



# Article Living in Ethnic Areas or Not? Residential Preference of Decimal Generation Immigrants among Asian Indians, Japanese, Chinese, Koreans, Filipinos, and Vietnamese

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Abstract: The present study examines the spatial assimilation patterns of immigrants who arrived as children. The main objective is to predict the likelihood of living in ethnic areas for decimal generation immigrants (1.25, 1.5, and 1.75) among Asian Indians, Japanese, Chinese, Koreans, Filipinos, and Vietnamese. Using 2013–2017 5-Year ACS Estimates and IPUMS, it applies the measure of local spatial clustering (the Local Moran's I statistic) to identify ethnic areas and the logistic regression model to assess the effects of immigrant generational status, cultural, and socioeconomic assimilation on the probability of living in ethnic areas. The findings show that the 1.25 and 1.5 decimal generation immigrants of Chinese, Filipinos, Japanese, and Koreans demonstrate higher propensities of living in ethnic areas compared to the first generation of each ethnic group, respectively. Meanwhile, their Asian Indians and Vietnamese counterparts show spatial assimilation. Regardless of generational effects, English language ability positively relates to the probability of living in nonethnic areas, whereas economic assimilation indicators reveal mixed results. We found substantial evidence for resurgent ethnicity theory and some support of spatial assimilation model, indicating the ethnic disparity in spatial assimilation patterns among Asian immigrants. Our paper highlights the nonlinear assimilation patterns among Asian decimal generations. Results suggest that, for Asian immigrants in the U.S., age-at-arrival and ethnicity are both significant predictors of residential preference.

Keywords: spatial assimilation; Asian immigrants; decimal generations; ethnic disparity

## 1. Introduction

In the past few decades, immigrants from Asia have seen a phenomenal increase in the United States, comprising 65.7% of the total Asian population as of 2019, according to the Census American Community Survey 1-Year Estimates (U.S. Census Bureau ACS Survey 2019a). The pool of Asian immigrants also comprises those who migrated to America in their early adolescent years, and 5.5% of Asian Americans under 18 were foreign-born (U.S. Census Bureau ACS Survey). The 1990 U.S. Census has shown that 90% of Asian American children are members of the first or second generation (Oropesa and Landale 1997). The generation that arrived in the United States as children is a distinct cohort. It is different in many aspects (e.g., ethnic self-identity and incorporation in the mainstream society) from the first generation, which immigrated at adult ages, and the U.S.-born generations. (Child 1943; Erikson 1968; Gans 1992; Portes and Zhou 1993).

Undoubtedly, the assimilation literature holds divergent opinions on how to define the immigrant generations that arrived as children (Oropesa and Landale 1997; Rumbaut 1994; Thernstrom 1973). As argued in this line of literature, age-at-arrival during immigration is critically related to varied assimilation outcomes. Therefore, the children immigrant generation should not be combined with the native-born children of immigrants as the



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**Copyright:** © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). second generation (Oropesa and Landale 1997; Rumbaut 1994). Thernstrom (1973) argues that immigrants who arrived at early ages because of family migration should be thought of as the "de facto" second generation. In later studies, Oropesa and Landale (1997) refer to them as decimal generations, and Rumbaut (1994, 2004) argues that the immigrants who arrived as children have dual characteristics as foreign-born status (as with first generation) and have experienced some of their developmental years (as with second generation) in the United States. Therefore, Rumbaut (1997) refines the definition with three decimal generation cohorts based on their ages of entering the United States. The 1.25 generation arrived in the United States at adolescent years (ages of 13-17) after spending most of their formative years in the origin country, and their adaptative outcomes are somewhat similar to the first-generation immigrants (Rumbaut 2004). The classic 1.5-generation immigrants are primary-school-age children who arrived in middle childhood (ages of 6–12) and have learned how to read and write in the mother tongue language at the country of origin but have completed most of their education in the United States. Finally, Rumbaut (1997) defines the 1.75 generation as those who arrived in early childhood (ages of 0-5) and asserts that this cohort mostly resembles the U.S.-born second generation: no official acquisition of the mother tongue and mostly socialized in the United States.

While acknowledging the importance of age-at-arrival, scholars begin to explore how children immigrants decomposed by age-at-arrival display dissonant immigration outcomes into adulthood (Lee and Edmonston 2011; Myers et al. 2009; Oropesa and Landale 1997; Rumbaut 1994). One common theme that emerged out of these studies is that the effect of age-at-arrival matters significantly for some socioeconomic outcomes. For instance, Mexican immigrants who arrived prior to the age of six are much more likely to acquire English language proficiency and complete high school compared to those who arrived as teenagers (Myers et al. 2009). For Asian immigrants, such differences in education and socioeconomic outcomes vary across ethnic groups. As stated in the study of Lee and Edmonston (2011), older age-at-arrival has a far greater negative impact on college completion for Asian Indians than for Chinese.

Our study focuses on examining the intersection of generation, measured by age-atarrival in the United States, and ethnicity, measured by country of birth in Asian immigrants' spatial assimilation in the United States. Given the backdrop of new immigration policy favoring high-skilled immigrants, the intellectual inquiry on the adaptation experiences of the post-1965 Asian immigrants and their offspring has become a burgeoning literature (Alba and Nee 1997; Portes and Zhou 1993; Zhou 1997a). First, the assimilation outcome of the children of Asian immigrants is highly characterized by the intergroup differences in socioeconomic mobility indicators, especially the educational achievement and labor market success (Aguilar-San Juan 2009; Zhou and Bankston 1998). Asians as a racial category are diverse. Well-heeled Asian immigrants differ from those of low-status refugees in preimmigration skills, reception context, and settlement patterns (Zhou and Xiong 2005). The disparity in the first generation affects the mobility of children of immigrants, as argued by Zhou and others in the segmented assimilation framework, which we will return for more detailed discussions (Portes and Zhou 1993; Zhou 1997b).

Moreover, for immigrants' mobility measures, residential assimilation (will be used interchangeably with spatial assimilation thereafter) is an essential dimension. It studies how immigrants transform cultural and socioeconomic mobility into residential proximity to the majority race group. One distinctive settlement pattern of contemporary Asian immigrants is that the first generation concentrated in a few traditional gateways, and their U.S.-born generations (the second or higher) dispersed to new destination states in the South and West (Frey and Park 2011). However, the exploration of residential assimilation on the descendants of Asian immigrants is still sparse, especially the disparity across ethnic groups. To fill this research gap, we examine the residential assimilation patterns of decimal generations (1.25, 1.5, and 1.75) and the differences across six Asian ethnic groups (Indians, Japanese, Chinese, Koreans, Filipinos, and Vietnamese). Ultimately, this study highlights the notion that residential assimilation of Asian immigrants needs to be understood at the

intersection of generational status and ethnic membership. The following questions guide the analyses.

- 1. What are the socioeconomic characteristics of ethnic areas where each Asian ethnic group concentrates?
- 2. How are decimal generations residentially distributed between ethnic areas and nonethnic areas in comparison to the first generation? What are the variations across Asian ethnic groups?
- 3. What are the average demographic and socioeconomic characteristics of 1.25-, 1.5-, or 1.75-generation Asian immigrants who reside in ethnic areas?
- 4. Finally, how does the probability of living in ethnic areas vary by decimal generations and ethnicities?

