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Ethnicity and Migration – The Concentration and Dispersion of Foreign-Born Asians and Hispanics in the United States

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ETHNICITY AND MIGRATION ─ THE CONCENTRATION AND DISPERSION OF FOREIGN-BORN ASIANS AND HISPANICS IN THE UNITED STATES

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This dissertation is approved as a creditable and independent investigation by a candidate for the Doctor of Philosophy degree and is acceptable for meeting the dissertation requirements for this degree. Acceptance of this does not imply that the conclusions reached by the candidate are necessarily the conclusions of the major department.

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ABSTRACT

ETHNICITY AND MIGRATION — THE CONCENTRATION AND DISPERSION OF FOREIGN-BORN ASIANS AND HISPANICS IN THE UNITED STATES

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Immigration from Asia and Latin America has rapidly changed the race and ethnic composition of the non-White population in the United States. This dissertation examines the question of race/ethnicity, nativity, and how acculturation and socioeconomic characteristics impact residential outcomes for Asian and Hispanic immigrants, a process often termed as residential assimilation. It also tests the effectiveness of spatial assimilation, segmented assimilation, and resurgent ethnicity theories for understanding residential segregation across metropolitan neighborhoods.

Three sets of analyses are presented in this dissertation. The first set of analyses studies the nativity difference in residential segregation levels between Asians and Hispanics from non-Hispanic Whites in metropolitan areas. In general, the findings from residential segregation patterns demonstrate that the classic spatial assimilation is not solely outdated but is only applicable to Hispanics. Looking closely into the nativity groups, Hispanic immigrants are more residentially segregated from Whites than are the native-born counterparts in all immigrant destinations (traditional gateways, new destinations, and other destinations). On the contrary, Asian nativity groups show a completely reverse pattern. By comparing the segregation levels of the aforementioned destination types, the native-born Asians are highly segregated from Whites than are the immigrant groups in other destinations, which portends that as Asians disperse to the newly emerging destinations, they are not spatially assimilated with Whites.

The second part of analyses examines differences in residential propinquity of living in ethnic areas (defined by PUMAs) by race, nativity, and considers the role of individual socioeconomic and demographic characteristics for understanding disparities in residential preferences of living in ethnic areas. Results show that controlling for individual differences in acculturation and socioeconomic characteristics explains away the nativity difference, as the native-born Asians and Hispanics show a higher tendency of living in the ethnic areas compared to their respective foreign-born counterparts. Build on past research findings and framework, this result lends less support to the classic spatial assimilation model, but more to the segmented assimilation and resurgent ethnicity frameworks. Hispanics are generally low in acculturation and socioeconomic attainment measures, which in turn generate a "downward" social context for the native-born groups. However, the relatively advantaged Asian native-born are more likely to live in ethnic areas, which is suggestive of a voluntary process that is related to preference and taste, rather than economic constraints.

The results from the last set of analyses show that Hispanic nativity groups are more responsive to the effects of human capital factors (demographics, English ability, and education) compared to Asians in the internal migration patterns. This nativity difference is the strongest at the relative risk of segregation. Consistent with spatial assimilation theory, I found that greater English proficiency and education help Hispanic immigrants disperse from established immigrant metropolitan areas. Whereas for Asians, advanced degrees are strongly related to the segregation migration. Moreover, other human capital characteristics, homeownership, family income, and self-employment,

impact the internal migration differently on Asians and Hispanics, providing some evidence for the segmented assimilation and resurgent ethnicity theories.

CHAPTER 1: INTRODUCTION

Statement of the Problem

Population distribution has historically been the subject of research in the United States, and the diversity of immigrant groups has made the question more interesting (Borjas, Bronars and Trejo 1992; Molloy, Smith and Wozniak 2011). The examination of population mobility, especially the settlement pattern of ethnoracial groups is significant because of the intersection of the immigrant assimilation process, racial/ethnic residential segregation, and the internal migration process. Every aspect of the residential settlement pattern is a distinctive interpretation of locational attainment based on individual and group traits.

Residential outcomes are particularly informative in the study of immigrant assimilation as the integration of immigrant groups in the host society is a multidimensional process involving changes in many areas of life (White, Biddlecom and Guo 1993). I choose to examine Asian and Hispanic groups for several reasons. Both groups constitute a growing minority population in the U.S., containing a substantial number of old and new immigrants. In 2018, there were over 18.7 million Asians and Pacific Islanders in the U.S., more than half of whom were foreign-born (2018 ACS 1-Year Estimates, Table B23002D). By 2018, Hispanics numbered over 59 million and constituted about 18.3% of the total U.S. population (2018 ACS 1-Year Estimates, Table DP05).

The 2010 census reveals that the two largest minorities, Hispanics and Asians, each grew about 43 percent—together accounting for more than 60 percent of the

nation's population growth over the last decade (Frey 2011). Based on the analysis of 1990, 2000, and 2010 decennial census data for the 100 largest U.S. metropolitan areas, Frey (2011) reports that nearly half of Hispanics lived in just 10 largest metro areas, and among the 29 large metro areas that doubled their Hispanic populations during this decade, Mexicans accounted for most of the growth in 19 metro areas. Asians were even more concentrated than Hispanics, and one-third of its population is concentrated in three metro areas: Los Angeles (CA), New York (NY), and San Francisco (CA).

Residential patterns of Asian and Hispanic populations, shaped by the initial settlement and subsequent mobility, have been extensively studied. The classic spatial assimilation model, focusing on the foreign-born populations, states that as immigrants increase English ability and socioeconomic status, they translate these gains into desegregation from their co-ethnic members, resulting in the dispersion of immigrants over time (Alba and Nee 2003; Massey and Denton 1988). Also, nativity as well as the generational status, according to the spatial assimilation model, are associated with residential patterns. The native-born racial minority group members are relatively advantageous in language proficiency, human capital, and socioeconomic endowments; thus, they are expected to live closely with Whites.

The indicator of residential segregation describes racial and ethnic stratification within metropolitan areas. Many studies have shown that the overall Hispanic-White and Asian-White segregation are lower than that of Black-White, while Hispanic and Asian segregation has remained steady or even increased since the 1980s (Center 2001; Iceland, Weinberg and Steinmetz 2002). Much of its increasing residential segregation is contributed by the rapid growth of immigrants from Asia and Latin America between

1980 and 2000 (Hobbs and Stoops 2002). Moreover, the foreign-born Asians and Hispanics are found to be more segregated from Whites than are the native-born of those groups, and this pattern is especially true for the Hispanic groups (Iceland and Scopilliti 2008). In the short run, the continued influx of Hispanic immigrants, largely with low socioeconomic status witness declining interaction with Whites. However, Asian immigrants, many of whom are recently arrived with more human capital, may prefer to live with co-ethnics rather than Whites (Logan and Zhang 2013).

Understandably, as the racial minority populations have substantially grown since the 1980s, the research scope on settlement patterns has expanded. In addition to the two brunches of studies of spatial assimilation and residential segregation, research on internal migration patterns has also been extensive (Alba and Logan 1991; Massey and Mullan 1984; Zhou and Logan 1991). The migration research serves as the bridge of the above two pieces of literature, as moving from ethnic-concentrated settlement areas to places with fewer ethnic members that are often rural is a dispersion and assimilation process of minority groups. For instance, Saenz and his collaborator (Saenz 1991; Saenz and Davila 1992; Saenz and Cready 1997) found that living in an ethnically concentrated metropolitan area significantly inhibits the out-migration of Hispanic populations. Those empirical studies suggest that the dispersion of Hispanics and Asians from traditional settlement areas needs to take into account the ethnic composition of sending areas (Lichter and Johnson 2006). Furthermore, residential dispersion into newly emerging destinations may not signal spatial assimilation with Whites, but segregation with co-ethnic members.

Research Questions

My dissertation examines residential patterns and neighborhood characteristics of Asians and Hispanics in the U.S., in particular, by ethnicity and nativity status, and more importantly, social and economic factors that contribute to the observed residential and neighborhood outcomes. The research questions of my dissertation mainly comprise of three aspects: 1) residential concentration and integration in the neighborhood, 2) spatial assimilation patterns, and 3) geographic dispersion and re-segregation.

The chapter on residential segregation (chapter 4) examines the difference in residential segregation patterns. It tests the applicability of spatial assimilation and segmented assimilation theories for understanding the residential integration of Asian and Hispanic nativity groups within metropolitan neighborhoods in the United States. It is subdivided into two sections. The first section examines differences in segregation levels (low<medium<high) comparing US- and foreign-born groups, supplemented with geographic distributions of these metropolitan areas. The focus in the latter subsection is on the segregation patterns among different immigrant gateways based on the typology classification of Singer (2014).

The chapter on spatial assimilation (chapter 5) explores the overall probability of living with co-ethnics for Asian and Hispanic immigrants compared to their native-born counterparts. It speaks to the residential assimilation literature and aims to answer the question of whether linguistic assimilation and socioeconomic attainment transfer the residential proximity to co-ethnics.

Lastly, chapter 6 analyzes the metropolitan-level migrations of Asian and Hispanic immigrants compared to their respective native-born counterparts. By comparing the nativity difference between the migration patterns (dispersed and segregated), chapter 6 focuses on the extent to which human capital characteristics explain the variations between Asian and Hispanic nativity groups in their internal migration patterns. The following research questions guide the analyses.

Chapter 4 ─ Residential Segregation by Nativity and Metropolitan Typology

1. Overall, how does the segregation level vary for Asians and Hispanics from non-Hispanic Whites, and are native-born of each race group less segregated than the foreign-born counterparts (segregation level varies by nativity status)?
2. In different immigrant destination typologies (*traditional*, *established*, *new*, and *other*), are foreign-born Asians and Hispanics more segregated from non-Hispanic Whites than their native-born counterparts (segregation level varies by destination types)?

Chapter 5 ─ Residential Assimilation

1. What is the current geographic distribution of Asian and Hispanic populations in the U.S.? What are the significant concentrated areas of both groups?
2. How do demographics, acculturation, and socioeconomic characters predict the probability of living in these ethnic concentration areas for Asians, Hispanics, and their nativity groups differently?

Chapter 6 ─ Internal Migration Patterns

1. What is the nativity difference (native-born vs. foreign-born) among Asians and Hispanics in their internal migration propensity?
2. How do Asian and Hispanic nativity groups respond differently to human capital characteristics in their internal migration patterns?

Overall: To what extent do the results support spatial assimilation, segmented assimilation, and resurgent ethnicity theories?

In this chapter, I also discuss the significance of my dissertation. In chapter 2, I discuss the theoretical framework and relevant perspectives that guide my research. The current literature on the residential patterns of Asians and Hispanics will be reviewed. Next, I discuss the limitations of the current literature. I then describe the research design and discuss the data and methodology that I use to answer the research questions and hypotheses in chapter 3. Finally, I present the findings in the results section (chapters 4, 5, and 6) and discuss the implication in the conclusion chapter. For the remainder of this paper, I use "Whites and non-Hispanic Whites," "Asians and non-Hispanic Asians," "native-born and US-born," "foreign-born and immigrants" interchangeably.

Significance of the Study

My dissertation makes three main contributions to spatial assimilation literature. First, it extends the literature by examining differences in segregation patterns by race, nativity, and destination typology. Secondly, this dissertation incorporates a new measure, the proportion of ethnics living in PUMAs as the proxy of ethnic areas. Analyses reveal interesting similarities in the pattern of living in the ethnic areas for Asian and Hispanic nativity groups after controlling for acculturation and socioeconomic

indicators. Additionally, living in a multi-racial household indicates a level of cultural integration, which largely inhibits the probability of living in the ethnic areas for Asians. Third, this dissertation incorporates inter-metropolitan migration to better capture the full range of spatial assimilation. It is to test the extent to which the human capital guides the internal migration patterns differ for native- and foreign-born groups. Most studies are limited to examining a small proportion of metropolitan areas, and thus making indirect inferences on the pattern of immigrant dispersion. This dissertation fills this research gap by including a large number of newly emerged immigrant destinations that were overlooked by previous literature.

Further study of the geographic distribution of ethnoracial groups is needed to help planners and policymakers understand the impacts of immigrant assimilation and race-ethnic relation in contemporary America. The impact of the residential distribution of race/ethnic minority groups has several important policy implications. First, policymakers need information on the determinants of immigrants' locations and destination choices to provide regional needs and funding to sustain a healthy economy and social services not only to the majority group but also to consider the special needs of race/ethnic minorities, which is the ultimate goal of this paper.

One would argue the social implication for Asians and Hispanics as they are becoming more isolated from other groups. Others could argue that the political implication is also great as Hispanics and Asians include a very large share of immigrant groups (non-citizens), but their share of the electorate in the concentrated places is still minor. Ultimately, the major consideration of this study is to provide new evidence of immigrant spatial assimilation, racial/ethnic integration in metropolitan neighborhoods,

and internal migration pattern by comparing current waves of Asians to Hispanics, so that the policymakers can have the most updated information on how race and ethnic immigrant groups integrate differently into local communities.

CHAPTER 2: BACKGROUND

Among all race groups in America, the non-Hispanic White population is expected to continue decreasing in future decades. It is projected that by 2050, non-Hispanic Whites will drop to below 50 percent of the U.S. population (Pew Research Center 2008). Due to immigration from Latin America and Asia over the past few decades, the population of Hispanics and Asians will continue to increase. It is imperative for us to understand the extent of racial and ethnic integration of minority groups, especially their residential assimilation patterns.

This chapter provides an overview of the theoretical frameworks, namely spatial assimilation, segmented assimilation, and resurgent ethnicity ─ to understand the residential integration of minorities in the United States. It also contains an overview of current literature on residential assimilation, racial/ethnic segregation, geographic dispersion of the foreign-born pertaining to individual human capital resources, contextual economic conditions, and co-ethnic social networks. This chapter also contains a brief overview of the project contributions.

Theoretical Background

In the immigration literature, there are mainly three models used to explain how immigrants settled in America and make their way into the mainstream of U.S. society. The theoretical models are spatial assimilation, segmented assimilation, and resurgent ethnicity. First and foremost, I will briefly review the assimilation theory (Gordon 1961; Park 1930) at the beginning of this chapter to set the base for the following arguments about the spatial integration of immigrants.

Assimilation Theory

A new era of mass immigration beginning in the late 1960s has dramatically increased the diversity of ethnic groups in American society. In the U.S. context, the concept of "Anglo-conformity" (Gordon 1961:265) is used in this line of literature to describe the fact that native-born Whites prefer to keep the English language and English-related cultural patterns as the dominant and standard culture in American life. Before a minority assimilates to the culture, they might experience a "social disequilibrium" process, in which the cultural values and norms conflict with what they have experienced before (Portes and Böröcz 1989). If the newcomers can adapt to the new culture, they will be closer to the host society; however, if they have some differences, such as religion and language, they will face more difficulties in adapting to the mainstream culture. In other words, the newcomers will be able to adapt to the culture much quicker when their own culture is similar to the host society, which affects their "immigrant reception," or how immigrants are received in the new society (Gordon 1961).

Gordon (1961) proposed that assimilation involves different stages. The first two stages are "acculturation" and "structural assimilation." The acculturation refers to language (English) and cultural practices of the mainstream society, while structural assimilation indicates immigrant groups largely incorporate themselves into social structures of the primary group members, for example, marital assimilation (Gordon 1964).

However, the concept of assimilation received many critiques from more recent literature. For instance, Alba and Nee (1997) assert that Gordon's assimilation hypothesis

is not clear in referring to the individual- or group-level analysis. One major critique falls on its hypothesis of referring to a two-group framework (majority and minority), which largely ignores the heterogeneity of American society. Therefore, Alba and Nee (1997) conclude that Gordon's assimilation proposition does not extend to relationships between members of different ethnic minorities, as none of them can be perceived as the majority in Gordon's framework. Assimilation should focus more on involving people to be a part of a new culture, rather than forcing them to completely abandon their own ethnic culture.

By contrast, the early Chicago school sociologists of the early twentieth century, Park and Burgess (1969) define assimilation as the way people and groups gain memories and attitudes of other people and groups by sharing experience and history, and finally, both groups become incorporated in common cultural life in this society. This definition of assimilation does not assume that the minority group must lose their ethnic and cultural distinctiveness, but rather becoming a part of the mainstream culture. Park (1930) envisioned the idea of assimilation by the process of "social assimilation" where people of different races and ethnic origins live and work together as a united group in the same location to maintain a national existence (Park, 1930: 281). Park's optimistic view about assimilation is closely related to the end stage of "eventual assimilation" in the "race-relations cycle" after the initial contact, competition, and accommodation among race/ethnic group members in society (Park, 1950: 138).

Another piece of canonical contribution to immigrant assimilation is the notion of "straight-line assimilation" (Gans and Sandberg 1973). If one of the criticisms on Gordon's assimilation concept is being static, straight-line assimilation argues that there

should a generational step in the progress of adaptation to the host society (Lieberson 1973). The key implication of this idea is that assimilation of minority groups does not only take time but also requires each generation to take a closer step to the final assimilation. Since the straight-line assimilation assumes that each generation will inevitably be more assimilated into mainstream culture irrespective of ethnic traits, it has been easily criticized. The segmented assimilation theory (Zhou 1997) is a forcible critique of the straight-line assimilation, which I will be discussing shortly.

Alba and Nee (1997) point out that several perspectives are missing from Gordon's assimilation framework. One dimension that Gordon overlooked is the dimension of economic assimilation, which is the key element of socioeconomic assimilation. As Alba and Nee (1997) argue that, once immigrant minorities are able to enter into the mainstream labor market and achieve parity of life chances with natives, their structural assimilation in the mainstream society will be much promoted. Since the contemporary immigrant groups have to compete for the scarce resources and opportunities in American society, whether the low-skilled immigrant groups can have the chance for upward mobility is an interesting question. Therefore, the segmented assimilation (Portes and Zhou 1993) provides explanations for divergent pathways of the second-generation minority groups based on the difference in their human capital profiles.

Spatial Assimilation Theory

The last comprehensive review of sociological research on immigration and assimilation outlined an increase in immigrants from Latin America and Asia and their prospects for assimilation (Massey 1981). Geographic concentration became one of the

most distinctive features of contemporary immigration, which is guided by social networks (Frey and Farley 1996; Waldinger 1989). For immigrant groups with low English proficiency and lack of familiarity with American society, they choose to concentrate because they often need assistance from kin and co-ethnics (Massey and Denton 1988). But for the professional immigrants, their tendency to find jobs that are compatible with their skill levels override the tendency of living with co-ethnics.

Massey and other sociologists suggest that spatial assimilation is a critical step that helps immigrant groups to achieve other types of assimilation after their lingual acculturation and other cultural contacts (Gordon 1964; Massey and Mullan 1984). Douglas Massey and his colleagues are amongst the first group of scholars who stress the relationship between social and spatial mobility and argue that spatial assimilation is an essential step in the process of assimilation, which is clearly a missing component in Gordon's assimilation framework (Massey and Mullan 1984; Massey and Denton 1985). In their studies of examining the process of Hispanics and blacks, Massey and Mullan (1984) defined *spatial assimilation* as "a group attains residential propinquity with members of a host society" (837).

Spatial assimilation theory is created to understand the relationship between socioeconomic advancement and spatial mobility. From an ecological perspective, people move to seek better resources and opportunities. The cost and quality of housing, health conditions, exposure to crime and violence, quality of education, and social prestige all depend on where one lives. Massey and Mullan (1984) combine the status attainment perspective with an ecological model to elaborate on the theory of spatial assimilation. Status attainment theory (Blau and Duncan 1967; Duncan, Featherman and Duncan

1972), framed at the individual level, argues that socioeconomic outcomes are strongly related to human capital inputs, for instance, education affects occupational status, and income is determined by both occupational status and education.

The ecological theory (Park 1926; Lieberson 1963) argues that the socioeconomic outcome has spatial consequences for immigrant groups. In the case of Hispanics, as they increase socioeconomic attainment by education, income, and occupation, they will put more distance from co-ethnic enclave areas and interact more with Anglos but less with blacks (Massey and Mullan 1984). Moreover, as rising social status, Hispanics successfully increase their contact with Whites by achieving locational proximity, but blacks fail to do so because of the ascribed characteristic of race (Massey and Mullan 1984: 852).

The most fundamental tenets of the spatial assimilation model are: (1) that residential mobility follows from the acculturation and the social mobility of individuals, and (2) that residential mobility is an intermediate step to achieve structural assimilation (Massey and Mullen 1984). According to Berry (1973), in a society that emphasizes achievement and social status, the mainstream American culture is creating and reinforcing this bond between social and spatial mobility. Berry (1973) argues that as people of any ethnic group improve job earning and income level, they move to places that match their need for a high-status lifestyle.

According to Massey and Denton (1985), when immigrants are constrained by housing, language, and labor market barriers, they tend to cluster in established immigrant enclaves, seeking affordable housing, social networks, and other ethnic benefits from a familiar culture. As immigrants establish connections to the non-ethnic

labor market, they tend to move away from the co-ethnic enclaves toward suburban neighborhoods that are “whiter” with better amenities (Alba et al. 1999). This upward residential mobility is considered as a milestone of successful spatial assimilation and an important marker of structural assimilation into American mainstream society (Alba and Logan 1993).

The analyses of the residential outcomes link the individual-level socialization to the structural-level access to group resources that one can dispose of. Social integration as a whole tends to increase with socioeconomic gains (Massey 1981), so spatial mobility should be closely associated with social mobility. The assumption is that net of discrimination, the more economic resources at one’s disposal, the more choice one has with respect to a residential location. Desirable locations tend to be areas with relatively high proportions of non-Hispanic Whites; hence residential mobility usually means increased residential contact with Anglos (Massey and Denton 1985).

In the spatial assimilation model (Gordon 1964; Massey and Mullan 1984), residential mobility directly reflects individual-level advancement and acculturation. Although framed at the individual level of status attainment theory, the spatial assimilation model is valid in testing the group difference in the conversion of social mobility into location outcomes. The two studies conducted by Massey and his colleagues (Massy and Mullan 1984; Massey and Denton 1985) confirm that blacks are greatly disadvantaged in converting social status into residential proximity and close contact with Anglos compared to Hispanics. Both studies strongly suggest the continuing importance of race/ethnicity as a salient dimension of stratification in the U.S. society.

Their findings also imply that the assimilation of minority groups is not following the straight-line pattern.

Nonetheless, the spatial assimilation model has received many critiques on the premise that immigrants arrived in the U.S. with little economic means, which was predominantly the case in the late 19th century (Logan, Zhang and Alba 2002). However, since the late 20th century, some immigrant groups have arrived in the U.S. with high levels of human and financial capital, such as Asian Indians and Chinese. Moreover, the recent emergence of suburban ethnic communities and the race/ethnic diversity within those ethnic neighborhoods question the spatial assimilation model for its linear prediction of residential assimilation for the current Asian and Latino immigrant groups (Alba et al. 1999; Iceland 2004; Li 2006).

For the Asian groups, Alba, Logan and Crowder (1997) find the weakening link between suburban residence and linguistic assimilation. Many newly arrived Asian immigrants now live in suburbia without any difficulty to function well even they cannot speak English well, because they find a large number of co-ethnics in their community, for example, the Monterey Park city in Los Angeles (Horton 2010). The suburban "ethnic community" (Logan, Zhang and Alba 2002) and "ethnoburb" (Li 1998) seem to imply that the spatial assimilation model may not be well predicted in residential outcomes for one group as it does for another. However, Wen, Lauderdale and Kandula (2009) point that although the ethnic neighborhood has been an emerging ethnoburb phenomenon, the classic spatial assimilation theory is not completely out of date. The resurgent ethnicity framework (Charles 2003) is possible to explain for better-endowed groups, such as Asian Indians and Chinese, in their preference of living in ethnic suburban communities.

However, for socioeconomically disadvantaged ethnic groups, such as Cambodians and Puerto Ricans, the classical spatial assimilation model offers a stronger explanation for their settlement and integration patterns.

Segmented Assimilation Theory

Since the 1980s, the classic assimilation theories have met challenges with their application to contemporary new immigrant groups from Asia and Latin America. By observing the non-European immigrant groups' adaptation process and outcomes, much research has challenged the eventual convergence into the mainstream core as the only predicted path by assimilation (Zhou 1997). Certainly, as Zhou (1997) argues, the immigrants' adaptation process largely depends on the place where they settled, as the affluent middle-class suburban neighborhood or poor immigrant enclave will pose significant contrast on the contextual environment for immigrants and their later generations.

Whereas spatial assimilation proposes a linear path to integration and place stratification focuses on structural barriers, segmented assimilation is raised as a middle-range theory to understand the varied process of incorporation of contemporary immigrants into the stratification of mainstream society. Portes and Zhou (1993) suggest that the assimilation pathway for the children of the immigrant group could be diverse, depending on the individual, family, and contextual factors. Because of the socioeconomic diversity of the first generation, the trajectory to social and spatial mobility will not be a straight line for the children of immigrants (native-born generations). The first possible outcome, which is the bottom-up story, best exemplified the premise of the straight-line assimilation model whereby immigrant minorities gain

upward mobility and incorporate into mainstream white culture. The second pathway is that some ethnic groups intentionally maintain strong ethnic ties and still achieve upward mobility. The third and the most salient assimilation pathway is downward mobility into an urban underclass (Portes and Zhou 1993).

According to segmented assimilation theory, both individual characteristics (e.g. education, English language fluency), and structural factors (e.g. race, stratification, economic opportunities, spatial segregation) interact to impact the trajectory of assimilation (Zhou 1999). For instance, segmented assimilation argues that for some of the contemporary immigrant groups, spatial assimilation with Whites will decline across successive generations, which is opposite to spatial assimilation theory (Zhou 1997). As indicated in the segmented assimilation, for labor immigrant groups settled in urban impoverished ghettos with downward socioeconomic mobility, we would anticipate the offspring of those immigrant groups experience increased segregation with co-ethnics and other underprivileged minorities (Portes and Zhou 1997).

Resurgent Ethnicity Theory

The theoretical framework of "resurgent ethnicity" is formulated to understand self-voluntary segregation. A growing body of literature has noticed the changes in the spatial patterns of ethnic communities, drawing attention from scholars to examine the changing characteristics of the neighborhood (Alba et al. 1999; Charles 2003; Frey 2001; Logan, Alba and Leung 1996; Logan 2001). Literature has noted that some middle-class immigrants bypass traditional inner-city enclaves and settle directly into affluent suburbs with a concentration of ethnic businesses and schools filled with children from diverse racial and ethnic backgrounds (Li 1998; Wright, Ellis and Parks 2005). The phenomenon

of racial/ethnic enclaves in suburbia has been examined in the assimilation literature to emphasize the role of intra-group attraction and preferences in contributing to residential segregation and ethnic concentration (Alba et al. 1999; Frey 2001; Horton 1995). Similar to the "in-group" preference hypothesis that argues for the residential segregation of race/ethnic groups, the tendency of living close to co-ethnics reflects natural ethnocentrism of preserving ethnic distinctiveness and pride (Charles 2003:182). The recent ethnic neighborhoods formed in American suburbia reflect the fact that a large number of more recent immigrants, especially those from Asia, are equipped with socioeconomic resources that grant them the freedom of residing in the quality neighborhood that co-ethnics are concentrated (Li 2006).

Classical assimilation theories imply residential ethnic concentration as materially disadvantaged ghettos (Wilson and Portes 1980). However, these theories leave very little room for understanding ethnic neighborhoods as socioeconomically- and socially-successful, semi-permanent settlements resulting from preferences for co-ethnic neighbors (Logan, Zhang and Alba 2002; Wen, Lauderdale and Kandula 2009). Correspondingly, Logan, Zhang and Alba (2002) make such a distinction on "ethnic community" from the traditional "immigrant enclaves" as two different types of ethnic areas. Ethnic communities are established in desirable locations, often in affluent suburbia, and ethnic members choose to live there although they had the option to live in an affluent white neighborhood. When immigrant groups of high levels of human and financial capital choose to live in these ethnic communities out of motives associated with taste and preference, these ethnic concentration areas should convey different meanings other than assimilation with majority Whites (Nee and Sanders 2001).

