

**IMMIGRANT ASSIMILATION:
DO NEIGHBORHOODS MATTER?**

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Abstract

The United States provides a path to citizenship for its newcomers. Unlike other immigration countries, however, the United States does not have policies that ease assimilation or directly promote naturalization such as easily accessible and widely advertised language and civic instruction courses. Immigrants are by and large left on their own when facing legal and financial barriers or seeking instruction to pass the citizenship test. Not surprisingly, thus, we find that immigrants' attributes such as educational attainment, English language proficiency, and income affect naturalization rates. This paper analyzes whether naturalization rates are also affected by neighborhood characteristics and informal networks for assistance and information. Towards that end, we estimate a binary model of immigrants' citizenship status specifying the size of the immigrant enclave and its level of assimilation as key explanatory variables. The study uses 2005 ACS data, and focuses on immigrants from the Caribbean islands in the New York area. The results suggest that who they are and where they live has substantial impacts on immigrants' propensities to have acquired US citizenship. Citizenship is unlikely for recent arrivals, those who do not speak English well, are poorly educated, and have a low income. Moreover, living in a neighborhood with a well assimilated immigrant enclave enhances the chance of acquiring US citizenship. This effect is stronger for highly educated than for poorly educated immigrants and thus misses the more vulnerable segments of the immigrant population.

Keywords: US Immigration, Assimilation, Caribbean Immigrants

JEL Codes: J15, J61

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Introduction

The United States' immigration system is one of paradoxes: relatively welcoming to immigrants, yet laissez-faire toward immigrant integration. Of the world's immigrant receiving countries, the United States stands out for not only being the most popular destination, but also as having one of the most immigrant-friendly immigration policies (Fix, 2007). Among other advanced industrialized countries, the US is one of the few states that allow high immigrant intake numbers and opportunities for permanent settlement (Joppke, 1999). However, once immigrants arrive and settle, the generous host does not provide an assisted path to citizenship – a traditional indicator of integration. Settlement (integration) resources are not widely available to all categories of immigrants; rather, government-funded resources are limited to refugees.¹ Immigrants admitted in all other categories must rely on their personal attributes, or turn to resources provided by their neighborhoods or communities.

The lack of public assistance can be attributed to the imbalance in the priorities of policymakers and the native public. In the United States, the national discourse surrounding immigration is steeped unevenly in policymaking to curb and punish irregular immigration, often at the expense of other pressing immigration concerns, namely integration. Fix (2007: iii) describes immigrant integration as “an afterthought in immigration policy discussions; in fact, integration remains one of the most overlooked issues in American governance.” This oversight is somewhat reflected in the low rates of naturalization, even though the process for obtaining citizenship is relatively simple, though costly.

Bearing in mind that the US government does not give financial nor institutional support to newcomers, the onus is on the immigrant to integrate him- or herself. Accordingly, this paper seeks to answer the question of what factors influence immigrants' naturalization rates. While previous research has convincingly shown (e.g., Bloemraad, 2006) that personal attributes such as educational attainment, English proficiency and sojourn length are key drivers of naturalization, this paper focuses on the role of immigrant enclaves in facilitating immigrant assimilation and ultimately their acquisition of citizenship. Specifically, we address three hypotheses. First, it is hypothesized that the immigrant's propensity to have acquired US citizenship is related to the size of the immigrant enclave in the immigrant's neighborhood. A large enclave size provides the immigrant with support and opportunities within the community and thus lowers the need to take advantage of the benefits associated with citizenship. Second, we hypothesize that the maturity or the degree to which the immigrant enclave as a whole is integrated into the host society increases the immigrant's propensity to choose citizenship. A mature and highly integrated ethnic enclave provides the know-how and support for immigrants seeking to naturalize, and advocates the beneficial effects of naturalization. In particular, a mature enclave is prone to providing well-functioning immigrant networks with individuals, groups, and civic organizations dedicated to serving the immigrant community. Finally, we are interested in whether the assimilation aid provided by the neighborhood benefits immigrants

¹ Refugee resettlement is the closest thing to an immigrant integration program available in the US, and with the decrease in refugee intake, the funding associated with federally-funded refugee resettlement programs has been declining too (Bloemraad, 2006; Fix et al., 2008).

unevenly. Towards that end, we test whether the effects of enclave size and maturity vary across salient personal characteristics, namely country of origin and educational attainment level.

The empirical analysis uses 2005 ACS data and focuses on immigrants from three Caribbean countries – the Dominican Republic, Haiti, and Trinidad and Tobago – living in the New York area. The three countries represent the linguistic diversity within the region. The Dominican Republic is a Spanish-speaking country; while the population of Haiti speaks French or a French Creole. Trinidad and Tobagonians are English-speakers. We estimate a series of logit models of immigrants' citizenship status where the key explanatory variables are neighborhood characteristics referring to enclave size and enclave maturity.

The paper is divided into four parts. Following this introduction, the second section provides the background of the study, dealing with the literature on naturalization and integration as well as information on the Caribbean immigrants in the New York area. The third section presents the empirical analysis, with subsections on data, methods, and results. The paper concludes with a discussion of findings and suggestions for future research.

