SPATIAL NETWORKS & HOUSING
AN ANALYSIS OF FOREIGN BORN WEST AFRICAN AND CHINESE POPULATIONS IN NYC AND LA

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A THESIS IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE MASTER OF SCIENCE IN URBAN PLANNING

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INTRODUCTION

In 2013, over 900,000 persons obtained lawful permanent resident (LPR) status. Over 400,000 people received permanent resident status through family sponsorship, 200,000+ received it through their spouse, 150,000 through employment, and 120,000 through asylum and refugee status. This is only a fraction of the 13 million lawful permanent residents. For many native and permanent residents finding suitable and affordable housing in the US can be difficult. Foreign born immigrants and permanent residents may have greater difficulties finding housing in the US due to language, cultural, and economic barriers.

There are many studies that seek to understand the issues that foreign born persons face when looking for housing. When foreign born persons first enter the US, they tend to enter through gateway cities (such as New York City and Los Angeles) and live within ethnic enclaves in the cities. (Painter and Yu, 2007)(Pamuk, 2004). They may settle in such communities and live with friends or family members and such communities may provide “rich social and institutional infrastructure that responds to quality of life needs which are transnational in scope and unavailable elsewhere.” (Pamuk, 2004)

While these communities may provide and sense of familiarity and comfort for newly arrived foreign born persons, they may also limit many of the dwellers. An example of such limitations includes accessibility to homeownership. In general, foreign born persons arriving from a foreign country have lower homeownership rates and higher housing cost burdens (however, after some time the difference between foreign born and native homeownership rates lessen). (Painter and Yu, 2007)(McConnell and Akresh, 2010). They are also more likely to live in overcrowded housing and face discrimination based on race and language. (Painter and Yu, 2007)(McConnell and Akresh, 2010).

Many studies focus on the spatial clustering of foreign born persons, housing cost burdens, discrimination, and barriers to entry into the housing market, there is not much qualitative addressing the experiences of these specific groups. The fastest growing foreign born population in the US is the African community. The number of African persons that have received LPR status has increased by 148% from 2004 to 2013 and all of the West African countries together are equal to the sixth largest population receiving LPR status. The Chinese population is the second fastest growing population and second largest foreign born group receiving LPR status, has experienced an increase of persons obtaining LPR status by 117% from 2004 to 2014. It is necessary to study both


<table>
<thead>
<tr>
<th>Country</th>
<th># of Persons Receiving LPR Status</th>
<th># of Naturalizations</th>
<th>Nonimmigrant Admissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>71,798</td>
<td>35,387</td>
<td>2,098,801</td>
</tr>
<tr>
<td>West Africa (Total)</td>
<td>37,383</td>
<td>25,883</td>
<td>2,498,872</td>
</tr>
<tr>
<td>Benin</td>
<td>342</td>
<td>206</td>
<td>2,821</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>585</td>
<td>230</td>
<td>3,928</td>
</tr>
<tr>
<td>Côte d’Ivoire</td>
<td>1,486</td>
<td>958</td>
<td>26,905</td>
</tr>
<tr>
<td>Gambia</td>
<td>1,018</td>
<td>573</td>
<td>2,551</td>
</tr>
<tr>
<td>Ghana</td>
<td>10,265</td>
<td>5,105</td>
<td>27,822</td>
</tr>
<tr>
<td>Guinea</td>
<td>1,518</td>
<td>958</td>
<td>2,777</td>
</tr>
<tr>
<td>Guinea-Bissau</td>
<td>43</td>
<td>24</td>
<td>126</td>
</tr>
<tr>
<td>Liberia</td>
<td>3,334</td>
<td>3,923</td>
<td>4,152</td>
</tr>
<tr>
<td>Mali</td>
<td>667</td>
<td>332</td>
<td>3,806</td>
</tr>
<tr>
<td>Niger</td>
<td>37</td>
<td>167</td>
<td>1,583</td>
</tr>
<tr>
<td>Nigeria</td>
<td>13,840</td>
<td>9,545</td>
<td>157,509</td>
</tr>
<tr>
<td>Senegal</td>
<td>1,340</td>
<td>869</td>
<td>10,518</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>1,651</td>
<td>1,613</td>
<td>3,188</td>
</tr>
<tr>
<td>Togo</td>
<td>1,257</td>
<td>1,380</td>
<td>2,186</td>
</tr>
</tbody>
</table>

Data from 2013 Yearbook of Immigration Statistics, US Homeland Security
populations through qualitative and quantitative analyses to fully understand how these populations are settling in the US which may result in better design of urban space and policies which suit the populations living in them.

The objective of this thesis is to further understand the housing experiences of West African (Benin, Burkina Faso, Côte d’Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo) and Chinese foreign born persons entering the US through interviews, as well as through spatial analysis. Interviews will focus on first generation, foreign born persons who came to the US alone or with their family. The study areas are New York City (NYC) and Los Angeles (LA) as these are the two regions where the highest numbers of immigrants enter and settle each year.4

LITERATURE REVIEW

For many foreign born persons adjusting to US can be difficult and stressful. An added stress for many people is the difficulty finding suitable housing. Many people may come to US and settle with family and friends at first. By settling in these ‘ethnic enclaves’ it can help and at the same time hinder many persons’ mobility in the US. Previous literature focuses on the limited housing options based on race and ethnicity in the US, ethnic/immigrant enclaves, and how many immigrants move throughout the US. (Briggs and Wilson, 2005) examines the patterns of segregation by race and income in the US. “Compared with their counterparts in European and other wealthy regions, America’s metropolitan areas are both very sprawling and very segregated by race and class, a dual pattern that creates what scholars have termed an uneven ‘geography of opportunity.’ Understanding and changing geography is crucial if America is to improve outcome in education, employment, safety, health, and other vital areas over the next generation.” (Briggs and Wilson, 2005, p. 2). Another layer of diversity may be laid over this ‘geography of opportunity’ if immigration status is considered. To understand how immigrants may successfully settle in the US, it is important to look at how race and ethnicity of affects the housing options of Americans first. Once this is understood, the intricacies of how immigrants select housing may be considered. Articles such as, The Emergence of Stable Racially and Ethnically Diverse Urban Communities: A case study of nine US cities (Nyden, Maly, Lukhart, 2010), also examine how ethnicity and race affect housing and communities in the US.

ETHNIC ENCLAVES

Many foreign born persons settle into ethnic/immigrant enclaves when they first arrive in the US for a multitude of reasons. Ethnic enclaves are defined as “a predominantly low-income area where immigrants have settled by necessity” (Pamuk, 2004). This definition of ethnic/immigrant enclaves is limiting as it suggests the immigrants/foreign born persons do not necessarily live in these communities by choices. An ethnic and immigrant enclaves definition should be revised to include the choice of living in these communities and as well as characteristics of enclaves such as overcrowding and linguistic isolation. (Pamuk, 2004). Immigrant Enclaves and Ethnic Communities explores ethnic enclaves and comes to the conclusion that many immigrants of all income levels may move into ethnic/immigrant communities at first as the communities do not have any economic constraints and instead have strong community networks which are very helpful for newly arrived immigrants.

Immigrant Enclaves and Ethnic Communities in New York and Los Angeles describes the “minority ghetto” where immigrants live in densely populated and inexpensive inner city community but consider these communities as temporary conditions. The article compares these communities as inner city, lower income African American communities where African Americans are limited in terms of their choices in housing and opportunities. According to Immigrant Enclaves, the immigrants are not as limited in their housing choices and have greater opportunities to move to more desirable neighborhoods.

Studies have recently shown that immigrants do not always settle into traditional ethnic enclaves and that the likeliness that immigrants may not live in enclaves depended upon their educational attainment levels and English fluency. Immigrants with higher education levels and English fluency are more likely not to live in ethnic enclaves and may even bypass traditional gateway cities (such as LA and NYC) when they enter the US. (Gurak & Kritz, 2015)(Johnson & Litcher, 2006)(Baird et al, 2008).

