NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

THESIS

PREDICTORS OF NONCITIZEN AND IMMIGRANT RETENTION IN THE U.S. MILITARY

by

Veronica Y. Baker

March 2018

Thesis Advisor:	Laura Armey
Co-Advisor:	Matthew Larkin

Approved for public release. Distribution is unlimited.

THIS PAGE INTENTIONALLY LEFT BLANK

REPORT DOCUMENTATION PAGE		*Form Approved OMB No. 0704–0188*

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington, DC 20503.

1. AGENCY USE ONLY (*Leave blank*)	2. REPORT DATE March 2018	3. REPORT TYPE AND DATES COVERED Master's thesis	
4. TITLE AND SUBTITLE PREDICTORS OF NONCITIZEN AND IMMIGRANT RETENTION IN THE U.S. MILITARY		**5. FUNDING NUMBERS**	
6. AUTHOR Veronica Y. Baker			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000		**8. PERFORMING ORGANIZATION REPORT NUMBER**	
9. SPONSORING /MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A		**10. SPONSORING / MONITORING AGENCY REPORT NUMBER**	

11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government. IRB number NPS 2014.0010-AM02-EP5-A.

12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release. Distribution is unlimited.	12b. DISTRIBUTION CODE

13. ABSTRACT (maximum 200 words)

This thesis applies quantitative methods to analyze attrition patterns and their demographic and pre-accession predictors among noncitizen and immigrant groups to assess the role of immigrants as a source of military manpower. Previous studies of noncitizen recruits have compared noncitizens to citizen recruits, but this study also looks at differences among the various noncitizen groups in terms of ethnicity and regions of origin. Past research has found that Hispanics, the largest group of noncitizen and immigrant recruits, do face unique challenges in their military experience when compared to citizens. This thesis looks at differences between Hispanics and other immigrant groups. This study uses data from the Defense Manpower Data Center (DMDC) for all enlisted service members who served in all branches of the Armed Forces between 2000 and 2012. Our results show that immigrants reenlist at higher rates than nonimmigrants, citizens and noncitizens. Specifically, both immigrants and noncitizens from Asia reenlist at higher rates than citizens from North America. Additionally, our ethnicity interactions find that Pacific Islander noncitizens and immigrants reenlist at higher rates. In terms of attrition, both noncitizens and immigrants as a whole were less likely to separate for all five reasons (body fat, dependency, drugs/alcohol, disciplinary and unqualified), even with regional and ethnic interactions. Last, noncitizens are more likely to use the GI bill, but when adding interactions for region, the results showed that Asian and South American noncitizens were less likely to use the benefit. More in-depth research on the predictors of attrition and retention can serve as a guide for future recruiting and personnel policy implementation, as can the study of the various ethnic groups among Hispanics.

14. SUBJECT TERMS immigrant, noncitizen, attrition, separation, retention, GI bill, Hispanic			15. NUMBER OF PAGES 101
			16. PRICE CODE
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UU

THIS PAGE INTENTIONALLY LEFT BLANK

PREDICTORS OF NONCITIZEN AND IMMIGRANT RETENTION IN THE U.S. MILITARY

Veronica Y. Baker
Lieutenant, United States Navy
B.S., United States Naval Academy, 2010

Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL
March 2018

Approved by: Laura Armey
                 Thesis Advisor

                 Matthew Larkin
                 Co-Advisor

                 Yu-Chu Shen
                 Academic Associate
                 Graduate School of Business and Public Policy

iii

THIS PAGE INTENTIONALLY LEFT BLANK

ABSTRACT

This thesis applies quantitative methods to analyze attrition patterns and their demographic and pre-accession predictors among noncitizen and immigrant groups to assess the role of immigrants as a source of military manpower. Previous studies of noncitizen recruits have compared noncitizens to citizen recruits, but this study also looks at differences among the various noncitizen groups in terms of ethnicity and regions of origin. Past research has found that Hispanics, the largest group of noncitizen and immigrant recruits, do face unique challenges in their military experience when compared to citizens. This thesis looks at differences between Hispanics and other immigrant groups. This study uses data from the Defense Manpower Data Center (DMDC) for all enlisted service members who served in all branches of the Armed Forces between 2000 and 2012. Our results show that immigrants reenlist at higher rates than nonimmigrants, citizens and noncitizens. Specifically, both immigrants and noncitizens from Asia reenlist at higher rates than citizens from North America. Additionally, our ethnicity interactions find that Pacific Islander noncitizens and immigrants reenlist at higher rates. In terms of attrition, both noncitizens and immigrants as a whole were less likely to separate for all five reasons (body fat, dependency, drugs/alcohol, disciplinary and unqualified), even with regional and ethnic interactions. Last, noncitizens are more likely to use the GI bill, but when adding interactions for region, the results showed that Asian and South American noncitizens were less likely to use the benefit. More in-depth research on the predictors of attrition and retention can serve as a guide for future recruiting and personnel policy implementation, as can the study of the various ethnic groups among Hispanics.

THIS PAGE INTENTIONALLY LEFT BLANK

TABLE OF CONTENTS

LIST OF FIGURES

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF TABLES

LIST OF ACRONYMS AND ABBREVIATIONS

AC21	American Competitiveness in the 21st Century Act
AFQT	Armed Forced Qualification Test
ASVAB	Armed Services Vocational Aptitude Battery
BRS	Blended Retirement System
CNA	Center for Naval Analyses
CPS	Current Population Survey
DEP	Delayed Entry Program
DHS	Department of Homeland Security
DMDC	Defense Management Data Center
DoD	Department of Defense
DOJ	Department of Justice
DREAM	Development, Relief and Education for Alien Minors
ECLT	English Comprehension Level Test
EO	Executive Order
FY	Fiscal Year
GED	General Education Diploma
INA	Immigration and Nationality Act
JROTC	Junior Reserve Officer Training Corps
LPR	Legal Permanent Residence
MANVI	Military Accessions Vital to National Interest
NCES	National Center for Education Statistics
NLSY	National Longitudinal Survey of Youth
OEF	Operation Enduring Freedom
PEP	Philippines Enlistment Program
RP-US MBA	Republic of the Philippines—United States Military Bases Agreement
TSP	Thrift Savings Plan
USCIS	United States Citizenship and Immigration Services

THIS PAGE INTENTIONALLY LEFT BLANK

ACKNOWLEDGMENTS

THIS PAGE INTENTIONALLY LEFT BLANK

I. INTRODUCTION

A. PURPOSE AND APPROACH

The purpose of this study is to analyze the demographic and pre-accession predictors of retention, attrition and Montgomery GI bill use among noncitizen and immigrant groups to better recruit, train and retain them in the various military services. The study assesses the reliability of noncitizens and immigrants as a source of military manpower. Noncitizens and immigrants come from numerous backgrounds and many of them have valuable foreign language and cultural skills with strategic importance to the United States. Understanding how various noncitizen and immigrant groups differ, the military services can develop programs to mentor and develop those individuals who struggle to remain in the service.

The study considers standard demographic variables that may impact retention specifically as they pertain to immigrant groups. Specifically, this study takes into account education level, aptitude test scores, race, ethnicity, age, branch of service and region of birth to better understand what variables are highly associated with longer careers in the service. This study also considers the cross-group propensities for various kinds of discharges from service to better understand the challenges these individuals face within the military. By looking at these factors across groups, the military can better understand some of the extrinsic or intrinsic motivators of immigrants and noncitizens who join the services. Finally, considering propensities to use the benefits per the Montgomery GI bill can assist manpower personnel in determining the value noncitizen groups place on further education and help them tailor incentive packages as necessary.

With an approximate cost of over $14,000 to recruit and train a new service member per FY 2004 data, better understanding service member attrition is vital to reduce the military's expenses (Hattiangadi et al., 2005). Studying what determines the success or failure of an individual once in the service, can reduce unnecessary spending by targeting the right individuals prior to enlistment. Additionally, it can assist the

Department of Defense (DoD) in improving programs or making policy that will ensure a lasting and diverse service.

The data for this study comes from the Defense Manpower Data Center (DMDC). It includes demographic information, separation and immigration data for all enlisted service members who served in all branches of the Armed Forces between 2000 and 2012. Using the data, this thesis presents quantitative analysis to predict the likelihood of reenlistment, attrition for various reasons and GI Bill usage among the immigrant and noncitizen groups.

B. RESEARCH QUESTIONS

1. Primary Research Questions

- Does noncitizen/immigrant status or group predict reenlistment in first term service members?