#### 2. Literature Review

Studies on the residential assimilation of immigrants build largely on the frameworks of spatial assimilation, place stratification, segmented assimilation, and resurgent ethnicity (Bean and Stevens 2003; Logan and Molotch 1987; Massey and Denton 1985). According to the spatial assimilation model, immigrants often choose to segregate in ethnic enclaves. By definition, immigrant enclaves are temporary springboards as immigrants need social, cultural, and economic support during the early stages of settlement in the new country (Bonacich et al. 1977; Wilson and Portes 1980; Zhou 1992). As immigrants accumulate more socioeconomic resources, such as through greater English proficiency and more knowledge about the local culture, they eventually will bypass immigrant enclaves and search for affluent white neighborhoods in suburbia (Alba et al. 1997; Logan and Alba 1993, 1995; Logan et al. 1996; Massey and Denton 1985). Therefore, the spatial assimilation model implies two important factors contributing to the residential integration across generations of an immigrant group: the upward socioeconomic mobility of each successive generation and the improved ability of each generation to translate their socioeconomic resources into proximity with whites than the previous generation (Alba and Nee 1997; Fong and Hou 2009).

The alternative framework—the place stratification model—holds that residential segregation reflects the consistent prejudice and discrimination against racial minorities (Alba and Logan 1991; Logan and Molotch 1987). In contrast to assimilation theory, the place stratification model posits that length of residency in the U.S. and familiarity with the mainstream society do not lead to increasing assimilation (Charles 2003). The main hypothesis of this model is that discriminatory practices in the housing market largely affect blacks and darker-skin Hispanics in their suburban residence, net of individual characteristics (Turner and Ross 2003; Turner et al. 2002). In other words, their subordinate and racialized position causes them to pay more for residence in suburban housing stock that is predominantly in the white area (Alba and Logan 1991). The third model of immigrant incorporation is segmented assimilation. This framework emphasizes divergent pathways of immigrant incorporation because of the intersection of the individual- and structural-level factors (Portes and Zhou 1993; Zhou 1997b). In consequence, different immigrant groups are absorbed by different segments of American society, varying from impoverished inner-city ghettos to affluent middle-class suburbs. As Zhou and Bankston (1994) noted, integration into the local underclass and racial minorities (e.g., blacks) may cause immigrants and their children to display the "downward assimilation" trajectory. Segmented assimilation has been used as a challenging framework to the spatial assimilation model and is more relevant to the residential segregation for Southeast Asian groups and some dark-skinned Latinos who are more likely to encounter structural discrimination in residential distribution from whites (Zhou 1999).

The fourth view is the resurgent ethnicity perspective. It has emerged as a challenging framework to describe a new settlement pattern among some recently arrived immigrants, especially after the 1980s (Li 2005; Wen et al. 2009). It stresses the preference, choice, and desire to live with co-ethnics rather than with members of the majority race group (Logan et al. 2002; Wright et al. 2005). Such residential preference of ethnic minorities to reside

with co-ethnic members arises not from economic limitations, as signified in the spatial assimilation model or downward assimilation. Rather, the resurgent ethnicity perspective posits that (i) first-generation immigrants who entered the United States with abundant market resources prefer to reside in suburban ethnic communities rather than impoverished immigrant enclaves (Li 1998), and (ii) native-born co-ethnic members may also choose to live in ethnic communities despite social mobility and economic advancement (Chen 1992; Horton 1995; Li 2005). Scholars have found that these affluent ethnic communities reward co-ethnic residents with quality facilities and institutional support in school, community engagement, and health care, as well as cultural symbols (e.g., newspapers in mother tongue languages), to preserve cultural distinctiveness (Aguilar-San Juan 2009; Li 1998, 2005). Chinese neighborhoods in the suburban San Gabriel Valley, California are found to be affluent ethnic communities with a relatively high proportion of immigrants (Li 1998, 2005).

The forementioned theoretical models are complementary, rather than competing, perspectives. The spatial assimilation model has maintained as a predominant framework for testing residential assimilation trajectories for Asian immigrants. In particular, research has shown that with improved socioeconomic conditions and greater English ability, Asians are able to attain residence in quality suburban white neighborhoods (Alba et al. 1999; Alba and Logan 1991; Logan et al. 1996). However, the increasing level of Asian–white segregation and growth of affluent Asian neighborhoods signify that the ethnic community grows as an alternative to majority-white neighborhoods for many Asian ethnic groups (Lee and Kye 2016; Logan and Zhang 2013; Wen et al. 2009). As Logan and Zhang (2013) note, the Asian–white segregation at the metropolitan level has been increasing. Moreover, the microsegregation within neighborhoods may also be increasing for Asians.

In the current study, the immigrants who arrived as young children have considerably more exposure to the mainstream culture and educational training than the adult immigrants. If following the logic of the spatial assimilation model, with their educational qualifications and socialization to U.S. norms, the chance for immigrants who arrived as children to live close to ethnic members should be lower compared to first-generation immigrants. In testing this hypothesis of generational advantage, empirical works have reached different conclusions. For instance, Fong and Hou (2009) compare the spatial outcomes for the first generation, 1.5 generation—those who immigrated before age 12—the second generation, and the third generation in Canada. Supporting the spatial assimilation model, they find more socioeconomic resources in the 1.5 generation than in the first generation; however, there are no substantial differences for the comparison between the 1.5 generation and the second or third generations. Moreover, Fong and Hou (2009) note that each successive generation is more efficient than the previous generation to translate socioeconomic success into spatial integration with whites, although racial and ethnic groups show great variations in this process. In particular, the 1.5 and second generations of Chinese and South Asians are less efficient than blacks in translating socioeconomic resources to large proportions of whites in their neighborhoods. Overall, the results suggest the preference of living near to co-ethnics among the children of Chinese and South Asian immigrants. Similarly, Ellis and Goodwin-White (2006) demonstrate that the 1.5 generation and U.S.born Asians are less likely to move out of the states with high immigrant concentrations, a finding contradictory to the prediction of the spatial assimilation model.

Our study seeks to make contributions in several ways. We first compare geographic location and socioeconomic characteristics of ethnic areas for six Asian ethnic groups, namely Asian Indians, Japanese, Chinese, Koreans, Filipinos, and Vietnamese. Then, we present a descriptive analysis of group disparities of living in ethnic areas for six Asian ethnic groups by first and decimal generations (1.25, 1.5, and 1.75). Finally, we examine the effects of cultural and socioeconomic indicators on the residential outcome among the decimal generations to gauge group variations. According to the spatial assimilation model, we expect to see English language proficiency remaining a strong predictor of spatial assimilation for all Asian ethnic groups. Supporting resurgent ethnicity perspective, we expect socioeconomic indicators to be negatively related to the spatial assimilation pattern,

meaning that economic upward mobility would be more likely to predict segregation in ethnic areas for most Asian ethnic groups. Although our study does not include a direct examination of the segmented assimilation and place stratification theories, our analyses of the average socioeconomic conditions of ethnic areas and ethnic members by decimal generations, and the likelihood of living in ethnic areas among decimal generations provide empirical basis for future work.

#### 3. Data and Methods

We use multiple datasets for the analyses. We extract PUMA-level demographic, socioeconomic, and geographic information from the 2013–2017 ACS Public Use Microdata Area (PUMA) Geodatabases where PUMA of residence is reported. PUMA is a statistical geographic area with approximately 100,000 persons nested within state boundaries. The individual-level socioeconomic data are extracted from the 2013–2017 ACS IPUMS data (Ruggles et al. 2019). The primary advantage of the IPUMS data is that it provides a large sample for identifying individual/household residence (in PUMA), demographics, English language ability, and socioeconomic status. We restrict our sample to adult (18 years and above) foreign-born immigrants. Following the work of Oropesa and Landale (1997) and Rumbaut (1997), we define the adult immigrants by three exclusive decimal generations: those who arrived in the United States at ages of 0–5 (1.75 generation); 6–12 (1.5 generation); and 13–17 (1.25 generation). The first-generation immigrants—those who immigrated at the age of 18 or older—are used as the reference group. The sample is further restricted to individuals who are householders.

