.6	65,907	2.2
Natural disaster	78,416	0.2	1,055	0.0	0	0.0
Weighted total	43,234,787	100.0	6,132,418	100.0	2,964,905	100.0

Source: 1994 through 2008 Current Population Survey

differences in the relative importance of housing-related reasons and employment-related reasons, natives and immigrants choose new locations for similar reasons.

This section now turns to an examination of logit regression results predicting suburban location destination. Descriptive statistics for all variables used in the analysis are shown in exhibit 3.

Exhibit 3

Descriptive Statistics (1 of 2)

Variable	Natives		First Generation Immigrants		Second Generation Immigrants	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Dependent variable						
Suburban resident	0.46	0.50	0.43	0.50	0.47	0.50
Independent variables						
Year of CPS sample dummy variables						
1995	0.06	0.24	0.05	0.21	0.06	0.25
1996	0.06	0.24	0.06	0.23	0.08	0.26
1997	0.06	0.24	0.06	0.24	0.08	0.27
1998	0.06	0.24	0.06	0.24	0.08	0.26
1999	0.06	0.24	0.06	0.24	0.07	0.26
2000	0.06	0.24	0.07	0.25	0.07	0.25
2001	0.06	0.24	0.07	0.25	0.07	0.25
2002	0.10	0.29	0.11	0.31	0.09	0.28
2003	0.10	0.30	0.11	0.31	0.09	0.29
2004	0.09	0.29	0.11	0.32	0.08	0.28
2005	0.05	0.23	0.05	0.22	0.04	0.20
2006	0.05	0.23	0.05	0.22	0.05	0.21
2007	0.05	0.23	0.05	0.22	0.04	0.20
2008	0.05	0.22	0.05	0.23	0.04	0.20
Household characteristics						
HH head recent immigrant	0.00	0.00	0.13	0.34	0.00	0.00
HH head noncitizen	0.00	0.00	0.49	0.50	0.00	0.00
HH income	$54,986.70	$54,804.23	$46,882.95	$52,405.18	$47,632.70	$50,106.33
HH head non-White	0.15	0.36	0.25	0.43	0.07	0.25
Number of children in HH	0.86	1.13	1.24	1.37	0.65	1.03
Age of HH head	47.52	16.38	43.77	15.74	54.66	19.91
HH head male	0.56	0.50	0.60	0.49	0.55	0.50
HH head married	0.55	0.50	0.63	0.48	0.52	0.50
HH head college degree	0.26	0.44	0.24	0.43	0.23	0.42
Household head occupation						
Professional	0.08	0.27	0.07	0.26	0.06	0.24
Farmer	0.01	0.09	0.04	0.20	0.01	0.09
Manager	0.12	0.32	0.07	0.26	0.09	0.28
Technical/ engineering	0.06	0.25	0.05	0.22	0.05	0.21
Sales	0.09	0.28	0.06	0.24	0.06	0.25
Administrative	0.09	0.29	0.05	0.22	0.08	0.27
Service	0.08	0.27	0.14	0.34	0.07	0.25
Transport	0.03	0.17	0.02	0.15	0.02	0.14
Laborer	0.02	0.14	0.03	0.17	0.01	0.12

Exhibit 3

Descriptive Statistics (2 of 2)