SPATIAL SEGREGATION/ASSIMILATION AND RACE

Along with the ethnic/immigrant enclaves that immigrants settle in, some immigrants are also limited by their race as where they may settle. There is a wide dearth of literature available studying the limitations of race and housing however, there are only a handful of
studies that examine the limitations that immigrants face in terms of race and assimilation. Most studies that do examine the assimilation of immigrants focus on immigrants as one group. Michael Haan (The Homeownership Hierarchies of Canada and the United States, Haan, 2007), Painter and Yu (Caught in the Housing Bubble, Painter and Yu, 2013), Zoua Vang (The Limits of Spatial Assimilation of Immigrants’ Full Integration, Vang, 2012), Li, Hofstetter, Wahlgren, Irvin, Chhay, and Hovell (Social Networks and Immigration stress among first-generation Mandarin-speaking Chinese immigrants in Los Angeles, Li, Hofstetter, Wahlgren, Irvin, Chhay, and Hovell, 2014), and Lance Freeman (Does Spatial Assimilation Work for Black Immigrants in the US? Freeman, 2002) study the impact of race and ethnicity amongst immigrants.

Based upon the literature available, it is apparent that there is a difference between the opportunities and settlement patterns amongst West African and Chinese immigrants. Due to race, it is more difficult for Black West Africans to assimilate into White communities in the US (assimilation is considered by dissimilarity index) than it is for non-Black immigrants. (Vang, 2012) (Freeman, 2002) The lack of assimilation and integration for West Africans is caused by racial prejudices in the US and has impeded West Africans access to better jobs, homeownership, and education. (Vang, 2012). Africans tend to face many of the same barriers as African Americans when it comes to living in the US but in the long term are more likely to live in more integrated communities with more community and neighborhood resources. (Vang, 2012) This may be due to higher education levels and skills amongst African immigrants. (Freeman, 2002) (McConnell and Akresh, 2010).

However, there are some studies that have shown that the foreign born Black population but are less segregated from the overall population. This may due to cultural differences or educational levels between the foreign-born Black population and the US-born Black population. (Freeman, 2002) (Johnson & Litcher, 2006).

**TRANSITIONAL COMMUNITIES AND SETTLEMENT**

Ethnic/immigrant enclaves are transitional communities for many immigrants. (Logan, Zhang, and Alba, 2002) (Pamuk 2004). As soon as immigrants become culturally assimilated and their economic status improves, they move out of these communities. (Logan, Zhang, and Alba, 2002) (Painter and Zhou, 2008). Leaving Gateways describes the experiences of many immigrants as such: “although immigrants enter the US with low homeownership, they have strong upward mobility in the housing market and are likely to reach a level of homeownership similar to that of US-born households after one or two decades of US residence.” It seems that after a decade many immigrants have become accustomed to the US, feel more comfortable and have the means to move into other areas in the US, such as the suburbs.

It should be noted that the immigrants from a foreign country are still disadvantaged when it comes to choices in the housing market and if the immigrant is living in crowded conditions they are less likely to own their own home in the future. (Painter and Zhou, 2008). Country of origin may also affect the prospects of homeownership and housing choices: “Latin American and Caribbean immigrants share housing disadvantages similar to blacks and Hispanics, race and ethnicity do matter in determining housing conditions of different groups in New York.” (Pamuk, 2004). In Geography of Immigrant Clusters it is theorized that immigrants are settling in new patterns and the communities are less homogeneous. This is based on how Asian communities have settled within the US recently but it may not apply to other minority immigrants if racial and ethnic prejudices are considered.

**CONCLUSION**

It is apparent from a review of current literature that many immigrants settle into ethnic/immigrant enclaves at first and then move into more desirable communities and neighborhoods when their economic status improves. What is missing from much of the literature is a narrative of immigrant experiences along with quantitative analysis on growing immigrant populations. The growing Chinese population has been studied as it a large immigrant group in the US but there is not much literature on the West African population. The populations may be compared to understand how a group with a larger foreign born population has settled in the US versus a rapidly growing foreign born group compare when it comes to settling in the US.

**CONCEPTUAL FRAMEWORK**

This thesis consists of both a pragmatic and transformative framework. The pragmatic framework is most suitable for mixed methods research that consists of both qualitative and quantitative data analysis. The transformative framework allows the thesis to result in new policy recommendations and practices. (Creswell, 2014)

**HYPOTHESIS**

It is hypothesized that foreign born persons may have greater difficulty assimilating into more diverse populations when settling in the US.
Many foreign born persons may settle into ethnic enclaves when they first arrive in the US and may be more likely to settle into more diverse neighborhoods the longer they have lived in the US. Foreign born persons may also face difficulties due to language barriers, lack of community and knowledge of real estate market, financial conditions, and racial/ethnic biases.

**RESEARCH QUESTION**

How will quantitative analysis determine how the West African and Chinese communities are settling in the US? Are both communities forming enclaves? Does the number of years a person has been in the US impact where they may live? What are some other difficulties and concerns that immigrants have when finding housing that is not captured in current quantitative data.

**METHODOLOGY**

The research for this thesis includes a mixed methods approach, a quantitative and qualitative analysis. The mixed methods approach to research includes the collection and analysis of qualitative (open-ended) and quantitative (closed-ended). The data can be merged together for a fuller understanding of the topics covered through a pragmatic and transformative philosophy (Creswell, 2014). The mixed methods approach is useful for understanding immigrants and their housing experience as interviewing immigrants may provide new insights into their experiences that is not available through open data. Analyzing data that is currently available such as data that is provided by the US Census and Homeland Security provides an overall understanding of the housing experiences that immigrants may face when entering the US.

Specifically, a convergent mixed-methods design has been used to analyze the data. This process includes gathering and analyzing both the qualitative and quantitative data at the same time (Creswell, 2014). By working and analyzing both data sets at the same time, a more thorough analysis may be completed. The data analysis compares both data sets and provides a side-by-side comparison as well as merges some of the common themes represented by the quantitative data into the qualitative data.

**CONVERGENT PARALLEL MIXED METHODS**

**QUANTITATIVE DATA**

<table>
<thead>
<tr>
<th>Data Source</th>
<th>West African NYC</th>
<th>West African LA</th>
<th>Chinese NYC</th>
<th>Chinese LA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homeowner</td>
<td>176</td>
<td>26%</td>
<td>48</td>
<td>48%</td>
</tr>
<tr>
<td></td>
<td>493</td>
<td>74%</td>
<td>46</td>
<td>46%</td>
</tr>
<tr>
<td>Renter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median Household Income</td>
<td>$62,300</td>
<td>$75,300</td>
<td>$55,000</td>
<td>$56,000</td>
</tr>
<tr>
<td>Median Gross Rent</td>
<td>$1,290</td>
<td>$1,360</td>
<td>$1,253</td>
<td>$1,265</td>
</tr>
<tr>
<td>Median Monthly Mortgage</td>
<td>$2,000</td>
<td>$1,800</td>
<td>$2,300</td>
<td>$1,600</td>
</tr>
<tr>
<td>Median House Value</td>
<td>$375,000</td>
<td>$400,000</td>
<td>$600,000</td>
<td>$500,000</td>
</tr>
<tr>
<td>American Parents</td>
<td>34</td>
<td>5%</td>
<td>3</td>
<td>3%</td>
</tr>
<tr>
<td>Naturalized</td>
<td>305</td>
<td>45%</td>
<td>71</td>
<td>71%</td>
</tr>
<tr>
<td>Not a Citizen</td>
<td>330</td>
<td>49%</td>
<td>26</td>
<td>26%</td>
</tr>
<tr>
<td>Does not Speak English</td>
<td>3</td>
<td>1%</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Speaks only English</td>
<td>98</td>
<td>15%</td>
<td>24</td>
<td>24%</td>
</tr>
<tr>
<td>Speaks English Very Well</td>
<td>350</td>
<td>52%</td>
<td>63</td>
<td>63%</td>
</tr>
<tr>
<td>Speaks English Well</td>
<td>157</td>
<td>23%</td>
<td>12</td>
<td>12%</td>
</tr>
<tr>
<td>Speaks English but Not Well</td>
<td>50</td>
<td>7%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data from 2013 Yearbook of Immigration Statistics, US Homeland Security

**QUALITATIVE DATA**

**COMPARE OR RELATE**

**INTERPRETATION**
The quantitative analysis was modeled after the analysis completed by Lance Freeman in *Does Spatial Assimilation Work for Black Immigrants in the US?* and uses three differed spatial segregation indices as well as an ordinary least squares (OLS) robust regression to obtain locational attainment models. The segregation indices measure the distribution of the foreign born populations within NYC and LA and whether or not the populations studied are forming enclaves. The locational attainment models use socioeconomic and demographic information as well as specific variables, such as citizenship status and English speaking ability, which may impact where a person may live.

