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DIFFERENCES IN INCOME FOR FOREIGN-BORN BLACKS ACROSS SETTLEMENT
TYPES IN AN ERA OF RISING ANTI-IMMIGRATION SENTIMENT

by

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Abstract

Traditional immigration patterns show immigrants in the United States settling in cities with a high density of co-ethnics called ethnic enclaves. There has been a shift in the last three decades where immigrants are moving to suburbs with a high density of one ethnic group called an ‘ethnoburb’ or mixed ethnicity suburbs. Partly reflecting the composition of migration flows, prior work has heavily focused on foreign-born Hispanics and Asians. Less attention has been paid to the settlement patterns of foreign-born Blacks. Furthermore, immigration has become more contested in the United States due to changing political discourse and it is unclear whether previous settlement patterns persist. Using the 2019 5-year estimates from the American Community Survey, this research explores: (1) how do the sociodemographic characteristics of foreign-born Blacks who settle in areas of high co-ethnic density compare to foreign-born Blacks who settle in areas of less co-ethnic density? and (2) how does income attainment compare between different settlement types for foreign-born Blacks? Foreign-born Blacks settle in areas of high co-ethnic density the most, but those who settle in areas of medium co-ethnic density have the highest earnings.

Keywords: foreign-born Black, returns to education, residential settlement, co-ethnic density

Introduction

Anti-immigration sentiments have always existed in the United States, but they have intensified throughout the past presidential term. Anti-immigration enforcement and political rhetoric against immigrants may have altered the settlement patterns of immigrants in recent years (Finley & Esposito, 2020). Historically, upon arrival immigrants have tended to settle into regions where there is a high proportion of their co-ethnics called ethnic enclaves. Enclaves typically provided many attractive resources to immigrants as well as safety from discrimination and acts of violence from neighbours and peers (Liu & Geron, 2008). Recent trends have shown that immigrants are leaving enclaves for the suburbs or settling directly into suburbs post-migration. When a suburb becomes dominated by one ethnic group, it becomes an ‘ethnoburb’ which facilitates easier transition there for other co-ethnics. Ethnoburbs provide the same safety and cultural resources as ethnic enclaves (Zhou, Tseng, & Kim, 2008). Some immigrants preferred to reside in a mixed-ethnicity suburb comprised of co-ethnic neighborhoods and native-born Americans. In such settings, access to mixed-ethnicity networks may receive higher returns to education (Barringer, Takeuchi, & Xenos, 1990). Additionally, the shift toward mixed-ethnicity suburbs can provide more safety during times of rising anti-immigrant sentiment. Ethnic enclaves have frequently become clear targets for acts of racial violence and discrimination throughout history (Qadeer & Kumar, 2006), leaving reason to believe that the increased feelings of animosity toward immigrants in the United States is making ethnically concentrated areas less safe. This makes mixed-ethnicity suburbs more attractive.

The recent growth of anti-immigration sentiment may have altered immigrant settlement patterns and the context of reception that immigrants in different neighborhoods face. While different immigrants have different reasons for living in their place of residence, it is important

to look at the differences in demographic characteristics between ethnic enclaves, ethnoburbs, and suburbs to see whether certain immigrant characteristics can predict where one will settle. It is also important to explore the returns to education within ethnic enclaves, ethnoburbs, and other settlements to determine whether certain locations are more disadvantageous.

Previous literature on ethnic enclaves and immigrant settlements as well as returns to education does not accurately portray the modern conditions. It has not yet been explored whether or not the anti-immigrant discourse that has intensified during the last presidential term has impacted immigrant settlement patterns in the United States. It is logical to believe it may have an impact as ethnically dense neighbourhoods have become obvious targets for racial violence and government raids in recent years, making enclaves less safe.