- Does noncitizen/immigrant status or group predict separation/attrition for certain reasons among service members?

- Does noncitizen/immigrant status or group predict likelihood of GI bill use?

2. Secondary Research Question

- Among the various noncitizen groups, are there differential impacts of demographic and pre-accession characteristics associated with higher or lower levels of reenlistment, separation/attrition or GI Bill use?

C. MOTIVATION FOR THE STUDY

You who have been born in America, I wish I could make you understand what it is like [to] not be an American—[to] not have been an American all your life—and then, suddenly, with the words of a man in flowing robes to be one, for that moment and forever after. One moment you belong with your fathers to a million dead yesterdays—the next you belong with America to a million unborn tomorrows.

—George Magar Mardikian
"Amazing Immigration Quotes" (2016)

George Mardikian was an Armenian-born naturalized American citizen who was awarded the Medal of Freedom by President Harry S. Truman for his service in World

War II ("Amazing Immigration Quotes," 2016). Noncitizen men and women enlist into the services for many reasons. Many of them have immigrated to the United States to escape violence or poverty and want nothing more than to start over in their new home. Service members and veterans are among the thousands that are granted citizenship each year. According to the *2016 Yearbook of Immigration Statistics*, the Department of Homeland Security (DHS) naturalized 753,060 people in FY 16 and of those 8,885 were members of the military (U.S. Citizenship and Immigration Service [USCIS], 2016).

According to the 2010 census, as cited in McIntosh and Sayala (2011), there are approximately 7 million 18 to 29-year-old noncitizens in the United States. Of those 7 million, only 2.3 million have the required LPR for enlistment. Additional requirements limit this pool to 1.6 million for those who have a high school degree and of those, that number falls to 1.2 million who speak English well (McIntosh & Sayala, 2011). With the requirements for enlistment, the military services miss out on a large segment of the population that possesses valuable foreign language and cultural skills of strategic importance to the United States. As the recruiting pool of qualified individuals continues to dwindle due to a competitive talent market, and as McIntosh and Sayala suggest, low fertility rates, we must make use of the resources available to meet the recruiting mission.

Current recommendations to reduce recruiting and retention expenses include spending money on bonuses or advertising as well as offering citizenship to noncitizens in exchange for enlisting (Cuhna, 2014). Although this study cannot measure the impacts such a policy would have on the military services, it does summarize instances in history when the military did use citizenship as an incentive much more openly. This study seeks to answer how the various noncitizen, ethnic groups, perform in the services as well as what characteristics make their performance unique.

D.   ORGANIZATION OF THE THESIS

Chapter II explores the background of immigration patterns in the United States from the 19th century to the present. Specifically, it examines the role of noncitizens and immigrants within the military services. Chapter III is a literature review of various qualitative and quantitative studies of attrition, promotion and propensity to serve. The

literature review focuses specifically on studies of Hispanics, the largest immigrant group serving in the U.S. military, and their performance in the military services. Chapter IV, describes the methodology, data, and provides summary statistics. Chapter V provides the results of the analysis of the data. Finally, Chapter VI concludes with policy recommendations.

II.   BACKGROUND

A.   HISTORY OF IMMIGRATION IN THE UNITED STATES

Events within the United States and around the world have affected the immigration patterns of the 19th century and the most current patterns of the 21st century. As a result, the U.S. population is incredibly diverse. It is important for its military service members to reflect the makeup of the civilian population to ensure that the services not only look like their civilian counterparts but that there is diversity in thought. Additionally, immigrants bring "language and cultural skills that are vital to national interest" (McIntosh & Sayala, 2011 p. 24). Therefore, it is important for us to study the history of immigration in the United States to know how immigration reform has affected the status of immigrants and what the military can do to attract their talent.

1.   19th Century Immigration

People have immigrated to the United States for many reasons, among them to escape religious persecution or war, to seek better economic conditions and escape poverty. Some people even immigrated forcibly via the international slave trade. According to an article by the History Channel titled "U.S. Immigration Before 1965," between 1815 and 1865, most immigrants originated from Northern and Western Europe with a third of immigrants hailing from Ireland due to its massive famine in the late 1840s. In total, from 1820 to 1930, "4.5 million Irish migrated into the United States" and settled along the east coast ("U.S. Immigration Before 1965," 2009). The article states that, around the same time, 5 million Germans immigrated and settled in the Midwest. Additionally, in the early 1850s, some 25,000 Chinese immigrants settled in California lured by the gold rush.

Following the Civil War and due to an economic depression, Congress passed stricter immigration policy in the 1880s leading to a decrease in immigration. Once again between 1880 and 1920, movement into the U.S. increased, resulting in the immigration of over 20 million people ("U.S. Immigration Before 1965," 2009). According to the U.S. Citizenship and Immigration Service (USCIS) fact sheet titled "An Overview of INS

History," the influx of immigrants led to the opening of the immigration station at Ellis Island on January 2, 1892, as well as the creation of the Bureau of Immigration and Naturalization (which would eventually become the Immigration and Naturalization Service in 1933) under the Basic Naturalization Act of 1906 ("Overview of INS History," 2012).

2.   20th Century Immigration

According to the USCIS as written in their electronic book, "Overview of INS History," prior to WWI, the U.S. admitted over 14.5 million immigrants. Most of those immigrating hailed from Central, Eastern, and Southern Europe, marking a shift from 19th century immigration patterns ("Overview of INS History," 2012, p. 6). By the early 1920s, 4 million Italians and 2 million Jews entered the country to escape religious persecution ("U.S. Immigration Before 1965," 2009). Under the Immigration Act of 1917, immigrants had to know how to "read and write in their native language" ("Overview of INS History," 2012, p.6). They were also subject to a pre-inspection and an extensive medical exam at their country of origin. Immigration slowed down at the onset of WWI and into the Great Depression and WWII. The Immigration and Acts of 1921 and 1924 set a limit on the number of immigrants every year. Each country received a quota based on previous census data ("Overview of INS History," 2012). Therefore, between 1930 and 1950 the foreign-born population in the U.S. decreased from 11.6% to 6.9% ("U.S. Immigration Before 1965," 2009).

After WWII, the Refugee Relief Act of 1953 was enacted to allow the entrance of refugees from Europe and the Soviet Union who were unable to enter due to the quota system enacted in 1921 ("Overview of INS History," 2009). Following the communist revolution in 1959, there were a large number of Cubans and escapees from communist countries who immigrated ("U.S. Immigration Before 1965," 2009). Following the Immigration and Nationality Act of 1965, immigration from Asia and Latin America, increased due to the removals of the national origins system from 1924 and an emphasis on reuniting families via family sponsorship, as well as due to increased numbers of visas for skilled workers ("Overview of INS History," 2009). The last major immigration

legislation took place with The Immigration Act of 1990 which created three separate categories for visas: family-sponsored, employee-sponsored, and diversity visa selected via lottery from certain countries ("Overview of INS History," 2009).

3.   21st Century Immigration

Due to the American Competitiveness in the 21st Century Act (AC21) the number of Legal Permanent Residences granted has increased. AC21 increased the cap on H1-B visas granted also making them portable across different employers. H1B visas are granted to employees in specialty occupations whose employers submit applications on their behalf. AC21 specified that there would be no limitations on the number of H1-B visas granted to "employees of institutions of higher education, nonprofit research organizations or governmental research organizations" (American Competitiveness in the Twenty-first Century Act, 2000).

According to the DHS's *Annual Flow Report* in 2016, 1,183,505 immigrants attained LPR status. The report states that the leading regions of birth for LPRs were Asia and North American at 39%. The report also mentions that since 2009, both these regions have made up more than 70% of new LPRs. The leading countries of birth for LPRs in 2016 were Mexico at 15%, China at close to 7% and Cuba at 5.6%. Additionally, it mentions that 68% of residence requests granted were family-sponsored, 12% were employment-based preference, 10% were granted to refugees and 3.1 to asylees (Department of Homeland Security [DHS], 2017). In terms of state of residence, the flow report mentions that California, New York, Florida, Texas and New Jersey accounted for 58% of new LPRs in 2016. All five states plus Illinois, have been the leading states of residence for LPRs since 1971. Although legal residents continue to reside mainly in these areas, the percentage of the proportion of legal residences granted in those states decreased from 82% in 1990 to 62% in 2016 (DHS, 2017).