In neighborhood studies, census tracts are predominantly used as the basic spatial units to proximate ethnic neighborhoods for immigrant groups (Alba et al. 1997; Massey and Denton 1985). Logan et al. (2011) argued that there is no prior threshold for defining how ethnic an ethnic neighborhood should be. Instead, the ethnic neighborhood should have a significant presence of one group with their neighbors at spatially coherent zones in a region (Logan et al. 2011, p. 2). In some recent studies, Asian ethnic neighborhoods have concentrations from as low as 10% Asian up to 25% (Bobo et al. 2000; Horton 1995; Walton 2017). Because the average concentration of Asian ethnic groups in our study varies considerably across areas, we measure spatial clustering using the spatial statistic, Local Moran's I that identifies geographic clusters with statistical significance (Anselin 1995). We employ the first-order queen's definition of contiguity, which considers polygons (e.g., census tracts in our study) that share boundaries and vertices as geographically connected neighbors. The Local Moran's I statistic identifies a group of tracts based on the proportion of group population in each tract relative to the national average (Alba et al. 1997; Anselin 1995; Walton 2015). Measured with the Local Moran's I, a cluster or "hotspot" is identified as a high-high concentration, which contains a set of tracts that have positive and significant z-values (p < 0.05) and with a relative group concentration score above 1, indicating a group's proportion in those tracts is higher than the average group's proportion in the country. To identify residential clusters of ethnic groups, we rely on the 2013-2017 American Community Survey (ACS) tract-level population estimates by detailed racial/ethnic groups.

After identifying the clusters (census tracts) in the above procedure, we use PUMA as the geographic unit to define ethnic areas. A PUMA will be classified as an ethnic area if it contains one or multiple clusters. PUMAs are contiguous geographical entities that are theoretically relevant in facilitating ethnic infrastructures, such as churches, social networks, and ethnic employment (Breton 1964). Although an ethnic area in our definition is a much larger geographic region than census tracts, using PUMAs as ethnic areas allows us to measure neighborhood-level characteristics and utilizes individual indicators from the IPUMS data. The biggest advantage of using PUMAs is that there are no records dropping due to the missing geographic identifier, and we can start with the full ACS PUMA sample, which gives a sufficient size of records to be broken down by generational status and ethnicity. Using PUMAs to define ethnic areas is not without limitations. To

meet the required minimum population threshold of 100,000 persons, some PUMAs are geographically large, especially in sparsely populated areas, and some PUMAs in urban areas are smaller than the size of a single county. In large PUMAs of sparsely settled areas, however, populations including immigrant groups are likely to be concentrated in a few places. We use census tract, a much smaller geography, to capture these population clusters.

Given that we perform the cluster mapping analysis separately for each Asian ethnic group, some ethnic area boundaries do overlap (e.g., Chinese, Koreans, and Vietnamese in California), implying that Asian groups share space in the defined ethnic areas. Ethnic areas in our definition may have different levels of concentration of an Asian ethnic group, depending on the state where the PUMA is located. For instance, the largest Chinese concentration is about 40.6% in Los Angeles County (Central)—Monterey Park & Rosemead Cities PUMA, whereas Asian Indians are greatly concentrated (26.8%) in Middlesex County (Southwest) PUMA, NJ.

Having identified ethnic areas, we analyze the ethnic composition and socioeconomic characteristics of ethnic settings. Then, we present the descriptive statistics, including the numbers and percentages of living in ethnic areas for four generations (1st, 1.25, 1.5, and 1.75) of Asian immigrants. Finally, we use logistic regression models to estimate probabilities of living in ethnic areas for decimal generations. The dependent variable  $Y = \pi(x)$  in this study is dichotomous: whether or not the individual householder lives inside (event happening, Y = 1) or outside (event not happening, Y = 0) of ethnic areas, and this situation is appropriate to use the binary logistic regression model (Agresti 2003). The mathematical form of the logistic regression model is written as follows:

$$\pi(\mathbf{x}) = \frac{\exp(\alpha + \beta \mathbf{x})}{1 + \exp(\alpha + \beta \mathbf{x})} = \frac{e^{\alpha + \beta_{\mathbf{x}}}}{1 + e^{\alpha + \beta_{\mathbf{x}}}}$$
(1)

where  $\pi(x)$  is the probability that the individual lives in ethnic areas, and x is the vector of individual covariates described below. The Formula (1) can be transformed using the exponential function, and the corresponding logistic regression model form is

$$\log((\pi(\mathbf{x}))/(1-\pi(\mathbf{x}))) = \alpha + \beta \mathbf{x}$$
<sup>(2)</sup>

The link function on the left side of the Equation (2) is the logit function  $\log[\pi/(1 - \pi)]$  of  $\pi$ , which can be written as  $\log it(\pi)$ . The logistic regression model, also called logit models, assumes a linear relationship between logit ( $\pi$ ) and the predictor variables, which we evaluate as follows, with anticipated effects based on the spatial assimilation model:

Generational status. The first-generation immigrants serve as the reference group in group-specific models. Based on age-at-arrival, decimal generations are categorized into 1.25 generation, 1.5 generation, and 1.75 generation. Age-at arrival is constructed by taking the difference between "respondent's current age" and "years in the U.S." If age-at-arrival is larger than 18, we define them as the first generation. The decimal generations' ages-at-arrival are 13–17 (1.25-gen), 6–12 (1.5-gen), and 0–5 (1.75-gen).

Language. English language proficiency, as an indicator of cultural assimilation, is closely related to residential assimilation. Bilingual immigrants who speak English poorly are more likely to live in ethnic areas. Two dummy variables refer to those who speak another language at home, (1) speak English very well, and (2) speak only English. "No English/Do not speak well" is the reference category.

Education. Education (measured by the number of years in school) is a standard indicator of socioeconomic status. Theoretically speaking, when controlling for other economic indicators, education can also be an indicator of cultural assimilation for those immigrants who obtained some extent of education in the U.S. For instance, a 1.75-generation immigrant who had experienced U.S. daycare would be much more culturally assimilated than a first-generation immigrant who arrived as adult. Whether it be socioeconomic resources or cultural adaptability, the spatial assimilation model expects highly educated people to be less likely to live in ethnic areas. Family income and homeownership. Both income and homeownership can be direct indicators of socioeconomic achievement. The spatial assimilation model presumes that, with economic advancement, the chance of living in ethnic areas is low. We use total family income that only reports the income of household members related to the householder. The family income is coded as a categorical variable with a \$20,000 increment from each level but included as a continuous variable in the logit models. Homeownership is a dummy variable, with the owner being the reference category.

Self-employment. The ethnic economy literature argues that self-employment ethnic entrepreneurs may depend on ethnic concentrations for resources (Logan et al. 2002; Zhou 1992). The "class of worker" indicates whether the person is self-employed or wage-employed. Thus, it serves as the proxy of ethnic employment, assuming those who identified as "self-employed" are more likely to live in ethnic areas than the wage-employed workers. The "class of worker" is represented by two dummy variables, self-employed and work for wages, and those who are not in the labor force are the reference category.