### SEGREGATION INDICES

To determine whether or not the foreign born populations are settling into enclaves or are segregated from populations, dissimilarity indices, isolation indices, and exposure indices were performed. Census tract level data from the American Community Survey 2014 5-year estimates was collected through Social Explorer. The indices were performed for larger minority populations that the foreign born populations may be living amongst (African American/Black and Asian) in comparison to the White population, the foreign born population in comparison to the White population, and finally the foreign born population in comparison to the larger minority population (African American/Black and Asian). All indices results vary from 0 to 1.0 indicating the levels of dissimilarity, isolation, and exposure.

Dissimilarity was measured using Duncan’s **index of dissimilarity** where \( x \) is the minority population in a census tract, \( X \) is the total minority population for the entire geographic area surveyed, \( y \) is the population of the minority population is being measured against (in this paper it is the White, African American/Black, or Asian population), and \( Y \) is the total population of \( y \) for the entire geographic area that is being surveyed.

The **isolation index** was calculated to understand how much interaction that the foreign born population has with each other for the entire city. This measurement is affected by the size of the population studied. A smaller or larger group may result in a smaller or larger number so it should be considered in comparison to the groups’ population size in the city. The formula used to calculate the isolation index where \( t \) equals the whole population of the entire census tract.

The third measurement to test for enclaves or spatial segregation, was the **exposure index**. As defined by Massey and Denton in *The Dimensions of Residential Segregation*, the exposure index “measures the degree of potential contact, or possibility of interaction, between minority and majority group members.” A group with a high exposure index number (close to 1) means that they have a high level of contact with the majority population. A low number (close to 0) would indicate a low level of contact with the majority population.

### REGRESSION

Ordinary Least Square regressions were performed using data from IPUMS ACS 5-year 2014 estimates to obtain locational quotients. The equations for the dissimilarity, isolation, and exposure indices are as follows:

**Dissimilarity Index**

\[
D = \frac{1}{2} \sum |\frac{x_1}{X} - \frac{y_1}{Y}| 
\]

**Isolation Index**

\[
x_{P*} = \frac{1}{2} \sum |\frac{x_1}{X} - \frac{x_1}{t_1}| 
\]

**Exposure Index**

\[
x_{P*} = \frac{1}{2} \sum |\frac{x_1}{X} - \frac{y_1}{t_1}| 
\]

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8 Steven Ruggles, Katie Genadek, Ronald Goeken, Josiah Grover, and Matthew Sobek. Integrated Public Use Microdata Series: Version 6.0 [Machine-read-
IPUMS data provides individual level data which is useful to understand how variables such as year a person immigrated to the US and how their income may affect the where they live. The smallest geographic level of data available for IPUMS data is PUMA (Public Use Microdata Area). PUMAs generally consist of 100,000 persons per area and any areas that did not include the studied foreign born group were not included in the regression analysis. The New York City West African population consisted of 49 PUMA and the Chinese population was contained in 55 areas. In LA, the West African foreign born population was contained in 43 PUMAs and the Chinese population consisted of 65 PUMAS.

The dependent variables for the regressions was the racial composition of the foreign born PUMA (Public Use Microdata Area). A regression was performed for each population to understand how the composition of the neighborhood affects the probability that a foreign born West African or foreign born Chinese person may live in that neighborhood. For the West African foreign born population the dependent variables included the percentage of the White population in the foreign born West African PUMA, the percentage of the African American/Black population, and the percentage of the foreign born West African population. Dependent variables for the foreign born Chinese population included the percentage of the White population in each PUMA, percentage of Asian population, and percentage of foreign born Chinese population.

For each population, the variables for household income and occupation standing were determined by standard deviations (excluding household incomes of zero). The years of immigration categories were based off the data. For all groups, most immigration occurred between 1990 and the present day. Educational attainment categories were determined through collinearity testing. Even though the populations have many persons with a high school degree, Masters, or Doctorate degree, these variables were excluded due to collinearity.

**QUALITATIVE DATA**

First generation immigrants were interviewed and are defined as immigrants that have migrated to the US as adults from a foreign country and have gone or are going through the process to become a permanent resident or US citizen. The participants involved in the study are either be the persons that have arrived to US as a single person or first generation immigrants that have arrived and settled with their entire family. Immigrants from West Africa and China have been interviewed. The West African region includes Benin, Burkina Faso, Côte d’Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo.

Participants were asked to take part in one-on-one interviews about their housing experiences in the US. Questions focused specifically on how they found housing when they first arrived in the US and how they found subsequent housing. The goal of the interviews was to gain a greater and more in-depth understanding on the experiences of West African and Chinese immigrants that was not necessarily represented by currently available data.

Qualitative data has been collected through six (3 Chinese interviewees and 3 West African interviewees) 60 to 90 minute interviews with participants. Participants were chosen through snowball sampling where interviewees may recommend more participants to be interviewed.

### OLS REGRESSION

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Percentage of Population in Foreign Born PUMA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent Variables</strong></td>
<td></td>
</tr>
<tr>
<td>Homeowner</td>
<td></td>
</tr>
<tr>
<td>Household Income</td>
<td></td>
</tr>
<tr>
<td>Occupational Standing</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>Year of Immigration</td>
<td></td>
</tr>
<tr>
<td>Educational Attainment</td>
<td></td>
</tr>
<tr>
<td>English Speaking Ability</td>
<td></td>
</tr>
</tbody>
</table>
Selected participants were restricted to first generation West African and Chinese immigrants to the US that are either in the process of obtaining a green card, have obtained permanent residency, or are currently a US citizen. Interviews took place the participant’s home, or a quiet public setting, such as a coffee shop. Data was recorded through a phone recording application and through hand-written notes. Data was transcribed by myself and coded throughout the research.

VALIDITY THREATS

Despite all efforts to ensure that all research is objective, there may still be a bias present in the research. Personal experiences and views may result in a biased presentation of the research. Interviews were conducted informally to encourage participants to share their experiences but such may have also caused some interviews not to provide enough details about their experiences.

As the foreign born population in the US is large, it is difficult to have a large enough number of interviews to represent the general population. To overcome this obstacle, informal interviews have been combined with data analysis and statistics and triangulated to verify information. It should be noted that not all information presented in interviews can be validated by current data as the data does not exist. In these cases, it should be considered that interviewee’s answers and experiences are something that need to be studied further to see if they are common amongst the general population.

In regards to quantitative data, some of the data may be skewed and therefore there may be some bias in the results. In order to overcome this, large datasets were which should void this problem however, the West African population consists of small proportion of the population in NYC and especially LA so the sample population measured is smaller.

RESULTS

QUANTITATIVE ANALYSIS

SEGREGATION INDICES

Segregation indices were performed for the larger minority populations in comparison the White population in NYC and LA. As shown in Table 2, the results for the Asian population in NYC and LA are similar suggesting that Asian population is forming enclaves in both cities and experiencing similar levels of dissimilarity, isolation, and exposure. The results for the African American/Black population in NYC and LA show slightly different levels of segregation, exposure, and isolation.