B.   NONCITIZEN POPULATION IN THE UNITED STATES

The Census Bureau places noncitizens in a special category of immigrants that includes LPRs, temporary migrants (which include students and temporary workers), refugees, asylees and unauthorized immigrants (Acosta et al., 2014). Due to the

incredibly diverse makeup of noncitizens, their characteristics differ significantly from the citizen population. Per a 2014 Census Bureau report titled "Noncitizens Under Age 35: 2010–2012" by Acosta et al., 80% of noncitizens fall within the 18–34 age range (24.8% aged 18–24 and 55.3% aged 25–34) while only 47.3% (20.9% aged 18–24 and 26.4% aged 25–34) of the citizen population lies within the same age range. The report also mentions that 60% of noncitizens aged 18–34 live in the states of California, New York, Florida, Texas, New Jersey and Illinois. Additionally, the authors of the report mention that the labor force participation rate of noncitizens in this age group is very similar to citizens, but they do differ in occupation type. Citizens tend to have jobs in the management, science, business and arts fields (39.1%), followed by sales jobs (24.6%) while noncitizens are employed in jobs within the service field (27.2%), followed by management, science, business and arts fields (24.5%) and lastly by natural resources, construction, and maintenance occupations (19.7%) (Acosta et al., 2014).

Within the noncitizen population, the Census Bureau's report, "Noncitizens Under Age 35: 2010–2012," also found that educational attainment varies greatly across the various regions of birth (Acosta et al., 2014). Among noncitizens ages 18–24, 65% of noncitizens from Asia, 54% of noncitizens from Europe and 54% from Africa are ever enrolled in college while the number drops to 18% for those originating from Latin America. Additionally, of those noncitizens ages 25–34, 49% from Latin America have not graduated high school while 68% of those from Asia and 54% from Europe have attained education above a bachelor's degree (Acosta et al., 2014).

Regardless of their differences in educational attainment, noncitizens are restricted in their ability to serve in the U.S. military. Only those noncitizens with LPR, or "green card," are able to enlist while even they are unable to commission as officers. Only special categories of noncitizens are able to enlist in the services under the Military Accessions Vital to National Interest (MANVI) Program without LPR (Department of the Navy, 2015). Despite these limitations, those noncitizens who have enlisted in the military throughout its history, have been an asset especially during periods of war.

C. NONCITIZENS IN THE U.S. MILITARY

1. History of Naturalizations in the U.S. Military

According to the USCIS article, "Military Naturalization During WWII," the Second War Powers Act of 1942 removed the requirement of citizenship to serve in the Armed Forces and authorized overseas naturalizations. During WWII, Congress acted to expedite citizenship for noncitizens serving in the armed forced and as a result, over the course of the war, 13,587 service members attained citizenship overseas (USCIS, n.d.b.). In February 1944, the Director of Research and Educational Services, Henry B. Hazard wrote in the *Immigration and Naturalization Service Monthly Review* about his overseas trips, traveling more than 40,000 miles to perform naturalizations, granting citizenship status to 3,678 service members from 66 countries. He wrote, "In general, those who have first-hand knowledge of them—the naturalization representative, their officers and comrades have been deeply impressed by the qualities of these new citizens. We have no fears as to their future effect upon us and our country but believe that they will fulfill the high duties of citizenship in equal degree with those of their native-born military associates" (Hazard, 1944, pp. 2–3).

The Commissioner of Immigration and Naturalization wrote about the foreign born in the United States Army during WWII in an article published in the October 1948 volume of the Department of Justice (DOJ) Monthly Review (Miller, 1948). He mentioned that between 1940 and 1945, over 109,000 of the 300,000 foreign-born enlisted service members in the Army were noncitizens. He stated that out of the 109,000 soldiers, 19,299 were from Canada, 14,452 from Germany and 15,487 from Mexico. Approximately 30,000, or a quarter of noncitizens serving in the army, were born in enemy countries. Figure 1 shows the country of birth of those who enlisted in the Army by citizenship status and Figure 2 shows the distribution of noncitizens born in enemy countries serving at the time.

Figure 1. Country of Birth of Foreign-Born, U.S. Army, By Citizenship Status: July 1, 1940, to June 30, 1945. Source: Miller (1948).

Country of birth	Total	Nat-uralized*	Non-citizen
All countries	100.0	100.0	100.0
Canada	18.2	18.6	17.6
Italy	12.8	15.4	8.1
Germany	10.9	9.6	13.2
British Isles	8.2	8.7	7.2
Mexico	6.5	2.3	14.1
Poland	5.7	6.4	4.5
U. S. S. R.	4.5	5.4	2.8
Irish Free State	4.3	4.8	3.3
China	2.9	3.7	1.3
Austria	2.6	2.2	3.3
Czechoslovakia	2.0	2.1	1.7
Sweden	1.9	1.9	2.0
Greece	1.9	1.6	2.3
Hungary	1.7	1.9	1.4
Norway	1.5	1.4	1.8
Yugoslavia	1.1	1.1	1.1
France	0.9	1.0	0.8
Roumania	0.9	1.0	0.6
Denmark	0.8	0.8	0.8
Netherlands	0.8	0.7	0.8
Cuba	0.7	0.5	1.2
All other	9.2	8.9	10.1

*Estimated: Based on place of birth for all persons in the United States Army and place of birth of noncitizens in the United States Army.
Source: Data adapted from tables prepared by the Department of the Army.

[11] Volume 7 *Federal Register*, pp. 8455-8456 (October 21, 1942).
[12] Adapted from table, "Country of Citizenship of Registered Aliens, by Age and Sex, December 26, 1940, Italy," (U. S. Department of Justice, Immigration and Naturalization Service).

Figure 2. Noncitizens Born in Enemy Countries, U.S. Army: July 1, 1940, to June 30, 1945. Source: Miller (1948).

Country of birth	Total	Percent
All countries	109,517	100.0
Principal enemy countries*	29,263	26.7
Germany	14,452	13.2
Italy	8,913	8.1
Austria	3,559	3.3
Hungary	1,521	1.4
Roumania	653	0.6
Bulgaria	132	0.1
Japan	33	....

*Noncitizens born in possessions of enemy countries are not included.
Source: Data adapted from tables prepared by the Department of the Army.

According to Miller's report, most of the noncitizens serving at the time were older than the average citizen service member. Of the 18 to 25-year-old white males,

31.1% were native born while only 7.7% were foreign males. Of the 18 to 30-year-old white males, 51.3% were native and 18.1% were foreign born. In Figure 3 from Commissioner Miller's report, we see that the largest percentage of foreign-born white males were in the older age groups.

Figure 3. Age Distribution of White Males 18–44 Years of Age, by Nativity, for the United States: 1940. Source: Miller (1948).

Age group	Native-born white	Per-cent	Foreign-born white	Per-cent
Over 18 and less than 25	7,202,523	31.1	143,537	7.7
Over 18 and less than 30	11,900,889	51.3	337,184	18.1
Over 18 and less than 35	16,131,214	70.0	680,175	36.4
Over 18 and less than 40	19,855,418	85.6	1,210,339	64.8
Over 18 and less than 45	23,193,286	100.0	1,867,121	100.0

Source: Adapted from Sixteenth Census of the United States: 1940, Population, *Characteristics of the Population, United States Summary*, p. 16, and *Characteristics by Age*, Part 1, *United States Summary*, p. 13 (U. S. Government Printing Office: 1943).

Additionally, The Commissioner explains that at the start of the war, per the Selective Service and Training Act of 1940, only those aliens who stated their intentions to become U.S. citizens could enlist in the military (Miller, 1948). Once Congress amended the law in 1942, all males ages 18 to 64 residing in the U.S. were required to register for the draft. Commissioner Miller wrote,

> It was recognized that the alien serving in the armed forces who desired to become a citizen of the United States was entitled to special consideration in his citizenship application. Many noncitizens in the armed forces were deeply appreciative of the opportunity to become citizens of the United States. That they did become citizens in large numbers was an impressive indication of their loyalty to the United States. (Miller, 1948, p. 54)

a.   *Philippines Enlistment Program*

In a master's thesis conducted by Luisito Maligat in 2000, he explains that "under a special agreement between the Filipino government and the U.S. Navy, the Philippines Enlistment Program (PEP) "was established as part of the Republic of the Philippines—

United States Military Bases Agreement (RP-US MBA)" (Maligat, 2000, p. 2). Between 1952 and 1991, over 35,000 Filipinos enlisted in the U.S. Navy. The program came to an end in 1992 when the military bases in the Philippines closed in 1992. Maligat found that Filipinos who enlisted as part of PEP, had much higher short-term and long-term continuation rates, much higher promotion rates, and higher percentage of reenlistments.