Variable	Natives		First Generation Immigrants		Second Generation Immigrants	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Country/region of origin, HH head						
U.S. outlying areas	0.00	0.00	0.07	0.26	0.00	0.00
Central America	0.00	0.00	0.04	0.21	0.00	0.00
Mexico	0.00	0.00	0.35	0.48	0.00	0.00
South America	0.00	0.00	0.04	0.20	0.00	0.00
Northern Europe	0.00	0.00	0.00	0.06	0.00	0.00
United Kingdom	0.00	0.00	0.03	0.18	0.00	0.00
Western Europe	0.00	0.00	0.01	0.11	0.00	0.00
Southern Europe	0.00	0.00	0.03	0.16	0.00	0.00
Central/Eastern Europe	0.00	0.00	0.07	0.25	0.00	0.00
East Asia	0.00	0.00	0.06	0.23	0.00	0.00
Southeast Asia	0.00	0.00	0.08	0.27	0.00	0.00
Southwest Asia/India	0.00	0.00	0.04	0.19	0.00	0.00
Central Asia	0.00	0.00	0.00	0.02	0.00	0.00
Middle East	0.00	0.00	0.02	0.14	0.00	0.00
Other Asia	0.00	0.00	0.01	0.08	0.00	0.00
Russian Empire	0.00	0.00	0.01	0.11	0.00	0.00
Other Europe	0.00	0.00	0.00	0.04	0.00	0.00
Northern Africa	0.00	0.00	0.00	0.07	0.00	0.00
East Africa	0.00	0.00	0.01	0.09	0.00	0.00
Other Africa	0.00	0.00	0.01	0.08	0.00	0.00
Oceania	0.00	0.00	0.01	0.07	0.00	0.00
MSA characteristics						
Northeast region	0.12	0.32	0.09	0.29	0.20	0.40
Midwest region	0.28	0.45	0.15	0.36	0.19	0.39
West region	0.18	0.38	0.36	0.48	0.29	0.45
Restaurants, bars/ 1,000 population	1.47	0.32	1.61	0.36	1.57	0.34
Road density in urban fringe	0.88	0.33	0.76	0.41	0.83	0.41
Intergovernmental transfers	35.68	9.72	36.16	9.17	36.37	8.88
Suburb/CC percent owner occupied	1.38	0.16	1.35	0.18	1.37	0.17
Percent of MSA population in suburbs	58.00	18.53	57.43	19.18	58.64	19.92
Suburb/CC per capita income[a]	1.07	0.19	1.03	0.18	1.07	0.19
MSA population	891,051.00	752,158.00	968,944.90	776,822.10	941,320.40	772,513.30
Suburban foreign-born residents	19,152.81	28,546.87	34,662.95	40,550.96	28,400.43	34,755.86
N	224,963		25,397		18,670	

CC = central city. CPS = Current Population Survey. HH = household. MSA = metropolitan statistical area.

[a] *Income in U.S. dollars.*

Exhibit 4 reports results from three regression models for native-born households, first generation immigrants, and second generation immigrants. These models rely on controls for CPS sample year, household characteristics, occupational characteristics, and MSA characteristics.

As previous studies have found, higher income is associated with a higher likelihood of choosing a suburban location. As in the study by Alba et al. (1999), this study finds that the effect of income on suburban location choice is larger among immigrant groups than among native households. If immigrant groups have lower income levels initially, the proportionate effect of an increase in income may be larger relative to the same increase among those earning higher incomes. Non-Whites are less likely to choose suburban locations, particularly if those non-Whites are native-born households. Differences in the effect of race between native and foreign-born households possibly reflect differences in average racial characteristics, with a larger share of natives likely identifying themselves as African Americans, who have historically exhibited lower rates of suburbanization relative to other racial groups.

Household characteristics influence suburbanization among the different groups in similar ways, with the exception of age of household head, which is negative and statistically insignificant for first generation immigrants. If the coefficients from exhibit 4 are applied to the means of the variables shown in exhibit 3, marital status of the household head has the largest effect among all statistically significant household characteristics. The influence of college-education status conforms with previous findings, which point to a negative effect on suburbanization among native-born households and a positive effect among first generation immigrants. That this finding still holds with a robust set of occupational controls points to possible cultural or skill differences

Exhibit 4

Logit Regression Results by Immigration Status (1 of 2)