The majority of the literature on immigrant settlement patterns focuses mainly on foreign-born Hispanics and Asians. Furthermore, there is considerable work on the residential segregation of native-born Blacks. Yet, insight about the residential settlement patterns of foreign-born Blacks remains rather limited. Foreign-born Blacks, particularly those from the West Indies, have better employment prospects and socioeconomic outcomes than native-born Blacks (Waters, 1999). Simultaneously, many foreign-born blacks may be subject to the same discrimination as U.S.-born Blacks. It is therefore unclear whether foreign-born Blacks are subject to the same residential segregation as native-born Blacks. Also, unknown is the extent to which the residential settlement patterns help determine the socioeconomic integration of foreign-born Blacks in the United States.

Using data from the five-year annual files of the 2019 American Community Survey (ACS), I first describe the settlement patterns of foreign-born Blacks in the United States. Next, I

identify the traits that help Black immigrants' sort into the distinct settlement areas. Finally, I document variations in foreign-born Black's income according to their settlement patterns.

This study offers several important insights to the literature on the residential assimilation of immigrants. To my knowledge, it is one of the few studies that examines the residential settlement patterns of Black immigrants. Furthermore, my analysis on the impact of immigrant settlement location on the socioeconomic attainment of immigrants can inform foreign-born Blacks' settlement decisions by helping identify in what areas foreign-born Blacks experience the most discrimination. Furthermore, it will help identify which group of immigrants need the most policy intervention. For example, showing that foreign-born Blacks in ethnoburbs have the smallest returns to schooling means that the government and the community organizations must invest more in their employment prospects.

Background

International Immigration and Enclaves

Examining international immigration provides insight into why immigrants settle in certain locations and choose to transition once they attain more capital, linguistic proficiency, and become more familiar with the destination country. Analyzing residential settlement patterns of foreign-born Blacks will show whether they differ from the settlement patterns of other immigrant groups. Several theoretical models have been proposed to describe immigrant settlement patterns.

The Enclave Economy Thesis posits that recent arrivals tend to settle in the same geographical regions as other immigrants from the same sending country, or "co-ethnics" (Wilson and Portes, 1980). Ethnic Enclaves are geographic locations with a concentration of an

ethnic group which involves economic activity and a cohesive cultural identity, examples include China Town (Xie & Gough, 2011). Employers within enclaves are ethnic entrepreneurs and rely heavily on a labour pool of immigrant workers with the same ethnic and linguistic background as them (Li & Dong, 2007).

Immigrants tend to settle in enclaves because they are near a main point of entry, it is an area of concentration of their ethnicity, and because jobs are readily available (Chiswick & Miller, 2005). Immigrants who settle in enclaves have better immediate and short-term rates of employment and income than immigrants who settle outside enclaves. New arrivals earn more working in ethnic enclaves than they would outside an enclave (Xie & Gough, 2011).

Ethnic enclaves have a number of benefits for immigrants. First and foremost, living and working in an 'ethnically sheltered economy' allows immigrants a direct path towards employment and thus earnings in the absence of language proficiency (Chiswick & Miller, 2005; Li & Dong, 2007). Second, immigrant families can have access to goods and services that they could have obtained in the source country, such as specific foods and materials. Living in an area with high ethnic concentration also offers them a venue to continue their cultural and religious practices and makes it easier for them to pass on their cultural heritage to their children (Jimenez, 2008). Third, living in an ethnic enclave may offer them protection against hostility, xenophobia, and racism directed towards their group. Specifically, enclave labour market outcomes are better because there is limited discrimination against the prominent ethnicity of the enclave (Edin, Fredriksson, & Aslund, 2003). This may be a particularly important feature given the rise in anti-immigration sentiments and tensions in race relations during the Trump presidency (Williams, 2020).

Nonetheless, there is a threshold to the benefits of living in an ethnic enclave. Many immigrants living in ethnic enclaves end up working low-skilled jobs despite their skill level. This benefits immigrants without a high level of education or transferrable skills but can hinder the earnings of those with higher skill and education levels. Many immigrants may choose to move after they have attained socioeconomic and linguistic proficiency. Spatial Assimilation Theory describes this process (Massey, Arango, Hugo, Kouaouci, Pellegrino, & Taylor, 1993). Specifically, it portends that immigrants typically settle in enclaves upon arrival, as time passes immigrants experience an increase in their income and social status which causes them to disperse from the enclaves to gain larger housing space in more desirable areas. They begin to assimilate with native-borns and reach income parity (Gelfand, 2019). There are multiple aspects of an immigrant's sociodemographic profile that can impact the transition out of the enclave including income and education (Andersen, 2016).