Control variables. We include three demographic indicators as control variables: age, gender, and marital status. The spatial assimilation model does not offer clear indications of the relationship between the life-cycle characteristics with residential assimilation. Age is included as a continuous variable with a one-year increment. Gender is a dummy variable with the reference group being male. Marital status is a dummy variable with single people being the reference category.

## 4. Results

This section addresses the research questions by reporting descriptive statistics of defined ethnic areas, decimal generations for each Asian-origin group, and the estimated probability of living in ethnic areas. We first present the defined ethnic areas<sup>1</sup> and their average characteristics, followed by demographic and socioeconomic conditions of decimal generations for each Asian-origin group. We then move to multivariate models and discuss model results.

#### 4.1. Defined Ethnic Areas and the Average Characteristics

The number of PUMAs identified as ethnic areas varies across different Asian groups, with the lowest number (N = 117) being Japanese ethnic areas. Asian Indians have the largest number (N = 426) of PUMAs defined as ethnic areas, with the rest of the four groups varying in between. The geographic distributions of Indian, Chinese, and Korean ethnic areas are largely overlapped and mainly concentrated in California, New York, the Great Lakes region, and some new destination states in North Carolina and Georgia. Japanese ethnic areas have a very small presence nationally, with noticeable ethnic areas in California and Hawaii. Filipino ethnic areas are mostly located in some central states, such as Kansas, Oklahoma, and Louisiana, in addition to California, Colorado, and Texas. (Maps are available on request.)

Table 1 presents the descriptive characteristics of ethnic areas of six Asian ethnic groups in comparison to the national average. We compare socioeconomic indicators of median household income and mean percent in poverty, the ethnic composition, and the number of PUMAs identified for each group. In this part of the analysis, all values (except for the number of PUMAs and PUMA averages) are means in each category of area weighted by the number of ethnic group members in each PUMA. The weighted mean measures the average environment experienced by a typical ethnic member residing in the area.

The ethnic areas vary significantly on socioeconomic standings and are polarized by Asian Indians (the most affluent) and Vietnamese (the least affluent). All Asian ethnic areas have above PUMA-level average (\$62,650) median household income except the Vietnamese. Vietnamese ethnic areas have relatively lower median household income (\$61,621) and high levels of poverty rates (15.1%). Asian Indian ethnic areas stand out for the highest median household income (\$89,282) and relatively low poverty rates (7.0%). From the standpoint

of spatial assimilation, ethnic areas are normally poorer than the areas where dispersed ethnic members tend to live (Massey and Denton 1987). This prediction is found true for Vietnamese only. The lower status of Vietnamese ethnic areas also gives indirect support to the segmented assimilation model, which argues that immigrants concentrate in poor ethnic enclaves and exhibit a downward assimilation pattern (Zhou 1999). Ethnic areas of other Asian groups attract members with high economic standings, and those of Chinese, Filipinos, and Koreans have similar levels of median income compared to the national average.

	Ethnic Areas	PUMA Average
Median household income		\$62,650
Asian Indians		
Median household income	\$89,282	\$83,683
Mean percent in poverty	7.0%	10.0%
% of Asian Indian (PUMA-level)	7.8%	5.7%
N of PUMAs	426	1734
Japanese		
Median household income	\$82,567	\$75,247
Mean percent in poverty	9.7%	12.3%
% of Japanese (PUMA-level)	4.9%	2.1%
N of PUMAs	117	1478
Chinese		
Median household income	\$76,605	\$77,467
Mean percent in poverty	10.9%	12.5%
% of Chinese (PUMA-level)	13.6%	9.7%
N of PUMAs	315	1835
Koreans		
Median household income	\$75,591	\$75,409
Mean percent in poverty	10.9%	12.3%
% of Koreans (PUMA-level)	5.2%	3.4%
N of PUMAs	309	1673
Filipinos		
Median household income	\$70,888	\$70,762
Mean percent in poverty	11.4%	12.9%
% of Filipinos (PUMA-level)	7.5%	5.0%
N of PUMAs	280	1871
Vietnamese		
Median household income	\$61,621	\$69,196
Mean percent in poverty	15.1%	13.8%
% of Vietnamese (PUMA-level)	8.4%	5.4%
N of PUMAs	318	1654

Table 1. Descriptive Statistics and Characteristics of Ethnic Areas and PUMA Average, 2013–2017.

Source: 2013-2017 ACS 5-year estimates, PUMA Geodatabases.

We also look at the ethnic composition at the PUMA level. For all Asian groups, ethnic areas include a relatively high proportion of co-ethnic members, and the value ranges from 4.9% for Japanese to 13.6% for Chinese.

#### 4.2. Residential Distribution of Decimal Generations

Figure 1 presents the percentages of those living in ethnic areas among decimal generations across Asian ethnic groups. The frequencies are weighed percentages of each generation who currently lives in ethnic areas. We observe intriguing patterns and variations across groups. Regardless of ethnicity, the percentage of a generational cohort living in ethnic areas is always higher for the first generation than the decimal generations. The declines in the percentage with the increase in generation are evidently shown in Figure 1. The Japanese stand out because of the low percentages of immigrants (irrespective of generational status) residing in ethnic areas. In other words, there is a higher proportion of Japanese immigrants dispersed in nonethnic settings. The Chinese display a somewhat

reversed pattern, with relatively high proportions of the 1.25 and 1.5 generations living in ethnic areas (about 68%). Filipinos show a similar pattern, with 65.8% of the 1.25 generation living in ethnic areas. More interestingly, for Asian Indians, Koreans, and Vietnamese, the proportion of people living in ethnic settings is often the highest among their first generation and the lowest among the 1.75 generation. This resembles a linear pattern; as the immigrant generation increases, the percentage of people living in ethnic areas decreases.



Figure 1. Percent Living in Ethnic Areas by Group and Generation.

## 4.3. Demographic and SES Characteristics of Decimal Generations

Table 2 presents descriptive statistics of decimal generations that live in ethnic areas by generational status. Compared to the first generation that is living in ethnic areas, decimal generation immigrants, on average, are younger and less likely to be married. English ability is invariably high among decimal generations, especially the 1.75 generation, which arrived at prekindergarten ages.

In general, the 1.75 generation, out of all groups, tends to have higher average years in school. Economically speaking, the first generation among the six groups is, on average, low in family income. Moreover, members of the 1.5- and 1.75 generations often report high family income. However, there is quite a discrepancy when comparing across groups: the family income of the first generation ranges from extremely low for Vietnamese (\$66,294) and extremely high for Asian Indians (\$147,706). Although Chinese ethnic areas are relatively lower in median income than the national PUMA average, the decimal generations that are living in ethnic areas are certainly economically better off.

Housing tenure is not perfectly in line with the level of family income. Although Vietnamese are generally low in family income, the homeownership rate exceeds that of the home renter, regardless of generational status. Moreover, the homeownership rate among the first-generation Japanese is only 38.3%. The self-employed rate is lower among Chinese and Filipinos than Koreans and Vietnamese. The first generation of Koreans has the highest self-employment rate (19.6%) among all groups by ethnicity and generation. Although the entrepreneurship rate declines among the decimal generations of Koreans, with the 1.75 generation reaching the lowest (11.6%), the rates are higher than that of other groups.