	Natives		First Generation Immigrants		Second Generation Immigrants	
	Coef.	Sig.	Coef.	Sig.	Coef.	Sig.
Independent variables						
Constant	– 2.999	0.000	– 1.247	0.000	– 1.860	0.000
Year of CPS sample dummy variables						
1995	0.054	0.042	0.118	0.214	0.123	0.184
1996	0.193	0.000	0.167	0.069	0.238	0.008
1997	0.195	0.000	0.111	0.222	0.152	0.086
1998	0.199	0.000	0.240	0.008	0.135	0.130
1999	0.203	0.000	0.260	0.004	0.228	0.012
2000	0.248	0.000	0.211	0.017	0.231	0.012
2001	0.267	0.000	0.229	0.009	0.183	0.048
2002	0.302	0.000	0.274	0.001	0.287	0.001
2003	0.324	0.000	0.248	0.003	0.294	0.001
2004	0.329	0.000	0.270	0.001	0.357	0.000
2005	0.297	0.000	0.207	0.032	0.219	0.040
2006	0.400	0.000	0.267	0.005	0.321	0.002
2007	0.431	0.000	0.338	0.000	0.313	0.003
2008	0.443	0.000	0.335	0.000	0.363	0.001

Exhibit 4

Logit Regression Results by Immigration Status (2 of 2)

	Natives		First Generation Immigrants		Second Generation Immigrants	
	Coef.	Sig.	Coef.	Sig.	Coef.	Sig.
Household characteristics						
HH income	1.46E-06	0.000	1.81E-06	0.000	2.07E-06	0.000
HH head non-White	– 0.968	0.000	– 0.281	0.000	– 0.270	0.000
Number of children in HH	0.079	0.000	0.023	0.042	0.070	0.000
Age of HH head	0.003	0.000	0.004	0.000	0.006	0.000
HH head male	0.036	0.001	– 0.029	0.342	0.039	0.295
HH head married	0.380	0.000	0.359	0.000	0.289	0.000
HH head college degree	– 0.142	0.000	0.095	0.020	– 0.008	0.855
Household head occupation						
Professional	– 0.036	0.083	0.211	0.001	0.017	0.829
Farmer	0.236	0.000	0.704	0.000	0.797	0.000
Manager	0.074	0.000	0.344	0.000	0.238	0.000
Technical/engineering	– 0.022	0.297	0.083	0.244	– 0.216	0.014
Sales	– 0.009	0.633	0.214	0.001	– 0.057	0.434
Administrative	0.006	0.746	0.211	0.001	0.039	0.566
Service	– 0.094	0.000	0.208	0.000	– 0.071	0.312
Transport	0.122	0.000	0.208	0.025	0.196	0.099
Laborer	– 0.041	0.253	0.019	0.821	– 0.171	0.228
MSA characteristics						
Northeast region	– 0.128	0.000	0.057	0.318	0.724	0.000
Midwest region	– 0.134	0.000	– 0.155	0.003	0.275	0.000
West region	0.493	0.000	0.236	0.000	0.339	0.000
Restaurants, bars/ 1,000 population	– 0.608	0.000	– 0.667	0.000	– 0.697	0.000
Road density in urban fringe	0.324	0.000	– 0.309	0.000	0.056	0.440
Intergovernmental transfers	– 0.022	0.000	– 0.048	0.000	– 0.037	0.000
Suburb/CC percent owner occupied	1.011	0.000	0.898	0.000	1.015	0.000
Percent of MSA population in suburbs	0.017	0.000	0.034	0.000	0.025	0.000
Suburb/CC per capita income[a]	0.400	0.000	– 0.538	0.000	– 0.474	0.000
MSA population	9.22E-07	0.000	3.95E-07	0.000	4.89E-07	0.000
Suburban foreign-born residents	9.49E-07	0.238	2.66E-06	0.000	6.97E-06	0.000
Pseudo R-square	0.153		0.140		0.167	
N	224,963		25,397		18,670	

CC = central city. CPS = Current Population Survey. HH = household. MSA = metropolitan statistical area.

[a] *Income in U.S. dollars.*

between native and foreign-born workers. Another explanation is that workers trained abroad may be less likely to seek or take advantage of the knowledge-sharing networks found in dense cities.