Background

Assimilation and Naturalization

Integration of immigrants is a necessary step in maintaining a cohesive nation. Otherwise, states are confronted with marginalized groups, potential security threats, or social unrest. High rates of cross border movements by migrants from the south to the north are increasing the salience of integration across developed states. For many new immigration countries, and old ones, integration is a new and continual challenge that they must confront with the appropriate policies to incorporate newcomers (legal and undocumented migrants) into the broader host society (Jacoby, 2007; Meissner, 2007). The process is best facilitated through pro-active policies wherein the host society – by means of the government – not only encourages but also assists newly arrived immigrants in incorporating themselves into the larger society's socio-economic and political institutions. Integration is not a one-way process done only by the newcomers, but rather a mutual responsibility whereby both the host and the immigrants play their roles of negotiation and accommodation (Papademetriou, 2003; Fix, 2007).

Current global migration trends make the issue of integration acute. Not only are the numbers of international migrants growing (GCIM, 2005), but we also witness an increasing diversity in the ethnic composition of immigration flows. For example, the number of foreign born in the US has been increasing and reached approximately 13 percent of the population by 2005 (OECD, 2008). In 2000, the foreign-born population was 10 percent, up from eight percent in 1990 and five percent in 1970 (Lapham et al., 1993; Aleinikoff, 2000). At the same time, however, over the past 50 years, overall naturalization rates in the US have been declining. Naturalization rates have dropped from 80 percent of the foreign-born population in 1950 to less than 40 percent in 2004 (Bloemraad, 2006). Over this same period, there also has been a shift in the native composition of immigrants in the US. The 1965 Hart-Cellar Act made US shores more accessible to persons from non-European countries of origin and we now see a majority of immigrants originating from Latin America, the Caribbean, and Asia. Immigrant groups from

Europe naturalized in high numbers, whereas the demographic shift in the native composition of immigrant flows was accompanied by lower naturalization rates.

Naturalization is the conventional marker of integration. As Benhabib (2004: 1) aptly puts it, “political boundaries define some as members, others as aliens. Membership, in turn, is meaningful only when accompanied by rituals of entry, access, belonging, and privilege.” Naturalization is the rights of passage through which the immigrant and the native become indistinguishable under the law and the immigrant receives full membership in the state (Aleinikoff, 2000; Aleinikoff and Klusmeyer, 2002). It follows then that both the host and the immigrant have an interest in encouraging and acquiring citizenship, respectively. Immigrants acquire citizenship and thereby become fully integrated, politically empowered members of the host society for one of two reasons, or a combination thereof: self-interest and/or a genuine emotional tie with the host country. Host states permit naturalization as part of the process of nation-building in order to build a cohesive nation in which members share a common identity distinct from others and whose members have a loyalty to the state. Taken together, these motivations by the immigrant and the host country shape the outcome of naturalization.

In the United States, the path to citizenship is less restrictive than that of other host societies. Citizenship is acquired in one of three ways: birthright, blood, or naturalization. In terms of citizenship by birthright, US policy is based on *jus soli*, whereby citizenship is acquired vis-à-vis birth on the territory of the host country – a right of soil. Citizenship through blood is governed by the principle of *jus sanguinis*, which embodies the assumption that citizenship or belonging to a nation is determined biologically or acquired from a parent, if born on foreign territory. Naturalization is the only channel through which immigrants can acquire citizenship. The process of naturalization requires that the immigrant resides on US territory for five years, after which he/she must pay a sizeable application fee and pass a civics and language test. The process also requires that the immigrant be of good moral character and have no criminal record. The final stage includes taking an oath of loyalty and renouncing the immigrant’s country of origin.

Generally, the burden of naturalization rests on three actors: the state, immigrant networks, and the newcomer. With respect to the state, it defines the context within which the immigrant is received. The host state, by providing social services, civic education, and language classes, proactively promotes naturalization. Knowledge of US civics, history, and the English language is tested by naturalization exams. Additionally, policies that restrict access to public goods and services from non-citizens influence immigrants’ decisions to naturalize. Passage of Proposition 187 in California denying access to social and medical services to non-citizens spurred a rush to naturalize in California and many other states, including New York (Rumbaut, 1999). Similarly, in 1996, the welfare reforms under the Clinton administration denied non-citizens access to federally funded social benefits – benefits that were previously equally available to immigrants and citizens. Thus, the enactment of laws that significantly distinguishes between immigrants and citizens make naturalization the only channel to secure benefits and often produce a surge in naturalization rates (Fix, 2007: v).

Of course, the personal attributes and the self-interest² of the immigrant bring a lot to bear on the decision to naturalize. Studies show that some immigrants tend to be positively selected: young, motivated, and skilled (Feliciano, 2005; Woodrow-Lafield, 2008). These attributes translate well into integrating into the host society. Qualities including education, income, proficiency in the host language, gender, age, homeownership, and duration of stay are often cited as correlates of naturalization rates (Bloemraad, 2006; Rogers, 2006; Fix et al., 2008; Woodrow-Lafield, 2008). Education, a facilitator of social upward mobility, allows for opportunities of higher paying employment, familiarity with civics of the host state, and language acquisition if the immigrant is a non-native speaker of the host language. Women see naturalization as a path to empowerment and as an opportunity to petition for the legal entry of relatives, particularly children, left behind. The older the immigrant at the point of admission, the less likely he or she will seek to naturalize. The socio-economic benefits of naturalization lose their appeal with age. This is because as Woodrow-Lafield (2008: 68) explains, “younger immigrants ... are more likely to be working and interested in seeking citizenship in order to obtain advantages in the labor market, such as governmental jobs [and] to have relatives abroad for whom they are seeking immigrant visas.” The large financial investment that goes into owning a home suggests intent of long-term residence or the laying of new roots in the adopted home country. Finally, while many years of residency in the host state diminishes social and emotional ties to the home country, it increases these bonds to former (Waldorf, 1994). As such, duration of stay is a popular predictor of naturalization.