	Ethnic Areas				
Indians	Gen 1	Gen 1.25	Gen 1.5	Gen 1.75	
Mean age	44.5	38.9	37.9	37.8	
% Female	18.4	29.1	37.9	40.1	
% Married	86.6	77.7	71.9	60.7	
% Speak English only	7.6	13.4	24.0	39.8	
Education (in years)	16.8	15.8	16.4	16.8	
Family income	\$147.706	\$154.050	\$160.129	\$184.689	
% Home Ownership	53.1	68.9	64.1	61.1	
% Self-employed	7.0	11.2	9.3	8.3	
Japanese	Gen 1	Gen 1.25	Gen 1.5	Gen 1.75	
Mean age	54.1	53.5	54.8	52.2	
% Female	45.0	53.9	59.6	53.7	
% Married	57.9	53.2	54.3	51.1	
% Speak English only	9.6	28.6	29.9	73.1	
Education (in years)	15.3	15.2	15.5	15.6	
Family income	\$94,513	\$98,771	\$110.065	\$132.084	
% Home Ownership	38.3	.57.1	69.5	67.9	
% Self-employed	12.5	17.4	14.7	12.5	
Chinese	Gen 1	Gen 1.25	Gen 1.5	Gen 1.75	
Mean age	52.5	42.8	42.3	40.4	
% Female	43.9	43.2	42.7	46.3	
% Married	68 5	57.9	57.6	50.7	
% Speak English only	3.4	64	17.1	38.8	
Education (in years)	14.3	15.1	15.9	16.1	
Eamily income	\$88 804	\$105.873	\$131 111	\$132 504	
% Home Ownership	φ00,00 <del>1</del> 56.9	65.7	71 5	64.2	
% Solf-omployed	82	97	9.0	78	
Kanagua	Con 1			Con 1 75	
Koreans	Gen I	Gen 1.25	Gen 1.5	Gen 1.75	
Mean age	55.6	42.2	40.6	37.1	
% Female	43.2	43.9	42.2	51.1	
% Married	70.1	62.8	60.0	48.2	
% Speak English only	4.7	9.0	22.5	63.0	
Education (in years)	14.9	15.5	16.0	16.0	
Family income	\$75,394	\$107,699	\$131,722	\$124,164	
% Home Ownership	44.0	49.5	51.3	48.1	
% Self-employed	19.6	18.3	15.5	11.6	
Filipinos	Gen 1	Gen 1.25	Gen 1.5	Gen 1.75	
Mean age	57.5	45.1	42.9	41.7	
% Female	52.6	47.9	47.2	43.0	
% Married	70.4	71.6	61.7	59.2	
% Speak English only	5.5	12.0	36.5	67.9	
Education (in years)	14.8	14.2	14.8	15.1	
Family income	\$100,433	\$105,351	\$109,187	\$107,910	
% Home Ownership	61.8	59.4	57.0	54.3	
% Self-employed	5.0	4.1	5.6	5.5	
Vietnamese	Gen 1	Gen 1.25	Gen 1.5	Gen 1.75	
Mean age	56.5	45.1	40.8	37.5	
% Female	36.2	32.2	42.2	46.6	
% Married	71.6	70.5	65.4	55.7	
% Speak English only	2.9	4.3	10.8	25.5	
Education (in years)	11.5	14.0	15.1	15.3	
Family income	\$66,294	\$94,978	\$112,023	\$117,920	
% Home Ownership	62.9	76.9	72.6	67.4	
% Self-employed	10.5	12.6	12.5	9.1	

**Table 2.** Descriptive Statistics of Asian Immigrants by Ethnic Areas<sup>2</sup> and Generational Status, 2013–2017.

Source: 2013–2017 ACS 5-Year Estimates, IPUMS. Notes: Numbers not denoted with % are means.

# 4.4. Predicting Residence in Ethnic Areas

Table 3 presents the results of group-specific models. Model results are expressed as odds ratios (OR), interpreted as the constant effect on the estimated probability of living in ethnic areas for each explanatory variable of interest relative to its reference category,

holding the other variables at constant values. First, we observe significant variations in the likelihood of living in ethnic areas across both decimal generations and ethnic groups. Decimal generations of Asian Indians show a relatively lower tendency of living in ethnic areas than their first-generation counterparts. In addition, as generation increases, the likelihood of living with co-ethnics linearly decreases. For Asian Indians, members of the 1.25 generation are 17% less likely to live in Indian ethnic areas compared to the first generation (OR = 0.830), while this likelihood is 27% less for the 1.75 generation (OR = 0.733). Such a residential pattern by generational status observed in Asian Indians conforms to the prediction of the spatial assimilation model.