2.   Current Military Policy Regarding Noncitizens

In all branches of the military services, only citizens whether native or naturalized, LPRs and U.S. Nationals are eligible to enlist. U.S. citizens include people from the 50 states, the District of Colombia, Guam, Puerto Rico, U.S. Virgin Islands and the Northern Marianas Islands. Positions requiring a security clearance are generally reserved for U.S. citizens. Each service has detailed eligibility requirements based on the program, but the basic criteria is standard across all of them. Reenlistment requirements though, do vary. In, "Non-Citizens in Today's Military: Final Report," Hattiangadi, Quester, Lee, Lien and MacLeod, Reese & Shuford (2005) explain that in the Army, noncitizens can only serve up to 8 years (non-consecutive) as noncitizens. Air Force airmen can only serve one term, either 4 or 6 years, as noncitizens before they are required to naturalize to reenlist. The Navy and Marine Corps have no such restrictions on reenlisting as a noncitizen (Hattiangadi et al., 2005).

(1)   Age Requirements

The Navy requires that those enlisting for active duty be between 18–34 years of age (17 with parental consent unless married then no consent needed) while those enlisting in the Navy reserves must be between the ages of 18–39 (Department of the Navy [DoN], 2015). The Marine Corps requires those entering the service to be between the ages of 17–29 years old and up to a maximum of 35 if they do not require recruit training (Marine Corps Recruiting Command [MCRC], 2011). The Army requires those enlisting into its active and reserve components to be between 17–35 years of age (Department of the Army [DoA], 2016). Lastly, the Air Force has the highest range of age eligibility and for both active duty and reserves requires its members to be between

17–39 at time of enlistment for non-prior service and up to 40 years of age for prior service applicants (Air Force Recruiting Service, 2005).

(2) Dependency Requirements

According to their respective recruiting manuals, all branches of the service prohibit unmarried applicants with dependents to join their active duty branches without a waiver. In most cases, married applicants with additional dependents up to a certain number are authorized with waiver approval. For applicants to the reserves, those that are unmarried with dependents may also receive waivers with the exception of the Marine Corps who will only entertain dependency waivers for the reserves if the applicant is married (MCRC, 2011). The Navy and Marine Corps recruiting manuals both stress how applicants with dependents usually suffer from family and financial hardships soon after enlisting, and both argue that the current dependency requirements "eliminate from consideration those who cannot balance the demands of family and service" (DoN, 2015, p. 164).

(3) Educational Requirements

Members enlisting into various military services must have earned their high school diploma, have attained their General Education Diploma (GED) or another high school equivalent. Additionally, applicants must pass the Armed Services Vocational Aptitude Battery (ASVAB) and are placed into programs based on their Armed Forces Qualification Test (AFQT) test scores. Regardless of attaining a passing grade on the ASVAB, in the Navy, those "whose English is a second language must be verified by LPO/LCPO" (DoN, 2015, p. 143). The Marine Corps similarly requires MEPS Liaison approval (MCRC, 2011, p. 3–19). Applicants in the Army and Air Force whose native tongue is not English are required to take the English Comprehension Level Test (ECLT), (AFRS, p.236) (DoA, 2016, p. 49).

b. *Immigration and Nationality Act*

Under the Immigration and Nationality Act (INA), noncitizens serving on active duty in the armed forced, certain components of the National Guard and Reservists are

eligible to apply for citizenship, (Lee & Wasem, 2003). "During peacetime, noncitizens in the military may petition to naturalize after 3 years aggregate military service rather than the requisite 5 years of legal permanent residence" (Lee & Wasem, 2003, p. CRS-2). "During periods of military hostilities, noncitizens serving in the Armed Forces can naturalize immediately," as designated by executive order, (Lee & Wasem, 2003, p. CRS-2). Tables 1 and 2 delineate the requirements for peacetime and wartime naturalizations.

Table 1. Requirements for Peacetime Naturalization. Source: USCIS (n.d.a.).

Be age 18 or older
Have served honorably in the U.S. Armed Forces for at least 1 year and, if separated from the U.S. Armed Forces, have been separated honorably
Be a permanent resident at the time of examination on the naturalization application
Be able to read, write, and speak basic English
Have a knowledge of U.S. history and government (civics)
Have been a person of good moral character during all relevant periods under the law
Have an attachment to the principles of the U.S. Constitution and be well disposed to the good order and happiness of the U.S. during all relevant periods under the law
Have continuously resided in the United States for at least five years and have been physically present in the United States for at least 30 months out of the 5 years immediately preceding the date of filing the application, **UNLESS** the applicant has filed an application while still in the service or within 6 months of separation. In the latter case, the applicant is not required to meet these residence and physical presence requirements.

Table 2. Requirements for Naturalization During Periods of Hostilities. Source: USCIS (n.d.a).

Have served honorably in active-duty status, or as a member of the Selected Reserve of the Ready Reserve, for any amount of time during a designated period of hostilities and, if separated from the U.S. Armed Forces, have been separated honorably
Have been lawfully admitted as a permanent resident at any time after enlistment or induction, **OR** have been physically present in the United States or certain territories at the time of enlistment or induction (regardless of whether the applicant was admitted as a permanent resident)
Be able to read, write, and speak basic English
Have a knowledge of U.S. history and government (civics)
Have been a person of good moral character during all relevant periods under the law
Have an attachment to the principles of the U.S. Constitution and be well disposed to the good order and happiness of the U.S. during all relevant periods under the law

The INA also provides for posthumous citizenship to those who have died in active duty. In the "Naturalization Through Military Service: Fact Sheet," the USCIS explains that the Naturalization at Basic Training Initiative established in 2009, gave Army recruits the opportunity to attain citizenship while completing basic training. Since 2009, the program has expanded to the Navy, Air Force and the Marine Corps, (USCIS, n.d.a.). Figure 4 summarizes data by the USCIS on military members who have attained citizenship by fiscal year.

Figure 4. Naturalized Service Members Through FY-17. Source: USCIS (n.d.a).

YEAR	TOTAL	USA	ABROAD
FY-02	2,434	2,434	0
FY-03	4,659	4,659	0
FY-04	6,327	6,327	0
FY-05	7,136	6,106	1,030
FY-06	8,538	6,643	1,895
FY-07	5,895	4,541	1,354
FY-08	7,865	6,356	1,509
FY-09	10,505	8,850	1,655
FY-10	11,230	9,819	1,411
FY-11	10,333	9,415	918
FY-12	8,693	8,184	509
FY-13	8,758	8,414	344
FY-14	9,239	8,970	269
FY-15	7,710	7,535	175
FY-16	6,908	8,599	171
FY-17	7,360	7,228	132
TOTAL	125,452	114,080	11,372

Portions of the law also authorize expedited citizenship for spouses and children of military members even when stationed abroad. Since fiscal year 2008 2,650 spouses from 33 countries have attained U.S. citizenship. The top countries include 964 spouses from Germany, 675 from Japan, and 464 from South Korea (USCIS, n.d.a.).

c.   *Executive Order 13269*

On July 3, 2002, President George W. Bush designated the period starting in September 11, 2001, as a period of hostility via his Executive Order (EO) 13269 (Lee & Wasem, 2003). His EO allowed service members to apply for citizenship immediately upon joining the military service vice having to wait three years as was customary. The EO remains in place today but it was not the first legislation of the same kind. Policy makers have offered expedited citizenship as an incentive in both world wars, the Korean War and the Persian Gulf War (Cuhna, 2014).

D.   SUMMARY

Immigration patterns have varied throughout the 19th century and continue to in the 21st century. These variations are due in large part to changing laws enacted to support the U.S. economy as well as worldwide events that have forced the movement of people in and out of their original birth country. Europe, once the largest region of origin for immigrants, is now replaced by North America and Asia. Noncitizens, a special type of immigrant, include those who are in the U.S. temporarily either for school or work as well as humanitarian immigrants (refugees and asylees), LPRs and undocumented immigrants. Of the former, only those with a permanent residence are allowed to enlist and of them, many have attained citizenship while in military service as a result of laws enacted to either expedite or guarantee citizenship in exchange for honorable service. The following chapters present analysis conducted on cohort data from 2000–2015 for all services to analyze the makeup of noncitizens and immigrants within the services and assess their performance in terms of attrition.