While sojourn length is considered the strongest predictor of naturalization, education has a particular significance. As already noted, education is a vehicle for social mobility and opportunities for higher paying jobs. With respect to naturalization, these benefits of education improve the likelihood of immigrants acquiring citizenship as they eliminate some of the barriers associated with the process. Educated immigrants are able to draw on their own personal resources. First, considering the application costs of naturalization, which continually increased in the US over the years, an educated immigrant might be in a better financial position to afford these high fees. Secondly, preparing for the civics and language tests becomes less daunting and easier for an educated individual. Lastly, educated immigrants might be more aware of political changes that affect their non-citizen status.

When the state plays a small or no active role in integration and individuals' personal attributes are insufficient, immigrant networks and civic organizations take up the mantle. In the context of the United States, “immigrant integration has historically occurred at the local level, primarily through the efforts of families, employers, schools, churches, and communities” (Meissner, 2007: i). The centrality of immigration networks in chain migration is widely noted (Massey, 1988; Waldorf, 1996; Waldorf, Esparza and Huff, 1990). In addition to their function in the migration decision making process, these groups play a salient role in the settlement of newcomers. However, their role is ambivalent in that immigrant enclaves can act as promoters or as inhibitors of naturalization. As promoters of naturalization, these groups serve as vital resources of information and encouragement to acquire citizenship. They reduce the costs of and

² Citizenship provides more opportunities and rights than permanent residency does. Beyond access to public goods and services mentioned above, being able to apply for and sponsor the entry of family members into the US is particularly important for many immigrants. Citizens may sponsor more categories of relatives, namely brothers and sisters, than non-citizens are allowed to sponsor.

doubts about naturalization by providing legal advice and information on the naturalization application process, informing immigrant communities about changes in laws that may adversely affect non-citizens; preparing immigrants for the citizenship test by giving classes in US civics and English; promoting the benefits of naturalization such as the right to vote; and serving as a reference point of naturalized US citizens. Rogers (2006) writes about the mobilization of these groups in promoting naturalization to the Caribbean immigrant community in 1996 when laws were enacted to restrict permanent residents' access to social services and welfare benefits.

In contrast, acting as inhibitors of naturalization, immigrant enclaves decrease non-citizens' incentives to assimilate by precluding the acquisition of "host country skill accumulation" (Edin et al., 2004: 134). That is, immigrant networks allow the newcomer to operate relatively successfully within the host state without having to adjust culturally or linguistically. They also allow for the maintenance of allegiance to the country of origin and the fostering of subcultures, which at times become even threatening to natives (Verbon and Meijdam, 2008). Borjas' (1998) assessment of ethnic enclaves seems quite fitting here: the externalities from immigrant groups are either good or bad depending on the quality of the enclave or, as we describe it in this paper, the "maturity" of the group.

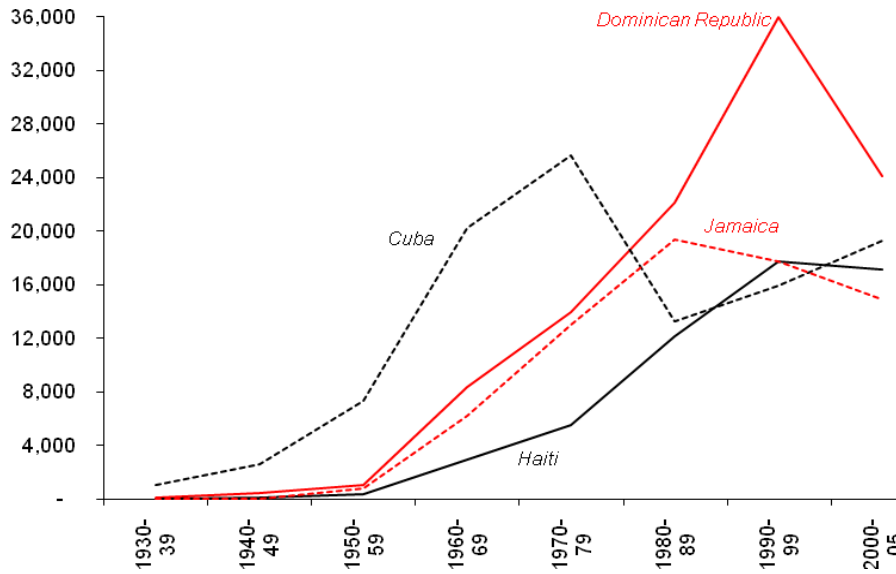
Caribbean Immigrants in the United States

Over the past 75 years, the number of immigrants³ from the Caribbean Islands has been increasing significantly. As illustrated in Figure 1, during the interwar years until the end of World War II, the number of immigrants originating from Cuba, Haiti and the Dominican Republic obtaining legal permanent status was quite low, below 4,000. The number of immigrants from most Caribbean countries began to increase significantly during the period of the enactment of the Hart-Cellar Act in 1965. Since then the numbers continually increased until the 1990s. The peak in the 1990s corresponds to the passage of the Immigration Reform and Control Act (IRCA) in 1986, which regularized large numbers of undocumented migrants. In more recent years, especially following 9/11, the number of immigrants obtaining permanent residence tapered off. For immigrants from Cuba, the trends are different than for immigrants from other Caribbean states. Most Cubans entered the US as refugees and the temporal trend for Cuban immigrants in Figure 1 reflects the strained political relations between the US and Cuba since the 1960s.