As shown by the Spatial Assimilation Hypothesis, leaving an ethnic enclave can facilitate greater economic achievement, returns to education, and integration into American society (Abramitzky, Boustan, & Connor, 2020). In recent years, immigrants seem to be more interested in settling outside enclaves and within multi-ethnicity suburbs (Alba, Logan, Sluts, Marzan, & Zhang, 1999). While there has been an overall growth in the number of immigrants in the United States, the proportion of immigrants living outside enclaves has also increased greatly (PEW Research Center, 2018).

There are various benefits that enclaves can provide to immigrants and immigrant networks provide a simplified route for them to reach the destination and allow them to settle into the enclaves. Immigrants usually fare better once they earn more money and are able to move out of the enclaves as confirmed by the Spatial Assimilation Hypothesis. As an immigrant

lives in a destination for a longer period of time, their income becomes closer to that of native-borns. It typically takes about 10 years to achieve income parity between immigrants and natives (Barringer, Takeuchi, & Xenos, 1990).

New Destinations

A shift in destination has been occurring where immigrants are settling in suburbs or ethnoburbs at a greater rate. Immigrants are also departing from enclaves they once settled in for suburban areas. The shift in destination has been occurring for approximately the last three decades and took place prior to the Trump-era anti-immigration sentiments that have transpired in the past half decade (Zhou, Tseng, & Kim, 2008).

Settling in suburban areas has two potential residential settlement patterns relevant to this analysis. First, when a suburb has a high concentration of one ethnic group, it becomes an ‘ethnoburb.’ These ethnoburbs occur in groups of immigrants who have higher levels of education, incomes, and occupations that have enabled them to develop a diverse network allowing them mobility. Second, there are other suburban areas that are relatively representative of a number of ethnicity and no single group dominates. These other settlements typically include some native-borns and many immigrants from various sending countries (Zhou, Tseng, & Kim, 2008).

Differing from enclaves, ethnoburbs are attractive for immigrants because of their larger homes and social service organizations that provide many resources such as “English training centers, employment referral services, health clinics, youth programs, day care centers, as well as welfare, housing, legal, and family counselling services” (Zhou, Tseng, & Kim, 2008). These are provided for those in the ethnoburb to take advantage of, making them more attractive than

another settlement area. The anti-immigration discourse that has been rising has made any location with a cluster of immigrants less attractive to reside. This means that other settlements with no dominant racial or ethnic group could have the potential to be safer places for immigrants.

The changing of settlement patterns can in-part be attributed to the anti-immigration sentiment that has intensified in the past five years. Integrated Threat Theory explains that prejudice is likely to develop from perception of threat against values/beliefs and social groups. The threat does not need to be real; the perception of threat is enough to result in prejudice. There are four types of threat that lead to prejudice: (1) *realistic threats* which are economic, physical, and political threats that exist when those resources are limited and groups must compete for them; (2) *symbolic threats* which stem from anticipated differences between groups; (3) *negative stereotypes* are perceived out-group threats; and (4) *intergroup anxiety* which is anxiety people experience during interactions with out-group members (Croucher, 2013).

The dominant culture often feels as though immigrants are not actively assimilating and feels threatened by it. This results in increased prejudice and hostility, which further decreases immigrant integration (Croucher, 2013) and keeps them in enclaves. While integration is not being promoted by threat theory, immigrants can actually feel more threatened in areas with a high concentration of their ethnicity. More prone to violent attacks and raids based on an increased in anti-immigrant political rhetoric (Qadeer & Kumar, 2006), ethnically concentrated areas can be more dangerous for immigrants. The increased police brutality and discrimination toward Black people make these areas even more dangerous for Black immigrants.