THIS PAGE INTENTIONALLY LEFT BLANK

III.   LITERATURE REVIEW

The following section summarizes general manpower trends and addresses several studies conducted in the areas of noncitizen and Hispanic motivators for enlistments, propensity to serve, as well as attrition, promotion and retention. It also includes analysis on the effects of policy on the propensity of noncitizens to enlist and to assess the effect of policy as an incentive for serving.

A.   GENERAL MILITARY MANPOWER TRENDS

The propensity of men and women to enlist in the services has varied over time. Asch, Hosek and Warner (2007) summarize the events and trends which created the manpower challenges we face today and will face into the future in Chapter 32 of Sandler and Hartley's *Handbook of Defense Economics*. The authors argue that the following have driven down both supply and demand for military manpower: the reductions in the force after the Cold War coupled with the rise in college attendance, the increasing operational demands on service members and, the increasing costs of military entitlements.

As stated, the period after the Cold War saw drastic reductions in the force. Following these force reductions, the services experienced a tough recruiting environment as college attendance rates increased. The attendance rate for male high school students rose from 46.7% in 1980 to 61.2% in 2003 while the college attendance rate for female high school students rose from 51.8% in 1980 to 66.5% in 2003 (Asch, Hosek & Warner, 2007). It was so difficult to recruit in the late 1990s, that the Air Force missed its recruiting goal in 1999 and the Navy and Army missed theirs in 1998 (Asch et al., 2007, p. 1079). According to the National Center for Education Statistics (NCES), the "total undergraduate enrollment rate increased by 30%" between 2000 and 2015 (from 13.2 to 17 million). Therefore, the military anticipated increased challenges in high school recruitment. "By 2026, total undergraduate enrollment is projected to increase to 19.3 million students" (McFarland et al., 2017, p. 116).

Overseas deployment for U.S. troops has further negatively impacted recruiting efforts. Studies show that a faster operational tempo, places a heavier burden on troops (Asch et al., 2007, p.1076). A constant state of war makes serving in the military less attractive to those who would join because of the higher education benefits. This further complicates the problem of supply for the services. A study by Warner and Simon (2005) (as cited in Asch et al., 2007, p.1085), showed that the Iraq war had a negative and statistically significant effect on the number of Army high-quality recruits. Per their study, the variable associated with Operation Enduring Freedom (OEF), reduced high-quality recruits in the Army by 34%. Additionally, of the eligible African American population, enlistments fell from 20% in 2000 to 10% in 2005.

Asch et al. (2005) analysis also showed that the increasing costs of military entitlements and the shift toward deferring most of a service member's military compensation has serious implications on the movement of personnel into or out of the services. The financial constraints the military services face in addition to the decrease in supply, will require more creative ways to incentivize recruits. The Blended Retirement System (BRS) that went into effect January 1, 2018, takes it upon the individual service member to contribute to a Thrift Savings Plan (TSP) as part of his or her pension plan taking some of the accounting burden away from the DoD and onto the individual. Approximately 83% of those who join the military attrite before they are eligible to retire and receive a pension. The BRS is beneficial to those who choose to leave before retirement because they can leave the service with a retirement fund in the form of their TSP matching contributions ("The Blended Retirement System," 2017). The effects of the BRS on military manpower are unknown but a study by the RAND Corporation estimates that the new system will maintain the desired force size for enlisted personnel as long as continuation pay is at projected levels, but officer retention is projected to fall (Asch, Mattock, & Hosek, 2017).

Due to the increased manpower requirements placed on the services and the tough recruiting environment they face, noncitizens, particularly Hispanics who are the largest group of noncitizens, are a likely target to fix the decreasing enlistment supply. Asch et al. (2007) study shows that Hispanics have a higher likelihood of joining the service than

other ethnic groups, yet they are also less likely to qualify for the service. The following is a closer look at how the previously mentioned manpower trends have affected noncitizen and Hispanic motivations, propensity to enlist and remain in the service.

B.   STUDIES ON NONCITIZENS' MOTIVATIONS TO SERVE

There is limited research on the motivation of noncitizens in joining the U.S. military, but generally research suggests that noncitizens have different motivations than their citizen counterparts. Although citizenship through service is increasing in general, the efficacy of policy changes, such as EO 13269 which enabled service members to receive expedited citizenship, are not clear.

In a study by Omer Senturk and Lynn O'Neil (2004) titled, "Noncitizens in the U.S. Military," the authors take a qualitative approach to research the motivations behind noncitizen enlistments. Overall, their results show that in most cases, those who enlist are motivated to join the service as a way to provide a better future for their families. Noncitizens tend to immigrate into areas where they can have a large support system and they are influenced by family and friends when looking for employment. Additionally, in most cases, noncitizens tend to have higher levels of education if attained in their birth country. The qualitative data for the study consisted of 10 interviews with country of origin per Table 3.

Table 3. Distribution of Interviewees by Service.
Source: O'Neil & Senturk (2004).

	Army	Navy	Air Force
Philippine Islands		2	2*
Mexico	2		
Cambodia		1	
Ghana		1	
Nigeria		1	
Iran			1

* One of the two interviewees is a woman.

Of those interviewed, six entered the U.S. via family sponsorship visas, two via diversity visas and two were undocumented immigrants. All ten, enlisted as noncitizens and half attained citizenship while on active duty. One of the interviewees was currently in the Delayed Entry Program (DEP) and one of the interviewees was a woman (O'Neil & Senturk, 2004, p. 25). The interview questions focused on the following topics: 1) "the reason why the enlistee and/or the enlistee's family chose to immigrate" 2) "whether immigration was a family or individual decision" 3) "the level of formal education completed by the enlistee" 4) "the motivations for enlistment" and 5) "the individual's plans for the future" (O'Neil & Senturk, 2004, p. 27).

To the question regarding the enlistees' reasons for immigrating, the responses centered around achieving material improvement, achieving maximum level of satisfaction both monetary and non-monetary as well as attaining a better future (O'Neil & Senturk, 2004, p. 28). In response to the question on immigration as a family decision, eight of ten interviewees affirmed that the decision was a family decision of which all eight sent remittances back to their birth country. Additionally, all interviewees moved to areas of significant immigrant populations upon arriving to the U.S. except the service members from Cambodia and the Philippines (O'Neil & Senturk, 2004, p. 29). In response to the question on education, four of the five enlistees who attained their highest level of schooling in their birth country, attained a level of education above a high school diploma. All five of those who attained the highest level of schooling in the Unites States, attained no more than a high school degree. Overall, those who immigrated after finishing high school, were much more likely to aspire to higher education. To the questions regarding employee motivation, almost all those interviewed mentioned job training or experience as the motivation for enlisting but most were unable to go into the occupation of their choosing due to security clearance requirements. All four Filipinos either had friends or family members who had served and only two mentioned expedited citizenship as a motivation for enlisting (O'Neil & Senturk, 2004, p. 31–32). Finally, regarding the question on future career plans, only four of those interviewed planned to reenlist.

The qualitative results of the study are worth considering but taking surveys of a larger population of noncitizens may lead to more accurate results. Based on their analysis, Omer Senturk and Richard O'Neil recommend the services take a closer look at the billets presently coded for security clearances to assess if the services can declassify some of them to open more billets to eligible noncitizens who may have qualifying aptitude scores. They also recommend implementing an immigration quota available to noncitizen applicants to enlist in exchange for citizenship or offer noncitizens unique reenlistment incentives to include citizenship. Additionally, because family ties were such a large aspect of the interview responses, the authors recommended the DHS provide expedited citizenship not just for those who serve but also their family members.

Huseyin Yalcinkaya, Melih Can and Jesse Cuhna analyzed the effects of EO 13269 on the enlistment of noncitizen recruits but do not find significant impacts of the EO on noncitizen enlistments (Cuhna, 2014, p. 1) (Yalcinkaya & Can, 2013, p. 1). In their thesis titled, "The Effects of Executive Order (EO) 13269 on Noncitizen Enlisted Accessions in the U.S. Military," Yalcinkaya and Can analyze the following questions: "Did the enactment of EO 13269 improve the number of noncitizen accessions to the U.S. military?," "What is the value of noncitizens as sources of manpower?" and "Do noncitizens take into consideration the value of becoming a U.S. citizen when making enlistment decisions?" (Yalcinkaya & Can, 2013, p. 2) The thesis utilizes DMDC data, covering "1,983,707 enlisted prior and non-prior service accessions from FY 2000 to FY 2010" as well as unemployment rates from the Current Population Survey (CPS) website (Yalcinkaya & Can, 2013, p. v).