Caribbean immigrants are settling primarily in two traditional immigrant hubs, namely in Florida and in and around New York City. Florida has well over one million immigrants from the Caribbean, accounting for almost 40 percent of all foreign-born persons. In the tri-state area including New York, New Jersey and Connecticut, the absolute size of the Caribbean enclave is as big as in Florida, but the Caribbean immigrants in the tri-state area account for only 20 percent of all foreign-born persons. In other traditional immigration hubs, such as California and Illinois, Caribbean immigrants account for a surprisingly low share of 0.7 percent and 1.6 percent, respectively, of the foreign born population. Although Florida has the strongest representation of Caribbean immigrants among its foreign-born population it also is a special case due to the large

³ The term immigrant is used in the context of the Department of Homeland Security's definition of the group, referring strictly to legal permanent residents (immigrants with a green card).

number of Cuban refugees. In the remainder of this section, we thus chose to exclusively focus on the NY-NJ-CT tri-state area.



Source: Data taken from the Department of Homeland Security

Figure 1. Average annual number of persons obtaining legal permanent resident status by selected country of last residence, 1930 to 2005

Having a green card is a pre-requisite for the application for naturalization. Taken as a whole, immigrants from Latin America, the Caribbean, and Asia have relatively low naturalization rates. However, within this broad group of “new immigrants,” each region, and more specifically each source country, has individual trends. For instance, among non-citizens, Mexicans (Fix et al., 2001) and Canadians (Rumbaut, 1999) have the lowest naturalization rates, while Asians have had the highest rates (Aleinikoff, 2000: 130).

Among Caribbean immigrants, Rogers (2006) finds that Afro-Caribbean non-citizens tend to have low to modest, at best, naturalization rates despite good education and high incomes, traditionally associated with a higher likelihood of naturalization. Duration of stay remains positively associated with naturalization in the Caribbean immigrant experience, but only after quite extended periods of stay of some twenty plus years. Furthermore, he finds that there is also considerable variation among immigrant groups from different Caribbean countries of origin. It is obvious, as this case indicates that certain individual characteristics are necessary conditions for naturalization,⁴ but not sufficient conditions for acquiring citizenship. In this paper, we examine the role of neighborhood characteristics and network effects in affecting naturalization

⁴ The immigrant must be a resident for at least five years, be economically endowed to pay the application fee, and be knowledgeable about US civics and English to pass the naturalization test.

rates of immigrants from the Caribbean. As shown in Table 1, there is wide variation in the naturalization rates of Caribbean migrants across different locations in the NY-NJ-CT tri-state area even when controlling for time of entry.

Table 1. Caribbean foreign-born population, by selected countries of birth, rates of naturalization and time of entry

State	County	Number of immigrants originating in:				% naturalized Caribbean immigrants by time of entry		
		Caribbean	Dominican Republic	Haiti	Trinidad & Tobago	1990-2000	1980-1989	before 1980
NY	Bronx	204,104	124,032	1,643	6,145	17.3	46.1	71.1
	Kings	312,075	59,362	61,267	52,256	20.2	53.3	76.9
	New York	152,122	125,063	5,083	2,852	15.7	38.9	67.3
	Putnam	434	51	50	51	20.0	46.4	83.6
	Queens	182,004	59,444	27,212	26,255	21.0	52.3	77.9
	Richmond	5,924	1,285	375	1,286	23.4	51.7	78.8
	Rockland	14,931	3,587	8,217	184	21.2	50.6	70.8
	Westchester	37,522	11,134	2,739	1,607	19.0	49.1	76.4
	Nassau	42,649	8,844	11,793	3,507	21.4	58.0	79.5
Suffolk	23,891	8,041	4,716	2,437	20.9	50.0	74.1	
NJ	Bergen	19,890	6,669	669	1,675	20.2	55.6	84.2
	Hudson	59,406	25,631	1,703	1,711	14.7	48.8	83.8
	Passaic	33,140	25,128	301	349	15.3	40.5	72.2
	Middlesex	20,392	12,037	882	1,465	12.5	46.4	78.5
	Monmouth	6,144	549	2,143	532	19.5	46.2	80.7
	Ocean	2,188	449	66	228	41.3	53.7	80.8
	Somerset	3,554	798	222	204	14.0	55.6	88.1
CT	Fairfield	22,252	3,671	6,138	710	20.1	49.4	76.4
	New Haven	7,591	2,276	407	431	20.5	50.8	74.8

Source: US Census Bureau, Census 2000

Kings County in New York has the largest concentration of 312,075 Caribbean immigrants, followed by Bronx County with 204,104 Caribbean immigrants, then Queens County with 182,004. Counties in New Jersey and Connecticut host smaller numbers of Caribbean immigrants with Hudson County having the largest share of 59,406. Looking at countries of origin individually, a slightly different picture emerges. Dominicans largely settle in two counties: Bronx and New York counties. In fact, they account for more than 80 percent of Caribbean immigrants in New York County. In New Jersey, the biggest settlements of Dominicans are in Hudson and Passaic Counties. In Connecticut, Dominicans mostly reside in Fairfield County. Haitians are predominantly in Kings County, followed by Queens County. The largest Haitian settlements in New Jersey are in Hudson and Monmouth Counties. Like the Dominicans, the larger share of Haitian immigrants is in Fairfield County in Connecticut. With respect to Trinidad and Tobago, settlement patterns in New York are very similar to that of

Haitian immigrants. In New Jersey, there are bigger differences. The top two counties with Trinidad and Tobagonian immigrants are Hudson and Bergen. In Connecticut, Fairfield again, has the larger concentration of immigrants from Trinidad and Tobago.