	Indians		Japanese		Chinese	
Independent Variables	OR	Two-Tailed <i>p</i> -Value	OR	Two-Tailed <i>p</i> -Value	OR	Two-Tailed <i>p</i> -Value
Generation						
1st (ref)						
1.25	0.830 **	0.001	1.150	0.279	1.372 ***	0.000
1.5	0.742 ***	0.000	1.142	0.270	1.402 ***	0.000
1.75	0.733 ***	0.000	0.794 *	0.024	1.357 ***	0.000
Language						
Speaks English well	0.816 **	0.004	0.668 ***	0.000	0.671 ***	0.000
Speaks only English	0.570 ***	0.000	0.312 ***	0.000	0.396 ***	0.000
Education	0.972 ***	0.000	0.987	0.343	0.961 ***	0.000
Employment (Ref = not in labor force)						
Self-employed	0.749 ***	0.000	1.695 ***	0.000	0.756 ***	0.000
Work for wages	1.038	0.389	1.103	0.247	0.918 **	0.003
Family Income (\$)	1.086 ***	0.000	1.084 ***	0.000	1.064 ***	0.000
Renter	1.159 ***	0.000	1.572 ***	0.000	1.393 ***	0.000
Age	0.995 ***	0.000	1.005 *	0.016	1.008 ***	0.000
Female	0.918 **	0.002	0.869 *	0.018	1.028	0.157
Married	1.198 ***	0.000	0.946	0.375	0.909 ***	0.000
Constant	2.074 ***	0.000	0.483 **	0.002	2.466 ***	0.000
	Koreans		Filipinos		Vietnamese	
T 1 1 ( T7 · 11	0.0	Two-Tailed	OR	Two-Tailed	OR	Two-Tailed
Independent Variables	OK	<i>p-</i> Value	UK	<i>p</i> -Value		<i>p</i> -value
Generation	OR	<i>p</i> -Value		<i>p</i> -Value		<i>p</i> -value
Generation 1st (ref)	OR	<i>p</i> -Value		<i>p</i> -value		<i>p</i> -value
Generation 1st (ref) 1.25	0 <b>R</b> 1.196 **	<i>p</i> -Value	1.583 ***	<i>p-</i> <b>value</b>	0.995	0.919
Generation 1st (ref) 1.25 1.5	0 <b>R</b> 1.196 ** 1.101	<i>p</i> -Value	1.583 *** 1.588 ***	<i>p-Value</i> 0.000 0.000	0.995 0.914	0.919 0.074
Generation 1.25 1.5 1.75	0R 1.196 ** 1.101 0.618 ***	<i>p</i> -Value	1.583 *** 1.588 *** 1.348 ***	<i>p-Value</i> 0.000 0.000 0.000	0.995 0.914 0.801 **	0.919 0.074 0.001
Generation 1.25 1.5 1.75 Language	1.196 ** 1.101 0.618 ***	<i>p</i> -Value 0.002 0.085 0.000	1.583 *** 1.588 *** 1.348 ***	0.000 0.000 0.000 0.000	0.995 0.914 0.801 **	0.919 0.074 0.001
Generation 1st (ref) 1.25 1.5 1.75 Language Speaks English well	1.196 ** 1.101 0.618 *** 0.658 ***	<i>p</i> -Value 0.002 0.085 0.000 0.000	1.583 *** 1.588 *** 1.348 *** 0.704 ***	<i>p-Value</i> 0.000 0.000 0.000 0.000	0.995 0.914 0.801 ** 0.790 ***	0.919 0.074 0.001 0.000
Generation 1st (ref) 1.25 1.5 1.75 Language Speaks English well Speaks only English	0R 1.196 ** 1.101 0.618 *** 0.658 *** 0.328 ***	<i>p</i> -Value 0.002 0.085 0.000 0.000 0.000	1.583 *** 1.588 *** 1.348 *** 0.704 *** 0.347 ***	<i>p-Value</i> 0.000 0.000 0.000 0.000 0.000	0.995 0.914 0.801 ** 0.790 *** 0.420 ***	0.919 0.074 0.001 0.000 0.000
Generation 1st (ref) 1.25 1.5 1.75 Language Speaks English well Speaks only English Education	0.658 *** 0.658 *** 0.328 ***	<i>p</i> -Value 0.002 0.085 0.000 0.000 0.000 0.000	1.583 *** 1.588 *** 1.348 *** 0.704 *** 0.347 *** 0.927 ***	<i>p-Value</i> 0.000 0.000 0.000 0.000 0.000 0.000	0.995 0.914 0.801 ** 0.790 *** 0.420 *** 0.997	0.919 0.074 0.001 0.000 0.000 0.401
Generation 1st (ref) 1.25 1.5 1.75 Language Speaks English well Speaks only English Education Employment (Ref = not in labor force)	1.196 ** 1.101 0.618 *** 0.658 *** 0.328 *** 1.023 ***	<i>p</i> -Value 0.002 0.085 0.000 0.000 0.000 0.000	1.583 *** 1.588 *** 1.348 *** 0.704 *** 0.347 *** 0.927 ***	<i>p-Value</i> 0.000 0.000 0.000 0.000 0.000 0.000	0.995 0.914 0.801 ** 0.790 *** 0.420 *** 0.997	0.919 0.074 0.001 0.000 0.000 0.401
Generation         1st (ref)         1.25         1.5         1.75         Language         Speaks English well         Speaks only English         Education         Employment (Ref = not in labor force)         Self-employed	0.658 *** 0.658 *** 0.328 *** 1.023 *** 1.126 *	<i>p</i> -Value 0.002 0.085 0.000 0.000 0.000 0.000 0.000	1.583 *** 1.588 *** 1.348 *** 0.704 *** 0.347 *** 0.927 *** 0.927	<i>p-Value</i> 0.000 0.000 0.000 0.000 0.000 0.000 0.207	0.995 0.914 0.801 ** 0.790 *** 0.420 *** 0.997 0.690 ***	0.919 0.074 0.001 0.000 0.000 0.401 0.000
Generation         1st (ref)         1.25         1.5         1.75         Language         Speaks English well         Speaks only English         Education         Employment (Ref = not in labor force)         Self-employed         Work for wages	1.196 ** 1.101 0.618 *** 0.658 *** 0.328 *** 1.023 *** 1.126 * 0.954	<i>p</i> -Value 0.002 0.085 0.000 0.000 0.000 0.000 0.023 0.284	1.583 *** 1.588 *** 1.348 *** 0.704 *** 0.347 *** 0.927 *** 0.927 0.956	<i>p-Value</i> 0.000 0.000 0.000 0.000 0.000 0.000 0.207 0.233	0.995 0.914 0.801 ** 0.790 *** 0.420 *** 0.997 0.690 *** 0.908 *	0.919 0.074 0.001 0.000 0.000 0.401 0.000 0.039
Generation 1st (ref) 1.25 1.5 1.75 Language Speaks English well Speaks only English Education Employment (Ref = not in labor force) Self-employed Work for wages Family Income (\$)	1.196 ** 1.101 0.618 *** 0.658 *** 0.328 *** 1.023 *** 1.126 * 0.954 1.070 ***	<i>p</i> -Value 0.002 0.085 0.000 0.000 0.000 0.000 0.023 0.284 0.000	1.583 *** 1.588 *** 1.348 *** 0.704 *** 0.347 *** 0.927 *** 0.927 0.926 1.071 ***	<i>p-Value</i> 0.000 0.000 0.000 0.000 0.000 0.207 0.233 0.000	0.995 0.914 0.801 ** 0.790 *** 0.420 *** 0.997 0.690 *** 0.908 * 1.012 *	0.919 0.074 0.001 0.000 0.000 0.401 0.000 0.039 0.029
Generation 1st (ref) 1.25 1.5 1.75 Language Speaks English well Speaks only English Education Employment (Ref = not in labor force) Self-employed Work for wages Family Income (\$) Renter	1.196 ** 1.101 0.618 *** 0.658 *** 0.328 *** 1.023 *** 1.126 * 0.954 1.070 *** 1.877 ***	<i>p</i> -Value 0.002 0.085 0.000 0.000 0.000 0.000 0.023 0.284 0.000 0.000	1.583 *** 1.588 *** 1.348 *** 0.704 *** 0.347 *** 0.927 *** 0.927 0.956 1.071 *** 1.592 ***	<i>p-Value</i> 0.000 0.000 0.000 0.000 0.000 0.207 0.233 0.000 0.000	0.995 0.914 0.801 ** 0.790 *** 0.420 *** 0.997 0.690 *** 0.908 * 1.012 * 1.349 ***	0.919 0.074 0.001 0.000 0.000 0.401 0.000 0.039 0.029 0.000
Generation 1st (ref) 1.25 1.5 1.75 Language Speaks English well Speaks only English Education Employment (Ref = not in labor force) Self-employed Work for wages Family Income (\$) Renter Age	1.196 ** 1.101 0.618 *** 0.658 *** 0.328 *** 1.023 *** 1.126 * 0.954 1.070 *** 1.877 *** 1.002	<i>p</i> -Value 0.002 0.085 0.000 0.000 0.000 0.023 0.284 0.000 0.000 0.000 0.000 0.147	1.583 *** 1.588 *** 1.348 *** 0.704 *** 0.347 *** 0.927 *** 0.927 0.956 1.071 *** 1.592 *** 1.019 ***	<i>p-Value</i> 0.000 0.000 0.000 0.000 0.000 0.207 0.233 0.000 0.000 0.000	0.995 0.914 0.801 ** 0.790 *** 0.420 *** 0.997 0.690 *** 0.908 * 1.012 * 1.349 *** 1.007 ***	0.919 0.074 0.001 0.000 0.000 0.401 0.000 0.039 0.029 0.000 0.000
Generation 1st (ref) 1.25 1.5 1.75 Language Speaks English well Speaks only English Education Employment (Ref = not in labor force) Self-employed Work for wages Family Income (\$) Renter Age Female	1.196 ** 1.101 0.618 *** 0.658 *** 0.328 *** 1.023 *** 1.126 * 0.954 1.070 *** 1.877 *** 1.002 0.963	<i>p</i> -Value 0.002 0.085 0.000 0.000 0.000 0.000 0.023 0.284 0.000 0.000 0.000 0.147 0.241	1.583 *** 1.588 *** 1.348 *** 0.704 *** 0.347 *** 0.927 *** 0.927 0.956 1.071 *** 1.592 *** 1.019 *** 0.901 ***	<i>p-Value</i> 0.000 0.000 0.000 0.000 0.000 0.207 0.233 0.000 0.000 0.000 0.000 0.000	0.995 0.914 0.801 ** 0.790 *** 0.420 *** 0.997 0.690 *** 0.908 * 1.012 * 1.349 *** 1.007 *** 1.035	0.919 0.074 0.001 0.000 0.401 0.000 0.401 0.000 0.039 0.029 0.000 0.000 0.000 0.498
Independent Variables         Generation         1st (ref)         1.25         1.5         1.75         Language         Speaks English well         Speaks only English         Education         Employment (Ref = not in labor force)         Self-employed         Work for wages         Family Income (\$)         Renter         Age         Female         Married	1.196 ** 1.101 0.618 *** 0.658 *** 0.328 *** 1.023 *** 1.126 * 0.954 1.070 *** 1.877 *** 1.002 0.963 1.046	<i>p</i> -Value 0.002 0.085 0.000 0.000 0.000 0.000 0.023 0.284 0.000 0.000 0.000 0.147 0.241 0.219	1.583 *** 1.588 *** 1.348 *** 0.704 *** 0.927 *** 0.927 0.956 1.071 *** 1.592 *** 1.019 *** 0.901 *** 1.592 *	<i>p-Value</i> 0.000 0.000 0.000 0.000 0.207 0.233 0.000 0.	0.995 0.914 0.801 ** 0.790 *** 0.420 *** 0.997 0.690 *** 0.908 * 1.012 * 1.349 *** 1.007 *** 1.035 1.073 *	0.919 0.074 0.001 0.000 0.000 0.401 0.000 0.039 0.029 0.000 0.000 0.000 0.000 0.498 0.016