The African American/Black population in LA and NYC is varied in terms of results. The African American/Black population in NYC appears to be much more segregated than LA despite the NYC population being larger (25% whereas the LA population is 8%). In NYC, there is a high level of spatial segregation from the White population as shown by the dissimilarity index (0.74) and the isolation index (0.59). The isolation index shows that even though the African American/Black population only makes up 25% of the city’s population, the chances of the African American/Black population living in census tracts that are predominately African American/Black is 59%. The exposure index reinforces this result as the possibility that the possibility of the African American/Black population is exposed to/living within the same census tract as the White population is 17%. In LA, the African American/Black population is less segregated and there is a higher chance of being exposed to the White population. If the foreign born West African population is settling within predominately African American/Black populations, these results may indicate spatial segregation from the majority White population amongst the West African population as well.

The foreign born Chinese populations are similarly sized in NYC (4%) and LA (13%).

Table 2: Segregation Indices for African American/Black and Asian populations.

<table>
<thead>
<tr>
<th></th>
<th>NYC</th>
<th>LA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>African American/Black Population</td>
<td>Asian Population</td>
</tr>
<tr>
<td></td>
<td>(25%)</td>
<td>(13%)</td>
</tr>
<tr>
<td>Dissimilarity</td>
<td>0.7358</td>
<td>0.4810</td>
</tr>
<tr>
<td>Isolation</td>
<td>0.5886</td>
<td>0.3360</td>
</tr>
<tr>
<td>Exposure</td>
<td>0.1794</td>
<td>0.4310</td>
</tr>
<tr>
<td></td>
<td>African American/Black Population</td>
<td>Asian Population</td>
</tr>
<tr>
<td></td>
<td>(8%)</td>
<td>(14%)</td>
</tr>
<tr>
<td>Dissimilarity</td>
<td>0.5691</td>
<td>0.4641</td>
</tr>
<tr>
<td>Isolation</td>
<td>0.2863</td>
<td>0.3136</td>
</tr>
<tr>
<td>Exposure</td>
<td>0.3844</td>
<td>0.4517</td>
</tr>
</tbody>
</table>

Data: ACS 2014 5-year estimates
and LA (3%) and like the Asian population, the foreign born Chinese population experiences similar levels of spatial segregation and isolation in both cities which is shown in Table 2.1. The NYC population has a dissimilarity index of 0.61 and LA has an index of 0.68 which indicates that the foreign born population is slightly more segregated from the White population in LA however, the isolation index is higher in NYC which may indicate denser enclaves but it may also be due to the small difference in the proportion of the populations in each city. Considering the small sizes of the foreign born populations in both cities, these populations are more likely than the larger Asian population to live within the same census tracts as predominately White populations. In comparison to the Asian population, the dissimilarity index and exposures index show that the foreign born population is living in predominately Asian populated census tracts in both NYC and LA.

In both NYC and LA, the foreign born West African population is very segregated from the White population which can be seen in Table 2.2. The dissimilarity index for the population in both cities is high at 0.82 in NYC and 0.84 in LA. The isolation index is not very high for the populations (0.05 in NYC and 0.02) in LA but this is only slightly larger than foreign born West African population in NYC (1%) and LA (0.14%). This may indicate that if enclaves are forming amongst the West African population, then the enclaves are very small and may not even be considered enclaves.

The exposure indices for both populations vary greatly when comparing the White population and African American/Black population. In NYC, the exposure index in comparison to the White population is very low (0.19) which indicates that the foreign born West African population is generally not living in census tracts that are predominately White. West Africans, however, are more likely to be living in census tracts that are predominately African American/Black in NYC. The dissimilarity index is lower (0.51) and the exposure index is higher (0.49) when the West African population is measured in comparison to the African American/Black population. In contrast, foreign born population in LA, has a higher exposure index when compared to the White population (0.41) than compared to the African American population (0.23). The dissimilarity index for the foreign born West African population is also high (0.69) when compared to the African American/Black population which indicates that West Africans are also more

<table>
<thead>
<tr>
<th>NYC</th>
<th>LA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Foreign Born Chinese Population (4%)</strong></td>
<td><strong>Foreign Born Chinese Population (3%)</strong></td>
</tr>
<tr>
<td>Dissimilarity</td>
<td>0.6129</td>
</tr>
<tr>
<td>Isolation</td>
<td>0.2226</td>
</tr>
<tr>
<td>Exposure</td>
<td>0.4060</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>In Comparison to the Asian Population</strong></th>
<th><strong>In Comparison to the Asian Population</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissimilarity</td>
<td>0.3137</td>
</tr>
<tr>
<td>Exposure</td>
<td>0.4098</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NYC</th>
<th>LA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Foreign Born West African Population (1%)</strong></td>
<td><strong>Foreign Born West African Population (0.14%)</strong></td>
</tr>
<tr>
<td>Dissimilarity</td>
<td>0.6129</td>
</tr>
<tr>
<td>Isolation</td>
<td>0.2226</td>
</tr>
<tr>
<td>Exposure</td>
<td>0.4060</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>In Comparison to the Black Population</strong></th>
<th><strong>In Comparison to the Black Population</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissimilarity</td>
<td>0.3137</td>
</tr>
<tr>
<td>Exposure</td>
<td>0.4098</td>
</tr>
</tbody>
</table>

*Data: ACS 2014 5-year estimates*
FOREIGN BORN CHINESE POPULATION AS A PERCENT OF TOTAL NYC POPULATION
FOREIGN BORN WEST AFRICAN POPULATION AS A PERCENT OF TOTAL NYC POPULATION
LA FOREIGN BORN WEST AFRICAN POPULATION
likely to be isolated from the African American/Black population. When all of the indices for the West African population in LA are considered, it indicates that population may be living in more diverse census tracts.

**LOCATIONAL ATTAINMENT MODELS**

The locational attainment models for the Chinese population in both NYC and LA resulted in many significant variables. While the r-squared values may not be high, these significant variables indicate the factors that indicated whether or not a foreign born Chinese person is more likely to live in PUMA with a higher White, Asian or foreign born Chinese population.

In NYC, it seems that receiving any sort of income (reference category for income is less than $10,030) may lead to a higher possibility that a foreign born Chinese person may live in a PUMA with a higher White population. Income does not have any significant effect on whether or not a person may live within a predominately Asian PUMA but higher income does have impact on whether or not a person may live in a Chinese community. Foreign born Chinese households with an income of $102,751 or more are more likely to move out of foreign born Chinese neighborhoods.

The year a person immigrated has a significant impact on whether or not a person may live in a PUMA with a higher percentage of Asian or Chinese population. This may indicate that no matter how long a foreign born Chinese person has lived in NYC, it will not influence their decision to move out of a predominately Asian or Chinese neighborhood and may, in fact, reinforce their decision to move to