Comparing settlement patterns with naturalization rates highlights some interesting linkages. First, and not surprisingly, the data on naturalization rates indicate that the longer the sojourn, the higher the rate of naturalization among Caribbean immigrants. Second, naturalization rates vary significantly across counties. Putnam County has the smallest Caribbean immigrant enclave but it has the highest rate of naturalization for immigrants entering before 1980. A similar trend is apparent for Ocean County in New Jersey. Actually, Ocean County has by far the highest rate of naturalization of Caribbean immigrants entering between 1990 and 2000 and one of the third highest rates of naturalization among immigrants arriving during the 1980s although having the smallest immigrant enclave in New Jersey in 2000. Nassau, a county with a relatively small sized Caribbean enclave, ranks in the top two counties in New York for highest naturalization rates for every category of entry. The counties in the NY-NJ-CT area with the significantly largest Caribbean immigrant settlements – namely Bronx, Kings, Passaic, and Hudson – have generally mid to low naturalization rates. Most interestingly, the data indicate that the counties in which there is a dominant Dominican presence, naturalization rates are low. Take for instance, New York and Passaic Counties in which Dominicans account for more than 80 percent and 75 percent, respectively, of the Caribbean immigrant enclave. Naturalization rates in these counties are the lowest among all others in the sample for all categories of entry, except for immigrants entering in the 1990s in Passaic County. This tentatively suggests that Dominicans naturalize at a lower rate than other Caribbean immigrants perhaps owing to the large size of their immigrant enclaves, the maturity of the enclaves, or even the difference in native and host languages. These data speak volumes to the hypothesized inverse relationship between enclave size and rate of naturalization; the positive relationship between enclave maturity and naturalization; and variation in naturalization rates across different countries of origin.

Empirical Analysis

Data

We use a sample of foreign-born persons taken from the 2005 American Community Survey (ACS), extracted from the IPUMS data base of the Minnesota Population Center. Several selection criteria are applied. The sample includes only persons who were born in the Dominican Republic, Haiti or Trinidad and Tobago and were residing in close proximity to New York City as of 2005. This area covers all of New Jersey and Connecticut, as well as those New York PUMAs⁵ that belong to the New York metropolitan area. At the time of the survey, the person had to have resided in the US for at least seven years. This constraint ensures that those included are indeed eligible for citizenship. Seven years is a somewhat arbitrary cut-off, but a universal minimum sojourn length for citizenship eligibility does not exist.⁶ Moreover, at the time of

⁵ A Public Use Microdata Area (PUMA) is defined by the US Census Bureau. PUMAs are areas with at least 100,000 residents. A county consisting of more than 200,000 persons is divided into more than one PUMA. For smaller counties, a PUMA may be a whole county or groups of counties within the same state. For a delineation of PUMAs see <http://www.census.gov/geo/www/maps/puma5pct.htm>.

⁶ This data comprise the universe of the foreign-born population. We acknowledge that the admission statuses of this population can affect the rate of naturalization. However, migrants who entered on temporary visas or who entered

immigration, the selected persons were at least 18 years of age. This selection criterion ensures that the respondents experienced most of their upbringing outside the US and could not have obtained citizenship as dependents of their parents. In total, the data set includes $n = 2,849$ observations.

Table 2 shows the definitions and summary statistics of the variables in this study. The variable of interest is the person's citizenship status, categorized as a binary variable with "1" indicating that the respondent is naturalized. Overall, 58 percent of the sampled immigrants are naturalized. Table 2 also shows means and standard deviations of the explanatory variables, for the entire sample as well as for the two subsamples defined by immigrants' citizenship status.

The pivotal explanatory variables are the immigrant enclave's size and maturity. The size of the ethnic enclave is defined as the number of immigrants of the same nationality as the respondent living in the respondent's neighborhood. The neighborhood is defined at the PUMA level. The enclave's maturity is its aggregate level of assimilation as proxied by the percentage of immigrants living in the same neighborhood (PUMA) who are already naturalized. On average, immigrants live in neighborhoods where their ethnic enclave is comprised of 12,671 immigrants and where 50 percent of their ethnic community has taken on US citizenship. However, those in the subsample of naturalized immigrants tend to live in smaller but more mature ethnic enclaves than those who are not naturalized.

We also control for a battery of additional variables. The variables can be assigned to four types. First, we account for information that specifically comes into play when dealing with an immigrant population, namely the immigrant's place of birth, the immigrant's length of stay in the US, English language proficiency, and whether the respondent speaks English at home. Comparing the averages for the two subsamples suggests that naturalized immigrants have been in the US significantly longer than those without citizenship, are more likely to speak English at home and have a better proficiency of the English language. Second, we account for the traditional personal characteristics, namely age, sex, marital status, and educational attainment. It is worth noting that naturalized immigrants are significantly more likely to have a college degree than those without citizenship. Third, we added a family variable – *income* – that indicates the economic power of the respondent's family. The income variable is expressed as a percentage of the poverty threshold. While the average family income in both subsamples far exceeds the poverty threshold, the average family income of naturalized citizens is 54 percentage points higher than the average family income of those who are not naturalized. Lastly, in addition to the enclave's size and maturity, we added another neighborhood variable that measures the density, proxied by a dummy variable that indicates whether the respondent lives in a building with more than five families.

illegally may have had changes in their statuses while present in the US, as was the case for millions of undocumented migrants granted amnesty in 1986 under the Immigration Reform and Control Act.