The thesis uses an OLS regression with a Difference-in-Difference model before and after the EO. "Citizen accessions were set up as a control group and noncitizen accessions were the treatment group" (Yalcinkaya & Can, 2013, p. 40). Yalcinkaya's research found that noncitizen accessions dropped by 16% and total accessions dropped by 8.41% after the EO. The decrease in noncitizen enlistments was greater than that of citizen enlistments after the policy, therefore, it was concluded that the EO had "no effect or a negative effect on noncitizen enlisted accessions to the military" (Yalcinkaya & Can, 2013, p. v).

In his paper titled, *Expedited Citizenship for Sale: Estimating the Effect of Executive Order 13269 on noncitizen military enlistments,* Cuhna assesses the "effect of EO 13269 on noncitizen enlistments" (Cuhna, 2014, p. 1). His model uses U.S. military personnel data covering all services from 1999–2010. The method of analysis is "a difference-in-difference model with accessions" among citizens as the control group (Cuhna, 2014, p. v) . The econometric equation is as follows:

$(\frac{Accessions}{Eligible\ Population})it = \beta o + \beta 1 Noncitizeni + \beta 2 POSTt + \beta 3(NonCitizen*POST)it + \delta Timet + \gamma(Time*POST)t + \mu t + \varepsilon it$

The abovementioned model works "under the assumption that" there is "no effect on the propensity" of "U.S. citizens to enlist" and that "there are no time-varying factors other than the EO that affect noncitizens and citizens" (Cuhna, 2014, p. 10). The denominator used, "total eligible population" is an estimate based on census data but since the estimate is used for both a regression on total accessions and the individual regressions conducted per service, there is most likely measurement error since entrance requirements differ by service. The model includes monthly fixed effects to control for summer months with higher accessions (Cuhna, 2014, p. 10). Cuhna found no effect from the EO on total accessions amongst noncitizens but does find "significant shifts of non-citizen enlistments out of combat intensive services and into" the "safer" services (Air Force, Navy and Coast Guard) (Cunha, 2014, p.15-16). Additionally, he finds a "positive and significant effect" from the EO on the "number of highly educated noncitizen accessions" (Cuhna, 2014, p. 5–16).

The findings give us some insight into what motivates noncitizens. Since noncitizens who join the service have to have a LPR to join the service, their pathway to citizenship has already begun and joining for the sake of attaining citizenship may not be a large enough motivator. If the services were to offer citizenship for service to those without LPR, the results could differ greatly and the policy could have significant effects. Yalcinkaya recommends removing LPR as a requirement for enlisting in the military to expand the number of those eligible to enlist and expand supply. He also recommends looking at data farther prior to the EO to see if the results changed more significantly. Additionally, he felt a study focused on the motivations of active-duty noncitizens would

24

help tailor future incentives to attract noncitizens to military service. Cuhna recommends collecting reason for enlistment data, to observe whether noncitizens value citizenship as an incentive.

Since policies like EO 13269 utilize citizenship as a motivator for enlisting, it is important to consider whether military personnel are actually able to attain citizenship through service. Studies address how well the services are doing in assisting service members in attaining citizenship once recruited. In the Center for Naval Analyses (CNA) report, "Noncitizens in the enlisted U.S. Military-CNA Report 2011," Molly F. McIntosh and Seema Sayala research how the services assist "noncitizen recruits with naturalization" and "to what extent do noncitizen recruits naturalize while serving?" (McIntosh & Sayala, 2011, p. 3). All services, except for the Marine Corps, have established naturalization training programs at boot camp, therefore one of the report's focuses was assessing the success of those programs in increasing the number of naturalizations after enlisting (McIntosh & Sayala, 2011).

The report finds that citizenship attainment is increasing although there is likely measurement error in the data due to inaccurate personnel files. Since service members do not have an incentive to report their status after naturalizing, the results most likely understate the true number of service members who attain citizenship (McIntosh & Sayala, 2011, p. 13). Attainment is much higher in the Air Force due to service limits on noncitizens. Air Force service members are required to attain citizenship prior to reenlistment. Minorities, females, married with dependents, "education and AFQT" are all variables "positively related to citizenship" attainment (McIntosh & Sayala, 2011, p. 15). Lastly, they find time to citizenship is decreasing but is highest in the "Marine Corps followed by the Navy, Air Force and the Army" (McIntosh & Sayala, 2011, p. 17). The authors of the study believe the "services should consider strategies to recruit noncitizens more effectively" as the propensity to enlist continues to decline as well as improve information sharing between DoD and USCIS on citizenship attainment and attrition to make better assessments of the data (McIntosh & Sayala, 2011, p. 21).

The authors of the various studies on motivation for enlistment recommend that the services consider better solutions to effectively recruit noncitizens. EO 13269

indirectly attempts to incentivize noncitizens to enlist by allowing them to apply for citizenship immediately after enlisting. Yet, studies show that the EO has not significantly increased the number of noncitizen applicants. The studies do show how certain demographics within the noncitizen population behave which could provide valuable insight into future policy implementation. Additionally, results show noncitizens are largely motivated to join the service to provide a better future for their families. Lastly, other results show that the number of citizenship attainments has increased but the services need to accurately advertise these success stories to ensure noncitizens are aware of the opportunity. With a more robust advertising campaign to target noncitizens along with the removal of LPR as a prerequisite to enlist, the services could tap into a large and valuable market.

C.   STUDIES ON HISPANICS' PROPENSITY TO SERVE

Following the end of the Cold War, the military services have run into a tough recruiting environment due to increases in college attendance. Compounding the lack of enlistment supply, studies show there is little the services can do in terms of recruiting to affect propensity. A study conducted by Warner, Simon and Payne (2003), on the Navy college fund and enlistment incentives, found "that personal attributes and family background factors play a dominant role in determining propensity," and that propensity is not affected by the intensity of recruiting efforts (p. vii).

To further address the propensity issues, other researchers have tried to narrow down some of the personal, demographic and family attributes which affect propensity to serve. Specifically, several studies center around the propensity of Hispanics to serve since they are the largest group of noncitizens within the US. In the 2009 RAND study, "Military Enlistments of Hispanic Youth: Obstacles and Opportunities," Asch, Buck, Klerman, Kleykamp & Loughran, addressed policymakers' interest in the underrepresentation of Hispanics in the military despite the increase of the population of Hispanics in the United States in the previous decade. In a poll conducted by the DoD in 2007, 12.6% of Hispanics, ages 18–24 stated they were most likely going to join the military while only 6.6% of whites said they would. These numbers would suggest an

overrepresentation of Hispanics in the military. Yet in 2007, when the Hispanics population (ages 18–40) was 17%, "only 11.4% of Army enlistment contracts and 15 percent of Navy enlistment contracts" were from Hispanics (Asch, Buck, Klerman, Kleykamp & Loughran, 2009, p. xv). The study examined the following: 1) "entry standards most likely to disqualify Hispanics from military" recruitment, 2) the effects of lowered recruiting standards on performance, and 3) the incentives most likely to increase Hispanic enlistment (Asch, et al., 2009, p. 4). Due to data limitations, the analysis was done on the overall Hispanic population vice analyzing the subgroups of the Hispanic population.

The strong propensity of Hispanic high school graduates to serve in the military coupled with their underrepresentation, "suggests that Hispanic graduates and seniors are disqualified for service on the basis of other factors" (Asch et al., 2009, p. 3). The authors collected data from the 1997 National Longitudinal Survey of Youth (NLSY) along with DMDC data for all enlisted personnel who entered the military from 1988–2002. They then identified five entry standards that were possible predictors of disqualification: "Armed Forces Qualifying Test (AFQT), body weight, number of dependents, criminal activity, and substance abuse" (Asch et al., 2009. p. 21).

Prior studies showed that failure of obtaining a high school diploma was the strongest reason for the Hispanic underrepresentation in the military. This study identified difficulty in meeting AFQT standards and weight standards as two other main causes for the underrepresentation. AFQT, education and weight were not associated with lower promotion or retention. Overall, the study found that 88% of white Army recruits remain in service after 3 months while 92% of Hispanic recruits do so. Additionally, only 17% of white E-5s are promoted by the sixth year (in the Army) while 22% of Hispanics are promoted (Asch et al., 2009, p. 69). The study also found that Hispanics generally have higher and faster promotion rates than whites in the military (Asch et al., 2009, p. 117).