In the spatial assimilation model, the entrance into relatively advantaged suburban communities that contain many Whites is a key outcome in the assimilation process (Alba and Logan 1993). However, the ethnic community model, proposed by Logan et al. (2002) convincingly decouples the linkage between a suburban residence with marked assimilation for some well-heeled immigrants who purposefully maintain ethnic cultural traits. The ethnic neighborhood and ethnoburb have emerged in traditional immigrant gateways, such as New York and Los Angeles, but also prominent in large metropolitan areas that recently attract immigrants, for example, Columbus Ohio, Austin Texas, and Phoenix Arizona (Brown and Chung 2006; Skop and Li 2005; Wen, Lauderdale and Kandula 2009).

This dissertation tests spatial assimilation theory by examining the relationship between acculturation and socioeconomic attainment with residential proximity to ethnic areas for Asian and Hispanic groups by nativity status. Spatial assimilation will be supported if there is evidence that greater English proficiency and socioeconomic achievement are associated with residence in non-ethnic areas. Spatial assimilation theory will be tested indirectly, as done in prior residential segregation studies, through descriptive analyses on segregation indexes of Asian and Hispanic immigrants in comparison to native-born Whites.

According to segmented assimilation theory, there may be different patterns of spatial location across ethnic groups. Specifically, I would expect to see higher levels of segregation from Whites among Hispanic groups, especially in the newly settled Hispanic destinations, where witness the influx of recent Hispanic immigrants. However, among Asian nativity groups, there is the anticipation that native-born Asians might “suffer”

higher levels of segregation from Whites than immigrant groups, which is against the prediction of spatial assimilation. Ideally, the spatial assimilation framework will be supported if there is evidence that immigrant groups show a higher tendency of leaving traditional immigrant metros.

Literature Review

Spatial Assimilation

The residential location of immigrant groups carries the symbolic meaning in the dimension of assimilation. The spatial assimilation model argues that earlier European immigrants usually concentrated in immigrant ghettos near the center of the city, and they gradually moved to more desirable areas as their economic conditions and social standings improved (Cressey 1938; Lieberson 1963; McKenzie, Park and Burgess 1967). The linear path of residential outcomes in response to acculturation and socioeconomic advancement also found evidence among Asian immigrants. Using the 1980 5-percent PUMS data, White, Biddlecom and Guo (1993) studied whether immigrant status (indicated by duration of residence in the U.S.) and ethnicity affect residential assimilation into white neighborhoods. Some of their findings are consistent with the proposition of the spatial assimilation model, which explains that Asian immigrants translate socioeconomic achievement into residential assimilation. While their finding also points out that the duration of residence has less impact than the ethnicity membership on the residential assimilation with native Whites.

The empirical studies on residential assimilation for contemporary Asian immigrants have been consistently conducted in the 1990s. Substantial studies indicate

that residential suburbanization in the past era was generally linked with assimilation (Alba, Logan, and Crowder 1997; Massey 1985; Massey and Denton 1988). However, the emergence of suburban ethnic enclaves (e.g. Monterey Park in the Los Angeles metropolitan area) starts to question whether the link between assimilation and suburban residence still operates today as it did for the immigrant groups of past decades (Horton 2010).

Alba and Logan (1991) also found strong evidence of spatial assimilation for Hispanic groups. In most aspects, Hispanics with higher levels of socioeconomic achievement and acculturation are able to achieve quality suburban residences that are similar to Whites. Compared to Asians, the acculturation variable is a stronger indicator of spatial assimilation, as Hispanics who speak English poorly are more likely to live in lower-status suburbs, but this pattern does not hold for Asians. Moreover, the black groups among Hispanics are likely to live in lower quality suburbs even with the same level of individual attributes (e.g. household income). Thus, the variations indicate that the linear path of the spatial assimilation model does not apply equally to all groups in Asians or Hispanics.

The variation in the residential mobility process among Hispanic groups is more consistent with the segmented assimilation framework. The study of South, Crowder and Chavez (2005) reaffirmed the basic tenets of spatial assimilation theory, the residential mobility into “whiter” neighborhoods increase with English ability, human and financial capital, and is greater among later generations of Mexican origins. Puerto Ricans, the black Hispanics show the lowest rate of moving into white neighborhoods, net of other control variables. Overall, the difference among Latino groups speaks to the predictions

of classic spatial assimilation (Mexicans residentially assimilated with upward socioeconomic mobility and acculturation), segmented assimilation (Puerto Ricans are impeded by their dark skin in their mobility patterns), and resurgent ethnicity (Cubans voluntarily concentrated in ethnic enclaves).

The contemporary settlement patterns of many middle-class Asian immigrants continue to challenge the canonical spatial assimilation theory, one significant phenomenon is that they have created ethnic concentrated communities in suburban areas, known as “ethnoburbs”, such as Monterey Park in Los Angeles (Li 1998). Thus, it seems like, for Asian immigrants, there is a mixture of spatial assimilation into white neighborhoods and self-voluntary concentration in suburban communities. These new immigrant settlement patterns are not restricted to Asians, as the presence of Salvadorans and others in the suburbs of New York (Mahler 1995). Moreover, they find that the suburban neighborhoods in which middle-class Asians and Hispanics occupied from 1980-1990 became more diverse in its racial/ethnic composition but containing fewer non-Hispanic Whites. It indicates that the residential segregation levels of Asians and Hispanics are significantly growing since the 1980s. This finding also implies that some Asian and Hispanic groups are living in quality suburban neighborhoods, but they are not necessarily assimilated with Whites. More importantly, as Li (1998) argues that the self-contained nature of ethnoburb itself retard the process of assimilation for the Chinese immigrants because the culturally familiar and affluent ethnoburb provides them with the ethnic taste and lifestyle to sustain their ethnic identity.

Beyond Assimilation: Concentration and Segregation

The residential settlement of race/ethnic minorities is interpreted from the perspective of spatial assimilation by examining its residential choice of living close with native Whites. This spatial transformation takes place at the macro-level as the residential mobility happens at the city-suburb dimension. The residential concentration of immigrant groups is much closer to the core of the assimilation analysis because it studies how racial/ethnic minorities are evenly distributed relative to native Whites in the neighborhood level (generally defined by census tracts) in metropolitan America.

The early Chicago school sociologists contend that the level of residential segregation reflects the social distance (indicated by socioeconomic status) between groups (Park, Burgess and McKenzie 1925). Massey and Denton (1988) are amongst the early groups of scholars who examine the effect of SES status on the spatial segregation that goes beyond white-black distinction. For Asians and Hispanics in the 1980s, Massey and Denton (1988) find that residential segregation declines with increasing socioeconomic status. Even in the most concentrated metropolitan areas, such as Los Angeles, San Francisco, and New York, Asians are found to be less segregated from Whites as the educational level increases. Hispanic groups, in general, have lower education levels compared to Asians, but declining segregation indexes with rising education, especially in native-born generations, suggest that the process of spatial assimilation continues to be the case among some Hispanic groups.

In the 1990s, as many immigrants bypassed established gateways like Los Angeles, New York, and Chicago, new immigrant destinations across the U.S. have been established. A group of scholars particularly examined the segregation levels in

traditional vs new immigrant destinations. Park and Iceland (2011) systematically compared the segregation of Asians, Hispanics, and their nativity groups in traditional and new destinations using 1990 and 2000 census data. Their findings suggest that segregation is higher in traditional gateways than in new destinations for Asians and Hispanics, and the foreign-born groups are more segregated than the native-born groups in both destinations. By contrast, Lichter and Johnson (2009) conducted the analysis using block group data of 1990 and 2000 decennial censuses and reached opposite conclusions to Park and Iceland (2010). Lichter and his colleagues asserted that the Hispanics are more segregated in new destinations than in established gateways, and this difference in segregation cannot be explained by place-level indicators, such as ecological location, population composition, or economic growth.

Although Asians are consistently showing moderate-high segregation from Whites within metropolitan areas, this pattern has been characterized as “separate but equal” (Logan and Zhang 2013). They argue that the level of Asian-white segregation has been considerably lower than that of other minorities in the last two decades, however, a larger share of first-generation immigrants would cause the segregation level to be increased. However, Asian groups are more advantaged in socioeconomic status (except the Vietnamese in their analysis), which may not necessarily relate them to neighborhood disadvantages. The overall pattern pointed out by Logan and Zhang (2013) that most affluent Asian groups (Indians and Chinese) are more responsive to the group-preference of living in ethnic contexts, which confirms the prediction in the “ethnic community” perspective and “resurgent ethnicity” hypothesis (Wen, Lauderdale and Kandula 2009).

The impact of Asian and Hispanic immigration on patterns of residential integration lead to the speculation of residential mixing. Logan and Zhang (2010) proposed the notion of "Global Neighborhood" to examine the phenomenon of how Asian and Hispanic immigrants transform the racial boundaries of neighborhoods in metropolitan America. After the 1980s, the most important salient feature about American society is that new multiethnic communities integrated with all four major racial/ ethnic groups (Whites, blacks, Hispanics, and Asians) start to emerge. Although the evidence has been weak, the presence of Asians and Hispanics does provide protection against "White flight" and the integration of blacks into the white neighborhood (Frey and Farley 1996). This dissertation gives special consideration to the current trend of Asian and Hispanic segregation from non-Hispanic Whites, and how do their current residential patterns vary from each other across different immigrant gateway destinations.

The Internal Migration of Foreign-Born

As increasing numbers of U.S. immigrants are moving to new destinations rather than to traditional immigrant gateways, such as Los Angeles, New York, Miami, Chicago, a growing number of studies begin to examine immigrants' mobility from traditional gateway to newer destinations (Frey and Liaw 2005; Gozdziak and Martin 2005; Lichter and Johnson 2009; Massey and Capoferro 2008; Singer 2004). Immigrant populations are growing tremendously in some states that had relatively few immigrants, such as North Carolina, Georgia, Tennessee, Nevada, South Carolina, Kentucky, and Alabama between 1990 and 2000.

Research shows that foreign-born populations are as likely to migrate internally as natives and that their migration decisions are responsive to human capital in much the same way as those of natives do (Kritz, Gurak and Lee 2013). Immigrants often tend to move to places that allow them to maximize the economic benefits and social support (Kritz, Gurak and Lee 2011). In addition, the internal migration tendency of some foreign-born groups is retard if they live in places where have large numbers of their compatriots (Bartel and Koch 1991; Fang and Brown 1999; Gurak and Kritz 2000; Kritz and Nogle 1994). Studies also examined how the labor market characteristics of new destinations attract immigrants (Brown, Lobao and Digiacinto 1999; Donato et al. 2007). For instance, the labor market restructuring has increased demand for unskilled workers in the South and Midwest, where foreign-born populations have grown most rapidly since the 1990s (Hirschman, Massey and Massey 2008). As a result, increased new jobs in food processing, agriculture, manufacturing, and low-wage industries in the South and Midwest largely attract immigrants, especially those who are of Latino origins with low education and skillsets because they are willing to work for low wages (Broadway and Ward 1990; Kandel and Parrado 2005; Parrado and Kandel 2008).

In addition, internal migration research that focused on migration for economic reasons also found that skilled immigrants are more likely to migrate internally than unskilled ones (Bartel and Koch 1991; Kritz and Nogle 1994; Kritz, Gurak and Lee 2013). If the unskilled immigrants are moving to new destinations to seek more employment opportunities, although with low pay; the skilled immigrants would be more attracted to the health, education, or other professional and high technology industries that are established in new destinations. Given that U.S. immigrant populations have a

bifurcated skill profile with comparable numbers of skilled and unskilled immigrants, the former is largely represented among Asian origins, and the latter is more found among Latinos. For instance, Kritz et al. (2013) find that high-skilled immigrants from India, China, Pakistan, Korea, and Taiwan who already settled in new destinations still have high probabilities of migration from new to both new and traditional destinations. It indicates that the migration tendency of these highly-skilled immigrants is strongly shaped by the search for employment commensurate with their skills (Kritz et al. 2013: 19).

Contemporary immigrants are more diverse in demographic and human capital profiles compared to immigrants in the past decades (Logan, Zhang and Alba 2002). Most of these immigrants (e.g. Asian groups) have high levels of human capital and fewer constraints in finding employment opportunities in the non-traditional destinations in the United States. Based on what the literature has argued, demographic and socioeconomic characteristics are also important in the internal migration for the foreign-born (especially for the Hispanics), such as nativity, citizenship, education, and English language fluency (Kritz and Nogle 1994; Lichter and Johnson 2009; Neuman and Tienda 1994).

Frey and Park (2011) examined the migration and dispersal of Hispanic and Asian groups from the perspective of co-ethnic community attraction and the spatial assimilation perspective, and their results are somewhat mixed. First, they confirm that co-ethnic community attraction continues to reduce the outmigration of Asian and Hispanic groups from major settlement origins and positively influences their destination selections. However, regarding spatial assimilation, they find that the most educated

native-born Asian migrants, especially Indians, show a tendency of selecting destinations with greater co-ethnic population shares. This result is opposite to the prediction of spatial assimilation that socioeconomic achievement will lead to greater spatial dispersal. In contrast, Hispanic migrants are more attracted by the employment growth at the destinations and education seems to play a relatively weak role in the selection of co-ethnic destinations. Although Hispanics show a pattern of dispersal, they are generally low in SES status and more attracted to low-skilled employment opportunities that are available in nontraditional settlement areas, so their dispersal pattern also does not fit the linear prediction of upward social mobility and spatial assimilation (Kandel and Parrado 2005).

Contributions

Prior studies have made substantial contributions to the research in spatial assimilation of Asian and Hispanic immigrant groups in the United States. While acknowledging some gaps in the literature, this dissertation offers several contributions to the field. The use of individual-level data from the 2013-2017 American Community Survey allows for an analysis that uses more recent data than used in most prior studies. To be specific, the use of PUMA as the geographic identifier provides the ability to examine the measures of individual and household structure, for instance, residence in a multi-racial or ethnic household, an important feature that is missing in the previous spatial assimilation studies.

With a few notable exceptions, the majority of research on spatial assimilation has used data from the 2010 Census or earlier. The high volume of immigration from Latin America and Asia and the subsequent growth of racial minorities make it imperative to

examine residential assimilation patterns using more recent data. In addition, many residential assimilation studies are restricted to examine the percentage of Whites in neighborhood or suburban residence as the direct outcome of socioeconomic and cultural assimilation (Alba, Logan and Crowder 1997; Alba et al. 1999; Massey and Mullan 1984; White, Biddlecom and Guo 1993). One notable exception is the study of Allen and Turner (1996) who remodifies spatial assimilation as reduced accessibility and distance to the ethnic concentration defined by PUMAs, and they argue that as the distance from the concentration increases, the relative assimilation of individuals should also increase. Following their logic, this dissertation constructs ethnic concentration for Asians and Hispanics based on the geographic identifier of PUMA. Adding to Massey's model of spatial assimilation, I argue that nativity groups of Asians and Hispanics will not confirm with the linear prediction in spatial assimilation. Just as Allen and Turner (1996) argued in their study, access to an ethnic concentration remains important for most immigrants and sometimes even for US-born members of ethnic groups.

Another addition to the spatial assimilation literature is the current examination of the residential segregation of Asians and Hispanics. More importantly, this research uses the most recent metropolitan typology from (Singer 2015), which is based on Census 2014 American Community Survey (ACS) and 2013 metropolitan area delineations. The revised standards include an expanded list of metropolitan areas, which allows for the analysis of Asians and Hispanics in the emerging metropolitan areas. This is informative for the in-depth comparison of residential segregation patterns of traditional port-of-entry gateways to the newly emerging metropolitan areas. The use of updated metropolitan classifications will also help with definitional consistency if results from this dissertation

are compared to future data collected during the 2020 Census or American Community Survey.

In addition, it is acknowledged that residential patterns are not static. Although this dissertation uses cross-sectional data, it does incorporate an indicator of whether the individual resided in the same metropolitan area one year prior to the survey. While research on residential mobility of race/ethnic groups generally looks at moves over the 5-year period, this dissertation relies on the measure of one-year mobility from the 2013-2017 American Community Survey to generate the inter-metropolitan mobility pattern. This approach offers an innovative methodology to the study of spatial assimilation, as the mobility tendency (dispersal) from immigrant traditional settled metros is consistent with the prediction of assimilation theory.

The next chapter describes the data and methods used in the analysis. Descriptions of the sample and construction of dependent, independent, and control variables are also provided.

CHAPTER 3: METHODOLOGY

Data and Methods

Sample Selection

This study relies on secondary data from the American Community Survey (ACS) 2013-2017 Public Use Microdata Sample (PUMS) 5-year estimates, TIGER/Line with Selected Demographic and Economic Data 2013-2017 5-year estimates (tract- and metropolitan-level). The ACS annual sample size includes about 3.5 million housing unit addresses and the data is collected nearly every day of the year (Census Bureau 2018). The ACS 2013-2017 5-year sample contains all households and persons from the 1% ACS samples for 2013, 2014, 2015, 2016, and 2017 identifiable by year. I used a 5-year interval to provide a large sample size to maximize the diversity of the ethnoracial population and to provide detailed information needed for this study. The focus is on immigrants (the foreign-born), but I also include the US-born members of same ethnic members. When measuring segregation, the non-Hispanic Whites are also included as the reference group.

The major race and ethnic groups are non-Hispanic Asians and Hispanics. The non-Hispanic Asians are selected from the race category of "Hispanic/Latino origin by race, not Hispanic/Latino Asian alone total population," hence after used as Asians. Hispanics are constructed from "Hispanic/Latino origin by race, Hispanic/Latino total population." The referent race group is non-Hispanic Whites, who are selected from the race category of "Hispanic/Latino origin by race, not Hispanic/Latino Whites alone total population," and hence after used as Whites.

The sample selection process varies according to the research questions. First of all, the sample in the analysis of residential segregation (chapter 4) is restricted to metropolitan areas that contain at least 1,000 members of Asians and Hispanics. This exclusion is necessary because segregation indexes are not meaningful when calculated for groups that have few members in a metropolitan area. Second, the sample for residential assimilation and migration (chapters 5 and 6) consists of adults from age 18 through age 65 because they are more likely to be independent and are responsible for making housing decisions. People living in group quarters (both institutionalized and non-institutionalized) are also excluded.

Research Design

Segregation

When measuring segregation (chapter 4), I treat census tracts[1] as proxies for neighborhoods. Census tracts are assumed to better approximate the usual conception of neighborhoods than any other spatial unit provided by the Census Bureau (Jargowsky 1997). They generally contain between 1,500 and 8,000 people, with an approximate size of 4,000 people. The analysis includes nearly 18 million individuals residing in approximately 23,169 census tracts across metropolitan areas in the United States. Metropolitan areas[2] as approximate housing markets are used for the creation of residential segregation indexes. The term "core-based statistical area" (CBSA) became effective in 2000 and refers collectively to metropolitan and micropolitan statistical areas.

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[1] For more information on census tracts, see Appendix A or refer < https://www.census.gov/programs-surveys/geography/about/glossary.html#par_textimage_13> (accessed July 15, 2020).

[2] For more information on metropolitan areas and their components, refer to < https://www.govinfo.gov/content/pkg/FR-2010-06-28/pdf/2010-15605.pdf> (accessed July 21, 2020).

The United States Office of Management and Budget (OMB) delineates metropolitan and micropolitan statistical areas according to published standards that are applied to Census Bureau data. The 2010 standards provide that each CBSA must contain at least one urban area of 10,000 or more population. Each metropolitan statistical area must have at least one urbanized area of 50,000 or more inhabitants. The analysis only contains the metropolitan areas and there are 389 metropolitan areas in the United States under the 2010 definitions.

The most commonly used measure of segregation is a measure of evenness, which refers to the differential distribution of minority and majority members across census tracts of a metropolitan area (Massey and Denton 1988). In chapter 5, I use the index of dissimilarity (D) to measure residential segregation. The index of dissimilarity is defined as D_{xy}=0.5 $*$ [$\sum$ |(x_i/X-y_i/Y)|], where x_i is the number of minority group X members in tract i, y_i is the number of group Y members in tract i, X and Y are metropolitan populations. The index ranges from 0 (no segregation) to 1 (total segregation) and can be interpreted as the proportion of one group that would have to relocate in order to achieve an identical neighborhood distribution to that of the other group. In this analysis, and consistent with previous segregation work, the reference group (Y) is non-Hispanic Whites.

The analysis of comparing segregation level in different gateways is based on Singer's (2015) immigrant gateway typology classification, which identifies eight different types of immigrant gateways based on the size of foreign-born, the foreign-born share, and the growth rate of the foreign-born population for each metropolitan area throughout the 20th century and into the 21st century. This typology of immigrant

gateways categorizes the 104 largest U.S. metropolitan areas using the Census Bureau's 2014 American Community Survey (ACS) and 2013 metropolitan area delineations. Table 3.1 presents a detailed description of the classification for the eight types of metropolitan areas.

Table 3.1 The Detailed Description of Immigrant Gateways from Singer's (2015) Typology

Immigrant gateway type	Description
1. Former Gateway	Once major immigrant ports of entry, these destinations had higher proportions of immigrant populations than the national average between 1900 and 1930. From 1930 onwards, these gateways have had a foreign-born share below the national average.
2. Major-Continuous Gateway	These gateways have experienced above-average shares of foreign-born populations for every decade in the past century. These metropolitan areas continue to house approximately one-quarter of all immigrants across the nation.
3. Minor-Continuous Gateway	Minor-Continuous gateways had shares of immigrant populations above the national average from 1900 to 1950, and above or near the national average in 2014.
4. Post-World War II Gateway	Before the 1950s, these gateways had relatively small immigrant populations. After World War II, foreign-born populations rapidly increased. Some of these metropolitan areas now rival the status of major-continuous gateways. Around 30 percent of immigrants nationwide live in these gateways combined.
5. Re-Emerging Gateway	Similar to former gateways, re-emerging gateways had higher than average immigrant populations in the early 20th century, followed by low levels of immigration. However, in the late 20th century and into the 21st century, these metropolitan areas have experience rapidly growing immigrant populations, thereby re-emerging as significant immigrant gateways.
6. Major-Emerging Gateway	With growth in foreign-born populations in the late 20th century, these metropolitan areas have become major destinations for immigrants only recently. They had small immigrant populations for most of the 20th century, but the share of foreign-born populations in these metropolitan areas has typically surpassed the national average since 1990 and the foreign-born populations grew faster than the national rate during one of the last three decades of the 20th century.
7. Minor-Emerging Gateway	These metropolitan areas have smaller immigrant populations than the other six gateway types but have seen extraordinary growth in their foreign-born populations since 1990. The immigrant growth has been at least three times the national average in either the 1990s or the 2000- 2014 period.
8. Low immigration metro areas	These areas do not meet any of the above criteria and their percent foreign-born is smaller than the national rate. There is considerable variation in the size and growth patterns of the immigrant population in these metro areas. Some have small, but fast-growing foreign-born populations, such as Birmingham and Scranton, and others have sizable, but slower-growing immigrant populations, like New Orleans. Still, others have very low numbers of immigrants.

For the purpose of this analysis, I adopt Singer's classification and reclassify the metropolitan areas into four categories A: *old* gateways (former gateways), B: *traditional gateways* (continuous and post-World War II gateways), C: *new destinations* (major/minor emerging and re-emerging), D: *other destinations* (low immigration gateways). Old gateways are the oldest immigrant port-of-entry places dating back to the first three decades of the early 20th century, which are characterized by the foreign-born share lower than the national average from the 1930s. Traditional gateways either have a higher foreign-born share than the national average during each decade of the 20th century or begin to have a higher foreign-born share than the national average after World War II. New destinations had a low percentage of foreign-born until 1970 followed by high proportions in the post-1980 period. Other destinations are somewhat similar to the old gateways in the below national average of foreign-born share, however, the former types are distinctively newer destinations where recently attract immigrant population, such as Charleston-North Charleston, SC, and Oklahoma City, OK, to name a few. To be clear, the foreign-born population used to define this typology include foreign-born people of all race/ethnicities.

Models and Research Hypotheses

I hypothesize that race/ethnic composition, nativity, demographics (age, gender, marital status), linguistic acculturation, and socioeconomic status have independent effects on residential assimilation and internal migration. I operationalize residential assimilation by measuring an individual's propensity of living in ethnic concentration areas. This measure indicates general residential exposure to the same ethnic groups and

attempts to offer an in-depth analysis of residential patterns and the explanatory power of assimilation factors.

I gather the variable of *nativity status* to be the key measure in assimilation and migration patterns for Asians and Hispanics. First, I measure explicitly whether or not an individual is foreign-born, anticipating that an immigrant would be more likely to live in ethnic neighborhoods compared to a native-born. Among Asians and Hispanics that I examine, there is a considerable range in the fraction of foreign-born (Tables 5.1 and 5.3), from 75.05% of Asian householders to 49.42% of Hispanic householders in the 2013-2017 5-year ACS.

I anticipate *age* to be related to internal migration through the effects of the life course on residential mobility. Individuals are the most residentially mobile in the earlier phases of the life course for a variety of well-documented reasons. Hence, I expect that older individuals will be less likely, net of other factors, to translate individual characteristics and preferences into residential change.

English-language ability is another individual-level character that is related to residential assimilation and dispersion. It can be both a determinant and a consequence of residential assimilation. English-language ability is assumed to be related to assimilation as individuals negotiate life in the U.S. and experience social and economic assimilation in the workplace. I expect that with a high level of English proficiency, the chance of living in ethnic concentration areas is substantially lower.

The expectations for the operation of socioeconomic status are consistent with models of structural assimilation and other studies of residential assimilation. I

operationalize socioeconomic status with measures of *annual family income*, rather than restricting it to the individual householder's income, and educational attainment (the completed education level of the householder). *Homeownership* and *class of workers* are also included in the model as socioeconomic status indicators. The ability to own a home is a sign of high SES status, and I expect that the homeowners are negatively related to the probability of living in ethnic concentration areas and more likely to disperse from traditional immigrant metros. I include *class of worker* as the proxy of entrepreneurship, which tells whether the householder is self-employed or not. Self-employment is seen as an indicator of economic assimilation, and I expect the self-employed respondents are more likely to live in ethnic concentration areas.

Assimilation Patterns

Segregation measures the aspect of residential evenness between Asians/Hispanics from Whites. Separately, I measure another aspect of residential patterns ─ *assimilation* by estimating how likely Asians and Hispanics live close to their co-ethnics. In this analysis, I wish to construct an innovative method of defining co-ethnic concentrations. In the IPUMS data, the PUMA (Public Use Microdata Areas) is the smallest areal unit for which individual-level census data (race/ethnicity, language proficiency, education, etc.) can be obtained. PUMAs are the collection of counties or tracts (geographically contiguous) within states with more than 100,000 people, based on the decennial census population counts. In this analysis, Public Use Microdata Areas (PUMAs) are used as proxies for the measurement of co-ethnic concentrations.

The ACS 2013-2017 5-year PUMA dataset is extracted from "TIGER/Line with Selected Demographic and Economic Data," which provides total population counts for

the race and ethnic groups. The percentage of Asians and Hispanics is calculated by "the total population of Asians and Hispanics/the total population in each PUMA area." I then define the ethnic concentration areas to be those PUMAs that equal to or above the mean average of the ethnic proportion. The dependent variable is a binary outcome, which can take the dummy value 0 (living in the ethnic concentration areas) and 1 (not living in the ethnic concentration areas). which allows measuring the value of logged odds on a range of explanatory power of independent variables. I use the logistic regression model to predict the logit probability separately for Asians and Hispanics.