Table 2. Variable definitions and descriptive statistics

Variable	Definition	Full Sample (n=2849)				Subsample: Noncitizens (n=1658)		Subsample: Citizens (n=1658)	
		Min	Max	Avg	Stdev	Avg	Stdev	Avg	Stdev
<i>Dependent Variable</i>									
citizen	citizen: 1 = yes, 0 = no	0	1	0.582	0.493				
<i>Immigration-related Variables</i>									
tnt ^{a)}	From Trinidad & Tobago: 1 = yes, 0 = no	0	1	0.170	0.375	0.155	0.362	0.180	0.384
haiti ^{a)}	From Haiti, 1 = yes, 0 = no	0	1	0.244	0.430	0.165	0.371	0.301	0.459
sojourn	Number of years in the US	7	60	21.5	10.1	17.3	8.3	24.5	10.2
engl	Speaks English at home: 1 = yes, 0 = no	0	1	0.187	0.390	0.170	0.375	0.199	0.399
poorengl	Does not speak English very well or does not speak it at all: 1 = yes, 0 = no	0	1	0.396	0.489	0.531	0.499	0.299	0.458
<i>Other Personal Attributes</i>									
age	Age [years]	25	92	51.5	13.1	49.0	12.9	53.4	13.0
female	Female: 1 = yes, 0 = no	0	1	0.591	0.492	0.581	0.494	0.598	0.491
married	Married: 1 = yes, 0 = no	0	1	0.544	0.498	0.490	0.500	0.583	0.493
white	White: 1 = yes, 0 = no	0	1	0.157	0.363	0.181	0.385	0.139	0.346
lths ^{b)}	less than HS: 1 = yes, 0 = no	0	1	0.328	0.470	0.432	0.496	0.254	0.435
bsplus ^{b)}	bachelor's degree: 1 = yes, 0 = no	0	1	0.135	0.342	0.093	0.291	0.165	0.372
<i>Family Attribute</i>									
income	Family income as % of poverty threshold.	0	501	253	155	222	142	276	159
<i>Neighborhood Characteristics</i>									
size	Size of enclave: number of same origin residents at PUMA level	55	67492	12671	16931	14085	17693	11655	16292
mature	Enclave maturity: % of enclave naturalized	0	1	0.500	0.183	0.435	0.159	0.546	0.185
highdens	> 5 families in structure: 1 = yes, 0 = no	0	1	0.558	0.497	0.625	0.484	0.511	0.500

^{a)} reference: Dominican Republic

^{b)} reference: High School degree or some college

Methodology

The conceptual linkages are summarized in Figure 2. Naturalization, taken as an indicator of an immigrant’s assimilation into the host society, is portrayed as a function of immigration-related characteristics, personal and household attributes and – most importantly – neighborhood characteristics. The influence of neighborhood characteristics, in particular the enclave’s size and maturity, is hypothesized to have a direct influence on assimilation. In addition, the influence of the neighborhood characteristics may be mediated by other variables. It should be noted that the immigrant’s assimilation may also have an influence on neighborhood choice as indicated by the dashed line.

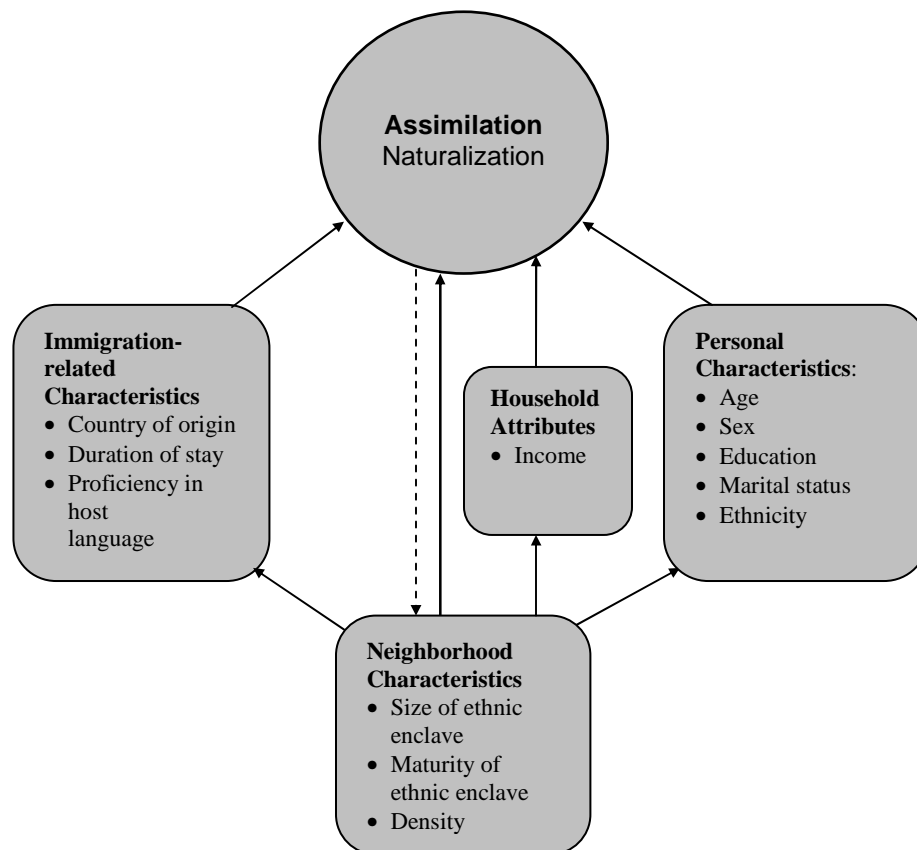


Figure 2. Determinants of immigrants’ assimilation

We estimate a series of binary choice models where the dependent variable indicates whether the immigrant is naturalized. The first model expresses citizenship status as a function of the immigrant enclave size and maturity, while controlling for the impacts of all other characteristics. The model is then enhanced by allowing the effect of sojourn length to be nonlinear (Model 2), and subsequently by allowing the effects of enclave size and enclave maturity to vary by birth place (Model 3) and by educational attainment level (Model 4).⁷ The

⁷ The preliminary models presented in this draft do not yet account for the possible endogeneities.

models are estimated as logit models, with observations weighted by ‘person weights’ provided by the ACS.