It has been shown that integration of immigrants into the dominant culture can result in more positive attitudes of the dominant group toward the immigrant group. The Intergroup

Contact Hypothesis shows that the contact must happen under optimal conditions of “common goals, cooperation, equal status, and institutional support” (Turner, Hewstone, Voci, & Vonofakou, 2008). These conditions could be in suburban neighbourhoods where immigrants are deciding to move to after being pushed out of their enclaves or ethnoburbs due to the perceived threat they pose.

While immigration patterns are changing, there are many different locations where immigrants settle. Whether it be clustered in an enclave or ethnoburb or in another settlement that is mixed ethnicity, residential settlement patterns depend on numerous factors. Immigrants typically depart from enclaves once they attain more capital, linguistic proficiency, and become more familiar with the destination country. However, leaving an enclave is becoming increasingly difficult in the age of anti-immigrant sentiment. Foreign-born Blacks have motivation to leave ethnic enclaves due to the threat they are perceived as and thus the targeting they face. Based on previous literature, the following competing hypotheses will be explored:

Hypothesis 1: Foreign-born Blacks who settle in areas of lower co-ethnic density will have higher income than those who settled elsewhere.

Hypothesis 2: Foreign-born Blacks who settle in areas with higher co-ethnic density will have higher income than those who settled elsewhere.

Immigrant Earnings and Returns to Education

Prior work has identified several correlates to the economic returns to education (Bratsberg & Terrell, 2002). Documenting variations in the economic returns to education highlights the factors that contribute to immigrant success in the destination country and the importance of context of incorporation for immigrant assimilation. Immigrants consistently

receive a lower return to their education than their native-born counterparts partly due to their limited English proficiency (Chaumba, 2016). While immigrants receive a lesser return to their education compared to native-born Americans, education still has a positive impact on their earnings (Xie & Gough, 2011). Language skills vary between immigrants which can reduce the earning potential for those who are not proficient in English by lowering the efficiency of their job search, undermining productivity in the workplace, and facilitating discrimination in hiring processes and workplaces (Chiswick & Miller, 2005).

Age at arrival can also play a significant role in immigrant success. Not only does age at migration affect educational attainment, but it may also offer immigrants the know-how to navigate institutions in the country of destination (Schaafsma & Sweetman, 2001). These skills may allow them to be better equipped to find jobs that meet their educational level and helps them attain an earnings trajectory that is commiserate to their skills.

Context of reception may be yet another factor influencing immigrants' returns to education. Living in areas with high levels of xenophobia can reduce immigrant pay. Furthermore, migrating to countries that do not acknowledge foreign credentials may result in underemployment (Hardoy & Schone, 2014).

Immigrants face disadvantage in the labour market and in their returns to their education through various mechanisms. Said mechanisms are thrust upon immigrants and a lot of the time are very difficult to overcome. The overall implication is that those with limited English proficiency, older age at arrival, racial minorities, and those who settled in areas with a lot of racism will have lower returns to education.

How Returns Differ by Settlement

Residential settlement types have different sociodemographic makeups which can result in a gap in returns to education between settlements. The gap in income between immigrants in enclaves and outside of enclaves is an important issue to explore to determine the level at which each settlement type advantages or disadvantages workers. Immigrants are already disadvantaged economically as a whole and more so based on their settlement type. Looking at residential settlement patterns and the Enclave Economy Thesis together, previous works have found many different outcomes prior to the rising anti-immigration sentiment in the United States.

The ability to enter the suburban housing market relies heavily on financial ability and socioeconomic status (Alba, Logan, Stults, Marzan, & Zhang, 1999). Many immigrants do not possess the funds to move to the suburbs when they arrive and thus end up in an ethnic enclave (Marten, Hainmueller, & Hangartner, 2019). Immigrants with less education face better labour market outcomes in enclaves and benefit from the low-skilled jobs and fields that are readily available (Edin, Fredriksson, & Aslund, 2003).

The lack of networks that immigrants already face in the American labour market is exacerbated for those in enclaves. When immigrants move into enclaves, the majority of the people they interact with also live and work in the enclave thus their networks do not extend outside the enclave. Networks have huge implications for job searches, especially for those with high levels of education. This means that new immigrants in enclaves have very limited pathways to the greater labour market, and thus become employed in low-skilled enclave jobs regardless of their level of education (Chaumba, 2016).