Logistic regression (Maximum Likelihood Estimation) is the predictive regression analysis used to predict the probability of events when the dependent variable is a binary outcome. Logit models are appropriate if dependent and independent variables are categorical, either nominal or ordinal (Agresti 1989; Aldrich, Nelson and Adler 1984). Logistic regression is an extension of logit models if one or more of the independent variables are ordinal or quantitative (Hosmer, Lemeshow and Sturdivant 1989). The underline assumption of the MLE is to estimate coefficients that make the target event as likely as possible to have occurred. It is to estimate the relationship between the predictor variables and the maximum probability of an event happening. The logistic regression equation is normally written as:

$$\ln((p/(1-p)) = b_0 + b_1 * x_1 + \ldots + b_k * x_k$$

In the logit equation above, p is the probability of the presence of an event. The left side of the equation is ln((p/(1-p)), which is the logit-transformed of probability (log odds). Log odds is the logit function of the odds, which is the probability of an event happening over the probability of an event fail to happen. The logistic regression

equation tests the log odds as a linear relationship with the predictor variables ($x_1 \dots x_k$). The coefficients ($b_1 \dots b_k$) indicate the amount of change expected in the logged odds when there is a one-unit change in the predictor variable (continuous) with all the other variables in the model held constant.

In chapter 5, I conduct the stepwise logistic regression model to measure the relationship between the dependent variable with explanatory variables (discussed in the following). The first model estimates the nativity difference in the probability of living in ethnic areas. The second model estimates the impact of demographic indicators and the third model measures how much of the nativity difference can be explained by adding the socioeconomic predictors. Then, the pooled model will test the residential assimilation patterns by regressing on all of the predictor variables.

Internal Migration Patterns

Based on metropolitan typology reclassification from chapter 4, I continually examine the inter-metropolitan migration tendency (chapter 6) for Asian and Hispanic immigrants. In order to define whether the householder has moved or not, and what type of metropolitan area they lived one year ago and their current residence, I merge the metropolitan typology onto the variables of "migmet131" (metropolitan area of residence) and "met2013" (current metropolitan area).

For the internal migration, the move from different metropolitan typologies can be defined as different migration directions (See chapter 6 for more discussions). Thus, the outcome variable has three mutually exclusive categories: (1) dispersed, (2) segregated, and (3) other migration. Because the categories are discrete, exclusive, and unordered entities, multinomial logistic regression methods are appropriate for estimating the model

of migration behaviors (Hoffman and Duncan 1988). It is inappropriate to use ordinary least squares (OLS) regression with a dependent categorical variable because OLS assumptions are violated.

Multinomial regression produces sets of formulas equal to the number of categories minus one; the resulting coefficients show the probability of choosing one option relative to an alternative that serves as a benchmark (Hoffman and Duncan 1988). Importantly, the coefficients estimated by a multinomial model can be easily transformed into odds ratios by taking the natural logarithm of the coefficients (Hosmer, Jovanovic and Lemeshow 1989).

In the multinomial logistic regression, I consider the outcome (1) dispersed, (2) segregated, and (3) other migration recorded in *y*, and the explanatory variables in X. Even though the outcomes are coded 1, 2, and 3, the numerical values are arbitrary because 1 < 2 < 3 does not imply that outcome 1 (dispersed) is less than outcome 2 (segregated) is less than outcome 3 (other migration). The multinomial logistic model estimates a set of coefficients, $\beta^{(1)}$, $\beta^{(2)}$, and $\beta^{(3)}$, corresponding to each outcome (Stata Corp. Manual13):

$$\Pr(y = 1) = \frac{e^{x\beta^{(1)}}}{e^{x\beta^{(1)}} + e^{x\beta^{(2)}} + e^{x\beta^{(3)}}}$$

$$\Pr(y = 2) = \frac{e^{x\beta^{(2)}}}{e^{x\beta^{(1)}} + e^{x\beta^{(2)}} + e^{x\beta^{(3)}}}$$

$$\Pr(y=3) = \frac{e^{x\beta^{(3)}}}{e^{x\beta^{(1)}} + e^{x\beta^{(2)}} + e^{x\beta^{(3)}}}$$

The multinomial logistic model arbitrarily set one of $\beta^{(1)}$, $\beta^{(2)}$, and $\beta^{(3)}$ to 0, and it does not matter which. If you arbitrarily set $\beta^{(1)}$, = 0, the remaining coefficients $\beta^{(2)}$, and $\beta^{(3)}$ will measure the change relative to the (y = 1) group. The coefficients will differ because they have different interpretations, but the predicted probabilities for y = 1, 2, and 3 will still be the same.

Setting $\beta^{(1)}$ = 0, the equations become

$$\Pr(y = 1) = \frac{1}{1 + e^{X\beta^{(2)}} + e^{X\beta^{(3)}}}$$

$$\Pr(y = 2) = \frac{e^{x\beta^{(2)}}}{1 + e^{X\beta^{(2)}} + e^{X\beta^{(3)}}}$$

$$\Pr(y = 3) = \frac{e^{x\beta^{(3)}}}{1 + e^{X\beta^{(2)}} + e^{X\beta^{(3)}}}$$

The relative probability of y = 2 to the base outcome is

$$\frac{P_r(y=2)}{P_r(y=1)} = e^{x\beta^2}$$

This ratio is called the relative risk ratio, and it is interpreted as the exponentiated value of a coefficient for a one-unit change in the corresponding explanatory variable. It is noted that the risk is measured as the risk of the outcome relative to the base outcome.

Independent and Control Variables

The main variables of interest are Asian/Hispanic groups, nativity status, linguistic assimilation, and socioeconomic indicators. This section will briefly describe the measurement of independent variables used in the descriptive and regression analyses for chapters 5 and 6. Consider that I specified two regression models to predict different aspects of spatial patterns, the logistic regression model (chapter 5) is to estimate the

individual probability of living in the ethnic areas, and the multinomial logistic model (chapter 6) is to predict the internal migration. Most of the independent variables of the two models are identical (e.g. acculturation and SES status). For the purpose of explanation, I will refer to the logistic regression (chapter 5) as the assimilation model and multinomial logistic regression (chapter 6) as the migration model.

Table 3.2 Regression Models and Independent Variables

	Assimilation model (Logistic)	Migration model (Multinomial)
Dependent variable	probability of living in ethnic areas	probability of moving between metro typology
Independent variables	race/ethnic groups (Asians/Hispanics) nativity status	race/ethnic groups (Asians/Hispanics) nativity status
demographics	age gender marital status	age gender marital status
cultural assimilation	English ability	English ability
SES status	education homeownership Family income class of worker	education homeownership Family income class of worker school status

Race and ethnic groups in this analysis include non-Hispanic Asians (Asians) and Hispanics. The "race" question in the ACS 2013-2017[3] questionnaires include several write-in options for people to select more than one race. The Asian category includes single-race Asians (e.g. Asian Indians, Japanese) and people who selected two or more races. Within the Asian category, I also specify mixed-ethnicity Asians (e.g. Chinese and

[3] The ACS 2017 questionnaire is available at < https://www2.census.gov/programs-surveys/acs/methodology/questionnaires/2017/quest17.pdf?#> (accessed July 29, 2020).

Japanese) and mixed-race Asians (e.g. Whites and Chinese). The Hispanic populations include "Mexican," "Puerto Rican," "Cuban," and "other Hispanics."

Nativity status is the second main variable of interest. In both models, native-born include Asians/Hispanics who were born in the United States, Puerto Rico, or another U.S. territory. Immigrants include those who were born in any other country outside of U.S. territory. Nativity status is represented by a dummy variable with a value of one indicating that the person is an immigrant.

Demographics include *age*, *gender*, and *marital status*. Both assimilation and migration models include the three demographic indicators. *Age* is an interval variable in years indicating the respondent's age at the time of the survey. *Gender* is a dummy variable that has a value of one for females. *Marital status* is represented by a dummy variable with a value of one for the single status.

Several variables are used as indicators of socioeconomic status and acculturation. Measures include *educational attainment, homeownership*, *family income*, and *English language proficiency*. A control variable for *school enrollment* is included in the migration model.

Educational attainment is created from responses to a categorical question asking, "What is the highest degree or level of school this person has completed?" and is represented by a series of dummy variables. Values are collapsed into four categories: less than a high school degree (the reference group), high school degree, some college, bachelor's degree, and advanced. *School status* is a dummy variable with 1 indicating the respondent is enrolled in school.

Homeownership is an indicator of wealth. It has a value of zero if the respondent

lives in an owner-occupied unit and one for residence in a rented unit.

Family income totals pre-tax money earned by all individuals that are related to the head of the household in the previous calendar year. This variable is being transformed and included in the two models differently (see chapters 5 and 6 for detailed discussions).

English language proficiency is a measure of linguistic assimilation. The variable is based on a question that asks whether the respondent speaks only English at home, and also indicates how well people who speak a language other than English at home, speak English. A value of zero indicates speaking no English at home, and a value of one means speaking English very well, and a value of two indicates speaking only English.

Class of worker indicates whether respondents worked for their enterprise(s) or someone else as employees. If the individuals are self-employed, it is a measure of economic assimilation. It is included as two dummies with the reference category as not in the labor force.

The next chapter presents characteristics of the sample and describes results from residential segregation analyses focusing on Asians, Hispanics, and nativity status. It is followed by the chapters of residential assimilation and internal migration.

CHAPTER 4: RESIDENTIAL SEGREGATION PATTERNS

The main goal of this chapter is to document the evenness of distribution of Asian and Hispanic groups in neighborhood settings. The descriptive analyses for Asians and Hispanics are discussed in two sections. The first section focuses on comparing foreign-born and native-born, their aggregate segregation levels from Whites, with maps showing the segregation patterns (low<medium<high). The second section explains the segregation patterns by immigrant gateway types (old, traditional, new, and other) to add more contribution to the argument of whether Asians and Hispanics are less segregated in new settlement areas, as predicted by the spatial assimilation theory.

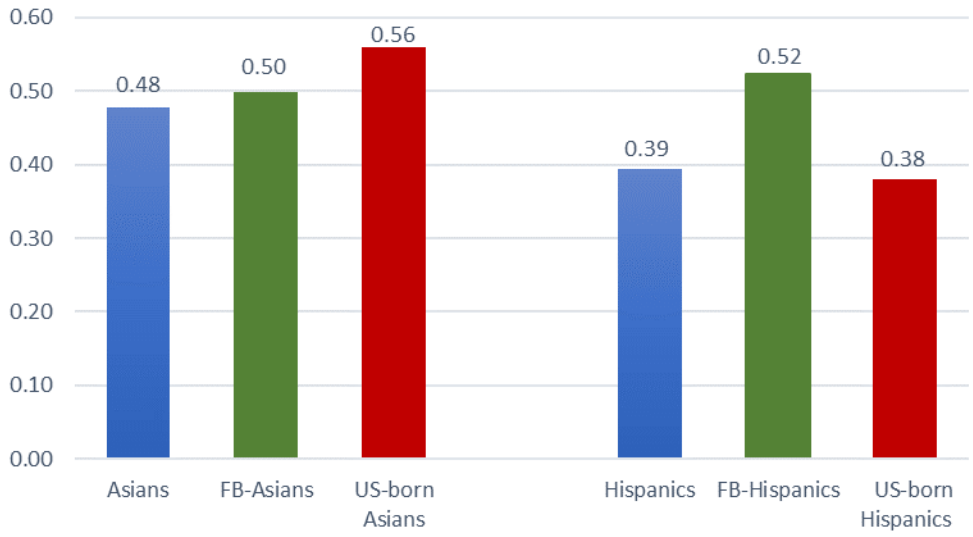
Segregation Patterns

The concentration of a group at the neighborhood level within metropolitan areas is typically summarized with a measure of segregation. The most common measure is the Index of Dissimilarity (D), which reflects how differently two groups are distributed across neighborhoods. The dissimilarity index ranges from 0 (complete integration) to 1 (complete segregation), which measures the percentage of a group's population that would have to change residence for each neighborhood to have the same percentage of that group as the metropolitan area overall. A general rule of thumb in the literature is that below .30 and indicates low segregation, .30 to .60 designates moderate levels of segregation, and values .60 and above specifies high levels of segregation (Massey and Denton 1988).

Even if residential segregation as measured by the dissimilarity index remains the same or slightly declines over time, growth in the minority population will tend to make

it more isolated (Logan and Stults 2011). To prevent bias associated with sampling error for small population groups, I calculate D values only for metropolitan areas containing the population of either Asian or Hispanics with 1,000 or more (Cutler, Glaeser and Vigdor 2008; Iceland and Scopilliti 2008; Park and Iceland 2011). Out of the 389 metropolitan areas, 381 of them have a large enough Hispanic population to compute the dissimilarity index, while 342 metros meet the Asian threshold. All metropolitan areas meet the 1,000 non-Hispanic White thresholds.

Figure 4.1 Average Metropolitan Dissimilarity Scores for Asian-White and Hispanic-White Segregation by Nativity



Note: 2013-2017 5-Year Estimates, ACS.

Figure 4.1 reports the average metropolitan segregation levels for Asians, Hispanics, and nativity groups, where the index is weighted by the particular group population in that metro area. The first two groups in comparison are overall Asians and Hispanics. Based on the 2013-2017 ACS tract-level data, the average segregation (D) of Asians from Whites is .48, about 9.0 points above that of Hispanics. The comparison

among Asian ethnicity is surprising as foreign-born Asians show relatively lower segregation (about 6.1 points) level than the US-born counterparts. Notably, the comparison of the average segregation levels of the Hispanic nativity is more obvious. The average segregation of the Hispanic foreign-born from non-Hispanic Whites is .52, and about 14.2 points above that of the US-born Hispanics.

The study of Iceland, Weinberg and Hughes (2014) calculated the segregation levels of detailed Asian and Hispanic groups. As a point of comparison, the average segregation level of Hispanics and Asians from Whites was .494 and .445 in 2010. The comparison of 2010 to 2017 shows that Asian segregation has been considerably increasing, while Hispanic segregation has been decreasing. Among the six groups in comparison, the US-born Asians have the highest segregation level (.56), while the US-born Hispanics have the lowest segregation level (.38).

The segregation level for Hispanic groups is suggestive of spatial assimilation, as US-born groups are less segregated from Whites than are foreign-born counterparts and overall Hispanics. However, this implication does not apply to Asians. These findings are consistent with the finding of Logan and Stults (2011: 2), that as a racial or ethnic group grows (and Asians are growing the fastest), “there is a tendency for their ethnic enclaves to become more homogeneous.” The residential segregation level of Hispanics from Whites since 2010 is steadily narrowing, which supports the spatial assimilation theory, as Hispanics are much less segregated from non-Hispanic Whites than they were in the past decade.

Residential Segregation of Asian Nativity Groups

Table 4.1 The Segregation Levels of Asians by Nativity Status in the Top Ten Metros

Metros	Foreign-born	Metros	US-born
Utica-Rome, NY	0.72	Anniston-Oxford-Jacksonville, AL	0.85
Alexandria, LA	0.71	Charleston, WV	0.82
Lafayette-West Lafayette, IN	0.69	Muncie, IN	0.80
Battle Creek, MI	0.68	Rome, GA	0.80
Jonesboro, AR	0.68	Goldsboro, NC	0.78
Lansing-East Lansing, MI	0.68	Hattiesburg, MS	0.78
Champaign-Urbana, IL	0.67	Battle Creek, MI	0.76
Decatur, IL	0.67	Kokomo, IN	0.76
Ithaca, NY	0.67	Huntington-Ashland, WV-KY-OH	0.75
Goldsboro, NC	0.66	Texarkana, TX-AR	0.75

Table 4.1 presents the high segregation levels for the top ten metropolitans for the Asian nativity groups. The segregation levels of US-born Asians (shaded in blue) are generally higher compared to that of the foreign-born (shaded in yellow). The metro area with the highest segregation index for Asian immigrants is in Utica-Rome, NY, with its (D) value of .72, while the metro with the highest D index (.85) for US-born Asians is Anniston-Oxford-Jacksonville, AL. The descriptive table at least reveals that Asian US-born more likely to concentrate in those non-traditional immigrant metros (such as West Virginia, Indiana, Georgia, and North Carolina) where they are more segregated from Whites. Asian foreign-born are highly segregated from Whites in the traditional immigrant metros, such as New York and Los Angeles.

Figure 4.2 The Segregation Levels of Foreign-born Asians

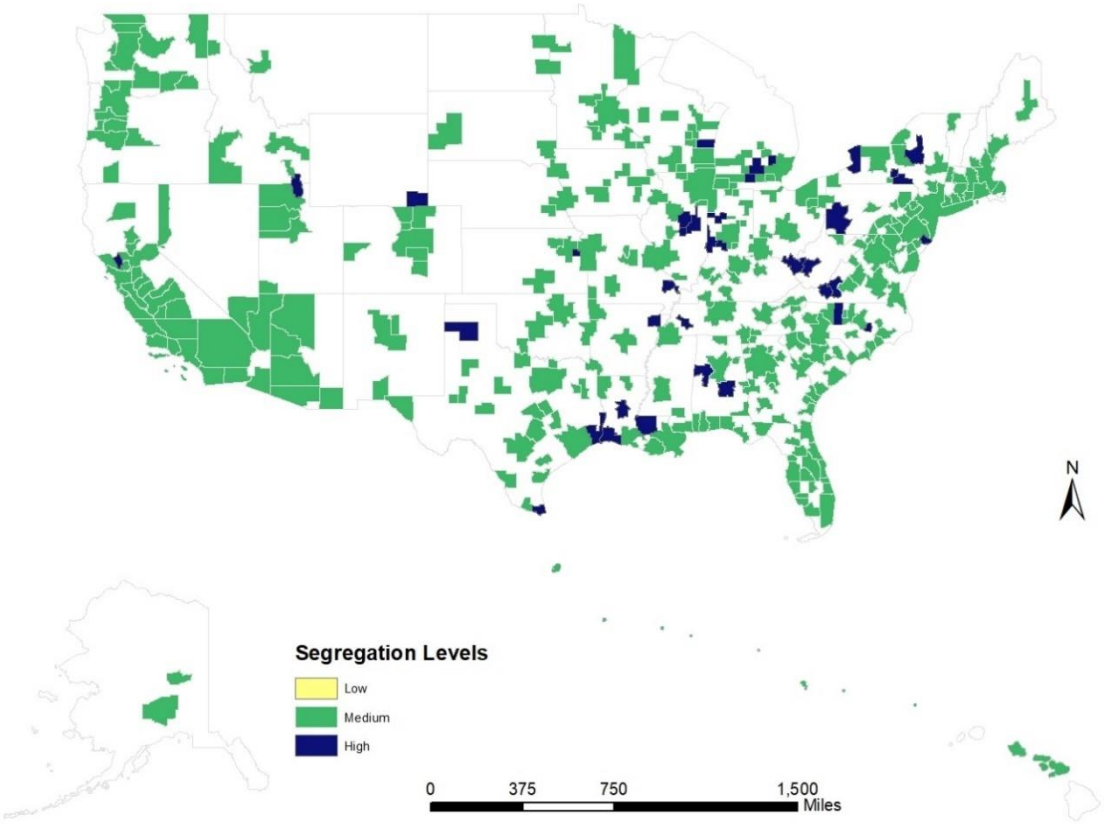
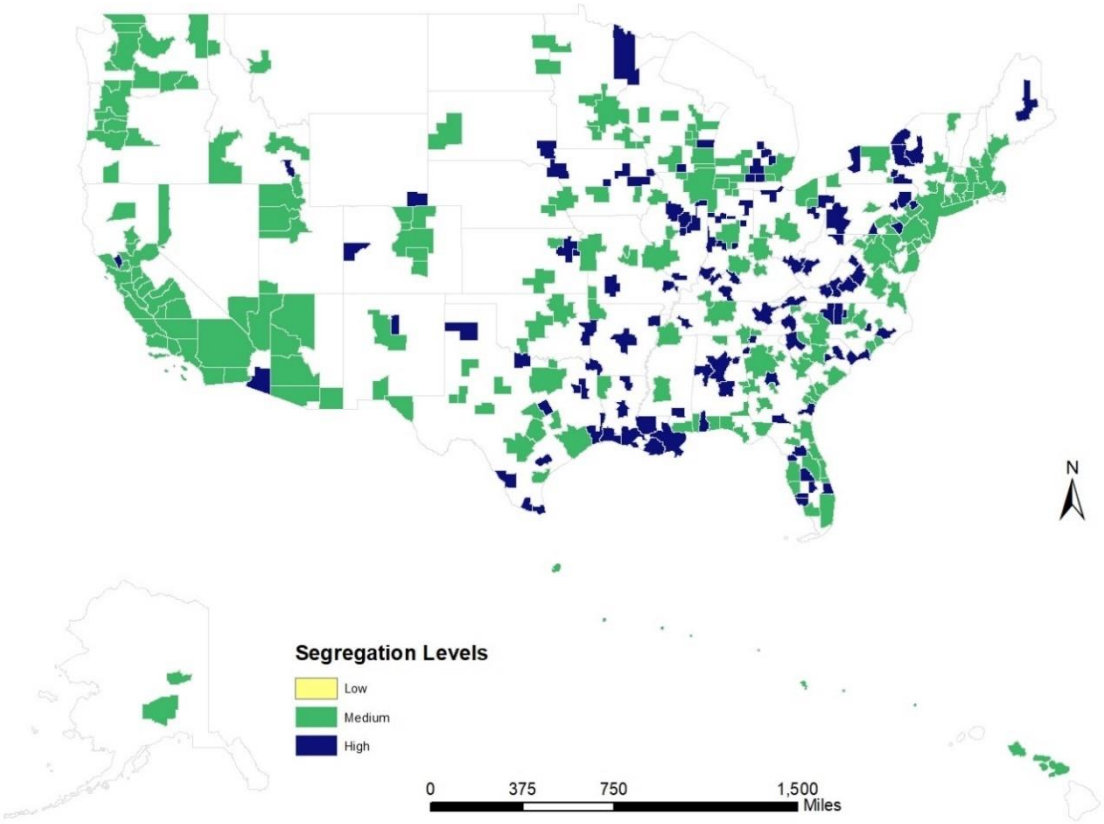


Figure 4.3 The Segregation Levels of US-born Asians



Figures 4.2 and 4.3 show the geographic distribution of the 342 metropolitan areas for the Asian nativity groups. We first notice that for both groups, there are no low segregation metros (D<.30). There are 313 metros (out of 342) highlighted as medium segregation (.60>D>.30), shaded in green, and 29 high segregation metros, shaded in dark blue for foreign-born Asians. Interestingly, Asian immigrants are highly segregated from now-Hispanic Whites in some of the new immigrant metros, such as Kansas, Utah, Louisiana, and North Carolina.

The segregation pattern of US-born Asians is presented in Figure 4.3. There are 103 high segregation metros (shaded by dark blue) for US-born Asians. Apparently, the US-born Asians are more segregated from Whites compared to the foreign-born counterparts, not only by the higher segregation values but also in the number of high-segregated metros (103 metros for the former while 29 metros for the latter). Both Asian nativity groups witness growing settlement in the Midwest and the South part of the U.S. where the US-born groups are substantively more segregated from Whites than the immigrant counterparts.

Residential Segregation of Hispanic Nativity Groups

Table 4.2 The Segregation Levels of Hispanics by Nativity Status in the Top Ten Metros

Metros	Foreign-born	Metros	US-born
Reading, PA	0.78	Springfield, MA	0.63
Huntington-Ashland, WV-KY-OH	0.78	Reading, PA	0.62
Altoona, PA	0.75	Huntington-Ashland, WV-KY-OH	0.58
Great Falls, MT	0.72	Providence-Warwick, RI-MA	0.58
Charleston, WV	0.72	Los Angeles-Long Beach-Anaheim, CA	0.57
Cumberland, MD-WV	0.71	Hartford-West Hartford-East Hartford, CT	0.57
Utica-Rome, NY	0.70	Salinas, CA	0.56
Scranton-Wilkes-Barre-Hazleton, PA	0.70	New York-Newark-Jersey City, NY-NJ-PA	0.56
Lima, OH	0.70	Cleveland-Elyria, OH	0.55
Bakersfield, CA	0.68	Charleston, WV	0.55

Table 4.2 shows that, compared to foreign-born groups, the Hispanic US-born are more residentially integrated with non-Hispanic Whites, indicated by their relatively lower average segregation values. The metro areas with the highest segregation level (.78) for the Hispanic foreign-born is Reading, PA, while for the Hispanic US-born, the highest (D) level is .63 in Springfield, MA. The metro areas with high segregation levels are Huntington-Ashland, WV-KY-OH (.78), Altoona, PA (.75), and Great Falls, MT (.72) for the foreign-born. However, for the US-born, the metro areas with high (D) values are Reading, PA (.62), Huntington-Ashland, WV-KY-OH (.58), and Providence-Warwick, RI-MA (.58).