Results

The results of the estimation are summarized in Table 3. Overall, the models perform quite well and support the notion that immigrants’ propensity to naturalize is affected by neighborhood characteristics. Before discussing the effect of neighborhood characteristics, we first focus on the effects of personal characteristics and begin with a few general observations that provide a consistent profile of immigrants’ choice to acquire citizenship. Surprisingly, the immigrant’s national origin is not a strong predictor of naturalization rates. There is no significant difference between the naturalization rates of immigrants from the Dominican Republic versus those for immigrants from Trinidad and Tobago. For Haitians, naturalization rates are significantly lower than for immigrants from the Dominican Republic, but the magnitude of the effect is rather small. What is of pivotal importance, however, is the immigrant’s sojourn length and Model 2 suggests that the effect is nonlinear. The propensity to be naturalized increases with increasing length of stay in the US, but does so at a decreasing rate. Whether or not an immigrant speaks English at home is not a significant predictor of citizenship. However, English proficiency is salient for naturalization. In fact, the models predict that those who are proficient in English ($\text{poorengl}=0$) are twice as likely to have US citizenship as those who speak English poorly or not at all.

The key demographic predictors of assimilation – sex, marital status, and education – strongly influence immigrants’ propensity to be naturalized. *Ceteris paribus*, women are about 1.8 times more likely to have adopted US citizenship than men, and married immigrants are about 1.6 times more likely to be naturalized than their unmarried counterparts. Models 1 to 3 also suggest that less educated (less than high school) immigrants have significantly lower naturalization rates than more educated immigrants. In contrast to the finding by Rogers (2006), race does not influence naturalization rates.⁸ Finally, the income variable is significant and the propensity to be naturalized increases with increasing income.

Turning now to the effects of neighborhood characteristics, we find that the size of the immigrant enclave is not important for immigrants’ propensities to be naturalized. The insignificant effect of the size variable is not altered when allowing it to vary by national origin (Model 3) or by educational attainment level (Model 4). The maturity of the ethnic enclave is, however, a powerful predictor of naturalization rates. For model 2, the estimated marginal effect suggests that a one percent increase in the maturity level raises the propensity of being naturalized by almost 0.9 percent. This effect does not vary by national origin (Model 3). However, the magnitude of the maturity effect varies across educational attainment levels, and the interplay between education and enclave maturity yields a complex mosaic that requires a more detailed disentanglement.

⁸ Rogers (2006) categorizes Afro-Caribbean immigrants as blacks from English-speaking Caribbean countries (such as Jamaica and Trinidad and Tobago) and considers immigrants from the Dominican Republic as Latinos. The study’s findings may thus suggest variations in naturalization rates by national origin rather than by race.

Table 3. Estimation results^{a)}

	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>	
	b	StdE	b	StdE	b	StdE	b	StdE
Constant	-3.669 ***	0.309	-4.403 ***	0.404	-4.227 ***	0.414	-4.296 ***	0.431
Tnt	-0.257	0.290	-0.238	0.287	-0.707	0.512	-0.202	0.286
Haiti	-0.314 *	0.168	-0.338 **	0.172	-0.901 *	0.540	-0.347 **	0.171
Sojourn	0.084 ***	0.008	0.158 ***	0.027	0.158 ***	0.027	0.160 ***	0.027
sojourn-sq			-0.002 ***	0.001	-0.002 ***	0.001	-0.002 ***	0.001
Engl	-0.169	0.270	-0.194	0.267	-0.216	0.266	-0.237	0.266
Poorengl	-0.698 ***	0.138	-0.714 ***	0.139	-0.715 ***	0.139	-0.702 ***	0.138
Age	0.004	0.006	0.005	0.006	0.005	0.006	0.005	0.006
Female	0.583 ***	0.110	0.574 ***	0.111	0.573 ***	0.111	0.574 ***	0.111
Married	0.460 ***	0.109	0.455 ***	0.110	0.457 ***	0.110	0.453 ***	0.111
White	-0.138	0.146	-0.123	0.145	-0.120	0.144	-0.120	0.144
Lths	-0.639 ***	0.129	-0.665 ***	0.129	-0.668 ***	0.129	-0.410	0.362
Bsplus	0.075	0.183	0.073	0.189	0.077	0.188	-1.797 ***	0.650
Income	0.001 **	0.000	0.001 **	0.000	0.001 **	0.000	0.001 **	0.000
Size	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mature	3.699 ***	0.335	3.675 ***	0.337	3.301 ***	0.433	3.495 ***	0.438
Highdens	0.058	0.121	0.066	0.122	0.060	0.123	0.069	0.123
tnt*size					0.000	0.000		
haiti*size					0.000	0.000		
tnt*mature					0.895	0.840		
haiti*mature					1.112	0.924		
lths*size							0.000	0.000
bsplus*size							0.000	0.000
lths*mature							-0.706	0.710
bsplus*mature							3.708 ***	1.205
pseudo-Rsq	0.215		0.218		0.219		0.223	
pseudo-loglikelihood	-1536		-1529		-1528		-1519.9	

^{a)} The dependent variable is *citizen*. Standard errors are robust. The asterisks identify significance at the 0.01, 0.05 and 0.10 level using ***, ** and *, respectively. The number of observations is n=2,849.