The influence of occupation on suburbanization varies substantially between native and foreign-born households. The omitted occupational category in this case is production worker. Relative to this occupational category, all occupational categories have a positive influence on first generation immigrant suburbanization, whereas professional and service worker status has a negative influence on suburbanization among natives. Because these job categories are among those most likely to value proximity to other employers for knowledge-sharing and proximity to intermediate labor inputs, the findings again point to native/foreign-born differences in the importance of central city consumer and urban amenities.

Natives and immigrants exhibit regional differences in migration propensities. The only region in which both native and foreign-born households are more likely to suburbanize is the West, which has seen historical rates of suburbanization in recent years (Lang and LeFurgy, 2007).

Regarding the influence of metropolitan characteristics, consumer amenities as measured by bars and restaurants are negatively associated with suburbanization. This finding is consistent with Glaeser, Kolko, and Saiz's (2000) "consumer city" hypothesis, which asserts that central cities have become relatively more attractive to mobile workers for their prevalence of consumer-based amenities and recreational opportunities.

Road density in the fringe is associated with a higher propensity to suburbanize among native workers but a lower propensity to suburbanize among foreign-born workers. This finding is consistent with Cutler, Glaeser, and Vigdor's (2008) assertion that recent trends in immigrant segregation reflect native/foreign-born differences in automobile usage, with foreign-born workers more likely to rely on transit for transportation purposes.

Both first and second generation foreign-born households are more likely to suburbanize in response to lower relative per capita incomes in the suburbs. This finding possibly reflects their sorting into lower income immigrant enclaves relative to native-born residents. This finding is corroborated by the positive influence of suburban foreign-born population on immigrant suburbanization. The coefficient on this variable is insignificant for native-born households.

Applying the means from exhibit 3 to the coefficients displayed in exhibit 4, the study finds that the magnitude of the effect associated with metropolitan characteristics tends to be larger than the effect of household characteristics. Among natives, the owner-occupied housing ratio has the largest effect, with a standardized increase equivalent to the mean of this variable, increasing the probability of suburbanization by 1.4. The magnitudes of the coefficients for immigrants differ somewhat, with MSA population in the suburbs exhibiting the largest effect. One noteworthy finding is the difference in the effect of intergovernmental transfers across immigrant categories. The effect of this variable on first generation immigrant suburbanization is more than twice as large as its effect on natives, and the effect on second generation immigrant suburbanization is 1.7 times as large. This finding possibly reflects cultural differences in the demand for particular public service/tax packages that suburban governments offer, a point the study returns to in the conclusion.

Exhibit 5 presents the results for foreign-born households only, introducing controls for country of origin, citizenship status, and whether the household immigrated recently (within the previous 5 years). Both noncitizens and recent immigrants are less likely to suburbanize, a finding that is consistent with the spatial assimilation perspective on suburbanization.

Examining the country/region-specific effects, the study finds that, in general, Europeans and those with European ancestry from Australia and New Zealand are more likely to suburbanize, whereas those from Southeast Asia and Africa are less likely to suburbanize. These findings are consistent with evidence that points to a recent increase in suburbanization among European countries. Few country-specific effects are significant, however, which suggests that other than these larger trends, suburbanization has more to do with household-level factors than country-specific cultural or economic conditions.

The pattern of year-specific effects suggests that, even after controlling for a variety of household and MSA characteristics, suburbanization still dropped in 2005 and 2006. Recall that the year-specific effects capture the average of all factors influencing suburbanization within each year, controlling for household and MSA characteristics. Such factors include the rise in housing costs, the subsequent decline in credit availability, political and economic events occurring over the time

Exhibit 5

Logit Regression Results, Foreign Born (1 of 2)