Figure 4.4 The Segregation Levels of Foreign-born Hispanics

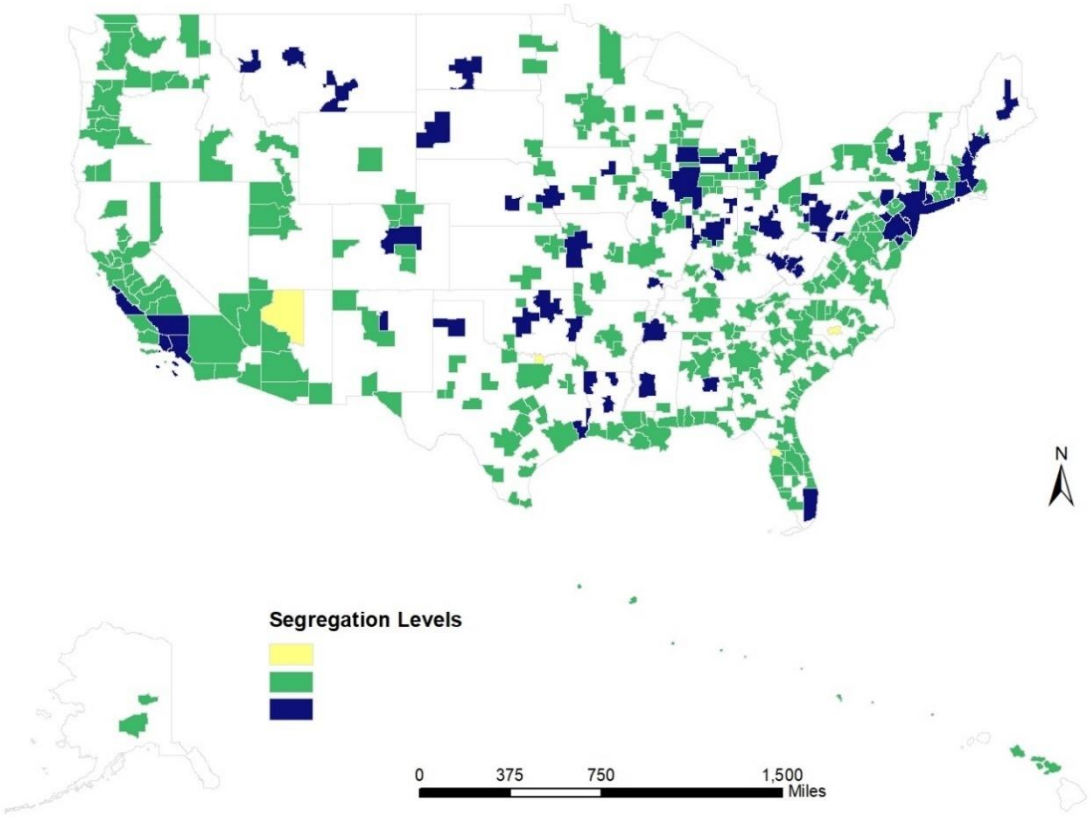
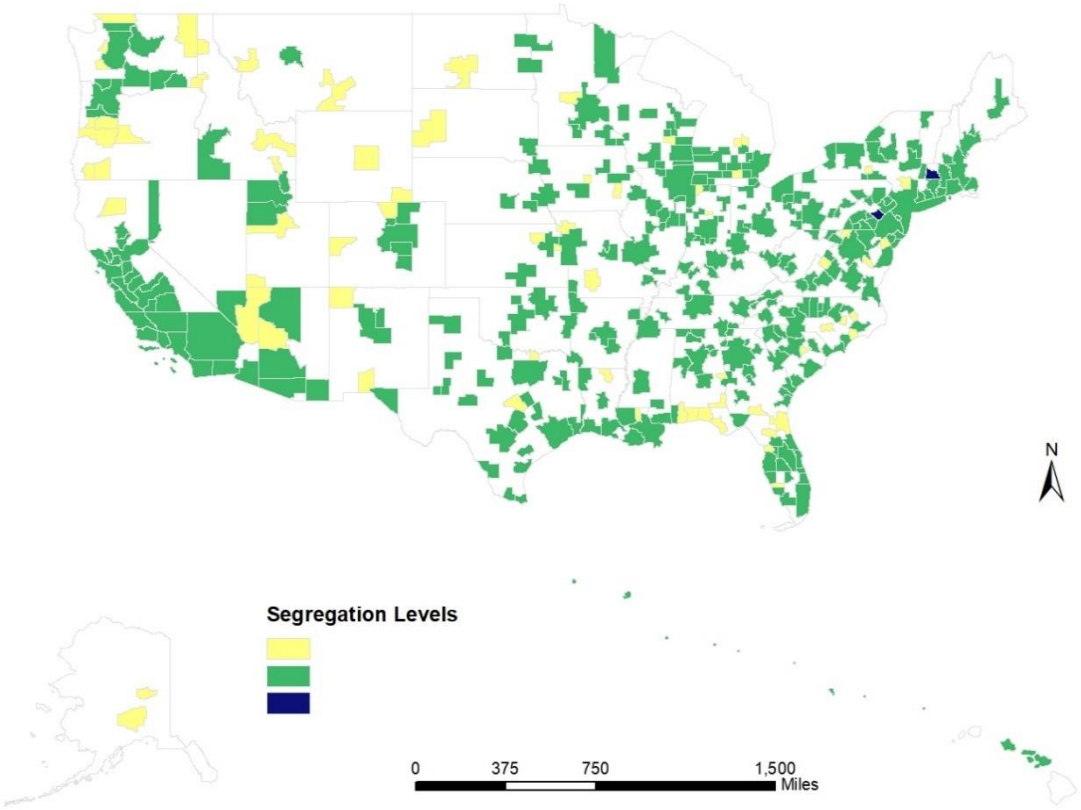


Figure 4.5 The Segregation Levels of US-born Hispanics



According to (Charles 2003; Massey and Denton 1988), the general rule of thumb for D score above .60 is interpreted as extreme segregation between two groups, indicating the percentage of either group that would have to move to another tract to achieve within-tract population distributions that mirror that of the metro area. Following this standard of classification, the score below .30 is considered as low segregation. And if the score falls the range between .30 and .60, it can be considered as medium segregation. Hispanics are grouped into three categories based on levels of Hispanic-White dissimilarity, low ($D \leq .3$), medium ($.3 < D < .6$) and high ($D \geq .6$) segregation. Figures 4.4 and 4.5 geographically map out the segregation levels based on this categorization.

Clearly, the segregation pattern is significantly different by nativity status for Hispanics. The light shaded areas in yellow in Figure 4.4 are the metros with low segregation levels. There are only four metros identified with low segregation ($D<.30$) for Hispanic foreign-born: Fayetteville, NC; Sherman-Denison, TX; Flagstaff, AZ; Homosassa Springs, FL. Among the 381 metro areas, 312 of them fall into the category of medium segregation, with the D value falling in the range of .30 ~ .60. Notably, the metros identified with high segregation values are emerging in the Midwestern states, where some of the medium segregation metros also appear. This layer of information is especially telling in the aspect of growing segregation of Hispanic immigrants in the Midwest of the U.S., which also implies that in those non-traditional immigrant destinations, Hispanic foreign-born are highly segregated.

Figure 4.5 shows the segregation pattern for US-born Hispanics. If we compare the distribution patterns of those medium-high segregation areas with that of foreign-born

in Figure 4.4, some areas are overlapped, which indicates the main concentration of Hispanic populations in those identified metros. For the yellow shaded areas, there are 70 metro areas with D values below .30. On the top end, there are only two metros identified with the high segregation with a D value above .60: Springfield, MA, and Reading, PA, where are also the high-segregation areas for Hispanic immigrants. Medium-segregated metro areas are similar to what has been identified for Hispanic foreign-born. However, in some Midwestern metro areas, such as Montana, North Dakota, and South Dakota where Hispanic foreign-born are highly segregated, US-born Hispanics witness lower segregation levels from Whites.

For Asians and Hispanics, native-born and foreign-born show a large discrepancy in their segregation levels from Whites, and it is also appealing to test how the nativity differences differ by comparing Asians to Hispanics. First and foremost, Hispanic immigrants are more segregated than US-born counterparts, and this difference can be told by comparing the total number of high segregation metros. For Hispanics, there are only two high segregation metros for US-born, but 63 for the foreign-born. For Asians, there are 103 high segregation metros for the native-born and 29 for the foreign-born. This layer of comparison proves that the residential pattern among Hispanic groups speaks to the prediction of spatial assimilation, as US-born Hispanics are less segregated from Whites than are foreign-born. However, Asian nativity groups show the opposite pattern. The US-born Asians clearly are more segregated from Whites than are foreign-born counterparts, which is not suggestive of spatial assimilation.

The second difference is by comparing the geographic distribution of the high-segregated metro areas. For the native-born Hispanics, the two high segregation metros

are all located in the northeast regions of the U.S., but those metros for foreign-born Hispanics spread all over the West, Northeast, the Great Lakes areas, and the Midwestern part of the U.S. However, the geographic patterns of the high-segregated areas between Asian nativity groups are very similar in terms of geographic locations. Both Asian nativity groups are more segregated in Northeast regions and the Great Lakes areas. This comparison tells us that Asian groups are more likely to concentrate in the same metropolitan areas with co-ethnic members.

The first goal of chapter 4 is to examine the nativity difference on the overall segregation levels from non-Hispanic Whites. The descriptive figures and maps both prove that the segregation levels vary by nativity status. The current ACS 5-year data point out that the overall Asians are more segregated than Hispanics from Whites. Among the four nativity groups, native-born Hispanics are the least segregated, but native-born Asians are the most segregated from Whites. This finding continually taps on the question of increased residential concentration with the same ethnic members for Asians and the in-group preference discussed in the resurgent ethnicity perspective. On the other hand, the high segregation of US-born Asians also disputes the linear prediction of spatial assimilation theory.

Segregation Patterns by Destination Types

The second goal of chapter 4 explores the segregation patterns of Asian and Hispanic nativity groups in different destinations from the perspective of spatial assimilation. Comparing segregation patterns by destination types helps to better explain if the residential patterns in new destinations are developing in ways that are significantly different from those in established gateways (Park and Iceland 2011). On one hand, it

might be reasonable to expect new destinations to be characterized by high levels of segregation because of the large volume of recent immigrants and the in-migration of the same ethnic members from other traditional enclaves. On the other hand, it could be that new destinations have lower levels of segregation than traditional gateways, as the latter continually attract and serve as large established ethnic communities with solid ethnic resources. This section of analysis therefore seeks to investigate how residential concentration patterns differ by destination types for Asian and Hispanic nativity groups. Based on the segregation patterns observed in the previous section, I hypothesize that the resurgent ethnicity framework is more fitting to explain residential patterns in new destinations (especially for Asians) while the spatial assimilation model explains better for traditional destinations.

The selection of metropolitan areas in this analysis is based on Singer's (2015) immigrant gateway typology (see table 3.1 for detailed descriptions), which identifies eight different types of immigrant gateways based on the size of foreign-born, the foreign-born share, and the growth rate of the foreign-born population for each metropolitan area throughout the 20th century and into the 21st century. This typology of immigrant gateways categorizes 104 largest U.S. metropolitan areas using the Census Bureau's 2014 American Community Survey (ACS) and 2013 metropolitan area delineations. However, Singer's (2015) typology only includes 104 largest metropolitan areas of 2013, together, 86 percent of all immigrants live in those metro areas. My sample includes a total of 342 metros for Asians and 381 metros for Hispanics. After applying Singer's classification, I classify the reminder of metro areas into the last category of "other" for both groups. Since I use the 2013-2017 American Community Survey data, I

match the metropolitan names based on the 2017 metropolitan delineations. This procedure constructs different destination patterns for Asians (Figure 4.6) and Hispanics (Figure 4.8) respectively.

Figure 4.6 The Destination Types for Non-Hispanic Asians

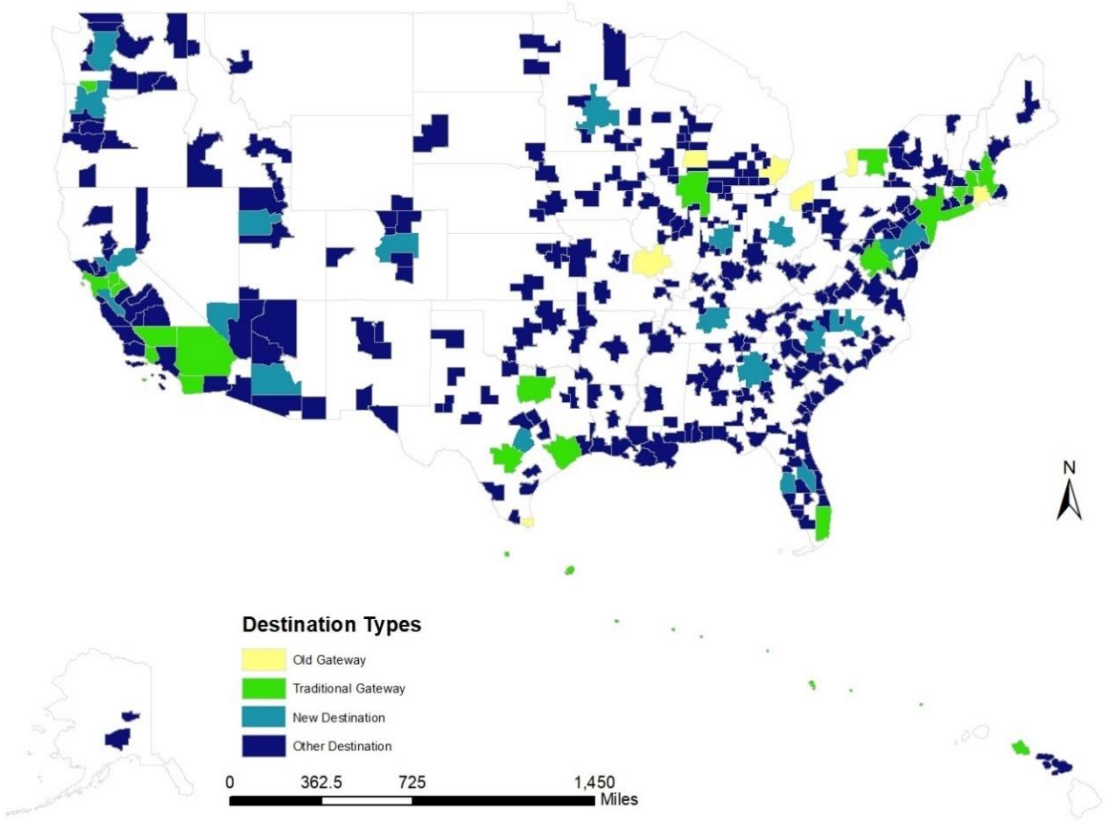


Figure 4.7 The Segregation Levels for Non-Hispanic Asians

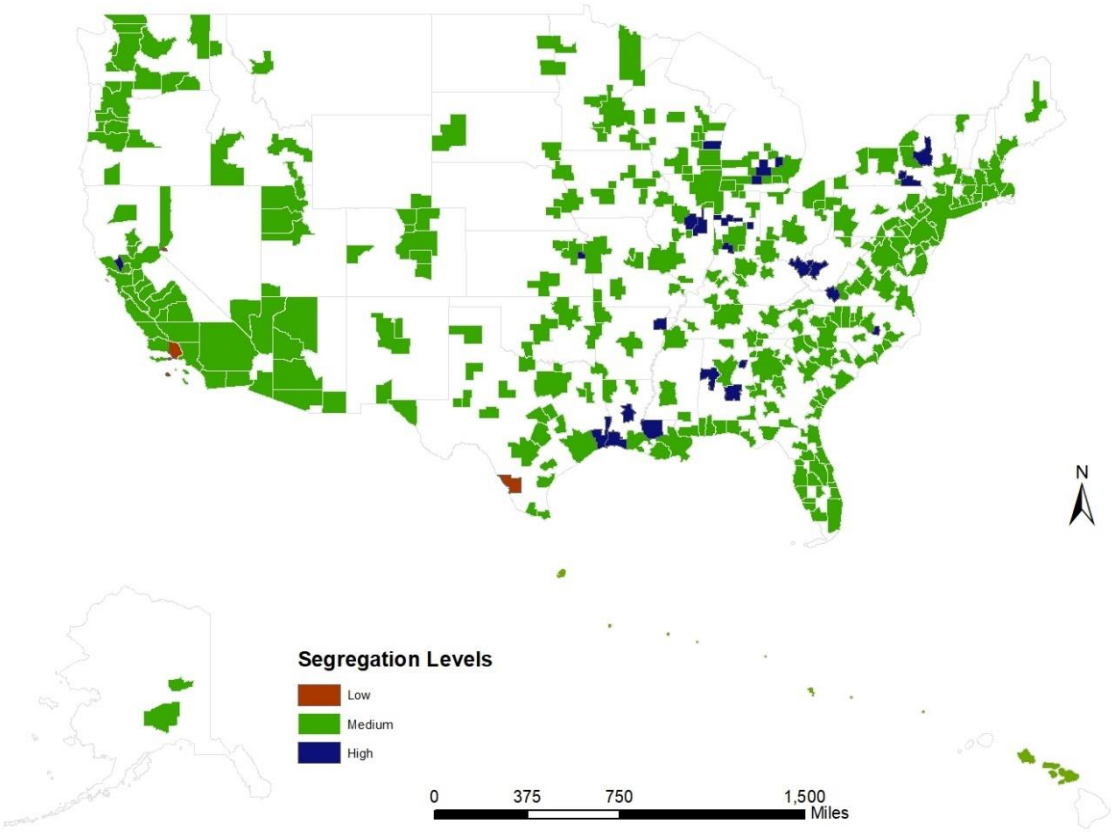


Figure 4.8 The Destination Types for Hispanics

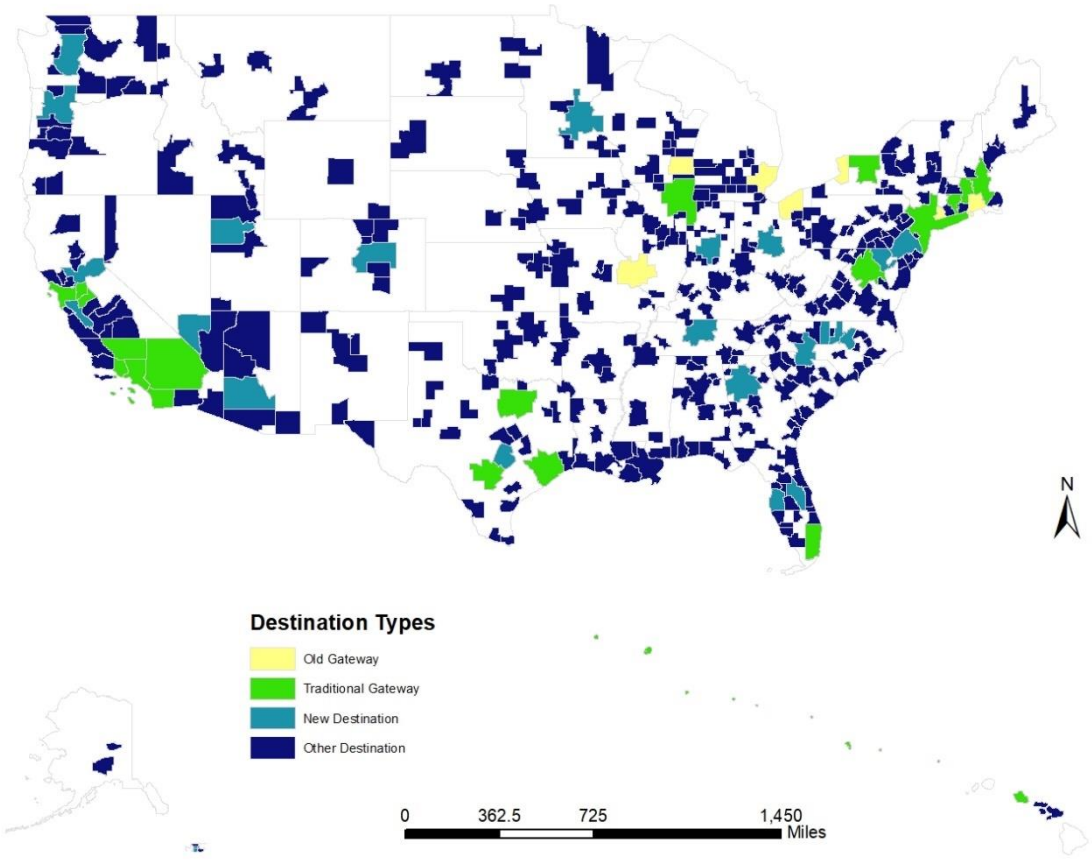


Figure 4.9 The Segregation Levels for Hispanics

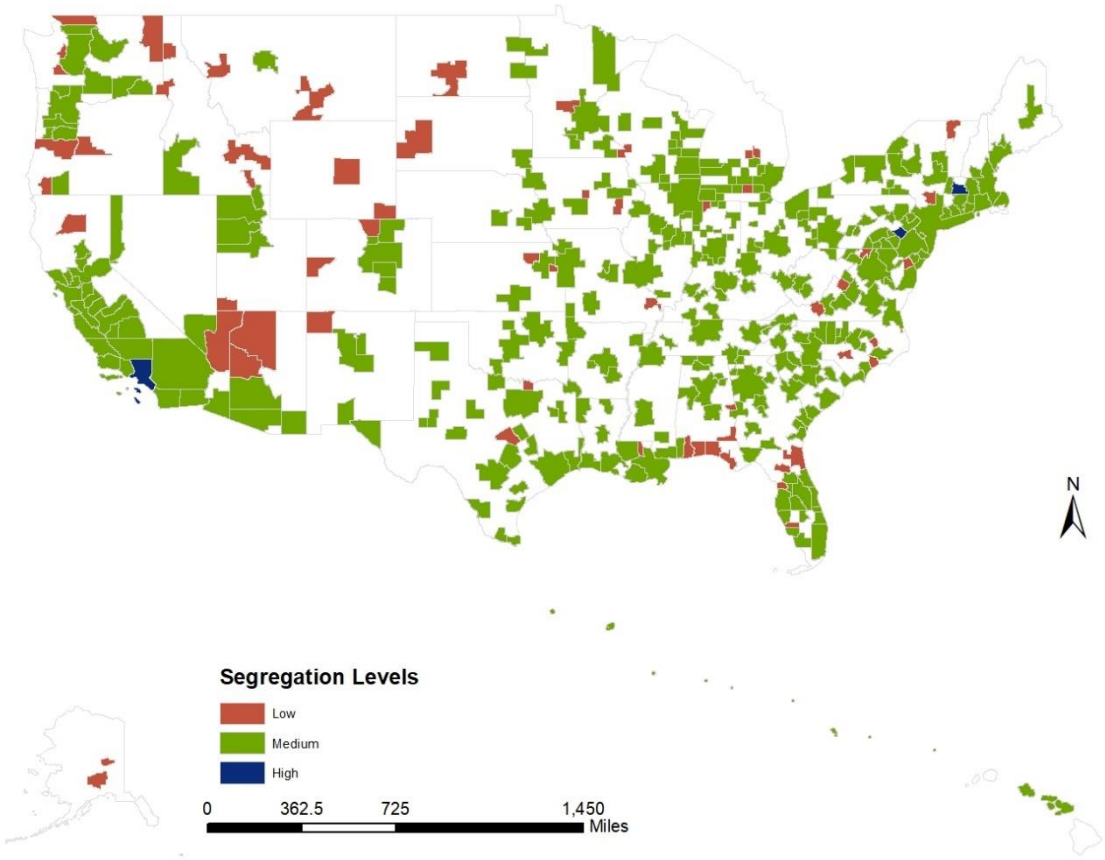


Figure 4.6 shows that among the 342 metro areas for the Asian groups, there are 7 metro areas considered as *old gateways* shaded in yellow, 20 metros as *traditional gateways*, 22 metros as *new destinations*, and 293 metros as *other destinations*. Here I also include Figure 4.7, which is the map showing the segregation level for overall Asians for reference purposes. By comparing the segregation level and destination types of these two maps, we can tell that for the overall Asians, old gateways are in the medium segregation levels, whereas some of the "new" and "other" destinations are also identified with medium or high segregation, for instance, Raleigh, NC, Blacksburg,-Christiansburg-Radford, VA, and Kansas City, MO-KS.

Among the 381 metro areas for the Hispanic groups, the selection standard of typology constructs 7 metros as *old gateways*, 20 metros as *traditional gateways*, 22 metros as *new destinations*, and 332 metros as *other destinations*. As it has been proved that segregation level does vary by nativity status for both Asians and Hispanics. Now, I continue to test whether the nativity difference exists among different destination types. The previous literature, however, more or less tends to focus on the comparison between the established gateways and new destinations. My study contributes to the literature by adding another layer of comparison: the segregation levels of "new destinations" to that of "other" destinations.

Because of the limitation of identifying all the metro areas on the thematic map, I supplement the analysis with the descriptive statistics comparing the nativity difference in traditional gateways and new destinations using the statistical significance test. Table 4.3 shows the average levels of metropolitan residential segregation by gateway types in 2013-2017. Generally, the average dissimilarity index indicates that Hispanics are more

segregated in traditional gateways than new destinations, while Asians show the opposite pattern. Across destination types, both nativity groups of Hispanics are more segregated in traditional than new destinations, which is not the case for Asians. Moreover, the overall Asians and nativity groups are more segregated in new destinations. Thus, this result proves that the spatial assimilation model is more fitting for the Hispanic groups, as Hispanics are less segregated from Whites as they disperse into new immigrant gateway metros.

Table 4.3 Residential Segregation for Traditional Gateways and New Destinations: Dissimilarity from Non-Hispanic Whites by Race, Ethnicity, and Nativity

2013-2017	Traditional gateways (B)	N	New destinations (C)	N	Difference (traditional gateways—new destinations)
Hispanics	0.497	20	0.441	22	0.056**
Foreign-born	0.572	20	0.541	22	0.031
US-born	0.471	20	0.409	22	0.062***
Asians	0.446	20	0.463	22	-0.017
Foreign-born	0.477	20	0.487	22	-0.01
US-born	0.481	20	0.495	22	-0.014
Significance test performed on the difference between traditional gateways and new destinations					

* t-test significant at 0.10.

** t-test significant at 0.05.

*** t-test significant at 0.01.

Table 4.3 also tells us the nativity difference in traditional gateways and new destinations for Asians, Hispanics and nativity groups. The difference by nativity is greater in new destinations than in traditional gateways for Hispanics while the pattern does not differ that much for Asians. These patterns suggest that Hispanic immigrants are much more likely to be segregated than their native-born counterparts in traditional gateways. The difference between traditional gateways (B) and new destinations (C) is

larger among the Hispanic native-born than for the foreign-born. Furthermore, this difference is only statistically significant for Hispanic native-born (indicated by .062***).

Table 4.4 Residential Segregation for New and Other Destinations: Dissimilarity from Non-Hispanic Whites by Race, Ethnicity, and Nativity

2013-2017	New destinations (C)	*N*	Other destinations (D)	*N*	Difference (new—other)
Hispanics	0.441	22	0.382	332	0.059***
Foreign-born	0.541	22	0.516	332	0.025*
US-born	0.409	22	0.370	332	0.039***
Asians	0.463	22	0.480	293	-0.017
Foreign-born	0.487	22	0.499	293	-0.012
US-born	0.495	22	0.568	293	-0.073***

Significance test performed on the difference between new destination and other:
* t-test significant at 0.10.
** t-test significant at 0.05.
*** t-test significant at 0.01.

Table 4.4 highlights the differences in segregation level between (C) new destinations and (D) other destinations. The reason behind this pair of comparison is that, though smaller metropolitan areas were not previously categorized in Singer's original typology (2015), they are becoming important in understanding emerging immigrant settlement patterns of the 21st century (Hall 2013; Park and Iceland 2011). Therefore, I classify a significant number of emerging metro areas into other destinations, especially for Hispanics. My study, for the first time, considers the impact of the emerging settlement areas into the comparison of segregation patterns for both Asians and Hispanics in the past decade. Table 4.4 shows that Hispanics and nativity groups are less segregated in other destinations, but Asians show the opposite tendency. The difference by nativity is greater in other destinations than in new destinations for Hispanics.

For overall Asians, the average segregation levels are consistently higher in other destinations, even for both nativity groups. It tells us that Asians are in general more segregated in the new immigrant metros. Moreover, in the two destination types, the difference by nativity is larger in other destinations for the Asian nativity groups. Thus, it confirms that the US-born Asians are more likely to be segregated than Asian immigrants in other destinations, where Hispanic immigrants are more segregated than US-born counterparts.

Summary of Segregation Patterns

Chapter 4 examines the residential segregation patterns for Asians and Hispanics in the United States. The main question that directs the analysis is whether the recent Asian and Hispanic populations have become more segregated from non-Hispanic Whites. The descriptive results prove that Asians and Hispanics vary in their average segregation levels by nativity and across destination types. In general, the segregation pattern for the Hispanic group is more consistent with the spatial assimilation theory, and the Hispanic native-born are much less segregated from Whites compared to the immigrant groups in the three immigrant destination typologies (traditional, new, and other).

Compared to the segregation levels in 2000 (Park and Iceland 2011), the descriptive results clearly state that the residential segregation of Hispanics from Whites is continually narrowing, but Asians seem to be more segregated from Whites than they were twenty years ago. In addition, the findings from the descriptive statistics (Figure 4.1) show that Asians are more segregated from Whites than are Hispanics, irrespective of nativity status. By looking at the difference of nativity status, the US-born Asians are

more segregated than immigrant groups. Regarding the first research hypothesis about whether spatial assimilation can still be applied to the current Asian and Hispanic groups, the answer is certain because US-born Hispanics are less residentially segregated from Whites than are foreign-born groups. Thus, the general residential trend among Hispanic groups lends support to classic spatial assimilation theory.

The descriptive results (Tables 4.3 and 4.4) are clear in testing the second research hypothesis. Quite opposite to my research hypothesis, the overall Hispanics in traditional gateways are more segregated than their counterparts in new and other destinations. For Asians, the average dissimilarity is the highest in other destinations. This finding indicates that on average Hispanics are still more segregated in traditional immigrant metros whereas Asians are the most segregated in other destinations where just recently attract immigrants. Moreover, nativity groups show similar patterns. For Hispanics, both US-born and foreign-born are more segregated in traditional gateways. However, both Asian nativity groups are more segregated in other destinations.