Figure 3 shows the estimated joint effects of changing enclave maturity and immigrants' educational status on their probability of having US citizenship. The probabilities refer to male, unmarried, nonwhite immigrants from the Dominican Republic who have been in the US for 10 years, speak English well but do not speak English at home, have an average income and live in a neighborhood with an immigrant enclave of average size. The maturity of the immigrant enclave and the educational attainment level of the immigrants are varied. Figure 3 shows that whether the most highly educated immigrants have the highest probabilities of being naturalized depends on the enclave maturity. In neighborhoods with very low enclave maturity, the probabilities are smaller for highly educated immigrants than for those with a high school degree only. Figure 3 also shows that – independent of educational attainment level – the probability of

being naturalized goes up with increasing enclave maturity. Most importantly, this effect of increasing naturalization rates with increasing enclave maturity is strongest for the most highly educated immigrants. This somewhat troublesome result suggests that assimilation aid provided by the immigrant enclave benefits immigrants unevenly, favoring the highly educated rather than those most in need of assimilation aid.

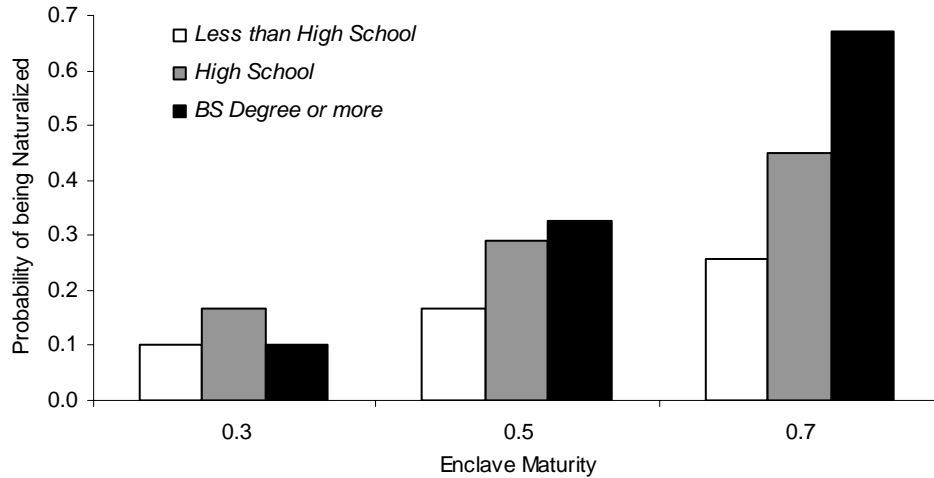


Figure 3. The joint effect of enclave maturity and education on naturalization rates

Discussion and Conclusions

In this paper, we sought to examine the impact of neighborhood effects on naturalization rates. Specifically, we estimated a series of logit models with immigrant enclave size and maturity as key explanatory variables. We found that who they are and where they live has substantial impact on immigrants' propensities to have acquired US citizenship. Citizenship is unlikely for recent arrivals, those who do not speak English well, are poorly educated, and have a low income. Moreover, living in a neighborhood with a well assimilated immigrant enclave enhances the chance of acquiring US citizenship. This effect is stronger for highly educated than for poorly educated immigrants and thus misses the more vulnerable segments of the immigrant population.

These findings suggest that the meaning of immigrant enclaves changes with education. The implications for the US where integration is left to immigrant communities and local civic organizations are troublesome. Not only can this strategy backfire to the extent that immigrants remain unassimilated but it also implies that less educated immigrants are at risk of being left behind. The government, therefore, needs to introduce programs⁹ that make available easily accessible classes that will promote integration. These courses should be geared towards

⁹ Americans can take a page from the recently implemented German integration initiative. Germany's Federal Office for Migration and Refugees is a clearinghouse for integration services provided by state and non-state groups to immigrants. A similar agency in the US would be useful for immigrants to access information on and assistance in preparing for the naturalization process.

improving immigrants' English and vocational skills, which will expand their employment opportunities and earning potential and ultimately increase their propensity to naturalize. We do not suggest that these network activities at the local level be replaced by government services as our research indicates that mature enclaves do positively impact naturalization rates for all segments of the immigrant population. Government services should be complementary to the integration process, not a substitute, as is the current practice. Government programs act, in this way, as a safety net that catches those immigrants who do not reside in neighborhoods with mature ethnic enclaves. A new focus on government integration support gains additional importance in light of recent developments that raised the bar for immigrants' naturalization in the US. Fees have increased and the exam has been redesigned such that it requires a better command of English and cognitive ability (Fix et al., 2008), thereby further putting naturalization out of the reach of immigrants who were not able to economically afford it before and who are less educated and have less proficiency in English.

Although this paper attempts to provide an analysis of the role of neighborhood effects on rates of naturalization, there are limits to the results. Ideally, longitudinal data with the year in which citizenship was acquired and location of the immigrant before and after becoming a citizen would benefit this research. These data will give a clearer understanding of the actual timing of the citizenship decision and the locational and personal attributes at the time of the decision. The rather complicated timelines of immigrant histories make it difficult to infer the proper causalities from cross-sectional data. Future research will expand the analysis by including data from earlier years. This will allow us to complement the cross-sectional analysis presented in this paper with synthetic cohort approach that may shed additional light on the relationship between the timing of the naturalization decision and neighborhood attributes.

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