The econometric analysis of the RAND study suggested several policy implications for the military in the future: creating programs to help recruits meet physical fitness standards prior to entry, relaxing weight standards at entry, varying

weight standards by occupation, relaxing weight standards while maintaining strength standards (specifically in the Marine Corps), and recruiting healthier populations (noncitizens who can pass the weight standards) (Asch et al., 2009, p. 119).

Another study by Asch, Buck, Klerman, Kleykamp & Loughran (as cited in Asch et al., 2007, p. 1090), conducted in 2005 also showed that a large percentage of Hispanics fail to meet AFQT or weight standards. Most of the disqualifying AFQT standards were due to weak English proficiency. The study found that even if the military relaxed the weight standard by 10 pounds, Hispanic enlistments would not increase since most of them fail to meet the standards by more than 10 pounds. Additionally, there appears to be a correlation between weight and other disqualifying standards, so again, relaxing the weight standards may not necessarily yield significant increases in Hispanic enlistments.

In the thesis titled, "An Exploratory Study of Hispanic Officer Recruiting in the Mexican-American Community of South-Central Los Angeles: Implications for the Officer Corps of the Future," Javier Hernandez addresses the propensity of Hispanics to serve as commissioned officers. The thesis is a qualitative study of 14 interviews from teachers, counselors, JROTC instructors, recruiters, church pastors and priests from Los Angeles. Overall, the study identified lack of academic achievement vice lack of interest in the military as the reason for Hispanics not aspiring to military service. The study also found that youth in certain areas of the country, like Los Angeles, have limited opportunities to attain "higher education because of poor academic preparation, underdeveloped English-language skills, poverty, and crime" (Hernandez, 2003, p. v). Limited opportunities lower the chances of Hispanics enlisting or commissioning. Additionally, the innate obligation Hispanics feel to care for their families also serves as a detractor from serving in the military.

Based on these findings, the author recommended implementing a more robust Officer recruiting program in high school as well as more "cooperation between recruiting and the admissions department at the Naval Academy" (Hernandez, 2003, p. 103). He also recommended conducting a study on Junior Reserve Officer Training Corps (JROTC) units as to why there are no units in inner-city Los Angeles. Lastly, he

suggested the military capitalize on Hispanic influencers especially when advertising for officer programs, (Hernandez, 2003, p. 95–100).

In the thesis titled, "Hispanics in the U.S. Military," William Arias and Selcuk Dal (2006) use qualitative and quantitative methods to identify Hispanics' propensity to enlist and addresses "their role in meeting the military's future manpower needs. The qualitative analysis consists of interviews with 10 active duty Hispanics, two high school counselors and two JROTC instructors, (Arias & Dal, 2006, p. i). The active duty service members interviewed are both female and male from the Navy of ranks E-3 to O-5 with anywhere from 3 to 30 years of service. Their ethnicities include, "Mexican, Mexican-German, Mexican-Irish, Mexican-Cajun, Salvadoran, Puerto Rican, and Guatemalan" (Arias & Dal, 2006, p. 29).

The interview responses show that clerical figures are no longer as important influencers as are peers and family members. "The senior active duty respondent, an O-5, believes that part of the reason for a lack of Hispanic representation in the higher O-6 and above ranks is due to family. He believes most Hispanics are unwilling to sacrifice family life for the demands of senior military officer life" (Arias & Dal, 2006, pp. 33–34). Also, the responses suggest that because Hispanics tend to live in school districts where schools are of lower quality, it affects their graduation rate. Additionally, respondents "hinted about an underground economy where money is plentiful without the need of a high school diploma" (Arias & Dal, 2006, p. 33). Many Hispanics are conditioned to work as soon as possible to provide financial support for the family. They also see their parents doing fine without a high school diploma and feel they can do the same. Hispanics' weak English language is also a hurdle which affects their education opportunities or desires to attain further education. Lastly, most active duty members interviewed were unaware of JROTC and did not know anyone who had joined through JROTC. Teachers interviewed felt "the program needed much more visibility and interaction" within "the school administration" (Arias & Dal, 2006, p. 35).

Overall, studies on propensity to enlist and commission focusing on the largest group of noncitizens, Hispanics. The results show that AQFT, high school graduation rates and weight standards are the largest factors affecting propensity to serve. Studies

29

suggest that the military should play a more active role in grooming and preparing Hispanics to successfully graduate high school and educate them on the many benefits that the military can provide for them via its JROTC units.

D.   STUDIES ON NONCITIZEN AND HISPANIC ATTRITION

Despite challenges in recruiting and enlisting Hispanics, many studies show that once in the military, Hispanics are highly successful. Overall, studies of noncitizen and Hispanics, show that they have lower levels of attrition and higher levels of promotion and retention. In their thesis titled, "Noncitizens in the U.S. Military," Omer Senturk and Lynn O'Neil, use quantitative analysis to examine the performance of noncitizens versus citizens in the enlisted ranks. The quantitative data for the study comes from "enlisted cohort data for FY 1990–1998" (O'Neil & Senturk, 2004, p. 81).

To analyze the data, separate multivariate probit models for attrition, retention and promotion were estimated for each of the services, (O'Neil & Senturk, 2004, p. 61). The dependent variables included "first-term attrition, retention beyond the first term, and promotion to E-4" (O'Neil & Senturk, 2004, p. 46). The independent variables included, "AFQT percentile, education categories, marital status, age at time of enlistment, race/ ethnic group and number of dependents" (O'Neil & Senturk, 2004, p. 47). The results from the quantitative portion found that first-term attrition rates were "significantly lower for noncitizens and" the "predicted retention beyond the first term and promotion to E-4" were "significantly higher" (O'Neil & Senturk, 2004, p. 78).

In the CNA report, "Noncitizens in the enlisted U.S. Military" (2011), Molly F. McIntosh and Seema Sayala analyze performance of noncitizens at first-term. The data used in the study comes from DMDC and includes FY 99 through FY 08 all service accessions tracked through June 2010. The authors of the study ran a logit regression to "model attrition behavior as a function of citizenship status at accession and other (demographic and service-related) characteristics" (McIntosh & Sayala, 2011, p. 78). Like Senturk and O'Neil's' results, the report found that noncitizen recruits attrite at lower rates than citizens recruits.

The CNA report titled, "Non-Citizens in Today's Military: Final Report," by Hattiangadi, Quester, Lee, Lien, MacLeod, Reese & Shuford (2005), further assesses whether certain noncitizen characteristics predict attrition. The study uses DMDC data on accession from all four services for FY88-FY02. The analysts ran an attrition logit model with the following independent variables: "educational attainment and intelligence of the recruit, participation" in DEP, "accession in the summer months, accession waivers, marital/dependency status, race/ethnic background, and noncitizen status" (Hattiangadi et al., 2005, p.52) as well as control variables for the FY of accession. Their dependent variable was attrition.

To analyze attrition, the researchers ran two separate logistic regressions for FY88 through FY94 accessions and FY95 through FY02 accessions. The results were as follows:

(1)   3-month attrition:

- Noncitizens had 3-month attrition rates 1.8% lower in the first cohort group and 3.7% lower in the second cohort group

- When they interacted citizenship status with ethnic code they found that "Black, Asian Pacific Islanders (API) and Hispanic noncitizens predicted to have 3-month attrition rates" 7–8% lower than "white citizens. Only Native-American noncitizens had a "higher attrition than" white citizens. When they included race and ethnicity interactions they found that the "marginal effect on attrition from non-citizen status," increased (Hattiangadi et al., 2005, p. 57)

- There was a small positive effect on attrition from waivers of which the largest of the effects came from medical or physical waivers (Hattiangadi et al., 2005, p. 58)

- High quality recruits had 3-month attrition rates that were 2.8% lower (Hattiangadi et al., 2005, p. 59)

- The longer a recruit was in DEP the lower the 3-month attrition

- Female recruits had attrition rates that were 5.1% higher than male recruits. The higher female attrition was the case in all services but was highest in the Army where females had attrition rates 9 percentage points higher followed by the Marine Corps at 5% higher (Hattiangadi et al., 2005, p. 59)

31

- Those with dependents had attrition rates 2.1 percentage points higher except in the AF (Hattiangadi et al., 2005, p. 59)

(2)   36-month attrition:

- Noncitizen "36-month attrition rates" were 9–20 "percentage points lower than white citizens" (Hattiangadi et al., 2005, p. 1)

- Those with "GEDs and 1-semester college accessions," had 36-month attritions "rates 9.5 and 7.8 percentage points higher than those" with a high school diploma (Hattiangadi et al., 2005, p. 64)

- Recruits with waivers had attrition rates 1.7 to 5.3 percentage points higher than those without waivers (Hattiangadi et al., 2005, p. 65)

- In the Marine Corps, attrition was 3.2 percentage points below the Army because they take most of their attrition at the start of enlistment.