Building on the existing literature, my study provides an updated residential integration pattern for Asians and Hispanics in metropolitan America. The recent 5-year estimates not only prove that the overall Hispanic population are generally more residentially assimilated with Whites, but also verify that Asians are more segregated from Whites in metropolitan areas. This finding suggests that spatial assimilation does occur for ethnoracial groups but in quite divergent pathways. Among Asian groups, spatial assimilation may not operate as strongly in new destinations as in traditional gateways. In all destination typologies, the Asian native-born are always more segregated than are immigrant groups. Therefore, the residential pattern for Asian groups is better

explained by the resurgent ethnicity framework as there is evidence that as Asians spread into new and emerging destinations, they are not residentially integrated with Whites.

Based on the group-level residential patterns, I examine the residential assimilation pattern by the individual-level acculturation and SES indicators in chapter 5. The following chapter takes a different path by looking more closely into the individual probability of living in ethnic concentrated areas to test which framework (classic spatial assimilation model, segmented assimilation, and resurgent ethnicity) better explains the residential patterns of contemporary Asians, Hispanics, and their nativity groups.

CHAPTER 5: SPATIAL ASSIMILATION PATTERNS

To understand the current residential distribution of Asian and Hispanic populations, I need to define the co-ethnic concentration areas for both groups. Previous research has confirmed a general association between spatial assimilation and other types of assimilation, but it has reached different and even contradicting patterns on the variables and groups that do not fit the linear prediction of those patterns. Thus, for this matter, I construct an innovative measurement of geographical identifiers based on PUMAs to measure ethnic areas.

To be consistent with chapter 4, I use the total population of "Hispanic or Latino by Race, Not Hispanic or Latinos, Asian alone total population" to measure the percentage of Asians, and "Hispanic or Latino Origin by Race, total population" to calculate the percentage of Hispanics. Figures 5.1 and 5.2 display the defined co-ethnic areas for both Asians and Hispanics. The threshold I use to define the ethnic areas is the mean average of the racial and ethnic groups by PUMA, with Asians of 5.12% and Hispanics of 18.5%. Out of 2378 PUMAs (Guam and US Virgin Islands have no data for both groups), 675 are considered as Asian concentration areas, and 753 for Hispanic areas. The defined concentration areas (shown in shaded red and blue on the maps below) all have the above mean percentages of Asians and Hispanics.

Figure 5.1 shows that among the 675 PUMAs that have an above mean percentage of Asians, Santa Clara County & San Jose (Northeast) Cities PUMA has the highest percentage of Asians (66.4%). The top ten PUMAs with above 50% of Asians are all located in California and Hawaii, except for one in New York. Among the 753

Hispanic PUMAs, the top ten that with above 90% of Hispanics are all located in Puerto Rico. Some high concentration PUMAs that have above 80% of Hispanics are found in the south border of Texas, New Mexico, and California. In addition, Figure 5.1 shows that Asian PUMAs are geographically similar to the Asian destination types in Figure 4.5. Asian concentration PUMAs are mostly located in coastal states of California and New York, the states of Illinois, Texas, Florida, and Michigan. Some Midwestern states, for instance, South Dakota, North Dakota, Montana, Wyoming, and New Mexico do not have any Asian concentration areas.

Figure 5.2 shows that, according to my definition of ethnic areas, Hispanics are profoundly concentrated in the West and the South part of the U.S. Except for a large concentration of Hispanics in Puerto Rico, the states of California, Nevada, New Mexico, Texas, Colorado, Washington, and Oregon all have significant and contiguous Hispanic concentrated PUMAs. Comparatively, New York, Florida, Georgia, Illinois, and North Carolina also have some Hispanic concentrated areas.

Figure 5.1 The Defined Asian Concentrated Areas (PUMAs)

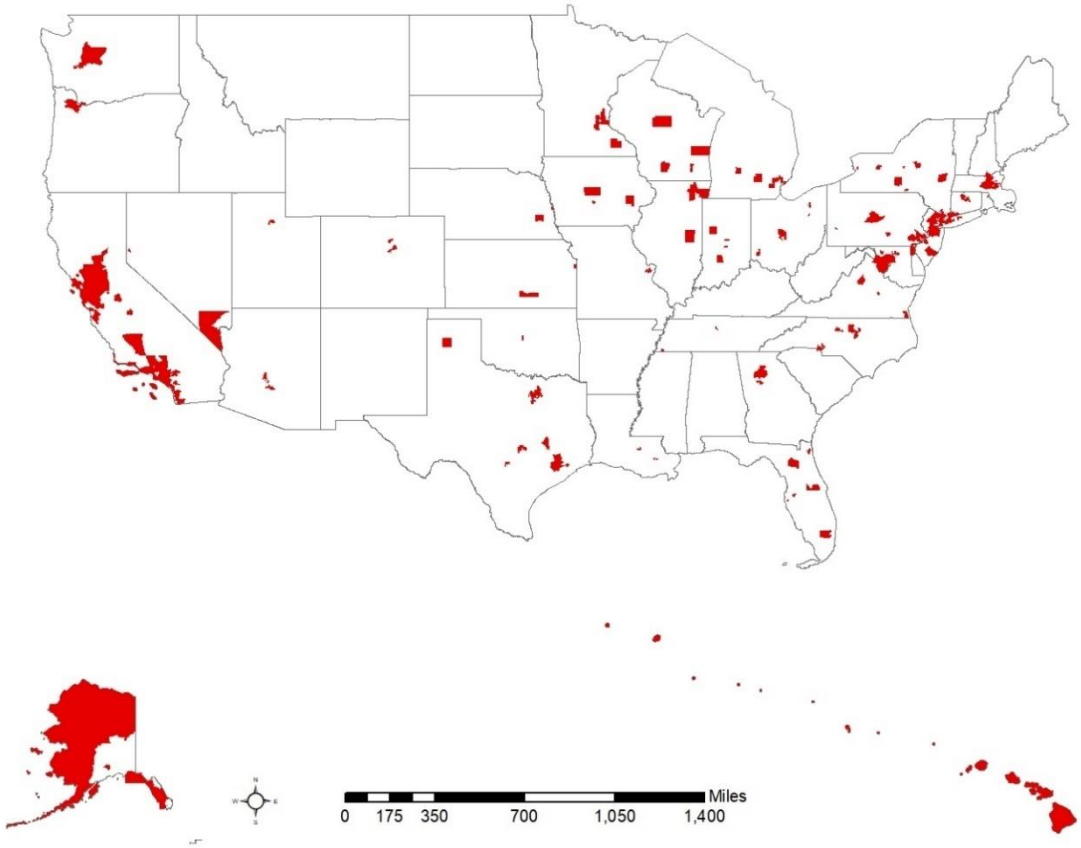
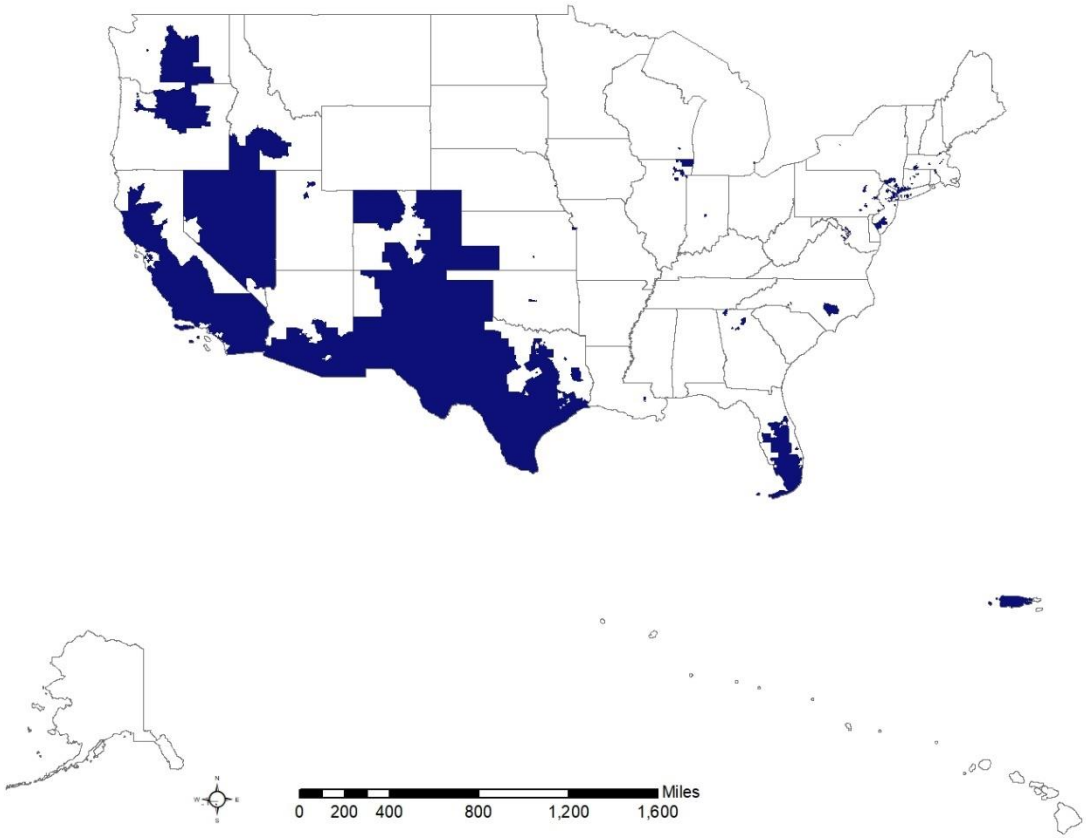


Figure 5.2 The Defined Hispanic Concentrated Areas (PUMAs)



Descriptive Results and Model Prediction of Asians

The first section presents the results of Asians. I used the logistic regression model to predict the probability of living in Asian areas (defined in Figure 5.1) with the acculturation and socioeconomic predictors by comparing foreign-born (immigrants) to native-born Asians. The dependent variable was coded as a dummy variable: 0 denotes the residence in areas that are lower than the mean average of Asians (5.12%), and 1 is the residence in areas that are equal to and above the mean average. The independent variables are "nativity status" (foreign-born or native-born), "race/ethnicity," "age," "gender," "marital status," "English proficiency," "educational attainment," "class of worker," "homeownership," and "family income."

The "nativity status" is the key variable of interest. It is a dummy variable with 0 measures Asians who are native-born, 1 refers to Asians who are foreign-born (immigrants). The "race/ethnicity" variable is a categorical variable only included in the Asian sample. It has three values, 0 denotes Asians who are of single race/ethnicity (e.g. Chinese, or Japanese); a value of 1 denotes Asians combined with other races (e.g. White and Chinese); a value of 2 denotes Asians with mixed ethnicity (e.g. Chinese and Korean). Since in the current ACS data, the race question allows people to select more than one race. The "race/ethnicity" variable can help to diagnose whether mixed-race or mixed-ethnicity plays different effects on the residential assimilation outcome.

Most of the explanatory variables are categorical or dummies, except for "age" and "family income," which are interval-ratio variables in the logistic regression model. Family income refers to the original values of the annual income earned by all people

related to the household. Below I will discuss the skewness check before and after the model specification.

Table 5.1 shows the descriptive statistics of the sample and the covariates of the Asian sample, and the values are weighted averages to represent the national population. The sample size is 250,261, with 24% native-born and 76% foreign-born. The median age of Asian immigrants is 45, about 8 years older than that of native-born. The variable of "race/ethnicity" captures the detailed categorization of race and ethnic compositions. Compared to Asian immigrants, native-born have a much lower percentage of single-race groups. However, Asian native-born also have a much higher percentage (33%) in mixed-race groups than the foreign-born counterparts (4%). This indicates that native-born Asians are more likely to identify themselves with mixed races. Both Asian foreign-born and native-born have low percentages of mixed ethnicity.

Table 5.1 Descriptive Statistics of Covariates (in Percentage) of Asians by Nativity Groups

Variables	Native-born	Foreign-born
Percentage of Asian	24.1	75.9
Race/ethnicity		
Asian single race/ethnicity	61.2	93.5
Asian_mixed race	32.9	4.1
Asian_mixed ethnicity	5.9	2.4
Median Age	37.0	45.0
% Living in Defined Areas	76.5	81.0
Gender		
Male	51.1	61.9
Female	48.9	38.1
Marital Status		
Single	52.6	28.5
Married	47.4	71.5
English Proficiency		
No English	0.7	13.7
Yes, very well	23.1	71.9
Yes, only English	76.2	14.4
Education Attainment		
Less than high school	2.4	9.1
High school graduates	10.8	12.1
Some college	29.2	18.2
4-year college, bachelor	35.0	30.8
Advanced	22.6	29.8
Homeownership		
Own	52.1	56.8
Rent	47.9	43.2
Class of Worker		
Self-employed	7.5	10.1
Works for wages	85.4	80.9
Not in labor force	7.0	8.9
Median Family Income	$74,600	$82,218

Source: ACS 2013-2017 5-year Public Use Microdata Samples (IPUMS)
Note: [a] Age in years, median family income in dollars.

English language ability is a conventional indicator of cultural assimilation. The 2013-2017 5-year estimates prove that Asian immigrants have high levels of English proficiency: about 72% of Asian immigrants speak English very well and 14% of them speak only English at home. Among the native-born, almost 76% of them speak only English at home, and respondents who do not speak English at all only have less than 1%.

Similarly, the educational attainment of both Asian nativity groups is quite high with more than half of both groups have college above degrees. The foreign-born still have a relatively higher rate of high school or less degrees compared to that of the native-born. Though the native-born Asians excel at achieving some college and bachelor's degrees than the foreign-born, the latter did better in achieving graduate degrees.

Both Asian nativity groups have high rates of homeownership, which ranges from 52% for the US-born and 57% for the foreign-born. Immigrant entrepreneurship is often high among immigrants (Aldrich and Waldinger 1990; Light and Bonacich 1988), but the 2013-2017 5-year estimates do not appear to be the same case for Asians. Both nativity groups report low self-employed rates, with 8% for the US-born and 10% for the foreign-born.

Before running the logistic regression models, I checked all the independent interval-ratio variables by using graphs in the STATA program showing the histograms, which test the skewness of the independent variables of age and family income. The variable of age is nearly normally distributed and therefore included with raw values. However, family income is heavily right-tailed, and the methods were implemented to correct this problem. Generally speaking, log transformation is the most common method to transform variables with continuous but skewed values, but the total family income in

the logistic regression models has negative values and the value of zeros, which is not appropriate to use the log transformation. Another common method that can be used to transform data is the square root, which in my case will generate missing values for both samples. Thus, I recode the total family income as 12 categories with each category has an increment of $20,000 for the Asian sample. Then, I include this recoded variable as an interval-ratio and re-modeled the logistic regression models (see Appendix B for more details). For the Hispanic sample, I use the square root values of the family income into the logistic regression model. The postestimation tests (see Appendix B) show both models are in good fit after the proper transformation of the family income variable.

The models should be specified in a way to guarantee the data fits the models well. Many statistical approaches can be used to examine that question, for instance by measuring the likelihood ratio chi-square with a p-value < 0.0001, which tells that the model fits significantly better than the null model. In other words, the likelihood ratio chi-square test is essentially testing whether the model contains the full slate of predictors that represents a significant improvement in fit over a null model. In addition, the "postestimation" options in STATA were used by measuring the specification diagnostic and goodness-of-fit analysis. In this analysis, the Hosmer Lemeshow goodness of fit test was used, which is essentially a type of a global measure of fit. In this test, the non-significant chi-square test an indicator of a good model fit (See Appendix B for more details).

Table 5.2 Logistic Odds Ratios of Predicting Residence in Ethnic Areas for Asians by Nativity Status

Variables	Model 1		Model 2		Model 3		Model 4	
	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.
Foreign born	1.337	***	0.764	***	1.350	***	0.777	***
Race/ethnicity								
Asian_mixed race			0.413	***			0.430	***
Asian_mixed ethnicity			1.010				1.047	
Female			1.002				1.009	
Age			1.011	***			1.013	***
Single			1.032	**			1.129	***
English Proficiency								
Yes, very well			0.938	***			0.759	***
Yes, only English			0.668	***			0.529	***
Education Attainment								
High school grad					0.933	**	1.088	***
Some college					1.000		1.290	***
Bachelor's					1.219	***	1.517	***
Advanced					0.923	***	1.141	***
Class of Worker								
Self-employed					0.977		0.983	
Work for wages					1.004		1.053	**
Owner					0.893	***	0.802	***
($)Family Income					1.000	***	1.000	***
Cons	3.504	***	4.483	***	2.901	***	3.250	***
LR chi2	636.67		5652.330		2606.1		7837.3	
Prob > chi2	0.000		0.000		0.000		0.000	
Log likelihood	-120418.37		-117910.54		-119433.68		-116818.08	

Notes: *p < .05; **p < .01; ***p<.001

Table 5.2 presents the four stepwise logit models for Asians by its nativity groups. The null model (model 1) shows that compared to the Asian native-born, the foreign-born are more likely to live in the defined Asian areas (odds ratio=1.337***).

When controlling for demographics and acculturation indicators, Model 2 shows that the difference by nativity status remains, however, this effect turns negative. The odds of .764 means that for Asian foreign-born, the odds of living in the Asian areas are .764 times as large as the odds for native-born to live there. It indicates that living in the Asian areas for the foreign-born is 23.6% less compared to that of the native-born. The "race/ethnicity" variable is a significant contributor to the model, as for those who are identified with Asians of multiple races, the chance of living in the Asian areas is 58.7% less compared to single-race Asians. One year increases in age, net of other variables, results in 1.1 % increases in the odds of living in the Asian areas. Compared to Asians who are married, the odds of living in the Asian areas for the singled Asians are slightly higher.

English proficiency ties closely to the immigrants' cultural assimilation as the native-born are more culturally assimilated than the foreign-born by speaking better English. By controlling other variables at constant values, the odds of living in the Asian areas for those who speak only English at home is 33.2% less compared to those who do not speak English at all. This indicates acculturation is significantly related to residential integration for Asians: the better they speak English, the less likely they live in Asian areas.

Model 3 estimates the residential returns to indicators of socioeconomic status. Notably, the odds ratio (1.350***) on the nativity status indicates that the foreign-born

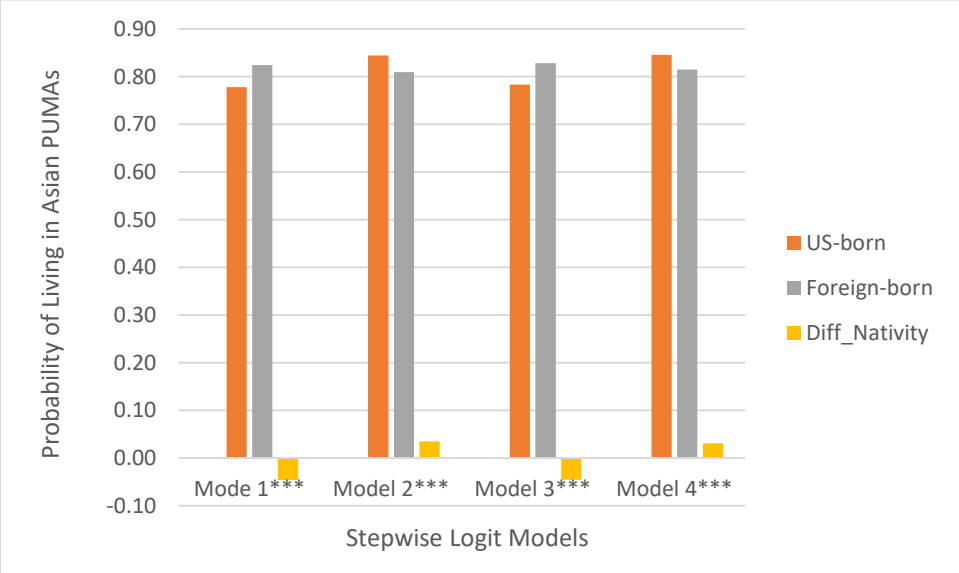
turn out to be more likely to live in the Asian areas after accounting for socioeconomic indicators. Education achievement is a significant contributor. Compared to the referent group of less than high school degrees, only those with bachelor's degrees are more likely to live in the Asian areas (odds ratio=1.219***). However, Asians with high school degrees and advanced degrees are less likely to live in the Asian areas when holding other SES variables at constant. The impact of some college degrees is not significant. This result indicates that the least educated and the most educated groups have lower tendencies of living in the Asian concentrated areas where they may find high competition by looking for employment that matches their skills.

Class of worker examines whether the status of employment impacts the likelihood of residential integration. It seems that the self-employed respondents are less likely to live in the Asian areas compared to the referent group who are not in the labor force, but this effect is not significant. Homeownership is a negative covariate in Model 3, and the odds of living in the Asian areas for those who own their homes are 10.7% less compared to the renters. The effect of family income has a positive odds ratio of 1, meaning that as every $20,000 increase in family income (in dollars), the odds of living in the Asian areas have no increase. Although it is a significant effect, we can say that the family income has no association with the residential outcome.

The pooled model (Model 4) explores the individual effects of demographics, acculturation, and SES indicators on the probability of living in the Asian areas. Notably, the odds of living in the Asian areas of the foreign-born are 22.3% less compared to the US-born, and this nativity difference is statistically significant at a p-value of .001. The effect of race/ethnicity is similar in direction and magnitude with Model 2, and mixed-

race Asians are less likely than single-race counterparts to live in the Asian areas. The effects of age and marital status are not that much different from Model 2. The impact of English fluency is still strong, especially for those who speak only English at home, the odds of living in the Asian areas is 47.1% less compared to those who do not speak English at all. When accounting for other indicators, educational attainment positively impacts the chance of living in the Asian areas at all levels. Homeownership and family income have similar impacts on the chance of living in the Asian areas in magnitude and direction given other indicators at constant values.

Figure 5.3 Predicted Probability of Living in the Asian Areas by Nativity Status from Stepwise Logit Models



Notes: *p < .05; **p < .01; ***p<.001***

Figure 5.3 above presents the difference in the probability of living in the Asian areas comparing the foreign-born and US-born. It reports such probabilities calculated with values of most of the independent variables held constant at the reference category or mean, only allowing the nativity status to vary. Model 1 proves that the US-born has a

lower probability (77.8%) of living in the Asian areas compared to that of the foreign-born (82.4%) and this nativity difference is significant at the p-value of .001. Adding acculturation indicators and socioeconomic factors significantly change the nativity effects of living in the Asian areas, as presented in Models 2 and 3, in different directions. It indicates that acculturation indicators (race/ethnicity and English skills) reduce the chance of living with co-ethnic members for the Asian foreign-born (immigrants). As spatial assimilation predicted, if the immigrant groups are more linguistically assimilated by increasing English skills, the chance of residentially assimilated with the mainstream society is also high. Although it is plausible to assume that Asian respondents who identify themselves as mixed-races were born in interracial families, the mixed-race Asians are much less likely to live in the Asian areas than are the single-race Asians. Therefore, English proficiency and racial/ethnic identification function as the "push" factors in the residential assimilation patterns for Asians.

However, Asian immigrants turn out to be more likely to live in ethnically concentrated areas after accounting for socioeconomic indicators. Educational attainment and family income are strong indicators in the residential assimilation process, as the spatial assimilation model argues. In theory, the upward socioeconomic mobility largely pushes immigrant groups away from ethnic enclaves (Massey and Denton 1988; Alba and Logan 1992). This proposition does not apply to the current Asian groups, as immigrant groups show a higher tendency of living in the Asian areas than US-born members when SES status is similar.

Moreover, after controlling for acculturation and socioeconomic factors all at mean in model 4, the Asian immigrants show a lower tendency of living in the Asian

areas than the US-born counterparts and this nativity difference is strongly significant. This result furtherly proves that for Asians, the nativity difference (immigrant status) is a significant determinant in the residential outcome even after controlling for individual differences in acculturation and SES characters. The fact that US-born Asians have a higher tendency of living in the ethnic areas indicates the in-group preference in residential choice. This finding also implies that the spatial assimilation model may not be well predicted for the recent Asian groups who are equipped with high socioeconomic status (median family income and educational attainment).

Descriptive Results and Model Prediction of Hispanics

As I mentioned in the specification of the logistic model, different transformations of data will generate differences in model fit. In the Hispanic model, I transformed the total family income as the square root of its raw values (161 missing values generated). The goodness of fit has a more reasonable chi-square value of .669, which indicates a good model fit (see Appendix B for more details).

Table 5.3 below shows the descriptive statistics of the sample and the covariates for the Hispanic groups. The sample size is 544,025, with 48% native-born and 52% of foreign-born. Different from Asians with a large proportion of immigrants, half of the Hispanic sample is US-born members. Among the nativity groups, the foreign-born have a relatively higher (73%) rate of living in the defined Hispanic areas than the US-born (68%).

Table 5.3 Descriptive Statistics of Covariates (in Percentage) of Hispanics by Nativity Groups

Variables	US-born	Foreign-born
Percentage of Hispanics	48.15	51.85
Median Age	41	44
% Living in Defined Areas	68.47	73.43
Gender		
Male	46.74	55.30
Female	53.26	44.7
Marital Status		
Married	49.52	64.62
Single	50.48	35.38
English Proficiency		
No English	3.10	39.09
Yes, very well	53.75	55.85
Yes, only English	43.16	5.05
Education Attainment		
Less than high school	13.53	43.06
High school graduates	26.25	25.68
Some college	38.02	18.23
4-year college, bachelor	14.97	8.67
Advanced	7.24	4.36
Homeownership		
Own	44.6	42.23
Rent	55.4	57.77
Class of Worker		
Self-employed	5.98	11.08
Works for wages	81.86	76.88
Not in labor force	12.16	12.04
Median Family Income	$49,662	$41,417

Source: ACS 2013-2017 5-year Public Use Microdata Samples (IPUMS)
Note: [a] Age in years, median family income in dollars.

The English language ability of Hispanic groups, in general, is lower than that of Asians. Among the Hispanic immigrants, the percentage of respondents who do not speak English is 39%, whereas Asians only have 14%. Among the US-born, only 43% of Hispanics speak only English at home, but Asian US-born has a much higher proportion (76%) of speaking English only.

The educational attainment of Asian nativity groups excels that of Hispanic groups. Even among the US-born Hispanics, more than half of its population have some college or less degrees. For Hispanic foreign-born, 43% of them have less than high school degrees. Moreover, both Hispanic nativity groups have low rates of achieving advanced degrees (less than 10%). About the homeownership rate, the US-born Hispanics have a relatively higher rate of owning a home (45%) than that of immigrants (42%).

Table 5.4 Logistic Odds Ratios of Predicting Residence in Ethnic Areas for Hispanics by Nativity Status

`	Model 1		Model 2		Model 3		Model 4	
	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.
Foreign-born	1.368	***	0.871	***	1.230	***	0.853	***
Female (ref=male)			1.127	***			1.137	***
Age			1.012	***			1.013	***
Single			1.052	***			1.039	***
English Proficiency								
Yes, very well			0.656	***			0.729	***
Yes, only English			0.315	***			0.357	***
Education Attainment								
High school grad					0.875	***	0.978	*
Some college					0.789	***	0.930	***
4-yr college, bachelor					0.579	***	0.700	***
Advanced					0.443	***	0.518	***
Class of Worker								
Self-employed					0.893	***	0.992	
Work for wages					0.833	***	0.949	***
Owner					1.037	***	0.972	***
($)Family Income					1.000		1.000	
Cons	2.374	***	2.837	***	3.634	***	3.040	***
LR chi2	2588.88		17569.19		8856.52		21364.28	
Prob > chi2	0.000		0.000		0.000		0.000	
Log likelihood	-313784		-306294		-310550		-304293	

Notes: *p < .05; **p < .01; ***p<.001

Table 5.4 presents the four stepwise logit models for Hispanics by their nativity groups. Compared with the Asian stepwise model (Table 5.2), I find a similar pattern among the Hispanic nativity groups. The null model (Model 1) shows that compared to the US-born Hispanics, the odds of living in the Hispanic areas for the foreign-born are 36.8% higher. This is similar to what I found for the Asian nativity groups: the foreign-born are more likely to live in the ethnic areas than the US-born counterparts without considering any impact of other covariates.