Variable	Coef.	Sig.
Constant	– 1.101	0.000
Year of CPS sample dummy variables		
1995	0.136	0.154
1996	0.194	0.036
1997	0.142	0.119
1998	0.272	0.003
1999	0.307	0.001
2000	0.252	0.005
2001	0.280	0.002
2002	0.315	0.000
2003	0.304	0.000
2004	0.317	0.000
2005	0.259	0.007
2006	0.298	0.002
2007	0.391	0.000
2008	0.393	0.000
Household characteristics		
HH head recent immigrant	– 0.214	0.000
HH head noncitizen	– 0.095	0.005
HH income	1.49E-06	0.000
HH head non-White	– 0.213	0.000
Number of children in HH	0.026	0.027
Age of HH head	0.001	0.404
HH head male	– 0.020	0.532
HH head married	0.358	0.000
HH head college degree	0.091	0.032

Exhibit 5

Logit Regression Results, Foreign Born (2 of 2)

Variable	Coef.	Sig.
Household head occupation		
Professional	0.151	0.022
Farmer	0.717	0.000
Manager	0.258	0.000
Technical/engineering	0.047	0.516
Sales	0.150	0.017
Administrative	0.171	0.011
Service	0.206	0.000
Transport	0.181	0.053
Laborer	0.052	0.537
Country/region of origin, HH head		
U.S. outlying areas	– 0.488	0.000
Central America	– 0.036	0.652
Mexico	– 0.057	0.328
South America	– 0.052	0.527
Northern Europe	0.028	0.905
United Kingdom	0.177	0.041
Western Europe	0.282	0.033
Southern Europe	0.253	0.009
Central/Eastern Europe	0.186	0.008
East Asia	0.036	0.648
Southeast Asia	– 0.261	0.001
Southwest Asia/India	0.025	0.780
Central Asia	– 0.728	0.227
Middle East	– 0.158	0.156
Other Asia	0.064	0.726
Russian Empire	– 0.073	0.575
Other Europe	– 0.806	0.039
Northern Africa	– 0.312	0.143
East Africa	– 0.158	0.343
Other Africa	– 0.902	0.000
Oceania	0.598	0.003
MSA characteristics		
Northeast region	0.062	0.290
Midwest region	– 0.170	0.001
West region	0.224	0.000
Restaurants, bars/1,000 population	– 0.665	0.000
Road density in urban fringe	– 0.289	0.000
Intergovernmental transfers	– 0.049	0.000
Suburb/CC percent owner occupied	0.947	0.000
Percent of MSA population in suburbs	0.034	0.000
Suburb/CC per capita income[a]	– 0.523	0.000
MSA population	3.88E-07	0.000
Suburban foreign-born residents	3.14E-06	0.000
Pseudo R-square	0.146	
N	25,397	

CC = central city. CPS = Current Population Survey. HH = household. MSA = metropolitan statistical area.

[a] Income in U.S. dollars.

period, and rising gas prices. In models without MSA controls (not reported for brevity), this drop is much more dramatic over the post-2005 period. Furthermore, year effects become statistically insignificant during the 2005-to-2008 period. Together, these findings suggest that factors varying across metropolitan areas, such as energy prices and housing price inflation, likely interacted to affect rates of foreign-born suburbanization during the most recent period.

Summary of Findings

This article examines the effect of various household and metropolitan characteristics on the suburbanization of foreign-born households. Several findings provide evidence regarding spatial assimilation theory as it pertains to suburbanization. First generation immigrants generally suburbanize at a slower rate than second generation immigrants and natives. Noncitizens and recent immigrants are less likely to suburbanize than other foreign-born households. Across all models, the influence of household and metropolitan characteristics on second generation immigrants is more comparable to the influence of native-born households. First generation immigrants, on the other hand, suburbanize in response to a different set of influences. The most significant household characteristics are those relating to education and occupation.

The study also finds evidence that native and immigrant groups place a different value on the consumer amenities found in the central city and the transportation access and owner-occupied housing supply found in the suburbs. This finding is consistent with the pattern of household-level effects, particularly those relating to education and occupation, along with the pattern of metropolitan-specific effects.