---

**Table 3: Locational Attainment Model for the Foreign Born Chinese population in NYC.**

<table>
<thead>
<tr>
<th>NYC CHINESE POPULATION (PUMA)</th>
<th>Percentage White</th>
<th>Percentage Asian</th>
<th>Percentage Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=2927</td>
<td>n=2927</td>
<td>n=2927</td>
</tr>
<tr>
<td><strong>Intercept</strong></td>
<td>0.443***</td>
<td>0.219***</td>
<td>0.0809**</td>
</tr>
<tr>
<td><strong>Owner</strong></td>
<td>0.00151</td>
<td>0.0262***</td>
<td>-0.00334</td>
</tr>
<tr>
<td><strong>$10,030 - 26,700</strong></td>
<td>0.0372**</td>
<td>-0.000816</td>
<td>-0.0077</td>
</tr>
<tr>
<td><strong>$26,701 - 55,000</strong></td>
<td>0.0484***</td>
<td>-0.00138</td>
<td>-0.00646</td>
</tr>
<tr>
<td><strong>$55,001 - 102,750</strong></td>
<td>0.0452***</td>
<td>-0.00139</td>
<td>0.00236</td>
</tr>
<tr>
<td><strong>$102,751 +</strong></td>
<td>0.0590***</td>
<td>-0.0203</td>
<td>-0.0157*</td>
</tr>
<tr>
<td><strong>Entered between 1976 - 1990</strong></td>
<td>0.00661</td>
<td>0.0255*</td>
<td>0.0187***</td>
</tr>
<tr>
<td><strong>Entered between 1991 - 2000</strong></td>
<td>-0.00236</td>
<td>0.0247*</td>
<td>0.0185***</td>
</tr>
<tr>
<td><strong>Entered after 2000</strong></td>
<td>-0.0079</td>
<td>0.0461***</td>
<td>0.0229***</td>
</tr>
<tr>
<td><strong>Occupation 2</strong></td>
<td>0.00879</td>
<td>-0.00991</td>
<td>-0.00331</td>
</tr>
<tr>
<td><strong>Occupation 3</strong></td>
<td>-0.0118</td>
<td>0.0182*</td>
<td>0.00319</td>
</tr>
<tr>
<td><strong>Occupation 4</strong></td>
<td>0.00169</td>
<td>0.00691</td>
<td>-0.00387</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td>-0.00374</td>
<td>0.00289</td>
<td>-0.000518</td>
</tr>
<tr>
<td><strong>Associates</strong></td>
<td>-0.0127</td>
<td>0.0362**</td>
<td>0.0124*</td>
</tr>
<tr>
<td><strong>Bachelors</strong></td>
<td>0.011</td>
<td>-0.0069</td>
<td>-0.00359</td>
</tr>
<tr>
<td><strong>Naturalized</strong></td>
<td>-0.00268</td>
<td>0.0201</td>
<td>-0.00175</td>
</tr>
<tr>
<td><strong>Not a citizen</strong></td>
<td>-0.0212</td>
<td>0.0384</td>
<td>0.00508</td>
</tr>
<tr>
<td><strong>Speaks only English</strong></td>
<td>0.0673*</td>
<td>-0.00626</td>
<td>0.0109</td>
</tr>
<tr>
<td><strong>Speaks English well</strong></td>
<td>0.0565*</td>
<td>0.0365</td>
<td>0.0279</td>
</tr>
<tr>
<td><strong>Speaks English very well</strong></td>
<td>0.0632**</td>
<td>0.0101</td>
<td>0.011</td>
</tr>
<tr>
<td><strong>R-sq</strong></td>
<td>0.026</td>
<td>0.04</td>
<td>0.046</td>
</tr>
</tbody>
</table>

*p<0.05, **p<0.01, ***p<0.001

Source: ACS 2014 5-year estimates
or stay within such a neighborhood. A higher English speaking ability increases the probability that a foreign born Chinese person may live in a predominately White PUMA but only 15% of the foreign born Chinese population speak English very well so this is not necessarily representative of the total population but indicates that as a person may assimilate into the White population more as their English language skills improve but there is not any significant correlation to show whether or not the Chinese population is moving out of Asian or Chinese neighborhoods as their English language skills improve.

The results for the foreign born Chinese population in LA are slightly different than LA. All incomes (reference category for income is less than 8,900) have any impact of the likeliness that a person may live in an Asian neighborhood but a foreign born Chinese person may be more likely to live in a predominately White neighborhood when their income is $110,001 or more. Year of entry into the US is also significant. Within the White population, year of entry has a negative impact on whether or not a foreign born Chinese person may live in the same PUMA. Based on year of entry, a Chinese person is more likely to live a PUMA with a high Asian or Chinese population which is reinforced by the results of the segregation indexes. However, similar to NYC, as a foreign born Chinese person’s English speaking ability improves, they are less likely to live in an Asian or Chinese neighborhood and are more likely to live a White neighborhood. This is more significant than the NYC population as 52% of the foreign born Chinese population speak only English, speaks English well, or speaks English very well.

Table 3.1: Locational Attainment Model for the Foreign Born Chinese population in LA.

### LA CHINESE POPULATION (PUMA)

<table>
<thead>
<tr>
<th></th>
<th>Percentage White</th>
<th>Percentage Asian</th>
<th>Percentage Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.469***</td>
<td>0.256***</td>
<td>0.0543***</td>
</tr>
<tr>
<td>Owner</td>
<td>0.00673</td>
<td>-0.00111</td>
<td>-0.00612</td>
</tr>
<tr>
<td>$8,900 - 26,100</td>
<td>0.00301</td>
<td>0.0489**</td>
<td>0.0188**</td>
</tr>
<tr>
<td>$26,101 - 56,000</td>
<td>0.0484***</td>
<td>0.0846***</td>
<td>0.0234***</td>
</tr>
<tr>
<td>$56,001 - 110,000</td>
<td>-0.000641</td>
<td>0.0769***</td>
<td>0.0226***</td>
</tr>
<tr>
<td>$110,001 +</td>
<td>0.0333*</td>
<td>0.0437*</td>
<td>0.011</td>
</tr>
<tr>
<td>Entered between 1976 - 1990</td>
<td>-0.0547***</td>
<td>0.0805***</td>
<td>0.0304***</td>
</tr>
<tr>
<td>Entered between 1991 - 2000</td>
<td>-0.0552***</td>
<td>0.0864***</td>
<td>0.0296***</td>
</tr>
<tr>
<td>Entered after 2000</td>
<td>-0.0350*</td>
<td>0.0538**</td>
<td>0.0227***</td>
</tr>
<tr>
<td>Occupation 2</td>
<td>-0.0186</td>
<td>0.019</td>
<td>0.00614</td>
</tr>
<tr>
<td>Occupation 3</td>
<td>-0.0359**</td>
<td>0.0373**</td>
<td>0.00746</td>
</tr>
<tr>
<td>Occupation 4</td>
<td>0.0173</td>
<td>-0.0198</td>
<td>-0.00387</td>
</tr>
<tr>
<td>Sex</td>
<td>0.0106</td>
<td>-0.00359</td>
<td>-0.00342</td>
</tr>
<tr>
<td>Associates</td>
<td>0.00246</td>
<td>-0.0048</td>
<td>-0.0058</td>
</tr>
<tr>
<td>Bachelors</td>
<td>-0.0200*</td>
<td>0.00557</td>
<td>0.000116</td>
</tr>
<tr>
<td>Naturalized</td>
<td>-0.0109</td>
<td>0.0227</td>
<td>0.00462</td>
</tr>
<tr>
<td>Not a citizen</td>
<td>-0.0212</td>
<td>0.0274</td>
<td>0.00503</td>
</tr>
<tr>
<td>Speaks only English</td>
<td>0.0903***</td>
<td>-0.0852***</td>
<td>-0.0301***</td>
</tr>
<tr>
<td>Speaks English well</td>
<td>0.0439***</td>
<td>-0.0437***</td>
<td>-0.0190***</td>
</tr>
<tr>
<td>Speaks English very well</td>
<td>0.0606***</td>
<td>-0.0568***</td>
<td>-0.0209***</td>
</tr>
<tr>
<td>R-sq</td>
<td>0.075</td>
<td>0.072</td>
<td>0.074</td>
</tr>
</tbody>
</table>

*p<0.05, **p<0.01, ***p<0.001

Data: ACS 2014 5-year estimates
When the locational attainment models were applied to the foreign born West African population, there were fewer significant variables. It should be noted, however, that the number of observations for the West African population is much smaller and as PUMAs account for a larger population it may have influenced the results. A smaller measurement, such as census tracts, may result in more significant variables. For both populations in NYC and LA, there were no significant variables when the percentage of African American/Black in foreign born West African PUMAs was set as the dependent variable. This indicates that some variables that impact the likeliness of whether or not a West African may live amongst African Americans may not have been included in the regression.

The only significant variable with the percentage of the White population is the income of $16,001-$32,000 (income reference category is less than $16,001). This household income is significant and indicates that West Africans will be more likely to live neighborhoods with higher White populations if they have a household income between these amounts. This income level also has a negative impact on whether or not West Africans are likely to live amongst other West Africans. The most significant variable in the model is homeownership. This variables is significant when the percentage of West Africans within a PUMA is the dependent variable. Homeownership has a negative impact which indicates that West African homeowners are less likely to own homes in neighborhoods where contact with fellow West Africans is high.