Model 2 adds the demographics and English indicator. It shows that the difference by nativity status remains. However, the odds of living in the Hispanic areas for the foreign-born is 12.9% less than the odds of living there for the US-born. It indicates that acculturation and demographic indicators account for some differences in the odds of living in the Hispanic areas. The odds for females to live there are 12.7% compared to the referent group of males. One year increases in age, net of other variables, results in 1.2% increases in the odds of living in the Hispanic area. English language proficiency strongly impacts the chance of living in the Hispanic areas, especially for the respondents who speak only English at home, the odds of living there are 68.5% less compared to the respondents who do not speak English at all. The same trend has been found for Asians, that is, the better they speak English, the less chance they live in the defined ethnic areas.

Model 3 estimates the residential returns to indicators of socioeconomic assimilation. Notably, the odds ratio (1.230***) indicates that the foreign-born are 23% more likely to live in the Hispanic areas compared to the US-born, and this nativity difference is statistically significant at a p-value of .001. Model 3 proves that most SES indicators (income and education) exhibit positive returns with respect to residential

assimilation. The more education they have completed, the less likely they live in the Hispanic areas. Compared to the referent group of less than high school degrees, the odds of living in the Hispanic areas linearly decrease as the education level increases. Especially for Hispanics with graduate degrees, the odds of living with the same ethnic members are 55.7% less compared to the group with less than high school degrees. The class of worker produces negative effects in predicting the likelihood of living with co-ethnics. Both self-employed and wage-employed Hispanics are similarly less likely to live in the Hispanic areas compared to those who are not currently in the labor force. The homeowners are more likely to live in the Hispanic areas than the home renters.

The pooled model (Model 4) explores the individual effects of the whole range of indicators on the probability of living in Hispanic areas. The nativity effects turn out to be negative, indicating that given the same level of acculturation and socioeconomic indicators, the Hispanic immigrants are less likely to live in ethnic areas than the US-born counterparts. The effects of demographic variables (gender, age, and marital status) are consistent in direction and magnitude from Model 2. The impact of English fluency is still strongly negative in the prediction of living in the Hispanic areas, and the magnitude of the odds ratio is similar to Model 2.

Among the SES indicators, education remains a negative impact even after controlling for other covariates, which indicates that the more educated the Hispanics, the less likely they live in the ethnic concentration areas. For the Hispanics who are the homeowners, the odds of living in ethnic concentration areas are 2.8% lower than the home renters, and this impact is significant at a p-value of .001. It seems that family

income is by no means increases or decreases the odds of living in Hispanic areas, and this odds ratio of 1.00 has no significant value.

Figure 5.4 Predicted Probability of Living in the Hispanic Areas by Nativity Status from Stepwise Logit Models

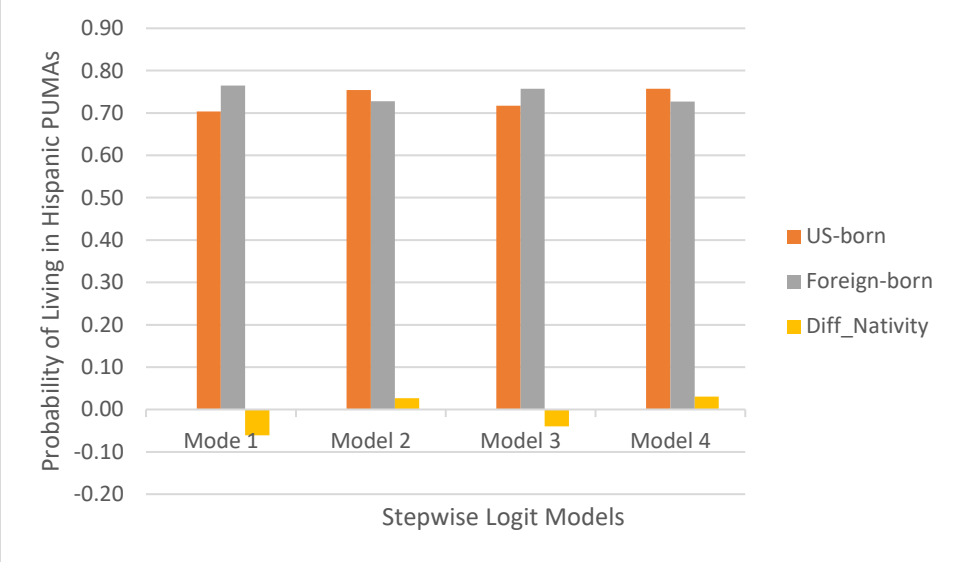


Figure 5.4 above presents the difference in the probability of living in the Hispanic areas comparing the foreign-born to native-born and controlling most of the independent variables' constant at the reference category or mean. We may notice that the nativity difference in the predicted probability across the models is quite similar to that of Asians (Figure 5.3). First, the null model (Model 1) shows that Hispanic immigrants have a higher probability (76.5%) of living in the ethnic areas compared to the US-born (70.4%) and this nativity difference is statistically significant.

Adding acculturation and socioeconomic factors significantly affect the nativity difference of living in the Hispanic areas, as presented in Models 2 and 3, in different directions. The probability charts in Model 2 indicate that acculturation (English skills)

strongly reduces the chance of living with co-ethnics for Hispanic immigrants, indicating residential assimilation. However, introducing SES indicators into Model 3 significantly increases the chance of living in the ethnic areas for Hispanics.

Model 4 charts the probability of living in Hispanic areas with the whole set of acculturation and socioeconomic factors. The Hispanic foreign-born show a lower probability of living with co-ethnic members compared to the US-born, given the same level of English proficiency and SES status. The stepwise logit model proves that English language skills, educational achievement, and income are strongly related to the probability of living in ethnic areas for Hispanics.

Summary of Assimilation Patterns

Using stepwise logistic regression techniques, the results are consistent with some aspects of the spatial assimilation model. I find strong support for Asians and Hispanics in translating linguistic assimilation into residential assimilation. Moreover, the results presented in Tables 5.2 and 5.4 points to more interesting facts.

In both Asian and Hispanic models, adding the English language proficiency measure significantly changes the impact (direction) of immigrant status. It proves that cultural assimilation, indicated by English language proficiency, is consistent with residential assimilation. Asian and Hispanic immigrants are able to translate cultural assimilation into the tendency of living in non-ethnic areas (the measure of residential assimilation used in my analysis). Moreover, for Asian groups, the measure of “race and ethnicity” points more at work. The multiracial Asians show a lower tendency of living in

the ethnic concentration areas compared to the single-race Asians, net of other characteristics.

I find economic indicators are strongly related to residential assimilation patterns but in opposite directions. For Hispanics, most of the socio-economic indicators strongly reduce the residential propensity of living in ethnic areas. Although there is quite a discrepancy between Asians and Hispanics in their educational attainment, the effects of education seem to be divergent: it pushes Asians to live close to co-ethnics, while it significantly reduces that likelihood for Hispanics.

By comparing Figures 5.3 and 5.4, I find similar nativity differences between Asians and Hispanics in their residential assimilation patterns. This finding posts significant implications on previous works of spatial assimilation. First, as most assimilation literature argues, the residential assimilation of Hispanic groups is more linear, and with improved English language ability and socioeconomic achievement, the native-born exhibit a higher propensity of living with Whites. The residential segregation patterns in chapter 4 also proved this argument as the US-born Hispanics are much less segregated from Whites compared to the immigrant groups. However, the analyses on residential assimilation reveal that US-born Hispanics show a higher tendency of living in ethnic areas compared to the immigrant counterparts, which is more consistent with segmented assimilation theory (Portes and Zhou 1993).

Although the descriptive results suggest that Hispanics are not exceptionally advantageous in English and labor market status, their residential choice is strongly affected by those assimilation indicators, which may play opposite effects on Asians. On one hand, the strong effects of the assimilation indicators (English ability, education, and

homeownership) in chapter 5 imply that the spatial assimilation model is not out of date for the current immigrant minorities. On the other hand, it tells us that the assimilation indicators need to be separately tested when predicting residential assimilation patterns for race/ethnic and nativity groups.

CHAPTER 6: INTERNAL MIGRATION PATTERNS

Chapter 6 examines the internal migration pattern for Asian and Hispanic nativity groups. The human capital perspective draws attention to how migration decisions are shaped by the individual- and place- level characteristics (Dunlevy 1980; Kritz and Nogle 1994). According to this approach, individuals consider the costs and benefits of migration and migrate if they think benefits outweigh costs. In addition to the "cost and benefit" approach, the social networks and ethnic concentration also impact the migration patterns among the foreign-born (Kritz and Nogle 1994). An abundance of research documents the importance of individual characteristics for migration, including age, education, employment, occupational and marital status (Greenwood 1997). Since human capital endowments differ by race and nativity, it can be reasoned that group differences in migration propensity should narrow as the human capital of natives and immigrants converge. Although classical assimilation theory suggests that immigrants initially may concentrate in immigrant communities but move to other areas as their human capital increases (Dunlevy 1980; Massey 1985), I ask the questions of how nativity groups respond differently to human capital in internal migration patterns.

I approach those questions in this chapter by comparing nativity differences in the inter-metropolitan migration of America's two largest ethnoracial groups (Asians and Hispanics). From a conceptual standpoint, internal migration is not only a core demographic process that determines the population change in size, but also a social indicator of ethnoracial integration in those places. Decisions about whether to migrate and how far afield to move are shaped by people's perceptions regarding whether they are welcome in different communities.

In chapter 6, I evaluate the dimension of individual human capital in shaping the internal migration of Asians and Hispanics in the 2013-2017 period. I examine how nativity groups differ in their migration propensity and then address two questions: (1), what is the nativity difference (US-born vs. foreign-born) among Asians and Hispanics in their internal migration propensity? (2), how individual-level indicators (demographics, English ability, and SES status) predict the internal probability of: *dispersed* geographically from traditional gateways into newer immigrant destinations; or *segregated* into more traditional gateways from newer settlement areas.

Chapter 6 uses data of the ACS IPUMS of 2013-2017 5-year estimates. In chapter 4, I have identified four metropolitan types followed by Singer's (2015) typology. Thus, I continue to incorporate the classification of metropolitan types into internal migration patterns. Similar to what I have argued for chapters 4 and 5 analyses, the sample is limited to all individuals who are self-reported as householders. Theoretical speaking, the household is probably the more appropriate unit of analysis because locational decisions are made at the household level. This analysis assumes that adult householders have the ability to make residential decisions for the whole household. This decision implies that the analysis gives more weight to the experience of larger households and households with children because there are more individuals involved in those households (Logan, Zhang, and Alba 2002). I include the individuals who are 16 – 65 years old as active labor force participants.

I select separate samples for Asians and Hispanics. To be consistent with chapter 5, I have identified Asians to be Non-Hispanic Asians (including Pacific Islanders, single race, and more than two races populations); and Hispanics include those of Mexican,

Puerto Ricans, Cuban, and other Hispanic origin groups. The ACS 2013-2017 IPUMS data provides information on the birthplace, which allows me to specify the nativity status for both groups. To iterate, the foreign-born are those whose birthplaces are outside of U.S. territory. The US-born populations have identified the birthplace to be either within the U.S. or the U.S. island territories (such as Puerto Rico or U.S. Virgin Islands).

Based on my sample selection, there are 202 metropolitan areas included in the analysis and I have classified them into these four types of immigrant gateways: (A) *old gateways*, (B) *traditional gateways*, (C) *new destinations*, and (D) *other destinations*. The detailed classification can be found in chapter 3. Figure 6.1 displays the geographic location of the four types of metropolitan typology on top of the state boundary. Among the 202 metros, eight of them are classified into old gateways, 24 are in the traditional gateways, 20 are in the new destinations, and 150 are classified into other destinations. We can also tell that, according to Figure 6.1, the old gateways are located in the upper northeast area, such as the states of New York, Pennsylvania, Illinois, and Missouri. As immigrants grow tremendously in the past decades, the immigrant concentrated areas are spreading toward the West, the South, and some lower areas in the Midwest.

Based on the individual householder's metropolitan ID and the classification of metropolitan typology, I defined the direction of internal migration as three mutually exclusive categories: (1) *dispersed* are the migration from an older metro typology to a newer one (for instance, A-D). However, the migration behaviors from typology B "traditional gateways" may be suspicious. By looking at the map, one may argue that typology A and B are all traditional immigrant gateways, which include the metro areas in California, New York, Illinois, Texas, and Florida. I argue that, based on the foreign-

born population count of 2013-2017 5-year estimates (Table 6.1 below), it is reasonable to consider all migration from topology B as *dispersed*. Thus dispersed migration will include the following: B-A/C/D, A-C/D, and C-D; (2) *segregated* are the migration behaviors from a newer metro to an older one, in this case including all of the following migrations: A/C/D-B, and C/D-A, and D-C. (3) *other migration*, which includes the migrations between the same type of metros (for instance, A-A or B-B).

Figure 6.1 The Selected 202 Metropolitan Typology Locations

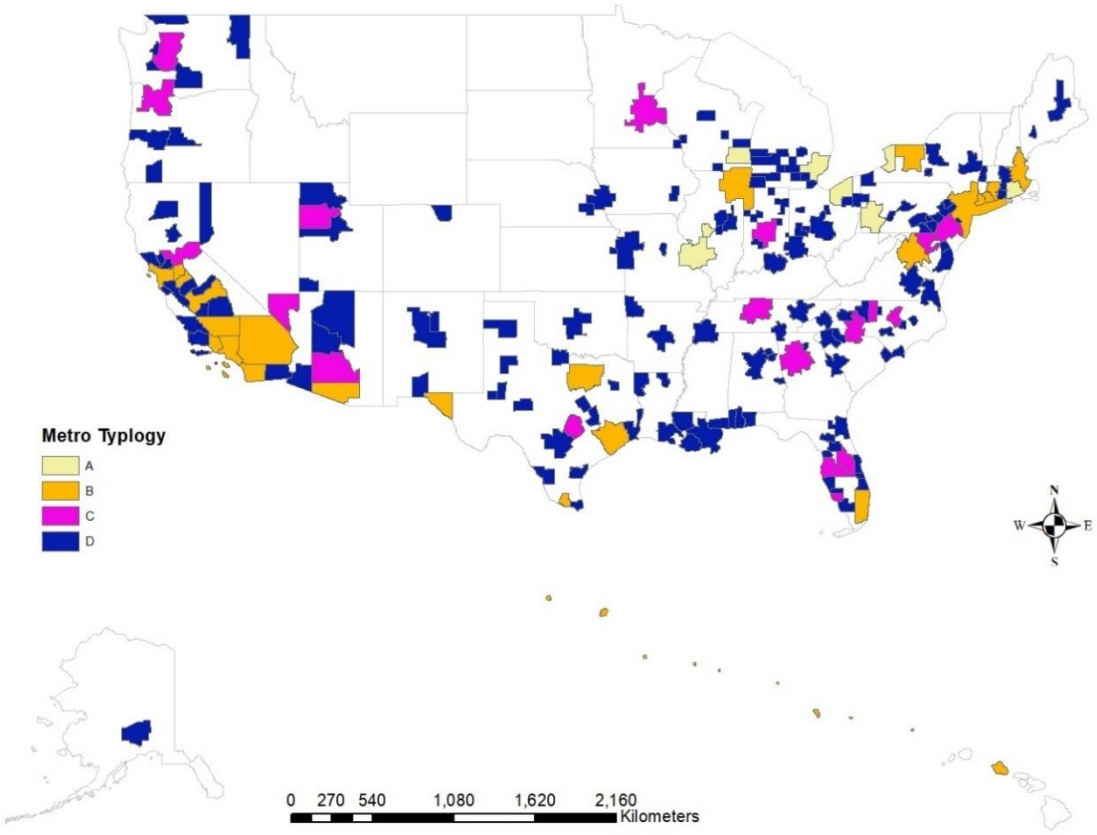


Table 6.1 Total Foreign-born Population of 2013-2017 Estimates for Typology A and B

Metro Names	Typology	Total Foreign-born
St. Louis, MO-IL	A	128,268
Springfield, IL	A	6,137
Pittsburgh, PA	A	88,293
Providence-Warwick, RI-MA	A	215,109
Detroit-Warren-Dearborn, MI	A	413,469
Milwaukee-Waukesha-West Allis, WI	A	111,923
Buffalo-Cheektowaga-Niagara Falls, NY	A	71,618
Cleveland-Elyria, OH	A	118,540
Rochester, NY	B	75,085
Riverside-San Bernardino-Ontario, CA	B	956,427
San Francisco-Oakland-Hayward, CA	B	1,413,878
San Diego-Carlsbad, CA	B	774,362
Stockton-Lodi, CA	B	168,377
Tucson, AZ	B	129,234
Urban Honolulu, HI	B	192,322
Washington-Arlington-Alexandria, DC-VA-MD-WV	B	1,377,353
New Haven-Milford, CT	B	103,028
New York-Newark-Jersey City, NY-NJ-PA	B	5,825,572
Oxnard-Thousand Oaks-Ventura, CA	B	190,782
Los Angeles-Long Beach-Anaheim, CA	B	4,433,588
McAllen-Edinburg-Mission, TX	B	229,053
Miami-Fort Lauderdale-West Palm Beach, FL	B	2,406,913
Modesto, CA	B	110,729
El Paso, TX	B	213,715
Fresno, CA	B	204,366
Hartford-West Hartford-East Hartford, CT	B	159,687
Houston-The Woodlands-Sugar Land, TX	B	1,538,097
Bakersfield, CA	B	175,287
Boston-Cambridge-Newton, MA-NH	B	866,821
Bridgeport-Stamford-Norwalk, CT	B	205,984
Chicago-Naperville-Elgin, IL-IN-WI	B	1,689,797
Dallas-Fort Worth-Arlington, TX	B	1,285,060

Nativity Difference among Asians in Internal Migration

In the first section, I present the stepwise multinomial logistic regression analysis for the Asian sample. I specify the multinomial regression based on the nominal outcome variable, which is the internal migration type. It has a value of 0 (other migration), a value of 1 (dispersed), and a value of 2 (segregated). The independent variables are the set of individual-level human capital indicators that measure demographic characters, English ability, and SES status. I also include the variable of "school status" to monitor the impact of current school status on the migration. I first predict the likelihood of the dependent variable with all of the explanatory variables in the full model. Then, I add two interaction products (nativity X English and nativity X education) into the second model to see if the nativity effects in migration tendency will change under different conditions of English ability and education levels.

Table 6.2 Migration Behaviors over the Past 12-month among Asian Nativity Groups

Migration Types	**Total migrants**		**Native-born**		**Foreign-born**	
	N	*%*	*N*	*%*	*N*	*%*
Dispersed	2,299	7.94	758	8.58	1,541	7.66
Segregated	2,416	8.34	702	7.94	1,714	8.52
Other Migration	24,250	83.72	7,379	83.48	16,871	83.83

Note: The analysis of migration behavior is restricted to migrants in the labor force.

First, Table 6.2 shows the descriptive statistics of migration patterns by nativity groups (n=28,965). From Table 6.2, we can see that among Asians, dispersed migration has the least cases, which only includes 7.9%. The percentage of segregated migration is slightly higher than that of the dispersed. The majority of the migration (83.7%) is classified into the category of other migration.

In addition, Table 6.2 also shows the migration percentages by nativity groups. First, among the native-born Asians, the percentage of dispersed migration (8.9%) is higher than that of the segregated (7.9%). Among the foreign-born Asians, however, the percentage of segregated (8.5%) is relatively higher than that of the dispersed (7.7%). From the descriptive results, we may sense that Asian immigrants are more favorable to segregated migration, meaning that they have a higher tendency of moving into traditional immigrant metros.

Table 6.3 Descriptive Statistics of Migration Types by Detailed Typology Classification for Asians

Migration Types	Category	*N*	%
Dispersed			
	B-A	129	
	A-C	82	
	A-D	100	
	B-C	881	
	B-D	751	
	C-D	356	
Sub-total		*2,170*	*7.94*
Segregated			
	A-B	145	
	C-A	42	
	C-B	628	
	D-A	120	
	D-B	994	
	D-C	487	
Sub-total		*2,416*	*8.34*
Other migration			
	A-A	648	
	B-B	14,800	
	C-C	4,795	
	D-D	4,007	
Sub-total		*24,250*	*83.72*

Table 6.3 presents the migration behaviors among the metropolitan typology for the Asian sample. The first migration pattern is dispersed. It is named as dispersed because the person has moved from a comparatively older/established metro to a newer one. For instance, if the individual has moved from Francisco-Oakland-Hayward, CA (B) to Washoe County, Nevada (D), this type of migration (B-D) will be considered as dispersed as the typology B is relatively "older" (in the time of attracting high volume of immigrants and high foreign-born population share) than the typology C. Among the dispersed, majority of the cases are the moves from typology B to C/D and C to D.

The migration pattern of segregation is defined as the opposite direction of the residential move of dispersed. The segregated are those migrations from a comparatively "newer metro" to an "older" one, for instance, from Santa Maria-Santa Barbara, CA (D) to Orange County, California (B). Within this migration category, almost half of them are the residential moves from typology D to B. Lastly, among all Asians, 83.7% of them are classified in the category of other migration, which includes those who either stayed in the same metropolitan area (not moved), or moved between the same type of metropolitan areas (for instance: A-A). In other migration category, there are 648 cases moved between typology A-A; 14,800 moved between typology B-B; 4,795 cases moved from typology C-C; 4,007 cases from typology D-D. Moreover, among those migrations, there are 21,704 of them have stayed within the same metro areas (the metropolitan ID of the previous year is the same as the current metro ID). 2,546 cases have moved over the past one year, but within the same metropolitan typology (A-A, B-B, C-C, and D-D), so I classify both into other migration category.

Table 6.4 Descriptive Statistics of Individual-level Covariates (in Percentage) of Asians by Migration Types

Variables	**Migration types**		
	Dispersed	Segregated	Other migration
Nativity status			
US-born	31.8	28.3	29.8
Foreign-born	68.2	71.7	70.2
Asian category			
Singe-race	84.0	86.1	83.5
Mixed-races	12.0	11.6	13.1
Mixed-ethnicity	4.0	2.3	3.4
Median age	32	32	34
Gender			
Male	62.4	61.0	59.0
Female	37.6	39.0	41.0
Marital status			
Married	52.8	53.0	55.1
Not married	47.2	47.0	44.9
English proficiency			
No English	4.3	4.7	7.5
Yes, very well	66.2	62.7	60.6
Yes, only English	29.5	32.7	31.9
Educational attainment			
Less than high school	3.9	2.8	5.1
High school	6.4	5.9	9.4
Some college	16.1	11.3	21.4
Bachelor	32.7	36.1	33.5
Advanced	40.8	43.9	30.5
Homeownership			
Rent	19.2	18.7	32.3
Own	80.8	81.3	67.7
Class of worker			
Not in labor force	3.8	4.2	4.3
Self-employed	5.2	4.4	6.9
Works for wages	91.0	91.4	88.3
School status			
Not in school	83.8	86.1	85.6
In school	16.2	13.9	14.4
Median family income ($)	65,154	64,200	66,840

Source: ACS 2013-2017 5-year IPUMS.

Table 6.4 presents the weighted percentages of the sample and individual covariates by the migration types. The analysis focuses on the dispersed and segregated migration (other migration as the referent group). Among the two migration types in comparison, immigrant groups are always outnumbered the US-born counterparts, especially in the segregated migration. Among the "Asian category," those with multiple races and ethnicity have a relatively higher percentage in the dispersed migration. By comparing the median age, we can tell that people who chose to disperse, or segregate are relatively younger than the reference outcome. Among the three migration types, the male group outnumbered its female counterparts, especially in the dispersed migration.

In the profile of 2013-2017 ACS data, the Asians who do not speak English at all have less than 8% across the three migration types. However, by comparing Asians who speak only English among the migration types, the segregated migration has the highest percentage (32.7%). Asian groups in general have high educational achievements, especially in the current wave of foreign-born groups (Appendix C, Table 3.2). Table 6.4 shows that, by comparing the educational levels across migration types, people who own graduate degrees have the highest percentage among the three migration types, especially those who chose to segregate into more traditional immigrant metros (43.9%).

Homeownership is generally seen as a key indicator of socioeconomic status, which is highly correlated to their residential assimilation pattern, as shown in chapter 5. As Logan and Alba (1993) argued, homeownership is a virtual prerequisite for living in many high-status suburban communities. When Iceland and Scopilliti (2008) examined the segregation level among Asians and Whites, they find that greater English fluency, homeownership levels, and income among Asians are associated with lower levels of

Asian-White segregation. Table 6.4 shows that the homeowners have the highest percentage in the segregated migration. Surprisingly, segregated migration also has the lowest median family income among the three migration types.

Table 6.5 presents the multinomial model results that include human capital covariates and the sample of foreign- and native-born Asians. The total number of observations in the Asian model is 28,965. The likelihood ratio chi-square tests the difference between the starting and ending log-likelihood. The likelihood ratio chi-square for Model 1 is 896.25 without interaction effects and 913.770 for Model 2, which indicates increased significance (slightly) with the adding interaction effects for the model explanation. In this case, the probability of obtaining this chi-square statistic for each model indicates that the independent variables, taken together, evidently affect the dependent variable. This is the probability of obtaining the chi-square statistic given that the null hypothesis is true. Since the p-value is less than .001 (Prob > chi2 = 0.0000) in model 1 and 2, which can be compared to a critical value, either .05 or .01, it denotes that both models are statistically significant.

Table 6.5 Multinomial Logit Regressions (Odds Ratios) of Internal Migration by Asian Nativity

Variables	Model 1		Model 2	
	Dis/ Other Mig.	Seg/ Other Mig.	Dis/ Other Mig.	Seg/ Other Mig.
Nativity status (ref=US-born)	0.89	1.06	0.60	0.53
Asian category (ref=single-race)				
Multiracial Asians	0.89	1.00	0.93	0.98
Multiethnic Asians	1.14	0.88	1.16	0.87
Age	1.00	0.99***	1.00	0.99***
Gender (ref=male)	0.91	0.93	0.91*	0.93
Marital status (ref=married)	0.95	1.03	0.93	1.03
English proficiency (ref=no English)				
Yes, very well	1.18	1.32*	0.99	0.78
Yes, only English	1.30*	1.31*	0.89	0.81
Education attainment (ref< HS)				
High school	0.85	0.82	0.76	0.69
Some college	0.91	0.77	0.87	0.73
Bachelor's	1.10	1.57**	1.07	1.28
Advanced	1.66***	2.18***	1.63	1.79
Class of Worker (ref=not in labor force)				
Self-employed	0.88	0.71*	0.87	0.71*
Works for wages	1.05	0.91	1.04	0.91
Homeownership (ref=rent)	2.05***	1.89	2.05***	1.89
$Family income	1.00	0.98*	1.00	0.98*
School status (ref=not in school)	1.04	0.86*	1.03	0.85*
2nd-order nativity ·English interactions				
Foreign-born ·speak well			1.19	1.66
Foreign-born ·only English			1.73	1.62
2nd-order nativity ·Edu interactions				
Foreign-born ·High school			1.16	1.23
Foreign-born ·Some college			1.05	0.97
Foreign-born ·Bachelor's			1.03	1.28
Foreign-born ·Advanced			1.01	1.26
Cons	0.05***	0.06***	0.07***	0.11***
N	28,965		28,965	
Log likelihood	-15686.475		-15677.711	
LR chi2	896.25		913.770	
Notes: *p < .05; **p < .01; ***p<.001. Base outcome=other migration (0)				

Model 1 tests the nativity status, race and ethnicity, and human capital variables (English ability and SES status) on the migration patterns for the Asian groups. Model 2 adds the 2nd-order interaction effects of nativity status X English proficiency and nativity status X educational attainment. The predicted outcomes are two independent migrations: dispersed or segregated, and the referent outcome is other migration.