Native-born Blacks consistently earn less than native-born Americans with comparable levels of education and sociodemographic characteristics, however education is consistently beneficial to income. Returns to education can vary based on multiple different factors, but previous literature has found that returns to education do differ between settlement areas, but the returns to education are nevertheless positive. As residential settlement pattern behaviors may have changed for foreign-born Blacks during the Trump-era, it is important to investigate whether this has impacted income. This motivates the third hypothesis this research will explore: *Hypothesis 3: Education level has a positive effect on earnings in all settlement types.*

Data and Methods

Data and Geographic Units

I rely on the five-year files of the 2019 American Community Survey (ACS). The ACS is conducted by the US Census Bureau and includes data on individuals and families all over the United States. The survey provides information on “social, economic, housing, and demographic characteristics” (United States Census Bureau, 2020) for the nation’s population. On average, the ACS has a sample size of 3.5 million each year. Data is collected every day for the ACS and then pooled in calendar years to create statistics for each year as well as pooled every five years to create five-year estimates (United States Census Bureau, 2020). The 2019 five-year estimates will be used in this research as there is a bigger sample size which leads to increased accuracy.

The ACS is ideal for the study of immigrant settlement patterns as it provides geographic identifiers for consistent public use microdata area (CPUMA) which is needed to describe the concentration of foreign-born Blacks in different settlements. Second, the ACS reports the socio-demographic profile of respondents, including their race, nativity status, education, and income,

identified by prior work as important determinants of immigrant settlement patterns. Third, this dataset breaks down levels of education into specific categories that will allow for an in-depth analysis of how returns to education differ across various settlement types. Fourth, this data set includes data quality flags that imputes values for missing data.

Sample

The analysis will be limited to working age adults who self-identify as black and report being born abroad. I define working age respondents as those between the ages of 18 and 65. I also excluded cases with missing data on key covariates. These sampling restrictions yield an analytical sample of 19,539,759 respondents.

Measures

Dependent Variable

The dependent variable in this analysis will be personal yearly income measured in a dollar amount.

Independent Variables

Our independent variable is concentration of black immigrants in the PUMA of residence. We define a PUMA as an area with low, middle, and high concentration of Blacks using even terciles of share of Black residence. The PUMAs within the bottom 33% concentration of Blacks will be a “low co-ethnic density” and are comprised of 3.5% of Black concentration or less. PUMAs between 33rd and 67th percentile, termed “medium co-ethnic density” have between 3.51% and 11.7% concentration of Blacks. Those in the 67th percentile or

higher termed “high co-ethnic density” have 11.71% or higher concentration of Blacks. Our models also control for education level, immigration year, English proficiency, and employment status, age, foreign born by male and female, and marital status.

Analytical Plan

My analysis is comprised of three parts. First, I present tabular results that compare the mean income level of foreign-born Blacks across settlement type. Second, I identify the traits of foreign-born Blacks who settle in areas with low, middle, and high concentration of Black immigrants. Finally, I run a series of ordinary least squared (OLS) regression models that predicts the mean income level of Black immigrants depending on their settlement type. Model 1 will be the zero-order association between settlement type and income. Model 2 will add demographic traits – nativity status, age, sex, and marital status to Model 1. Model 3 will add migration related factors and socioeconomic status to Model 2.

Results

Income levels of Black immigrants by Settlement Type

Table 1 presents the mean income of black immigrants across each settlement type. Areas with a medium density of co-ethnics fare the best in terms of mean earnings, with the settlement population earning \$46,803 and foreign-born Blacks earning \$44,796. The settlement population with a high density of co-ethnics on average earn \$42,827 while the foreign-born Blacks earn \$43,460.