Based on household income, the foreign born West African population

**NYC WEST AFRICAN POPULATION (PUMA)**

<table>
<thead>
<tr>
<th></th>
<th>Percentage White</th>
<th>Percentage Black</th>
<th>Percentage West African</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.392***</td>
<td>-2.894</td>
<td>0.0368***</td>
</tr>
<tr>
<td>Owner</td>
<td>0.0288</td>
<td>-0.753</td>
<td>-0.0118***</td>
</tr>
<tr>
<td>$16,001 - 32,300</td>
<td>0.0705*</td>
<td>0.691</td>
<td>-0.0109*</td>
</tr>
<tr>
<td>$32,301 - 61,100</td>
<td>0.0313</td>
<td>0.492</td>
<td>-0.00654</td>
</tr>
<tr>
<td>$61,101 - 104,000</td>
<td>0.0409</td>
<td>1.982</td>
<td>-0.00667</td>
</tr>
<tr>
<td>$104,001 +</td>
<td>-0.0132</td>
<td>7.661</td>
<td>-0.00633</td>
</tr>
<tr>
<td>Entered between 1976 - 1990</td>
<td>0.0505</td>
<td>0.255</td>
<td>-0.00829</td>
</tr>
<tr>
<td>Entered between 1991 - 2000</td>
<td>0.00955</td>
<td>-1.353</td>
<td>0.00318</td>
</tr>
<tr>
<td>Entered after 2000</td>
<td>0.0123</td>
<td>1.679</td>
<td>0.000349</td>
</tr>
<tr>
<td>Occupation 2</td>
<td>-0.0192</td>
<td>22.24</td>
<td>0.00497</td>
</tr>
<tr>
<td>Occupation 3</td>
<td>-0.00105</td>
<td>-0.411</td>
<td>-0.00193</td>
</tr>
<tr>
<td>Occupation 4</td>
<td>0.024</td>
<td>2.153</td>
<td>-0.00424</td>
</tr>
<tr>
<td>Sex</td>
<td>0.0167</td>
<td>-3.033</td>
<td>-0.000882</td>
</tr>
<tr>
<td>Associates</td>
<td>-0.0482</td>
<td>-3.12</td>
<td>0.00391</td>
</tr>
<tr>
<td>Bachelors</td>
<td>-0.0197</td>
<td>-3.702</td>
<td>-0.000826</td>
</tr>
<tr>
<td>Naturalized</td>
<td>-0.0523</td>
<td>1.083</td>
<td>-0.00428</td>
</tr>
<tr>
<td>Not a citizen</td>
<td>-0.061</td>
<td>2.486</td>
<td>0.00213</td>
</tr>
<tr>
<td>Speaks only English</td>
<td>-0.0889</td>
<td>-0.2</td>
<td>0.00554</td>
</tr>
<tr>
<td>Speaks English well</td>
<td>-0.141</td>
<td>-2.188</td>
<td>0.00633</td>
</tr>
<tr>
<td>Speaks English very well</td>
<td>-0.0929</td>
<td>2.783</td>
<td>0.00875</td>
</tr>
<tr>
<td>R-sq</td>
<td>0.083</td>
<td>0.027</td>
<td>0.127</td>
</tr>
</tbody>
</table>

* p<0.05, ** p<0.01, *** p<0.001

Data: ACS 2014 5-year estimates

Table 3.2: Locational Attainment Model for the Foreign Born West African population in NYC.
is less likely to live in neighborhoods with higher percentages of West Africans. The only other significant income variable is household incomes from $38,401-$74,550 which indicates that West Africans are less likely to live in neighborhoods with higher White population if they are within these income brackets. As most of the significant variables for household income indicate a negative relationship with the White and West African population, it brings to question of where West Africans are more likely live depending on their income.

A variable that was not significant with any other populations but is for the LA West African population is sex. Female West Africans are more likely to live in predominately White neighborhoods. Higher educational attainment, such as a bachelor’s degree and naturalized citizenship also has an impact on the probability that a West African person may live in a predominately White neighborhood. A person that does not have any citizenship may also live in a predominately white neighborhood which may indicate that most West Africans in LA are more likely to live in neighborhoods with higher White populations.

Table 3.3: Locational Attainment Model for the Foreign Born West African population in LA.

<table>
<thead>
<tr>
<th></th>
<th>Percentage White</th>
<th>Percentage Black</th>
<th>Percentage West African</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.459***</td>
<td>0.0715</td>
<td>0.00923***</td>
</tr>
<tr>
<td>Owner</td>
<td>0.00681</td>
<td>-0.0246</td>
<td>-0.00102</td>
</tr>
<tr>
<td>$10,801 - 38,400</td>
<td>-0.00551</td>
<td>-0.093</td>
<td>-0.00632**</td>
</tr>
<tr>
<td>$38,401 - 74,550</td>
<td>-0.123*</td>
<td>0.0294</td>
<td>-0.00510**</td>
</tr>
<tr>
<td>$74,551 - 138,555</td>
<td>-0.0284</td>
<td>-0.0512</td>
<td>-0.00492*</td>
</tr>
<tr>
<td>$138,556+</td>
<td>-0.0404</td>
<td>-0.1</td>
<td>-0.00599**</td>
</tr>
<tr>
<td>Entered between 1976 - 1990</td>
<td>0.0645</td>
<td>-0.0379</td>
<td>-0.00162</td>
</tr>
<tr>
<td>Entered between 1991 - 2000</td>
<td>0.027</td>
<td>-0.00571</td>
<td>-0.00176</td>
</tr>
<tr>
<td>Entered after 2000</td>
<td>0.00484</td>
<td>-0.0239</td>
<td>-0.00223</td>
</tr>
<tr>
<td>Occupation 2</td>
<td>-0.0466</td>
<td>0.0294</td>
<td>-0.000641</td>
</tr>
<tr>
<td>Occupation 3</td>
<td>0.0369</td>
<td>0.00545</td>
<td>-0.00186</td>
</tr>
<tr>
<td>Occupation 4</td>
<td>-0.0201</td>
<td>0.0288</td>
<td>0.0000359</td>
</tr>
<tr>
<td>Sex</td>
<td>0.202**</td>
<td>0.061</td>
<td>0.00103</td>
</tr>
<tr>
<td>Associates</td>
<td>0.0389</td>
<td>-0.0501</td>
<td>0.000944</td>
</tr>
<tr>
<td>Bachelors</td>
<td>0.0662*</td>
<td>-0.0424</td>
<td>-0.000127</td>
</tr>
<tr>
<td>Naturalized</td>
<td>0.191**</td>
<td>0.0543</td>
<td>0.000793</td>
</tr>
<tr>
<td>Not a citizen</td>
<td>0.259***</td>
<td>0.0618</td>
<td>0.000143</td>
</tr>
<tr>
<td>Speaks only English</td>
<td>-0.0352</td>
<td>0.08</td>
<td>0.000093</td>
</tr>
<tr>
<td>Speaks English well</td>
<td>-0.0352</td>
<td>0.104</td>
<td>0.0011</td>
</tr>
<tr>
<td>Speaks English very well</td>
<td>-0.0932</td>
<td>0.0807</td>
<td>0.00178</td>
</tr>
<tr>
<td>R-sq</td>
<td>0.253</td>
<td>0.263</td>
<td>0.37</td>
</tr>
</tbody>
</table>

* p<0.05, ** p<0.01, *** p<0.001

QUALITATIVE ANALYSIS

INTERVIEWS

Interviews were conducted to gain a greater understanding of the process and experiences West African and Chinese immigrants face when finding housing in the US. Six interviews were conducted, 3 Chinese immigrants and 3 West African immigrants (2 from Burkina Faso and 1 born in Togo and raised in Côte D’Ivoire). All 3 Chinese interviewees are currently living or lived in predominantly Chinese immigrant communities and currently live in housing that they own. All 3 West
African interviewees lived with family or friends from their home country when they first arrived in the US and are currently renting an apartment or house. Chinese interviewees were more likely to move to the US with their family or because of their family (with hopes to bring their family over) whereas, the West African immigrants came to the US for education.