Table 3. Logistic Regression Models Predicting Residence in Ethnic Areas: 2013–2017.

Notes: Estimates are Odds Ratios. \* p < 0.05; \*\* p < 0.01; \*\*\* p < 0.001 (two-tailed tests). Sample size (N): Indians = 40,146, Japanese = 6857, Chinese = 51,030, Koreans = 20,048, Filipinos = 33,294, Vietnamese = 21,587.

Comparisons across decimal generations of Chinese and Filipinos, however, provide support for the resurgent ethnicity framework. Controlling acculturation and socioeconomic indicators in the logistic models, the decimal generations of Chinese and Filipinos are more likely to live in affluent ethnic areas compared to their first-generation counterparts. Moreover, we observe a nonlinear pattern of the generational effect among Japanese, Koreans, and Vietnamese. For Japanese and Vietnamese, the 1.75 generation is about 20% less likely to live in ethnic areas, while the estimates for the other two decimal generations are not statistically significant. A unique pattern presented in the Korean model is that the probability of the 1.25-generation Koreans living in ethnic areas is higher than that of the first generation, while the 1.75 generation is less likely to do so in reference to the first generation.

Despite the variations introduced by Chinese and Filipinos, a general pattern observed among the other four groups proves that those who arrived at later childhood ages (after 6 years old) are more likely to live close to co-ethnics, while those who came before 5 years old will be potentially dispersed into mainstream society. The findings indicate that, between the first and second generations, the decimal generations of Asian Indians have already started spatial assimilation to some extent, while their counterparts in other groups show different patterns, reinforcing self-segregation.

Reviewing the effects of other independent variables, the most successful predictor of residential assimilation is English proficiency. Almost without exception, those with greater English proficiency are less likely to live in ethnic areas. Among the socioeconomic variables with more direct links to market resources, we find interesting results. With increased education, Asian Indians, Chinese, and Filipinos exhibit a lower tendency to live in ethnic areas, which is consistent with the prediction of spatial assimilation. However, education exhibits positive returns to the residence in ethnic areas for Koreans (OR = 1.023). It appears that, for all Asian groups, increased family income is associated with the tendency to live in ethnic areas. Homeownership is also closely linked with the housing search process, and renters are significantly more likely to live in ethnic areas, as predicted by the assimilation model. Self-employed entrepreneurs among immigrants oftentimes depend on ethnic social networks, and they should be more likely to live in ethnic areas. This assumption is tested to be true for the self-employed Japanese and Koreans, who are 69.5% and 12.6% more likely to live in ethnic areas, respectively (OR = 1.695 and 1.126). The pattern is reversed for Asian Indians, Chinese, and Vietnamese, with the self-employed being less likely to live in ethnic areas.

Among the control variables, age has positive effects for most groups (the exception is Asian Indians), indicating that older Asian householders are more likely to reside in ethnic areas. Gender has no significant impact on the probability of living in ethnic settings for most groups. The married householders among Asian Indians, Filipinos, and Vietnamese are more likely to live in ethnic settings. However, this effect is negative for the Chinese (OR = 0.909) and nonsignificant for Japanese and Koreans.

In summary, we have observed diverse spatial assimilation patterns among the first generation and three decimal generations of six Asian ethnic groups, and the effects of socioeconomic indictors are not always consistent across ethnic groups. The ethnic areas are more attractive for the decimal generations of Chinese and Filipinos and members of the 1.25-generation Koreans. Decimal generations of Asian Indians, however, are more likely to move out of ethnic areas and present more spatial dispersion. The 1.75 generations of Japanese, Koreans, and Vietnamese are found to be less likely to reside close to co-ethnics in comparison to their first-generation counterparts. Moreover, cultural assimilation in language and education is greatly associated with the prediction of living in nonethnic settings for most Asian groups. The association between entrepreneurship and the likelihood of living in ethnic areas, however, is not identical across ethnic groups. We discuss how the main findings contribute to the theoretical frameworks and current literature in the following section.

#### 5. Discussion

This paper sheds light on the diverse pattern of assimilation among the current wave of Asian immigrants, focusing on examining the variability attributed to differences in ethnic membership and generational status. It is the first study that distinguishes decimal generations among Asian immigrants and estimates models predicting their residential outcomes. The findings provide some support for the spatial assimilation theory but also argue that this model cannot stand alone for understanding the locational attainment of Asian immigrants, especially when considering the children immigrants who came to the United States prior to adult ages. This study intends to highlight the group differences in residential patterns for Asian immigrants. Throughout the analyses, we use PUMA as the geographic unit to define ethnic areas. PUMAs are much larger than census tracts, the conventional ethnic neighborhoods in residential assimilation literature. We need to be aware of the differences between the geographical units when trying to draw conclusions for residential concentration.

To answer the first research question, we find that the ethnic areas are characterized by group differences: Asian Indians are concentrated in high-income areas, and Vietnamese are living in the least affluent areas, and the four other groups vary somewhere in between. The comparison between ethnic and nonethnic areas shows that the defined ethnic areas of four groups (Asian Indians, Japanese, Koreans, and Filipinos) have higher median household income and lower mean poverty rates than the national average. Vietnamese concentrate in less affluent PUMAs. This is mainly due to the refugee status of Vietnamese immigrants.

The second research question examines the distribution of the four decimal generations living in their respective ethnic areas. The results show both similarities and differences across ethnic groups. The 1.75 generation across all groups except Asian Indians (0.1% higher than that of the 1.5 generation) has the smallest percentage living in ethnic areas in comparison to other generations. For Japanese and Vietnamese, we observe a close-to-linear decline in the percentage of living in ethnic areas with the increase in generation (e.g., from 1st generation to 1.75 generation). However, the percentages of the 1.25- and 1.5-generation Chinese and Filipinos living in ethnic areas are higher than their first-generation counterparts. These findings help us predict the nonlinear patterns in the logistic regression model.