Low density co-ethnic areas fare the worst in terms of average earnings as seen in Table 2 and Figure 1. The settlement population earns \$40,905 on average while foreign-born Blacks

earn \$34,810 on average. The maximum earners in high density co-ethnic areas and medium density co-ethnic areas are significantly higher than those in low density co-ethnic areas, with the maximum earners in the former categories earning over \$115,000 and the maximum earners in the low density co-ethnic areas earning \$92,063 for the settlement population and \$76,780 for the foreign-born Black group.

	Mean	Std. Dev.	Minimum	Maximum	<i>n</i>
High Density Co-Ethnic Areas					
Settlement Population	42,827	14,259	19,943	134,694	6,316,942
Foreign-Born Blacks	37,730	15,850	0	178,801	21,754
Medium Density Co-Ethnic Areas					
Settlement Population	46,803	15,104	24,381	131,478	6,665,624
Foreign-Born Blacks	38,173	10,303	0	115,976	68,899
Low Density Co-Ethnic Areas					
Settlement Population	40,905	10,495	18,458	92,063	6,557,193
Foreign-Born Blacks	34,810	8,027	4,225	76,780	183,707

Source: 2015-2019 American Community Survey

Table 2 compares the socio-demographic traits and migration profile of immigrants across settlement types. Black immigrants in low co-ethnic density areas typically have the lowest level of education, with high school diploma or equivalent being the most common education level. High co-ethnic density areas have the most educated foreign-born Blacks, while the same proportion of people with doctorate and professional degrees reside in high and low co-ethnic density areas.

Low co-ethnic density settlements have the largest number of foreign-born Blacks that immigrated in 1999 or earlier. For all three settlement types, the least common year of immigration is the most recent one, 2015-2019. High co-ethnic density areas have more recently immigrated foreign born Blacks than areas of lower co-ethnic density. All three settlement types have 90% or more of foreign-born Blacks proficient in English. The foreign-born Blacks in high

co-ethnic density areas have a lower employment rate at 69% compared to low and medium co-ethnic density areas that both have employment rates of 73%.

Foreign-born Blacks in low co-ethnic density areas tend to be the oldest, while they tend to be youngest in high co-ethnic density areas. Medium co-ethnic density areas have the highest proportion of married people. Low co-ethnic density areas have the most foreign-born Blacks that are single, widowed, or divorced and the highest proportion of foreign-born Black females. High co-ethnic density areas have the highest proportion of foreign-born Black males.

Table 2: Descriptive Statistics for Foreign-Born Blacks by Black Co-Ethnic Density

	Low Co-Ethnic Density	Medium Co-Ethnic Density	High Co-Ethnic Density
Education Level			
High School Diploma/Equivalent	0.27	0.23	0.21
Some College	0.22	0.23	0.24
Associates Degree	0.10	0.10	0.09
Bachelor's Degree	0.17	0.18	0.18
Master's Degree	0.08	0.09	0.09
Doctorate Degree	0.02	0.01	0.02
Professional Degree	0.02	0.02	0.02
Immigration Year			
1999 or Earlier	0.55	0.52	0.47
2000-2004	0.16	0.16	0.16
2005-2009	0.13	0.14	0.14
2010-2014	0.11	0.12	0.15
2015-2019	0.05	0.06	0.09
Proficient English	0.90	0.92	0.91
Employed	0.73	0.73	0.69
Age	42.94(12.88)	41.54(12.80)	39.24(13.07)
Marital Status			
Married	0.49	0.52	0.49
Single, Widowed, Divorced	0.18	0.16	0.14
Sex			
Female	0.54	0.51	0.46
Male	0.46	0.49	0.54
Number of Observations	183,707	68,899	21,754

Standard deviations in parentheses.
Source: 2015-2019 American Community Survey

Table 3 presents the results from the ordinary least squares regression models predicting income. Model 1 establishes the initial relationship between income and settlement type.

According to Model 1, living in a high density co-ethnic area has a positive effect of \$1,922 on income while living in a medium density co-ethnic area has a positive effect of \$5,898 on income. The *R*-squared value shows that Model 1 including settlement type can only account for 0.15% of the variation in individual yearly income.