**CHINESE INTERVIEWS**

The housing process for Chinese interviews has been described as difficult and two of the interviews recommend that Chinese immigrants rent or buy from Chinese landlords as they are more understanding of culture and there is no language barrier. The Chinese interviewees also did not sign any lease when they rented apartments from Chinese landlords. In two of the families, siblings would share a bedroom with parents in the other bedroom. In one family, grandparents stayed with the family for several years and slept in the living room. Despite some crowded living conditions, none of the interviews were upset about the living situations.

In regards to the process of becoming homeowners, two of the interviewees described the process as difficult and stressful as interviews and loans were required in order to purchase the home. The other interview may not be representative of the general population as she purchased her home in the 1990’s and chose to move out of a predominantly Chinese community. The reason for this move was because she said she wanted her child to assimilate to American culture and learn English quickly. She recommended that Chinese immigrants move out of predominately Chinese communities into more diverse communities to allow their children to learn about more cultures and learn English.

**WEST AFRICAN INTERVIEWS**

Unlike the Chinese interviewees, West African interviewees did not move into predominantly West African neighborhoods. This is most likely because there are not many dense West African communities like there are large, densely populated Chinese communities. At some point all of the interviews lived in apartments that severely overcrowded. One interviewee lived in a studio apartment in LA with 6 other people while another interviewee lived in one bedroom apartment in NYC with 3 other people. This was common amongst all West African interviewees.

Two of the interviewees also spoke of experiences they’ve had with negligent landlords. An interviewee spoke of a time while living in LA where police were called to his apartment that he lived in with 6 other West African communities. His neighbors, in a Hispanic community, called the police since they were alarmed by such a large group of West African men in the building. The same interviewee also faced problems with a negligent landlord who would not fix the baseboard heating in the middle of winter or fix the leaking roof that caused mold to grow on the living room wall. He claimed the landlord would only come for rent. He and his roommates did not have many choices on how to resolve their problems with their landlord as none of their names were on the lease. The lease was under one of the roommate’s relatives that did not live in the unit and the roommates would continuously find new roommates through friends or families as one person moved out. This passing down of the apartment is something that is common within the West African community.

One interviewee spoke of her troubles with her landlord but as her name was on the lease she was able to seek legal recourse to find a solution to "THE PROCESS IS TOO COMPLICATED AND TIME CONSUMING."

"THE PROCESS WAS STRESSFUL SINCE WE NEEDED TO BE INTERVIEWED AND GET LOAN AS WELL."

"IT’S NOT GOOD FOR CHILDREN TO GROW UP IN A CHINESE COMMUNITY—THEY NEED TO BE EXPOSED TO ENGLISH."

"I WOULD SAY CHINESE ARE MUCH EASIER TO DEAL WITH IN TERMS OF LEASING AND FINDING A CHEAP APT."
her difficulties. She claimed that the landlord would not fix things that had broken in the apartment, such as the refrigerator and would not take care of problems like people smoking outside her apartment window. The landlord also tried to raise her rent by $75/month but she refused to sign the lease and pay the increased rent as the landlord was negligent. Eventually the landlord tried taking her to court for not paying the full rent but as she was able to document all her problems through 311 calls and photographs. The case was settled in her favor and she was able to move out without paying the additional rent. This is not always the case with tenants as they may not be aware of their rights.

Two of the interviewees also mentioned difficulty just being able to rent an apartment as they did not have any credit when they tried to find their own apartment. One interviewee had to pay rent 6 months in advance in order to sign a lease and the landlord for the other interviewee refused to put his name on the lease and would only allow the lease to be under his wife’s name who had credit. At the time that both interviewees tried to rent and sign a lease for an apartment, they had jobs but as they did not have any credit, the rental process was made much more difficult and limiting.

**FINDINGS**

When the quantitative and qualitative analyses are considered together, the interviews reinforce the segregation indices and locational attainment models. The interviews with the Chinese participants indicate strong ties to family and the Chinese community. Despite being in the US for several years and higher English speaking abilities, only one participant moved out of a Chinese/Asian neighborhood. However, even that interviewee continues to have strong ties to the Chinese community.

The West African interviews, on the other hand, do not seem to have any sort of attachment to large West African community. This could be due to the small size of the West African community in NYC and LA. It should be noted that although the West African immigrants are not settling into West African enclaves, they may be forming community bonds and networks through other means, such as through family, friends, social media and technology as it is not always necessary to share a close spatial location to maintain a network.

Theory indicates that for some populations with lesser English language skills and lower educational attainment levels paired with race may impact where a person may live and it seems to hold true when the Chinese population is considered. The segregation indices and locational attainment models show a strong connection between the Asian and Chinese populations and language. The results from show that the Chinese population is more likely to own homes in Asian and Chinese communities. Table 4 shows that in general Chinese persons have lower monthly mortgage payments and higher home values. This could be a result greater integration into the larger Asian community and may be a result of having access to a network of resources such as Asian banks and more services available in Mandarin (as a significant portion of the population does not speak English well).

The locational attainment models also showed that Chinese persons that do speak English very well are more likely to live in communities with more White persons. This may be a result of living in the US for a longer period of time and as result learning English and the housing market

**WEST AFRICAN INTERVIEWEES**

“AT SOME POINTS THERE WERE UP TO 6 OR 7 PEOPLE LIVING IN STUDIO APARTMENT. THE APARTMENT ITSELF WAS FILLED WITH ROACHES AND FALLING APART.”

“NOTHING IN EASY. EVERYTHING IS A BATTLE. THERE IS A HIGH RATE OF HOMELESSNESS IN THE US. THERE ARE NOT THE SAME PROBLEMS IN BURKINA FASO. THERE NO ONE HELPING EACH OTHER.”

“STAY WITH SOMEONE AS LONG AS YOU CAN. UNTIL YOU CAN UNDERSTAND WHAT IS HAPPENING IN THE COMMUNITY AND HOW TO FIND HOUSING. FOR THE LANDLORD—TRUST YOUR TENANTS! AFRICANS WOULD RATHER BE RESPONSIBLE AND PAY RENT THAN EAT.”
or it could just be due to greater English language speaking abilities which makes it easier to navigate the housing market.

As shown in the literature review and the locational attainment models, is not necessarily true for the West African population. The West African population is highly segregated from the White population in both NYC and LA but there is also some segregation from the African American/Black population in LA. It should be noted that are not very large West African communities and the segregation indices did not indicate that the West African community is forming enclaves which may be due in part to the population’s size. The locational attainment model explains some of the variation and indicates that the West African population may be more likely to live in neighborhoods with larger White populations as their level of education rises but overall the West African population is highly segregated and isolated from each other. Not having this spatial sense of community may be a hindrance to the West African population as there may be fewer resources available that are specific to their needs and wants.

As noted by Takougang and Tidani, Settlement Patterns and Organizations Among African Immigrants in the United States, access to specialized resources and organizations can be beneficial: “The creation and functioning of national, ethnic and religious based organizations is accompanied by the emergence of small businesses as forms of organization that highly contribute to the reinforcement of African communities through the creation of an ethnic economy, including ethnic labor and consumer markets” (Takougang and Tidjani, 2009).

Having access to specialized resources and organizations may also impact a person’s ability to obtain affordable, clean and safe housing. While homeownership was not a significant variable in all of the models, it is still important to look at homeownership as it may be an indicator of integration and settlement. If there are barriers to obtaining homeownership it may result in fewer homeowners than the actual amount of persons that desire to become homeowners. As such, this expectation to become a homeowner cannot be captured in the locational attainment model and cannot be measured along with the other variables.