We first look at results for the dispersed relative to other migration (the left column in model 1). For Asian immigrants relative to the US-born, the relative risk for being dispersed to other migration would be expected to decrease by a factor of .89, given the other variables are held constant. It indicates that Asian immigrants are less likely to fall into the category of dispersed if given the same level of human capital as US-born groups. However, this effect is not significant at any p-value.

The variable "Asian category" includes single-race, mixed-races, and mixed-ethnicities. For mixed-ethnicities Asians to single-race, the relative risk of dispersed to other migration is expected to increase by a factor of 1.14. Model 1 also observed mixed-races Asians are less likely to disperse relative to other migration, but none of these effects is significant.

The demographic indicators of age, gender, and marital status are not significant in predicting the dispersed migration relative to other migration for Asians. Moreover, English language ability and education are not strong factors, except for those who speak only English and hold advanced degrees. For Asians speaking only English to no English at all, the relative risk of dispersed to other migration increases by a factor of 1.3, which is significant at a p-value of .05. So, it is safe to argue that if Asians speak only English at home, the chance is much higher for them to disperse from traditional immigrant metros.

English language ability in this case positively affects the dispersed migration. Similarly, for Asians with advanced degrees to less than high school graduates, the relative risk for being dispersed would be expected to increase by a factor of 1.66. This effect is significant at a p-value of .001. The self-employment status does not have any significant effects. However, homeownership is a significant factor, because for homeowners, the relative risk for being dispersed to other migration increases by a factor of 2.05. This effect is significant at a p-value of .001.

The second column in Model 1 compares the relative risk of segregation relative to other migration on the same group of human capital indicators. Same with the dispersed migration, there are no significant effects on immigrant status and the "Asian category" variable. In general, we can say that the older the Asians, the less likely they choose the segregated migration. English language ability seems to be a significant but less robust factor. In general, for Asians who speak English well, the relative risk of segregation also increases. Although both odds ratios are significant at a p-value of .05.

Educational attainment is also significant in predicting the relative odds of falling into the segregated migration to other migration, especially for those who have bachelor's or above degrees. The relative risk for being segregated increases by factors of 1.57 and 2.18 for bachelor's and advanced degrees. More generally, Asians who are highly educated are even more likely to move into traditional immigrant metros, given the other human capital at the same levels. For the self-employed to those who are active in the labor market, the relative risk for being segregated to other migration would be expected to decrease by a factor of 0.71. This effect is only significant at a p-value of .05. This effect indicates that self-employed Asians are less likely to move to traditional immigrant

metros given the other covariates held constant. The effect of family income is negative, as family income increases by every $20,000, the relative risk for segregation decreases by .98. For Asians who are currently in school, the relative risk would decrease by a factor of .86.

Now, we turn to the results of Model 2, which adds the 2nd-order interaction terms of "nativity status X English ability" and "nativity status X education." In Model 2, most of the independent variables are not significant other than "age," "class of worker," "homeownership," "family income," and "school status." The impact of age remains the same as what we have seen in Model 1.

In Model 2, the main effects of English ability and education are not significant. Although the interaction effects are not significant in Model 2, we cannot say that English and education do not contribute to the migration patterns. As the descriptive tables (See Appendix C, Table 3.2) have shown, the variations of English proficiency and educations levels between foreign-born and US-born Asians are so small, the interaction effects may explain away the variance on the nativity difference.

Since education strongly impacts the relative risk of segregated migration in Model 1, it is reasonable to chart the predicted probability of different migration patterns at different levels of education. Figures 6.2 – 6.4 are the predicted probability of three migration patterns when conditioned by values of most of the independent variables held constant at the mean, only allowing the education levels to vary. Figure 6.2 shows that, for high school graduates or less, the probability of dispersed slightly decreases, however, there is only a small proportion of Asians with high school or less degree among the dispersed migration (Table 6.2), thus this effect is trivial. As the education level increases

from “some college,” the probability of dispersed also increases. Figure 6.3 shows that Asians with some college degrees are least likely to choose segregated migration, but those with advanced degrees are the most likely to do so. Figure 6.4 presents that when educational attainment is at the level of “some college,” Asians are predicted to have the highest tendency of choosing other migration.

Figure 6.2 The Predicted Probability of *Dispersed* by Education

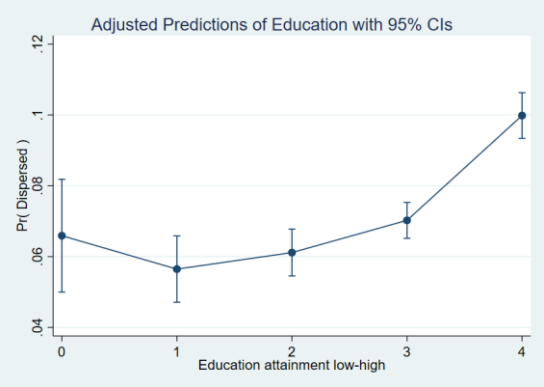


Figure 6.3 The Predicted Probability of *Segregated* by Education

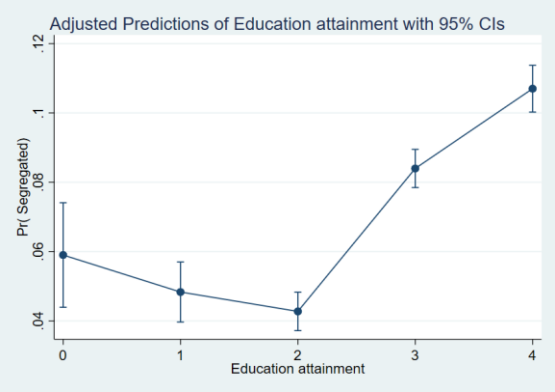
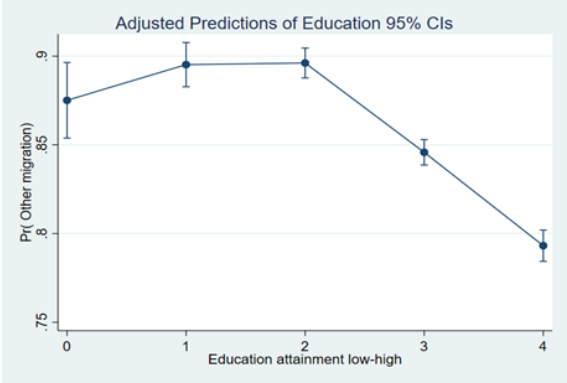


Figure 6.4 The Predicted Probability of *Other Migration* by Education



Nativity Difference among Hispanics in Internal Migration

In this section, I use the same model specification to predict different migration patterns only for Hispanics. Since Hispanics significantly differ from Asians in human capital characters, running separate analysis allows me to compare horizontally how the two ethnoracial groups vary in their internal migrations by nativity status and individual-level human capital factors.

Table 6.6 Migration Behaviors over the Past 12-month among Hispanic Nativity Groups

Migration Types	**Total migrants**		**Native-born**		**Foreign-born**	
	N	*%*	*N*	*%*	*N*	*%*
Dispersed	2,816	5.62	1,855	6.24	961	4.71
Segregated	2,460	4.91	1,675	5.63	785	3.84
Other	44,874	89.48	26,201	88.13	18,673	91.45

Note: The analysis of migration behavior is restricted to migrants in the labor force.

Compared to the Asian nativity groups, the migration patterns among Hispanics are similar but slightly different. By comparing the first two migration behaviors, Table 6.6 shows that the dispersed migration among the overall Hispanics has a relatively higher percentage (5.6%) than that of segregated migration (4.9%). A similar pattern has been observed for the nativity groups: both foreign-born and native-born Hispanics have higher percentages in the dispersed migration.

Table 6.7 Descriptive Statistics of Migration Types by Detailed Typology Classification for Hispanics

Migration Types	Category	*N*	%
Dispersed			
	B-A	83	
	A-C	46	
	A-D	45	
	B-C	1,062	
	B-D	1,158	
	C-D	422	
Sub-total		*2,816*	*5.62*
Segregated			
	A-B	49	
	C-A	32	
	C-B	561	
	D-A	49	
	D-B	1,089	
	D-C	680	
Sub-total		*2,460*	*4.91*
Other migration			
	A-A	757	
	B-B	26,416	
	C-C	8,919	
	D-D	8,782	
Sub-total		*44,874*	*89.48*

Table 6.7 shows the detailed number of migrants by destination typology. Among the dispersed, the numbers of migrants from topology B to C/D are almost 80 percent of the total. In contrast, the moves from A to /C/D only have 91 cases. In the migration category of segregated, approximately half of the cases has moved from topology D-B. However, only 32 migrations are from topology C-A. It seems that the internal migration from B to C/D is the most popular for the dispersed, whereas migration from D to B is the most pronounced for the segregated tendency. The Asian sample also shows a similar tendency among the dispersed and segregated migration.

Table 6.8 Descriptive Statistics of Individual-level Covariates (in Percentage) of Hispanics

Variables	**Migration types**		
	Dispersed	Segregated	Other migration
Nativity status			
Native-born	63.2	66.3	56.8
Foreign-born	36.8	33.7	43.2
Median age	33	32	34
Gender			
Male	56.6	54.5	49.4
Female	43.4	45.5	50.7
Marital status			
Married	44.0	43.0	46.2
Not married	56.0	57.0	53.9
English proficiency			
No English	11.0	11.4	17.4
Yes, very well	56.4	52.3	54.7
Yes, only English	32.6	36.3	28.0
Educational attainment			
Less than high school	15.7	15.6	23.8
High school graduates	21.4	17.8	25.9
Some college	35.1	33.7	32.6
4-year college, bachelor	18.3	22.3	12.4
Advanced	9.4	10.7	5.3
Homeownership			
Own	18.5	15.2	19.8
Rent	81.5	84.8	80.2
Class of worker			
Not in labor force	7.1	7.1	7.3
Self-employed	5.3	4.7	7.4
Works for wages	87.7	88.2	85.4
School status			
Not in school	85.7	85.8	89.5
In school	14.3	14.2	10.5
Median family income ($)	35,000	39,000	36,240

Source: 2013-2017 ACS 5-year IPUMS

Table 6.8 shows the weighted percentages of the Hispanic sample and the individual covariates. The sample size is 50,150, with 57.6% native-born and 42.4% foreign-born (Appendix, Table 3.3). Different from the Asian sample that contains a larger proportion of foreign-born, the Hispanic immigrants are outnumbered by the native-born counterparts. Among the three migration types, native-born Hispanics are above the average, especially in the segregated migration.

The human capital endowments vary significantly between Asians and Hispanics if we compare the English proficiency and educational achievement across groups (see Appendix C, Tables 3.2 and 3.3). The Asian nativity groups are generally advantaged than Hispanics in English proficiency and SES status (e.g. educational levels and median family income). It seems that, among the three migration types, the groups with moderate English proficiency (speak very well) are above the average. Moreover, Hispanics who speak only English have the highest percentage (about 36%) in the segregated migration.

Among Asians, the people with bachelor's and graduate degrees are above the average among the three migration types, however, it is not the case for Hispanics. Among Hispanics, people with some college or less degree are above the average. The Hispanic groups have quite lower homeownership rates among the dispersed and segregated migration, especially in the latter. The self-employed Hispanics have the least cases among the three migration types, especially in the segregated migration. Compared to Asians, the median family income of Hispanics is much lower (about $26,000 less), which indicates a lower level of human capital stock among Hispanics.

Table 6.9 Multinomial Logit Regressions (Odds Ratios) of Internal Migration by Hispanic Nativity

Variables	Model 1		Model 2	
	Dis/ Other Mig.	Seg/ Other Mig.	Dis/ Other Mig.	Seg/ Other Mig.
Nativity status (ref=US-born)	0.87**	0.83***	0.60**	0.61*
Age	1.00*	1.00	1.00*	1.00
Gender (ref=male)	0.74***	0.73***	0.74	0.73***
Marital status (ref=married)	0.93	0.99	0.93	0.99
English proficiency (ref=no English)				
Yes, very well	1.17*	1.05	0.80	0.81
Yes, only English	1.29**	1.29**	0.85	0.99
Education attainment (ref< HS)				
High school	1.25**	0.99	1.28*	0.97
Some college	1.56***	1.32***	1.71***	1.28*
Bachelor's	2.20***	2.37***	2.29***	2.37***
Advanced	2.65***	2.56***	2.70***	2.39***
Class of Worker (ref=not in labor force)				
Self-employed	0.66***	0.62***	0.66***	0.63***
Works for wages	0.83*	0.83*	0.83*	0.84*
Homeownership (ref=own)	1.32***	1.66***	1.32***	1.66***
$Family income	0.97**	1.03*	0.97**	1.03*
School status (ref=not in school)	1.18***	1.28***	1.25***	1.29***
2nd-order nativity·English interactions				
Foreign-born· speak well			1.55*	1.32
Foreign-born· only English			2.23***	1.48
2nd-order nativity·Edu interactions				
Foreign-born ·HS			0.97	1.02
Foreign-born ·College			0.77	1.07
Foreign-born ·Bachelor's			0.95	0.95
Foreign-born ·Advanced			1.00	1.20
Cons	0.04***	0.03***	0.05***	0.04***
N=50,150				
Log-likelihood	-20049.65		-20037.73	
LR chi2	928.66		952.50	

Notes: *p < .05; **p < .01; ***p<.001. Base outcome=*other migration*

Table 6.9 shows the multinomial model results that include nativity status, demographics, and human capital covariates. The total number of observations in the Hispanic model is 50,150. The likelihood ratio chi-square tests the difference between the starting and ending log-likelihood. The likelihood ratio chi-square for Model 1 is 928.66 without interaction effects and 952.50 for Model 2, which indicates increased significance after adding interaction effects for the model explanation. In the two regression models, the probability of obtaining this chi-square statistic for each model indicates that the independent variables, taken together, evidently affect the dependent variable.

Table 6.9 proves that nativity status is a significant indicator in predicting the migration patterns for Hispanics, whereas it is not the case for Asian nativity groups. In Model 1, for foreign-born relative to US-born, the relative risk of dispersed would be expected to decrease by a factor of .87, given the other IVs held constant. This nativity status effect is significant at a p-value of .01.

In addition to nativity status, most of the demographics and human capital covariates show significant effects on predicting the relative odds of dispersed to other migration. For instance, as age increases by one year, the relative ratio for being dispersed to other migration would increase by a factor of 1.00. The females are less likely to fall into the dispersed migration compared to males. English proficiency and educational attainment all show positive impacts on the prediction of relative ratio for being dispersed to other migration. It seems that the greater the English ability, the more likely Hispanics choose to disperse relative to other migration. Education has a similar

impact, as education level increases, the relative risk ratio of dispersed to other migration also increases.

For the self-employed to the group of not active in the labor force, the relative ratio for being dispersed would be expected to decrease by a factor of .66. This effect is significant at a p-value of .001. Homeownership is a significant indicator as a measure of labor market success. For homeowners to renters, the relative likelihood of dispersed to other migration increases by a factor of 1.32, which is significant at a p-value of .001. As family income increases by every $20,000, the relative risk for being dispersed would be expected to decrease by a factor of .97. For those who are currently in school, the relative likelihood of dispersion increases by a factor of 1.18 (p=.001).

The second column in Model 1 shows the odds ratio of falling in the outcome of segregation relative to other migration. I notice that the individual covariates have similar impacts in direction and magnitude (at least in some IVs) compared to the relative risk of dispersed. For foreign-born relative to US-born, the relative risk for segregated to other migration would be expected to decrease by a factor of 0.83, which is also significant at a p-value of .001. This indicates that the foreign-born Hispanics are less likely to segregate in traditional immigrant metros compared to the US-born groups, and this effect is stronger than dispersion.

In addition to the demographic covariates, English proficiency and education both positively impact the relative likelihood of segregation. For instance, for those who speak only English, the relative risk of being segregated would be expected to increase by a factor of 1.29. It is significant at a p-value of .01. For any increase in educational achievement, the relative likelihood of being segregated to other migration also increases.

The economic indicators, such as the class of worker, homeownership, and family income are significant in predicting the relative likelihood of segregation to other migration. For instance, for homeowners to renters, the relative risk for being segregated would be expected to increase by a factor of 1.66, which is significant at a p-value of .001. Family income places a positive effect on segregated migration, and as family income increases by every $20,000, the relative risk of segregation increases by a factor of 1.03. Therefore, for Hispanics, the higher the family income, the more likely they choose to move into traditional immigrant metro areas, although this effect is weakly significant at a p-value of .05.

Model 2 contains the 2nd-order interaction terms of nativity status X English and nativity status X education. The Likelihood Ratio (LR) Chi-Square, indicated in the last row of Table 6.7, shows that with the two interaction terms, Model 2 has better explanatory power than Model 1. The key variable of interest, nativity status is still significant but less robust in predicting the difference in migration patterns. The main effects of education are still significant and similar to Model 1. The main effects of English proficiency are not significant in Model 2, but the interaction terms show strong and positive impacts on the relative likelihood of dispersion for foreign-born Hispanics, especially those who speak only English. This result implies that for Hispanic nativity groups, the migration tendency of dispersion is strongly affected by different levels of English proficiency. The interaction effect of nativity status with English proficiency exerts a stronger effect on foreign-born Hispanics who speak English only.

Figure 6.5 The Predicted Probability of *Dispersed* by Nativity Status and English Proficiency

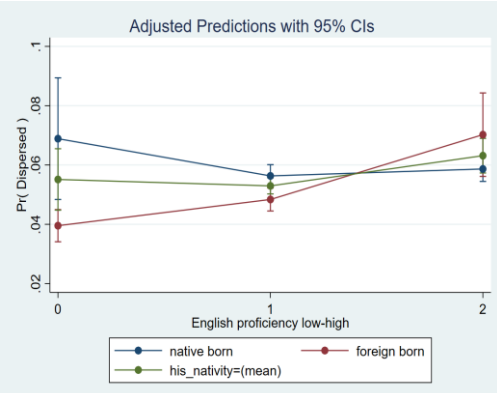


Figure 6.6 The Predicted Probability of *Segregated* by Nativity Status and English Proficiency

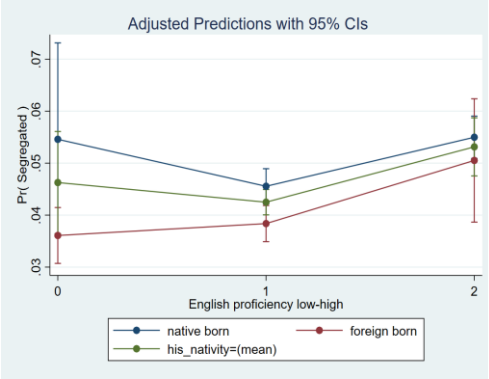
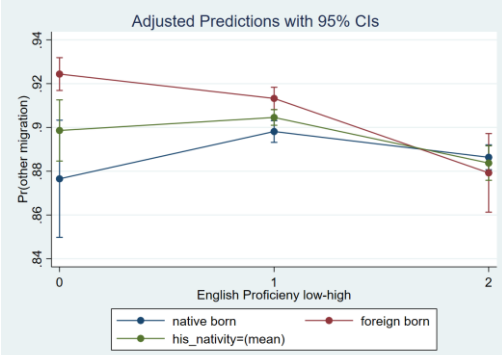


Figure 6.7 The Predicted Probability of *Other Migration* by Nativity Status and English Proficiency



Figures 6.5 – 6.7 show the adjusted predictions for each migration tendency based on the indicators of nativity status and English proficiency for Hispanics by manipulating other IVs' values at the mean in Model 2. As I have discussed in the above text, the nativity effects in predicting the migration pattern vary by English language proficiency (indicated by the interaction of "Foreign-born·speak well" and "Foreign-born·only English"). Figure 6.5 charts this probability for being dispersed for Hispanic nativity groups when conditioned on different levels of English ability (speak no English, speak very well, and speak only English). It proves that for foreign-born Hispanics, English proficiency significantly increases the probability of dispersed as predicted by the Model 2 results. However, the US-born groups are less likely to disperse when English proficiency increases.

Summary of Internal Migration Patterns

Chapter 6 began the analysis by asking whether Asian and Hispanic immigrants differ from their US-born counterparts in internal migration patterns, and how human capital indicators impact their efforts to make their way in American society. The findings of chapter 6 basically point out that Asians and Hispanics show large differences in responding to the individual human capital characters in affecting their internal migration patterns. In general, the Hispanic nativity groups respond stronger to the effects of human capital factors (demographics, English ability, and education) compared to Asians when they migrate at metropolitan levels.

At first blush, only the Hispanic nativity groups show a significant difference in the migration tendencies of dispersed or segregated. This nativity difference is the strongest at the relative risk of segregation, meaning that Hispanic immigrants are less

likely to move to traditional immigrant metros than their US-born counterparts. In comparison, Asian nativity groups do not show an obvious difference in internal migration patterns when controlling for other explanatory indicators.

English language proficiency is considered to be an indicator of cultural assimilation, which is strongly linked with spatial assimilation for immigrants. Chapter 4 has demonstrated that English proficiency exhibits positive impacts on residential assimilation for both Asians and Hispanics, and as the English ability increases, the chance of living in ethnic concentration areas decreases. However, I found a weaker influence of English ability on the internal dispersion or segregation for the Asian groups. English ability places a stronger impact on Hispanics, especially for immigrant groups. Model 2 with interaction terms shows that Hispanic immigrants who speak only English have a stronger tendency of dispersing from traditional immigrant metros.

Education as one of the most crucial indicators of socioeconomic success has shown its influence on the internal migration for Asians and Hispanics, especially on the latter. For the Asian groups, only the bachelor's or graduate degrees have significant effects. Based on the predicted probability charts (Figure 6.2 – 6.4), we can tell that Asians with advanced degrees are the most likely to move into traditional immigrant metros (segregated). For Hispanic groups, all education levels have significant influences on the dispersed or segregated migration, but the interaction effects between nativity status and education have no explanatory power to the model prediction. The strong significance of the main effects on educational achievement indicates that Hispanics with advanced degrees are most likely to disperse from traditional immigrant metros, which lends support for the spatial assimilation model. In contrast, the Asian groups show the

opposite tendency because their high education attainment pushes them to move into traditional immigrant metros.

I assessed economic dimensions by examining indicators of homeownership, family income, and self-employment. Of these factors, homeownership is also a strong determinant of dispersion for Asians, and "owning a home" gives them a stronger "push" effect of dispersing from traditional immigrant metros. This result is significant even after adding the interaction terms into the model. This finding is consistent with the fact that homeownership among Asians is associated with lower levels of Asian-White segregation (Iceland and Scopilliti 2008). Although the effect of English proficiency is weaker and less robust in the Asian model, the greater homeownership levels prove that with higher socioeconomic ability, Asians would choose to migrate to other new settlement areas. The influence of family income is much weaker, and in general, the increased family income is negatively associated with the likelihood of segregation for Asians. This summary proves the classic spatial assimilation theory, and with high SES stability, Asians show a tendency of dispersing away from traditional immigrant gateways.

On the other hand, homeownership contributes more to the segregation of Hispanics. The upward SES mobility guarantees Hispanics greater tendencies of moving into traditional immigrant metros where maybe a large presence of co-ethnics. The negative effect of self-employment on the odds of dispersion or segregation, which were found for the Hispanic groups, weakly affects the Asians. For Hispanic groups, self-employment negatively impacts the relative likelihood of segregation.

This analysis shows that Asian US-born and immigrant groups do not differ from each other in either dispersed or segregated migration, given the same level of human capital resources. The individual human capital indicators totally explained away the difference in the migration patterns for Asian nativity groups. On one hand, Asians are more responsive to choose traditional gateways, especially among the most highly-educated groups. On the other hand, homeownership increases the likelihood of dispersion. For Hispanic groups, the immigrants significantly differ from US-born counterparts in dispersion and segregation, and this nativity effect is somewhat stronger on segregation.

The findings from the above texts prove that the human capital indicators (life-course variables, English language proficiency, and socioeconomic factors) are divergent in predicting residential mobility and its relation to spatial assimilation. From the spatial assimilation perspective, greater English proficiency and educational achievement are all related to a higher tendency of dispersing from immigrant enclaves. However, this pattern only finds true among the Hispanics with most educated and greater English proficiency. Socioeconomically speaking, homeownership, family income, and self-employment all related to the dispersion, but in different directions. The differences across Asian and Hispanic groups in human capital and the implications of those differences for internal migration suggest that groups may follow different paths of assimilation. Further work is needed to clarify these processes more fully.

The next chapter discusses the relevance of these findings in light of prior research and the theoretical frameworks that guide the analyses. Project contributions, limitations, and directions for future research will also be thoroughly discussed.

CHAPTER 7: DISCUSSION AND CONCLUSION

Discussion

The central purpose of the research presented in prior three chapters was to document and further understand the residential patterns of Asians and Hispanics residing in metropolitan areas in the United States. Chapter 4 uses the 2013-2017 American Community Survey (ACS) 5-year estimates (tract- and metropolitan-level) to measure the Asian-White and Hispanic-White residential segregation by nativity status and metropolitan typology. It aims to test the spatial assimilation model and resurgent ethnicity frameworks. Chapters 5 and 6 rely on the 2013-2017 Public Use Microdata Sample (PUMS) 5-year estimates. The purpose is to examine the nativity difference in residential assimilation and internal migration patterns. Similarly, the spatial assimilation model, segmented assimilation, and resurgent ethnicity frameworks all find some evidence of support from analyses in chapters 4, 5 and 6.

Results presented in chapter 4 show that Asians are more segregated from non-Hispanic Whites than are Hispanics. The average segregation dissimilarity index of all Asians is about 9.0 points above that of Hispanics. It confirms the general pattern in the segregation literature that, Asian-White segregation has been considerably increasing, while Hispanic-white segregation has been decreasing. Another significant finding of chapter 4 is the difference between Asians and Hispanics, by nativity groups and metropolitan typology. The general pattern is that Hispanics lend much support to the spatial assimilation model because immigrant groups are more segregated from Whites than are native-born counterparts in three immigrant typologies. However, the resurgent

ethnicity framework is more fitting for Asians, whose native-born groups are more segregated from Whites than are immigrant counterparts.

By looking into nativity groups in detail, I observed significant differences between Asians and Hispanics. For Asians, the US-born are residentially segregated from Whites than are foreign-born. US-born Asians have more highly-segregated metros than foreign-born. Both Asian nativity groups do not have low segregation metros (D< .30) among the selected 342 metros. In addition, some of the highly-segregated metros are identical for Asian nativity groups, such as Utica-Rome, NY, Sheboygan, WI, Champaign-Urbana, IL, and Napa, CA. This result indicates that Asian US-born and foreign-born groups are more likely to concentrated in similar immigrant metros where the former are even more segregated from Whites.

Compared to Asian immigrants, US-born Asians have almost two times in highly segregated metros. There are 103 high segregation metros for US-born, but only 29 of them for immigrants. The Asian immigrants are still highly concentrated in the traditional immigrant metros, such as in the states of California, New York, and Illinois. However, for the US-born Asians, the highly-segregated metros are also pronounced in the newly settled areas, such as North Carolina, Virginia, Iowa, and Louisiana. Apparently, the US-born Asians are more segregated than immigrants in these new destination metros.

Hispanic nativity groups show a reverse pattern compared to the Asian groups. The Hispanic immigrants are more segregated from Whites than are US-born counterparts. There are some overlaps with the highly segregated metros for both nativity groups, for instance, Reading, PA, Los Angeles-Long Beach-Anaheim, CA, and

Providence-Warwick, RI-MA. The dissimilarity index is generally higher among foreign-born in these highly-segregated metros.