Model 2 adds the control variables age, marital status, nativity status, and sex. Model 2 decreases the effect that living in a high co-ethnic density settlement can have on income, making it a negative effect of \$818, a difference of -\$2,740 from Model 1. The effect that living in a medium co-ethnic density area has on income remains positive in Model 2 but is \$1,719 lesser than in Model 1. Age has a positive effect of \$533 on income as do both types of marital status, with being married having a positive effect of \$24,396 on income and being single, widowed, or divorced having a positive effect of \$8,866. Being an immigrant has a substantial negative effect of \$4,777 on earnings, and being a male has a large positive effect of \$21,943 on earnings. The *R*-squared value shows that Model 2 including settlement type, age, marital status, nativity status, and sex accounts for 9.1% of the variation in individual yearly income.

Model 3 is the full model which incorporates education level, immigration year, English proficiency, and employment status into Model 2. We see a suppressor effect in Model 3 by the drastic change in the regression coefficient for the high density co-ethnic variable and the *R*-squared value. The effect that living in a high density co-ethnic area has a very small positive effect of \$94 on income, an increase of \$912 from Model 2. Living in a medium co-ethnic density area has a positive effect of \$2,758 on income, a difference of \$1,421 from Model 2.

Age still has a positive effect on earnings of \$616, which is \$83 higher than the predicted effect of age in Model 2. Being married has an effect of \$11,941 in Model 3 which is \$12,428 lesser than the effect of being married in Model 2. The marital status single, widowed, or

divorced has a predicted effect of \$5,817, \$3,049 less than in Model 2. Being an immigrant has a negative effect of \$4,765 on income, which is \$12 higher than in Model 2, however the regression coefficient for immigrant in Model 3 is not statistically significant. Being a male still has a large positive effect on earnings of \$21,036, a decrease of \$907 from Model 2.

All levels of education have a positive effect on earnings, with high school diploma or equivalent having the smallest effect of \$2,001 on income and professional degree having the largest effect of \$109,043. As level of education increases, so does predicted effect on income. Income is predicted to increase by \$3,829 if one has immigrated in 1999 or before and \$1,441 if one has immigrated between 2000-2004. Immigrating between 2005-2019 all have negative effects on income, with income being predicted to decrease by \$122 if one has immigrated between 2005-2009, decrease by \$1,937 if one has immigrated between 2010-2014, and decrease by \$3,776 if one has immigrated between 2015-2019. None of the immigration years have statistically significant regression coefficients. Being proficient in English has a substantial positive effect of \$9,269 on earnings, as does being employed with a positive effect of \$33,166 on earnings. The *R*-squared value shows that Model 3 including settlement type, education level, immigration year, English proficiency, employment status, age, marital status, nativity status, and sex accounts for 28.6% of the variation in individual yearly income.

Consistently across all three models living in a high density co-ethnic area has a lesser effect than living in a medium density co-ethnic area. Model 3 shows that all levels of education have significant positive effects, proving consistent with Barringer, Takeuchi, and Xenos that education has positive effects on foreign-born earnings and earnings in general. By adding

Table 3: Regression Models Predicting Income			
	Model 1	Model 2	Model 3
Settlement			
High Co-Ethnic Density Area	1,922***	-848***	94*
Medium Co-Ethnic Density Area	5,898***	4,179***	2,758***
Low Co-Ethnic Density Area	Ref.	Ref.	Ref.
Education Level			
High School Diploma/Equivalent			2,001***
Some College			8,041***
Associates Degree			11,148***
Bachelor's Degree			33,044***
Master's Degree			49,575***
Doctorate Degree			73,730***
Professional Degree			109,043***
Immigration Year			
1999 or Earlier			3,829
2000-2004			1,441
2005-2009			-122
2010-2014			-1,937
2015-2019			-3,776
Proficient English			9,269***
Employed			33,166***
Age		533***	616***
Marital Status			
Married		24,369***	11,941***
Single, Widowed, Divorced		8,866***	5,817***
Immigrant		-4,777***	-4,765
Male		21,943***	21,036***
Constant	40,905	-4,490***	-49,437***
R-Squared	0.0015	0.0908	0.2855
Number of Observations	19,539,759	19,539,759	19,539,759
* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ (two-tailed tests)			
Source: 2015-2019 American Community Survey			

education to Model 3 a suppressor effect was found. The addition of education into Model 3 increased the predictive power of living in a high density co-ethnic area and the *R*-squared value significantly.