Table 4 shows the median monthly mortgage payment as a percentage of household income. In general, both foreign born populations are paying a higher percentage of their household

<table>
<thead>
<tr>
<th></th>
<th>Median Mortgage as % of Household Income</th>
<th>Median Monthly Mortgage</th>
<th>Median House Value</th>
<th># of Observations</th>
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<tbody>
<tr>
<td><strong>West African</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NYC</td>
<td>19%</td>
<td>$2,000</td>
<td>$375,000</td>
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<tr>
<td>LA</td>
<td>31%</td>
<td>$1,800</td>
<td>$400,000</td>
<td>39</td>
</tr>
<tr>
<td><strong>Chinese</strong></td>
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<td></td>
<td></td>
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<tr>
<td>NYC</td>
<td>30%</td>
<td>$2,300</td>
<td>$600,000</td>
<td>806</td>
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<tr>
<td>LA</td>
<td>22%</td>
<td>$1,600</td>
<td>$500,000</td>
<td>643</td>
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<tr>
<td><strong>Entire NYC</strong></td>
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<tr>
<td><strong>Asian</strong></td>
<td>22%</td>
<td>$2,000</td>
<td>$480,000</td>
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<td><strong>Asian</strong></td>
<td>18%</td>
<td>$2,000</td>
<td>$480,000</td>
<td>6928</td>
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</tbody>
</table>

Data: ACS 2014 5-year estimates
income to their mortgage each month in comparison to the general populations. The two populations of most concern may be the Chinese population in NYC and the West African population in LA where they are paying 30% of their household income in their monthly mortgage payment.

The Chinese population is paying lower monthly mortgage payments for homes of higher value. Some reasons for this could be that the Chinese population is making larger down payments on homes, Chinese banks that may offer more generous loan terms, and a network within both cities that provide Chinese residents with more resources to purchase a home.

The median monthly mortgage payment and home value may be of particular concern for both West African populations. When compared to the general population and the White population, it is noticeable that the median monthly mortgage is higher for West Africans for homes of similar or lower median value. There may be several factors that may have an impact on the monthly mortgage payment including credit score, access to the banking system, and discrimination. As the segregation indices show, West Africans are highly segregated from the White population and somewhat segregated from the Black population and overall the West African population is very isolated and dispersed which may lead to fewer resources being distributed to the population and fewer opportunities. As the African and West African population continues to increase in cities, this segregation and isolation should be a concern for cities and planners. Access to resources and living in segregated and isolated areas may lead to more tenuous living situations such as overcrowding which is the interviewees indicated is a common living situation. Not only are overcrowded apartments uncomfortable to live in but too many people in a small household may be a health and safety hazard and if not all tenants have signed a lease, such as situation creates an uncertain living situation for tenants. Living in uncertainty may impact a person's ability to focus and perform well in other aspects of their life such as job or school. Interviewees did not indicate that living in overcrowded situations affected their lives negatively but further research would need to be completed with a larger group to understand how such informal living situations impact the West African population.

Another effect of the West African population not having many resources and banking systems available to them can be shown in their willingness to move elsewhere as their income and education levels rise. As their income and education level rises, many Africans will move out of cities where they may perceive neighborhoods to be safer with better schools (Takougang and Tidjani, 2009) (Gurak and Kritz, 2015). Cities such as LA and NYC should be concerned about this as they are losing educated and skilled persons as well as higher income earners. In order to combat West Africans desires to leave cities, more resources should be dedicated to the West African community as it is a highly educated population that can be an asset to a city.

The interviews indicated that many people found the housing experience to be very difficult and confusing in both NYC and LA. LA and NYC should provide more accessible information in order to prevent unsafe informal housing situations and predatory lending. The information about housing and a tenants and homeowner rights should be available in one central location where immigrants may find information about housing and their rights. This is something organized by

The city agencies may coordinate with local West African/African and Chinese community organizations, non-profits, and embassies to assess the needs of these populations. After a thorough assessment, they may create a comprehensive website available in multiple languages where tenant and homeowner rights are listed, what a person may do in the case of discrimination or questionable behavior, as well as resources for community groups that a person may get in touch to learn more about the city, housing, and living in the US. The information may then be provided to community groups and non-profits that assist immigrants and foreign born populations, embassies and may be included in a section of the Department of Homeland Security website under “How do I… Move to the United States”.

By providing easily accessible information on how to navigate the housing market in NYC and LA and tenant’s rights, the cities may facilitate safer and healthier living situations as people may be more aware of their rights, they be more willing to report illegals. To further the idea of accessible information, the cities should provide a safe space where persons who are not in a legal living situation or whose status is not entirely legal may report abuse.

Another solution to assist both populations to promote and enforce acceptance of an alternative credit check as many of the interviewees did not have US based credit when they first entered the US and had difficulty finding housing as a result. The Chinese population in NYC and the West African community in NYC and LA are also within the top 10 foreign born populations of concern and located within Racially or Ethnically Concentrated Areas.
of Poverty (R/ECAP) according to the US Department of Housing and Development and are need of assistance and services. Lack of established credit and banking services in their community may lead to fewer opportunities for persons to find affordable housing, obtain a reasonable mortgage, and live in community where they may thrive and open local businesses and contribute to the economy. A report, Change It Up!, from the Center for Urban Pedagogy and the New Economy Project showed that communities with low access to banks and the banking system end up paying more for credit and banking services by services such as check cash shop which charge fees. The Chinese community already has more access but the system may not be robust enough to service the size of the population and their needs which may be why the Chinese population is considered to be mainly located in R/ECAP areas. The West African population does not have the same access to services. There is only one African Bank in NYC and it is a South African based bank. There are not African banks in LA. There are several Chinese bank and credit unions in both NYC and LA.

FICO, LexisNexis Risk Solutions and Equifax have created alternative credit score which considers how often a person pays their bill payment history, rental payment history, address changes, and other factors to generate a credit score that is similar to a FICO score. As this credit score is issued by large, widely-known credit bureaus, it should be an acceptable credit score for banks and landlords.

By promoting and enforcing acceptance of this alternative credit check, millions of people will have access to the banking system. As a result of this, many immigrants may show the alternative credit score to rent an apartment that they were previously unable to rent which may result in fewer overcrowded homes as people will be to rent their own apartment. They will be able to buy a home and obtain an affordable mortgage and they will have access to more banking services such as something as simple as bank account to deposit their check. Access to credit and basic financial services may create more economically stable and thriving communities and opportunities for the Chinese and West African communities.

**FURTHER ACTIONS AND QUESTIONS**

New York City already has fairly comprehensive city-wide survey of the foreign born population released through their The Newest New Yorkers publication. A similar survey should also be completed in Los Angeles. However, this survey uses data from the American Community Survey and The Newest New Yorker which lack specific information on informal housing that foreign born persons may be settling in and the restrictions people may be facing from lack of credit or government-issued identification. Factoring in these issues may highlight new issues that the city may focus on in future planning.

Additional research may explore whether or not having a stronger community or network that a person can rely on the city is helpful or if it actually more beneficial to foreign born populations not to have a strong network as they may assimilate to the US more quickly in terms of language, housing and education. Studying these two populations together can provide future planners, cities, and governments more comprehensive and in-depth analysis in terms of how to plan for different emerging immigrant populations.

**SOURCES**


Case studies examining the effects of immigration across six global cities.


https://books.google.com/books?hl=en&lr=&id=VAr6CAAAQBAJ&oi=fnd&pg=PR5&dq=affordable+housing+for+mi-
AN ANALYSIS OF FOREIGN BORN WEST AFRICAN & CHINESE POPULATIONS IN NYC AND LA


A private/public partnership providing housing for migrants in South Carolina.


Studies the different effects on immigration, segregation and socio-economic transformations in European cities.


Studies ethnic enclaves in the US.


Examine the cost burdens that many immigrants face when seeking housing in the US.


US Census definition and guide of overcrowding.


Studies the effects of immigration and housing in Sweden.


A collection of essays on the history of immigration in the US.


Examines the effects of the housing bubble and the groups it has affected.


Reviews how subsidized housing has moved throughout the US. Uses Minneapolis-St. Paul as a case study.


Looks as the growing immigrant population and their integration in US cities.


This book studies the history of the US and immigration, segregation by race, income and housing as well as the effects of sprawl.


Follows the lives of undocumented immigrants in the US and the struggles they and their families have.


Studies the different effects on immigration, segregation and socio-economic transformations in European cities.


Study of housing choices, segregation and it’s effects on two cities in the US.


“Quantifying the US Housing Crisis - Urban Land Magazine.” Urban Land Magazine