The follow-up examination of individual-level SES characteristics gives us a closer comparison of the four generations across groups. It confirms the logic of using generational status as the proxy of cultural assimilation, because the decimal generations have greater English skills, longer years of education, and higher family income. One notable distinction is that decimal generations that live in Vietnamese ethnic areas have high socioeconomic characteristics (e.g., family income and years of education). This pattern indicates the ethnic preference among the decimal generation Vietnamese who may choose to live in lower-status ethnic areas. We do not find any direct support for segmented assimilation theory, because decimal generations of Asian ethnic groups in the current sample have relatively high socioeconomic status, and most of the defined ethnic areas, except those of the Vietnamese, are not much disadvantaged in terms of selected economic indicators.

We emphasize that an important piece of contribution is the linear and nonlinear change in spatial assimilation in response to cultural assimilation with generational status as the proxy. For some groups (e.g., Asian Indians), the probability of living in ethnic areas declines along with the increase in generation, while for other groups (e.g., Chinese and Filipinos), the generational effects are uniformly positive. Moreover, differences across decimal generations are not neglectable for Koreans, Japanese, and Vietnamese.

The analysis of individual-level data adds new evidence relevant to the spatial assimilation theories. We found substantial support for the spatial assimilation model in the case of Asian Indians and, to some extent, Japanese, Koreans, and Vietnamese. Asian Indians came with high education and technological skills, and their foreign-born children are attracted to the mainstream housing although these might be places with lower SES status. Their ethnic areas are much better-off but may not be attractive to the decimal generations that are more culturally assimilated. For Japanese, Koreans and Vietnamese, spatial assimilation is more likely to be observed in their 1.75 generations. The first generation of Vietnamese came from modest socioeconomic backgrounds, while their children can achieve upward mobility and choose to settle in the mainstream housing market (Zhou and Bankston 1998). Despite the disadvantaged conditions regarding immigrant status, the context of reception, settlement patterns, and SES status, the fact that the 1.75-generation Vietnamese prefer to live in nonethnic areas that are more affluent resembles the upward assimilation into the mainstream culture. In summary, these findings support that spatial assimilation still exists as a major trend for some Asian ethnic groups, irrespective of their SES characteristics.

Apparently, for most Asian immigrants who are economically prepared for better residential locales, the preferred choice for them is living close with co-ethnic members. The resurgent ethnicity perspective can explain why the decimal generations of Chinese, Filipinos, Japanese, and Koreans (1.25- and 1.5 generations) are more likely to live with co-ethnics. The children immigrants who arrived for 6-12 years have some cultural training and influence from their home countries, and they also find many benefits of living in ethnic areas, although they have achieved parity with white counterparts in education, English, and SES indicators. The tendency of living in ethnic areas among children immigrants signifies a stronger role of race and ethnicity in Asian immigrants' locational attainment process (Brown and Chung 2006; Lee and Kye 2016; Logan et al. 2002). Japanese and Koreans both display nonlinear patterns among decimal generations: the 1.25- and 1.5 generations prefer to live with co-ethnics, whereas the 1.75 generations are less likely to live in ethnic areas than the first generation. These findings have shown that the children immigrants are such a distinct group, whose residential patterns differ from those of the first generation and U.S.-born generations. It confirms the findings in previous studies that age-at-arrival has a determining effect on the assimilation outcomes for different race and ethnic groups (Lee and Edmonston 2011; Myers et al. 2009; Rumbaut 1994, 2004).

Based on the above discussions, we found substantial evidence on resurgent ethnicity theory, which assumes that living in ethnic areas reflects preference rather than economic constraints (Charles 2003; Li and Park 2006). Self-segregation into areas with a relatively large number and share of ethnic members is likely to contribute to the continued segregation of Asian immigrants and their foreign-born and U.S.-born children. The majority of the ethnic areas in our study are economically comparable to the counterpart nonethnic areas. We observe that Vietnamese ethnic areas are relatively low in SES status. The theoretical implication for this finding indicates that segmented assimilation may not be suitable for depicting residential assimilation patterns for certain Asian immigrant groups that are classified as "Honorary Whites" in the triracial system (Bonilla-Silva 2004), for instance Asian Indians and Chinese. The current study, however, states that some Asian groups in this racial classification are concentrated in ethnic areas through self-segregation, while others move out of ethnic areas. Place stratification theory examines the structural discrimination and inequality that impede the residential assimilation with non-Hispanic whites (Farley and Allen 1987; Logan and Molotch 1987). The current study provides no variables that directly measure discrimination in housing. However, acknowledging the great impact of institutional discrimination, we would like to include related covariates to estimate a more comprehensive model in future work.

Overall, we demonstrate that ethnicity has a significant effect on residential assimilation, and the demarcation among immigrant generations is a great addition to the contour of Asian immigrants with their foreign-born children navigating social and spatial mobility in American society. While the findings reinforce the spatial assimilation model and the predominance of ethnic communities (Logan et al. 2002), the study underscores the intersection of ethnic membership and generational status to a better understanding of the residential patterns for Asian immigrants arriving at different ages. Variations across ethnic groups are clearly substantial, and the differences attributed to age-at-arrival should also be taken into consideration by scholars when examining the spatial distribution pattern of the Asian groups. Given that we only examined cross-sectional data of current residence as a proxy of spatial assimilation patterns, future studies should compare the internal mobility trend to look for temporal variations through the intersectionality of generation and ethnicity.

**Author Contributions:** Conceptualization, S.L. and W.Z.; methodology, S.L. and W.Z.; software, S.L.; formal analysis, S.L.; writing—original draft preparation, S.L.; writing—review and editing, S.L. and W.Z.; supervision, W.Z. All authors have read and agreed to the published version of the manuscript.

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**Data Availability Statement:** Data available in a publicly accessible repository that does not issue DOIs. Publicly available datasets were analyzed in this study. This data can be found here: https://usa.ipums.org/usa/ and https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-data.2017.html (accessed on 9 June 2021).

**Conflicts of Interest:** The authors declare no conflict of interest.

### Appendix A

Table A1. Descriptive Statistics and Characteristics of Ethnic and Nonethnic Areas, 2013–2017.

	Ethnic Areas	Nonethnic Areas
Asian Indians		
Median household income	\$89,282	\$66,071
Mean percent in poverty	7.04%	10.65%
% of Asian Indian (PUMA-level)	7.78%	1.97%
N of PUMAs	426	1734
Japanese		
Median household income	\$82,567	\$64,900
Mean percent in poverty	9.7%	12.2%
% of Japanese (PUMA-level)	2.4%	0.3%
N of PUMAs	117	1478
Chinese		
Median household income	\$76,605	\$67,575
Mean percent in poverty	10.9%	10.7%
% of Chinese (PUMA-level)	13.6%	1.5%
N of PUMAs	315	1835
Koreans		
Median household income	\$75,591	\$66,187
Mean percent in poverty	10.9%	11.1%
% of Koreans (PUMA-level)	5.2%	0.9%
N of PUMAs	309	1673
Filipinos		
Median household income	\$70,888	\$63,166
Mean percent in poverty	11.4%	11.8%
% of Filipinos (PUMA-level)	7.5%	0.9%
N of PUMAs	280	1871
Vietnamese		
Median household income	\$61,621	\$64,344
Mean percent in poverty	15.1%	11.6%
% of Vietnamese (PUMA-level)	8.4%	0.9%
N of PUMAs	318	1654

Source: 2013-2017 ACS 5-year estimates, PUMA Geodatabases.

#### Notes

<sup>1</sup> The SES characteristics for the nonethnic areas are provided in Appendix A.

<sup>2.</sup> The descriptive statistics for nonethnic areas are available upon request.

## References

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