The longer one has been in the United States the lesser the effect of immigration year on income. While these findings are consistent with the Spatial Assimilation Hypothesis, unlike Barringer, Takeuchi, & Xenos' findings however, these findings show that it takes more than 10 years to reach income parity with native-borns even if one lives outside of high density co-ethnic areas. Models 2 and 3 show that it is beneficial to be a male and that being an immigrant is disadvantageous as a whole.

This analysis is consistent with *hypothesis 1* that foreign-born Blacks living in areas of less co-ethnic density have higher income than those who settle in areas of high co-ethnic density. Since *hypothesis 2* is a competing hypothesis, it is not consistent with this research as foreign-born Blacks in high co-ethnic density areas do not have higher income than those who settled elsewhere. This analysis is also consistent with *hypothesis 3* that education level has a positive effect on earnings in all settlement types.

Discussion and Conclusion

While a plethora of research exists on immigrant settlement patterns, analysis of settlement patterns given events in the recent half decade are scarce and the Black immigrant group is neglected. This research used the 2015-2019 ACS 5-year estimates to create a series of ordinary least squares regression models that predict the impact of settlement type, education level, immigration year, English proficiency, employment status, age, marital status, nativity status, and sex on personal yearly income. Three notable findings were discovered.

First, medium co-ethnic density areas are the most advantageous place for people to live with respect to yearly personal income. It is also the least disadvantageous place for foreign-born Blacks to live. Areas of medium co-ethnic density are likely in the suburbs and it is more difficult to transition into suburban areas because of the socioeconomic barriers created by the housing market which may partially explain the highest mean income being in the areas of medium co-ethnic concentration. The Intergroup Contact Hypothesis has shown that integration is necessary for the development of positive attitudes toward immigrant groups. Foreign-born Blacks in medium co-ethnic density areas have more integration of Black immigrants and the

highest earnings overall, which shows evidence toward the Intergroup Contact Hypothesis and that integration into mixed ethnicity areas is beneficial for immigrant groups.

Second, education has a positive impact for everyone. Any level of education has a positive effect on earnings and as the level of education increases, so does the positive effect it can have on earnings. Settlement type cannot predict income well by itself, but education level impacts the effect that living in a high density co-ethnic area can have on income since education level and settlement type are related.

Finally, the sociodemographic characteristics of foreign-born Blacks that settle in areas of high co-ethnic density are more commonly younger men who are more recent immigrants than other areas. They also earn less income than those in areas of medium co-ethnic density. Foreign-born Blacks who live in areas of low co-ethnic concentration are commonly older than the other settlement areas and have immigrated longer ago. Income attainment is highest for foreign-born Blacks in areas of medium co-ethnic density and the lowest in areas of low co-ethnic density. Overall, foreign-born Blacks are disadvantaged in their earnings compared to the rest of the settlement populations regardless of which settlement type they reside in.

This study had some significant limitations. First, I would have liked to observe the settlement pattern of black immigrants over prolonged durations of stay in the United States, but am unable to do so because my data is cross-sectional. Second, this dataset did not include temporal variables allowing for the testing how many years one has lived in the settlement location to see how Black immigrants fare in each destination over time. This made testing the Enclave Economy Thesis not possible.

Nonetheless, this study still makes an important contribution to the body of literature on immigrant settlement patterns and earnings. This research analyzed the modern settlement

patterns of foreign-born Blacks in the United States and identifies selectivity into each of the areas. It also determines how income attainment compares within those settlement types. Policies aimed at further integration of foreign-born Blacks into areas of medium co-ethnic density could target the income disparities between residential settlement types however, further research would need to be conducted to ensure that foreign-born Blacks want to depart from the areas of high co-ethnic density and do not live there for non-socioeconomic reasons.

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