Finally, the suburbanization of all households has varied over time, with rising suburbanization levels seen until 2005, when suburbanization rates began to decline somewhat. These trends mimic recent trends in housing and gas prices. These trends have interacted with metropolitan-specific conditions to affect rates of suburbanization among foreign-born residents, particularly since 2005. Together, these findings suggest that factors varying across time and across metropolitan areas, such as energy prices and housing price inflation, likely interacted to affect rates of foreign-born suburbanization over the most recent period.

Policy Implications

These findings have important implications for the current suburbanization/urban sprawl debate. So-called "smart growth" advocates have argued that the high rate of suburbanization and urban sprawl seen in the United States is to blame for a variety of social problems, ranging from environmental degradation to social inequality (Squires, 2002). To combat these problems, advocates have argued for various policies designed to slow the rate of suburbanization and reorient new urban growth back toward central cities. Although this article does not seek to address the relative merits of these proposals, the findings from this article have important implications for the likely effects of increased immigration on urban sprawl. Groups such as the Federation for American Immigration Reform and the Center for Immigration Studies have argued for restrictions on immigration to combat urban sprawl. The study presented in this article finds that natives are still more likely

to suburbanize than are first generation immigrants. The study also finds that after controlling for a variety of socioeconomic and metropolitan characteristics, the immigrant groups most likely to suburbanize originate in countries that constitute only a small share of new immigrant inflows. According to the most recent picture of the foreign-born population provided by the Census Bureau, 53.3 percent of foreign-born residents were from Latin American countries. Latin American countries provide the largest share of new immigrant inflows but are no more likely to suburbanize, controlling for household socioeconomic characteristics. Those originating from Asian countries constitute about 25 percent of the foreign-born population but are less likely to suburbanize after arriving, according to our estimates. Those most likely to suburbanize originate from European countries, but immigrants from European countries constitute only 13.7 percent of the total foreign-born population (Larsen, 2004). These findings suggest that concerns about the effect of increased immigration on urban sprawl are unfounded.

Regardless of whether the immigrant suburbanization trend is a real or perceived phenomenon, many suburban local governments have begun to adopt policies that are designed either explicitly or implicitly to exclude immigrant households from their communities. The recent increase in local anti-immigrant policies reflects, in part, the devolution of immigration policing power from the federal government to local governments, something that Coleman (2007) described as "pushing the border inward." For example, in Farmers Branch, Texas, landlords are required to check the legal status of renters before signing a lease agreement. The city has also passed an ordinance declaring English the city's official language. Suffolk County, New York, places restrictions on the number of residents that can occupy a single-family home (Walker, 2008). Other common restrictions include English-only requirements for local businesses, restrictions on local public service provisions to illegal immigrants, and land use restrictions that limit occupancy and density and raise the cost of housing for low-income immigrant households.

In addition to applying overt restrictions on immigrant location choices, local governments may also exclude immigrants through decisions regarding the mix and quantity of local public goods. If particular groups demand low levels of a given service, local governments may choose to provide higher levels of that service to exclude those households from a jurisdiction (Becker and Murphy, 2000). The results of this study suggest that policies that influence urban amenities, transportation access, and intraurban labor market opportunities will likely play the most significant role in shaping immigrant location choices.

One alternative interpretation of our findings is that suburban anti-immigrant policies are working. The study finds that immigrant households headed by a U.S. citizen earning a higher income and with more years of education are more likely to suburbanize. It is possible that limitations on higher density affordable housing in suburban areas place limitations on housing choices for low-income immigrant households. Similarly, restrictions on public services to noncitizens may further limit access to the suburbs. Given that the federal Fair Housing Act prohibits housing discrimination on the basis of national origin, further research is needed to determine if suburban anti-immigrant policies play a role in limiting the housing choices of immigrant households. Further research is also needed to understand the effect of suburban residence on the quality of life for foreign-born residents.

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