The nativity difference between Hispanic groups can also be demonstrated by comparing the numbers of low and high segregation metros. Among the 381 selected metro areas, only 4 of them are considered as low segregation (D < .30) for Hispanic immigrants whereas 70 low segregation metros for the native-born. In addition to the high segregation metros for foreign-born that are found in traditional immigrant gateway areas, such as California, New York, Illinois, and Florida, there are more growing high segregation areas in the Midwestern states, for instance, Nebraska, Iowa, Kansas, and Oklahoma. However, the US-born Hispanics are only moderately segregated in these Midwestern areas. there are two implications of those results: first, foreign-born Hispanics were more likely than native-born Hispanics to reside in non-traditional immigrant destinations. Second, compared to the native-born Hispanics, foreign-born Hispanics were more segregated from non-Hispanic Whites in new settlement areas.

By comparing the segregation levels between traditional gateways and new destinations (Table 4.4), I found that on average, the overall Hispanics are more segregated in traditional gateways than in new destinations. Furthermore, the difference by nativity is greater in new destinations than in traditional gateways for Hispanics while the pattern does not differ as much for Asians.

I also compare the segregation levels between new destinations and other destinations. In my modification of Singer's (2015) typology, I classify a significant number of smaller metropolitan areas into the "other destinations" that were not previously included in Singer's (2015) typology. Conceptually, "other destinations" (low

immigration metro areas in Singer's definition) are a heterogenous list of metro areas that vary in size and growth patterns of the immigrant population. The comparison of segregation levels by new destinations and other destinations contributes to the understanding of the impact of the emerging settlement areas in the comparison of segregation patterns for both Asians and Hispanics in the past decade.

For overall Hispanics and their nativity groups (foreign-born and native-born), the average dissimilarity index is higher in new destinations than in other destinations. This pattern for Hispanic groups at least provides some support for the spatial assimilation model as Hispanics are dispersing into some low immigrant metro areas where they are less residentially segregated from Whites. However, this pattern does not hold for Asian groups. The higher average dissimilarity index for the overall Asians and US-born groups tells us that as Asians are growing in the low immigrant metros, they do not necessarily reside close to Whites.

For Hispanic groups, the difference between new destination and other destination is larger among Hispanic US-born, and this difference is significant at a p-value of .01. When comparing the nativity difference within new and other destinations, I found that the nativity difference is larger in other destinations. This result implies that Hispanic immigrants are more segregated in other destinations. However, for Asians, the difference by destination types is larger among the US-born groups, which is significant at a p-value of .05. Moreover, the nativity difference is also larger in other destinations. Thus, the US-born Asians are more segregated in other destinations.

Overall, the results of chapter 4 prove that Asians and Hispanics vary not only in the overall segregation levels but also by nativity and destination types. In general, the

segregation pattern of the Hispanic group is more consistent with the spatial assimilation theory, as the US-born Hispanics are less segregated from Whites compared to the immigrant groups across destination types. Asian segregation by nativity in traditional gateway metros is in alignment with the predictions of the spatial assimilation model. In non-traditional destinations, however, the findings are reversed with native-born Asians being more segregated than foreign-born Asians.

Analyses in chapter 4 show that on metropolitan average, the residential pattern of Hispanic groups gives more credentials to the spatial assimilation theory as Hispanic immigrants are more segregated from Whites than are US-born counterparts. However, the resurgent ethnicity perspective is more appropriate to explain that of the Asian groups. Results in Chapter 5 suggest that the nativity difference in residential proximity with co-ethnics may post challenges on the spatial assimilation model. Chapter 5 uses logistic modeling to predict the individual-level probability of living in ethnic concentration areas, measured by PUMAs with a range of assimilation factors.

Theoretically speaking, the segregation pattern was able to provide the backdrop for the residential assimilation picture because it tells us how the ethnic-racial groups are residentially integrated with non-Hispanic Whites in metropolitan contexts. As the two most recent and major immigrant groups, Asians and Hispanics differ in their nativity status in segregation patterns from group levels, as proved in chapter 4, and also in their English ability and socioeconomic characteristics from individual levels. In the assimilation literature, much of the past research has been conducted at an aggregated level, with the proportion of ethnic members who live outside the central city as the dependent variable of spatial assimilation (Massey and Mullan 1984). Notably, Alba and

Logan (1991, 1992, 1993) and some others remedy this problem by using individual data from IPUMS and construct a multilevel regression model to measure locational attainment (average household income and percentage of non-Hispanic Whites) from a vector of the individual- and household- level variables.

Similarly, chapter 5 analyses of my study conduct individual-level models to examine residential attainment by race and ethnicity, nativity status, and associated assimilation indicators. If the results uphold the spatial assimilation model, we will see the greater English ability and socioeconomic status predict a lower probability of living in ethnic areas, defined by PUMAs with an above-average of co-ethnics. In other words, nativity status (US-born versus foreign-born) is expected to play different effects on the probability of living in ethnic areas.

However, the descriptive results of the Asian sample show a small discrepancy in English language proficiency between US-born and foreign-born groups. The education attainment and homeownership status between Asian nativity groups are also in equivalent levels, and foreign-born groups are even more advantageous in median family income. However, the English ability and SES status of the Hispanic sample are not so promising compared to the Asian groups. This is especially true for Hispanic immigrants who have low English proficiency and educational achievement (39% speaking no English and 43% have less than high school degrees). The homeownership and median family income of Hispanic immigrants are somewhat lower than that of US-born members.

From the stepwise logistic regression models for Asian and Hispanic nativity groups, I found interesting facts. First, both Asian and Hispanic nativity groups show

similar patterns in the residential assimilation prediction. With no consideration to assimilation variables, foreign-born groups show a higher tendency of living in the ethnic areas. Linguistic assimilation (indicated by English proficiency) significantly decreases the probability of living in the ethnic areas for both Asians and Hispanics, which supports the link between cultural assimilation and spatial assimilation. Moreover, adding the demographic variables and the measure of language proficiency change the direction of nativity impacts, meaning that immigrant groups are significantly less likely to live with co-ethnics than are the US-born counterparts.

Education, as the standard indicator of socioeconomic assimilation, significantly reduces the likelihood of living with co-ethnics only for Hispanics. For Asians, higher degree completion associate with higher chances of living in ethnic areas. Homeownership is a significant predictor of living in ethnic areas for Asians and Hispanics. Homeowners are less likely to live in ethnic areas than renters. However, family income does not have significant effects on Hispanics. Labor market effects are also mixed. Self-employment only has negative effects on Hispanics in the model with SES indicators. In the full model for Hispanics, the negative effect is not significant.

The similar nativity effects found in both Asians and Hispanics post significant implications for understanding spatial assimilation. In chapter 4, I found that Hispanic groups are more consistent with the linear prediction of the spatial assimilation model, and the US-born members are less residentially segregated from native Whites. However, findings in chapter 5 indicate that Hispanic groups lend support to the segmented assimilation framework. One possible explanation could be US-born Hispanics may be more likely to reside (voluntarily or involuntarily) in ethnic concentrated areas. The

finding for Asians provides support to the resurgent ethnicity framework, which possibly explains that high SES status guarantees US-born Asians more choices for residence, but they rather choose to live close to co-ethnics.

Another finding from chapter 5 is the effect of mixed race and ethnicity in predicting the residential patterns for Asians. The stepwise logistic regression models show that Asians who self-identify as multiple races are less likely to live in Asian concentrated areas. This finding confirms the idea that race and ethnicity identification is an important factor influencing residential outcomes, at least for Asians. Compared to those who reported single race and ethnicity (e.g. Chinese), the mixed-race Asians (e.g. Chinese and White) show a lower propensity of living in the ethnic areas. The effect of mixed race and ethnicity persists after controlling for individual differences in nativity, English ability, and socioeconomic indicators. Indeed, this finding suggests that for residential assimilation study on the Asian groups, race and ethnic identification is a critical factor to consider in addition to nativity, English proficiency, and socioeconomic status.

I continue to examine the extent to which the spatial assimilation model can explain the residential migration of Asian and Hispanic nativity groups. The segregation and assimilation analyses in chapters 4 and 5 are both cross-sectional examinations on neighborhood and assimilation patterns. To better capture the mobility patterns, I use the indicator of current metropolitan residence compared to the residence one year ago before the survey in ACS IPUMS. Chapter 6 conducts the longitudinal analysis of residential mobility for one year to examine whether the mobility patterns of Asian and Hispanic nativity groups conform to the spatial assimilation model.

It is widely recognized that immigrant spatial assimilation is generated by geographic mobility into neighborhoods inhabited predominantly by the Anglo majority. In my analysis, however, I use the dispersion from immigrant concentration metros as the suitable proxy of residential assimilation. Based on the classification of the immigrant metropolitan typology of Singer (2015), I defined the migration behaviors as three mutually exclusive outcomes: dispersed, segregated, and other migration. The crux of chapter 6 analyses is to address the internal dispersion or segregation of Asian and Hispanic foreign-born compared to the US-born counterparts on a range of human capital factors.

In general, Hispanic nativity groups show significant differences in their internal migration patterns, and this difference is stronger on segregation (moving to traditional immigrant metros). However, the Asian nativity groups do not differ from each other when controlling for human capital indicators, meaning that the individual differences in demographics, English language ability, and SES status explain away the nativity difference of internal migration patterns.

Most of the human capital indicators place strong effects on the Hispanic nativity groups. For instance, English proficiency positively impacts the dispersion from traditional immigrant metros for Hispanic immigrants, as indicated in the interaction effects. This result proves that greater English proficiency is associated with a tendency of dispersion, which lends support to the classic spatial assimilation model. However, the predicting power of English proficiency is weaker for Asian groups.

Education as the main indicator of human capital strongly influences the internal segregation for the Asian groups, especially those who have advanced degrees. The

adjusted probability charts show that, instead of being dispersed, Asians with advanced degrees are most likely to move into traditional immigrant metros. Education has a stronger effect on the Hispanic groups, especially the dispersed migration. To iterate, the impact of education on Hispanics gives more credit to the classic spatial assimilation model as greater educational attainment increases the chance of moving out of immigrant concentration areas. However, the reverse pattern of Asians provides much support for the resurgent ethnicity framework as the most educated Asians are more likely to segregate into traditional immigrant metros. The labor market effect is stronger among Hispanics. Self-employment significantly decreases internal migration, and the effects are comparable but somewhat stronger on segregation migration. Homeownership strongly impacts Asians to disperse from traditional immigrant areas, while it significantly contributes more to the segregated migration among the Hispanics.

In addition to the substantive contributions discussed above, the analyses in chapters 4, 5, and 6 provide an update to the residential assimilation literature with most research based on Census data prior to 2010. Despite the relatively high volume of immigration from Asia and Latin America after the 1990s, results show a relatively lower level of Hispanic-White segregation, but with steady high Asian-white segregation in the current 2013-2017 ACS data. The analyses on the assimilation and migration patterns additionally test the application of the classic spatial assimilation model on the current wave of Asian and Hispanic immigrants.

Limitations and Future Research

This dissertation is not without limitations. First, it is ideal to use the county-level mobility rates to measure the urban to rural dispersion for Asian and Hispanic

immigrants. However, the county populations vary widely from large to small numbers, especially for foreign-born Asians and Hispanics in the rural counties. This procedure only produces a much-reduced sample of migrants from urban to rural, which jeopardizes the model prediction in chapter 6.

Analyses would also be strengthened if they contain information on neighborhood advantage beyond the individual scope of language and socioeconomic characteristics, such as locational attainment or contextual-level economic situations, which allows us to track the economic status of neighborhoods involved in residential moves. Future research can consider using additional data resources, such as the American Housing Survey and Panel Study of Income Dynamics.

There are several ways this research could be extended. While analyses examined differences in residential patterns by nativity among Asians and Hispanics, the differences among the foreign-born by country of birth were not included. There is within-race heterogeneity in immigrant characteristics by country of birth. The categories employed are pan-ethnic groups and substantial diversity in residential patterns may exist between individuals by country of birth. Studying these differences could shed more light on the integration and assimilation of subgroups and provide a stronger examination of the tenets of segmented assimilation theory. Moreover, this research could also be expanded by including Blacks into the study of segregation patterns in order to provide a racial breadth of comparison on all racial groups.

Another extension would be to use information from the 2010 Census to examine the change in residential segregation patterns. There was substantial growth in the immigrant population between 2000 and 2010, particularly to the new destinations. By

combining the decennial Census and the current American Community Survey (5-year data set), analyses could examine the change in the current cohort of immigrant groups and look more closely at the relationship between growth in the minority and immigrant population and change in residential patterns, both for minorities/immigrants and Whites.

Conclusion

To summarize, the primary aims of this research were threefold. The first was to study and document differences in neighborhood integration by race, nativity, and destination types. The second was to understand differences in residential assimilation and metro-level migration by race, nativity, and human capital indicators. The third and overarching objective was to test the applicability of spatial assimilation, segmented assimilation, and resurgent ethnicity theories. Results provide some support for spatial assimilation theory and substantial support for the segmented assimilation and resurgent ethnicity theories. Overall, the study reported substantial segregation between Asians and non-Hispanic Whites. Compared to foreign-born Asians, US-born Asians with advantaged socioeconomic status were more likely to reside with the same ethnic members, instead of moving close to non-Hispanic Whites. Apparently, the resurgent ethnicity framework is more suitable for Asians. On the other hand, results provide strong evidence that US-born Hispanics are more residentially assimilated with Whites than are immigrant groups, a residential assimilation pattern that is predicted by the classic spatial assimilation model. Moreover, segmented assimilation is also appropriate to explain that US-born Hispanics are more likely to live with co-ethnics than are immigrant counterparts.

Overall findings post important implications to future research that race, ethnicity, and nativity status are critical indicators to assess in spatial assimilation research.

APPENDIX

Appendix A. Census Bureau Geographic Definitions.

Census Tract

Census tracts are small, relatively permanent statistical subdivisions of a county or statistically equivalent entity delineated by local participants as part of the U.S. Census Bureau's Participant Statistical Areas Program. The U.S. Census Bureau delineated census tracts where no local participant existed or where a local or tribal government declined to participate. The primary purpose of census tracts is to provide a stable set of geographic units for the presentation of decennial census data. This is the first decennial census for which the entire United States is covered by census tracts. For the 1990 census, some counties had census tracts and others had block numbering areas (BNAs). For Census 2000, all BNAs were replaced by census tracts, which may or may not represent the same areas. Census tracts in the United States, Puerto Rico, and the Virgin Islands of the United States generally have between 1,500 and 8,000 people, with an optimum size of 4,000 people. For American Samoa, the Northern Mariana Islands, and Guam, the optimum size is 2,500 people. Counties and statistically equivalent entities with fewer than 1,500 people have a single census tract. Census tracts on American Indian reservations, off-reservation trust lands, and special places must contain a minimum of 1,000 people. (Special places include correctional institutions, military installations, college campuses, workers' dormitories, hospitals, nursing homes, and group homes.) When first delineated, census tracts are designed to be relatively homogeneous with respect to population characteristics, economic status, and living conditions. The spatial size of census tracts varies widely depending on the density of

settlement. Census tract boundaries are Census 2000 Geographic Terms and Concepts A–11 delineated with the intention of being maintained over many decades so that statistical comparisons can be made from decennial census to decennial census. However, physical changes in street patterns caused by highway construction, new developments, and so forth, may require occasional boundary revisions. In addition, census tracts occasionally are split due to population growth or combined as a result of substantial population decline.

Metropolitan and Micropolitan Statistical Areas

The United States Office of Management and Budget (OMB) defines metropolitan and micropolitan statistical areas according to published standards that are applied to Census Bureau data. The general concept of a metropolitan or micropolitan statistical area is that of a core area containing a substantial population nucleus, together with adjacent communities having a high degree of economic and social integration with that core. Currently defined metropolitan and micropolitan statistical areas are based on the application of 2000 standards (which appeared in the Federal Register on December 27, 2000) to 2000 decennial census data. Current metropolitan and micropolitan statistical area definitions were announced by OMB effective June 6, 2003.

Standard definitions of metropolitan areas were first issued in 1949 by the then Bureau of the Budget (predecessor of OMB), under the designation “standard metropolitan area” (SMA). The term was changed to “standard metropolitan statistical area” (SMSA) in 1959, and to "metropolitan statistical area" (MSA) in 1983. The term "metropolitan area" (MA) was adopted in 1990 and referred collectively to metropolitan statistical areas

(MSAs), consolidated metropolitan statistical areas (CMSAs), and primary metropolitan statistical areas (PMSAs). The term "core-based statistical area" (CBSA) became effective in 2000 and refers collectively to metropolitan and micropolitan statistical areas. OMB has been responsible for the official metropolitan areas since they were first defined, except for the period 1977 to 1981, when they were the responsibility of the Office of Federal Statistical Policy and Standards, Department of Commerce. The standards for defining metropolitan areas were modified in 1958, 1971, 1975, 1980, 1990, and 2000.

Appendix B. Logistic Models of Chapter 5

Figure 2.1 Total Family Income in the Asian Logistic Model before the Transformation

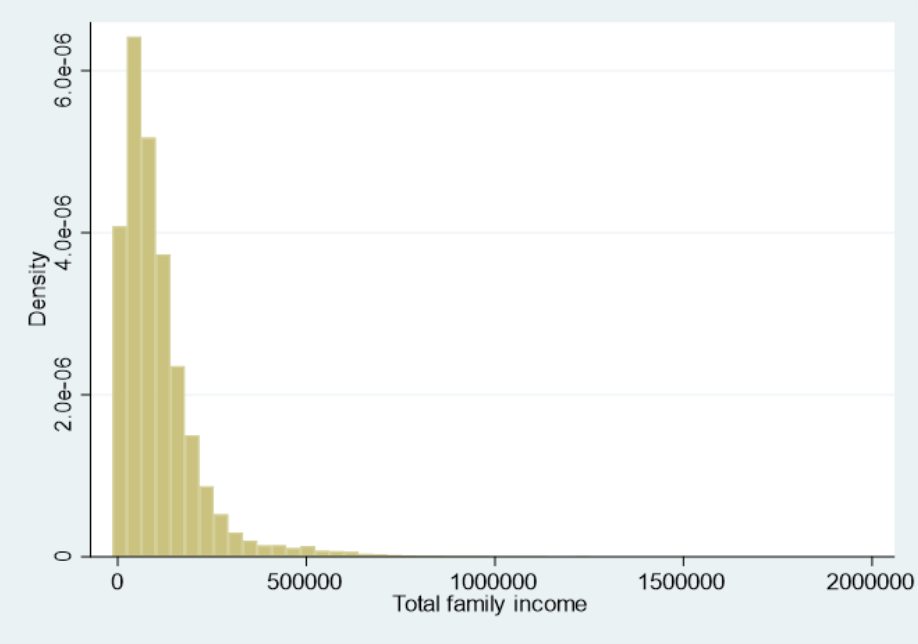


Figure 2.2. Total Family Income in the Asian Logistic Model after the Transformation

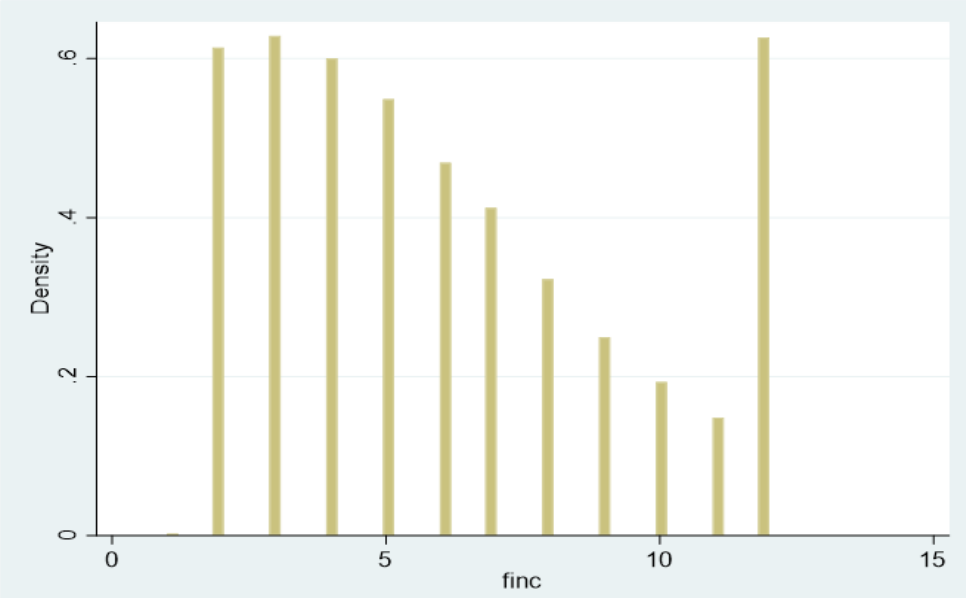


Figure 2.3. The Goodness of Fit Test for the Asian Logistic Model after using Transformation for Family Income Variable

Logistic model for nbhd a, goodness-of-fit test

```
      number of observations =    250261
number of covariate patterns =     84997
         Pearson chi2(84980) =     85005.47
                Prob > chi2 =         0.4747
```

Figure 2.4 Total Family Income in the Hispanic Logistic Model before the Transformation

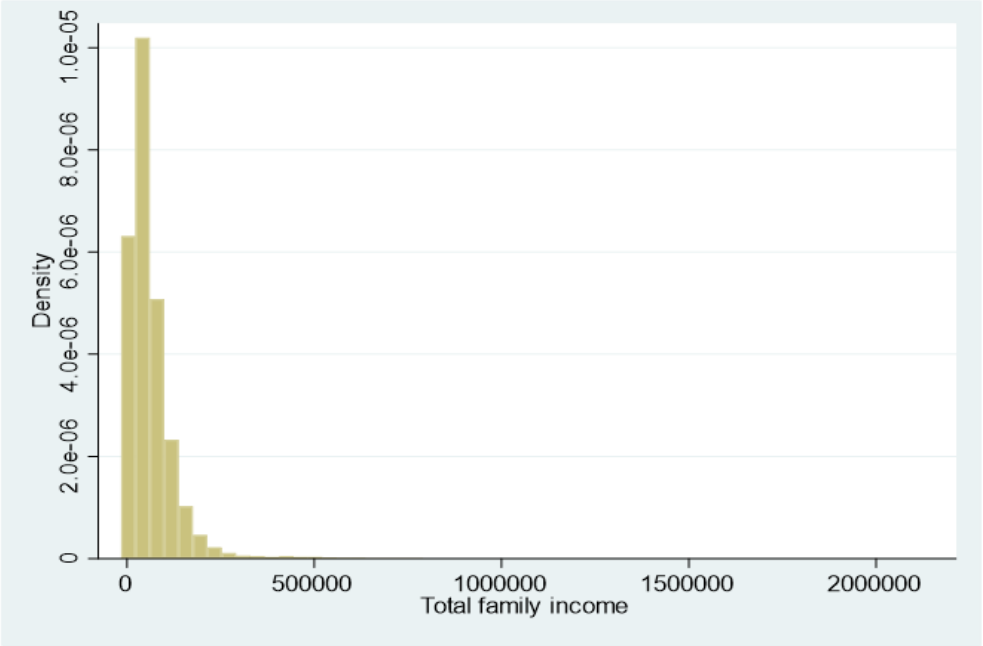


Figure 2.5 Total Family Income in the Hispanic Logistic Model after the Square Root Transformation

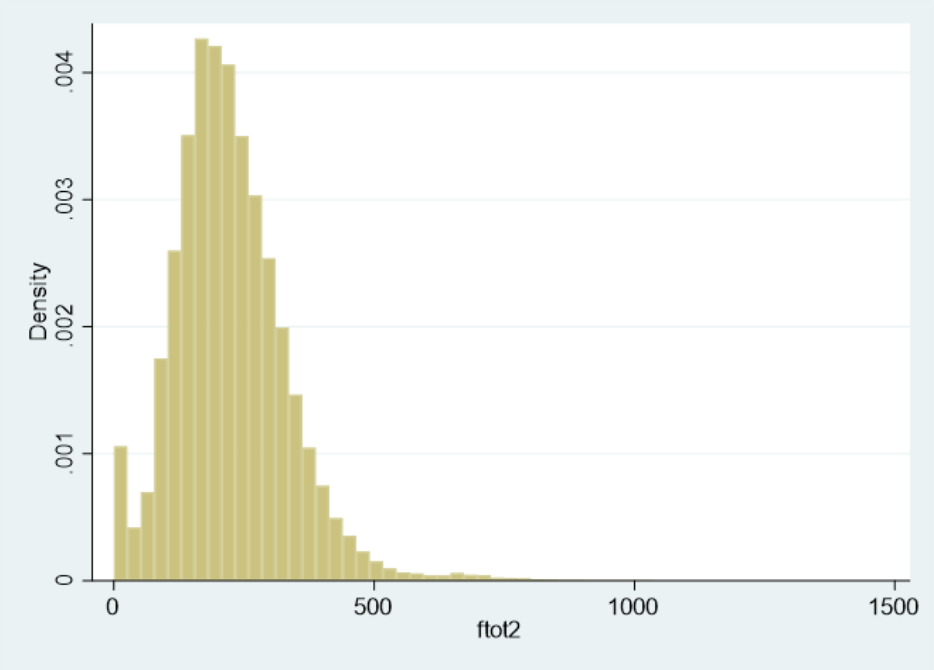


Figure 2.6. The Goodness of Fit Test for the Hispanic Logistic Model after using Transformation for Family Income Variable

Logistic model for nbhd_h, goodness-of-fit test

```
      number of observations =    543864
number of covariate patterns =    510374
        Pearson chi2(510359) =    509916.75
                 Prob > chi2 =         0.6690
```

Appendix C. Additional Descriptive Results for Asians and Hispanics in Chapter 6

Table 3.2 Descriptive Statistics of Covariates (in Percentage) of Asians by Nativity Groups

Variables	Native-born	Foreign-born
Percentage of Asians	30.52	69.48
Race/ethnicity		
Asian single race/ethnicity	61.09	93.56
Asian_mixed race	33.68	4.55
Asian_mixed ethnicity	5.23	1.89
Median Age	37	45
% Living in Defined Areas	77.88	82.62
Gender		
Male	50.75	62.37
Female	49.25	37.63
Marital Status		
Married	49.53	72.59
Single	50.47	27.41
English Proficiency		
No English	0.78	13.35
Yes, very well	22.56	72.29
Yes, only English	76.66	14.36
Education Attainment		
Less than high school	2.34	9.1
High school graduates	10.48	11.07
Some college	28.3	18.26
4-year college, bachelor	35.46	31.17
Advanced	23.43	30.39
Homeownership		
Own	56.57	61.42
Rent	43.43	38.58
Class of Worker		
Self-employed	7.55	10.41
Works for wages	85.46	81.57
Not in labor force	6.99	8.02
Median Family Income($)	74,600	82,218

Table 3.3 Descriptive Statistics of Covariates (in Percentage) of Hispanics by Nativity Groups

Variables	Native-born	Foreign-born
Percentage of Hispanics	59.28	40.72
Median age	31	38
Gender		
Male	44.3	55.22
Female	55.7	44.78
Marital status		
Married	38.81	57.1
Not married	61.19	42.9
English proficiency		
No English	2.13	34.12
Yes, very well	51.41	59.97
Yes, only English	46.46	5.91
Educational attainment		
Less than high school	11.77	35.8
High school graduates	23.14	25.81
Some college	40.48	21.64
Bachelor's	17.24	10.96
Advanced	7.36	5.79
Homeownership		
Own	22.21	23.95
Rent	77.79	76.05
Class of worker		
Not in labor force	7.15	7.13
Self-employed	4.98	10.3
Works for wages	87.86	82.57
School status		
Not in school	85.09	92.62
In school	14.91	7.38
Median family income ($)	35,000	37,231

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