- Female recruits have higher attrition at 36-months but the results vary from 3.4% points higher in the Navy to 18.6 percentage points higher in the Army (Hattiangadi et al., 2005, p. 67)

- Attrition at 36-months for those with dependents upon enlistment are lower in the AF but higher in the other services.

William Arias and Selcuk Dal (2006) also look at attrition within the enlisted ranks but specifically at Hispanic attrition. They also analyze promotion and retention of Hispanic recruits. They use DMDC enlisted cohort data for all service from 1992–2005 and utilize a multivariate econometric model of military attrition, promotion, and retention with separate models for each service due to differing enlistment requirements. The results were as follows:

(3)   6-month attrition:

- Hispanics have "attrition rates that range from" 3 "percentage points" to 24 "percentage points lower than" non-Hispanics (Arias & Selcuk, 2006, p. 70–71)

- In the Navy, number of dependents increases early attrition.

- The higher the age the higher the probability of early attrition.

- Females had lower early attrition in the Navy. Air Force and Marine Corps have higher early attrition rates (in the first six months). Finally, marriage

at enlistment is associated with higher attrition (Arias & Selcuk, 2006, p. 71)

(4) First-term attrition:

- Rates are lower for all Hispanic ethnicities. Other Hispanics in the Air Force have 5% lower attrition than non-Hispanics and Latin Americans in the Navy have attrition rates 24% lower than non-Hispanics (Arias & Selcuk, 2006, p. 71)

- Unlike early attrition, "number of dependents is associated with lower first term attrition" (Arias & Selcuk, 2006, p. 74)

- Age (greater) is associated with higher attrition as is marriage.

- Females and more dependents are associated with higher retention.

(5) Retention beyond first-term:

- Retention is higher for Hispanics than other ethnic groups.

- The retention rates range from "1 percentage point higher for" Mexicans "in the Navy to 16 percentage points higher for Puerto Ricans in" the Army when "compared to non-Hispanic whites" (Arias & Selcuk, 2006, p. 78)

- Retention beyond first term is highest for Hispanic enlistees in the Army than the other services.

- Increasing numbers of dependents increases probability of reenlistment.

(6) Promotion to E-4:

- Promotion rates range from 4% higher for "Other Hispanics" in Air Force to 17% higher for Puerto Ricans in the Army.

- Females promoted at lower rates.

- AFQT, marriage and dependents have positive effects on promotion.

Studies on promotion, retention and attrition show that both noncitizens and Hispanics perform favorably once in military service compared to their citizenship counterparts and member of other ethnicities. This thesis looks at specific drivers of attrition and how Hispanics noncitizens perform.

E.   SUMMARY

Prior studies show that both noncitizens and specifically Hispanic service members have lower levels of attrition throughout their career, as well as higher levels of promotion and retention. Due to fierce competition for talent the military services face, noncitizens are a valuable source of manpower. A study of the demographic and pre-accession variables which make noncitizens most likely to enlist may yield answers to positively affect recruiting and personnel policy.

Prior studies have focused on the differences in retention, promotion and attrition between citizen and noncitizen groups, but the following is a look at how the various noncitizen groups differ amongst each other and how we can target some of these ethnic groups to maximize supply. Additionally, prior studies touched on the need to assess country of origin or home of record (state) to see how these variables affect enlistments. Therefore, with access to those variables, this study will also look closer at the impact these pre-accession variables have on reenlistments.

IV.   DATA AND ANALYSIS

A.   DATA

The thesis uses data provided by the Defense Manpower Data Center (DMDC). It includes home of record, demographic data, number of dependents, immigration and separation data for all enlisted military personnel who served between 2000 and 2012. Although officer data was available, I chose to remove these observations since officers cannot commission without U.S. citizenship. The data includes 5,634,399 observations. Of these 373,707 are from the Navy, 1,283,454 are from the Marine Corps, 2,377,863 are from the Army and 1,412,064 are from the Air Force. The number of observations for the Navy is unusually low, therefore we expect some of these observations were most likely coded incorrectly under the Army or Marine Corps.

1.   Dependent Variables

The intention of this thesis is to measure the impact of being a non-citizen on retention. To that end we also examine the motivation and ability of enlisted personnel by looking at whether they use the GI bill, or attrite before the end of their first term for various reasons. To create our reenlist dependent variable we coded the first term end date variable using each member's service obligation end date and also used data on career status which described whether someone was in their first term, second term or whether they were a careerist. The variable takes the value of one in the year someone reenlists in the U.S. military, and the value of 0 for any year in which a first term person does not reenlist.

To examine various reasons for first-term attrition. We create additional dependent variables for attrition due to failure to qualify, inability to meet body fat standards, dependents, drugs and alcohol, and disciplinary issues. The 2009 RAND study, "Military Enlistments of Hispanic Youth: Obstacles and Opportunities," by Asch, Buck, et al. identified five entry standards that were possible predictors of Hispanic disqualification, based on the NLSY and DMDC data for all enlisted personnel who entered the military from 1988–2002: "AFQT, body weight, number of dependents, criminal activity, and

substance abuse" (Asch et al., 2009. p. 21). Qualitative studies mentioned in the literature also identify family as a major motivator for enlistment and in driving decision making, therefore, attrition for dependency reasons I felt was worth investigating (O'Neil & Senturk, 2004). We examine whether issues with these factors also drive early attrition for certain immigrant/non-citizen groups.

Data on the Montgomery GI bill use came from the Veteran's Administration. Census data shows that educational attainment varies greatly among the various regions of birth with Asians typically attaining higher education than Hispanics (Acosta et al., 2014). Additionally, literature also found that noncitizens and immigrants tend to attain higher levels of education in their birth country (O'Neil & Senturk, 2004). Our results and analysis on GI bill usage can help us asses the relative importance of the benefit to non-citizen and immigrants and in so doing assess whether it is an important recruiting tool for these groups.

2. Independent Variables

To create our noncitizen and immigrant variables we used immigration data from DMDC. I used U.S. citizenship status codes to create a binary variable for noncitizens which includes all members who are not yet citizens and those who are U.S. nationals. Since U.S. nationals are not citizens yet, I wanted to include them in the noncitizen variable but, unlike other noncitizens, U.S. nationals are allowed to enlist without having LPR. I chose to include them in the noncitizen variable because they are also not citizens upon enlistment. Additionally, U.S. nationals would differ significantly from the citizen population especially in terms of race and ethnicity.

To create the immigrant variable, I used U.S. citizenship origin code information. The immigrant variable is made up of those who became U.S. citizens by naturalization while the nonimmigrant dummy variable includes those who were born in the U.S., Guam, Puerto Rico or the Virgin Islands, those whose parents became citizens by naturalization and those born outside the U.S. to at least one citizen parent. Non-citizen immigrants are coded as missing. This results in 5,553,751 observations of noncitizens and 5,246,922 observations of immigrants which are a relatively small but notable populations to study.

I also include control variables for AFQT, age and dependent quantity, race, ethnicity and service component. Education includes dummy variables for high school diploma, no high school diploma, some college, bachelors, masters and above and an "other" category. Those with a high school education make up the largest proportion of the observations at 74%. Next, the race dummy variables were created out of 64 different race values and compiled into white, black, Asian, Pacific Islander and American Indian/Alaskan Native. Then, the ethnic dummies were created out of 23 different values and were compiled into the following categories: Hispanic, Asian, Pacific Islander and an "other" category. Finally, I also incorporate AFQT percentile score, age and dependent quantity.

I created interaction variables between noncitizen and ethnicity as well as noncitizen and region of birth to analyze whether there were significant differences in pre-accession variables among the various subgroups. I used country home of record information to code region dummies from over 500 countries into the following nine regions: Asia, Middle East, Europe, North America, Central America, South America, Caribbean, Africa and Oceania. While many of those with overseas homes of record are immigrants or non-citizens, the region dummies will also include American recruits who enlisted while their parents were stationed or otherwise resided overseas.

Tables 4 and 5 provide a summary of each variable, its components, values and descriptions.

Table 4. Dependent Variable Description

Variable	Value	Definition
Reenlist	1,0	Value of 1 if service member reenlisted prior to end of first term
GI Bill Ever	1,0	Value of 1 if ever used GI Bill
Separation Codes		
Unqualified	1,0	Value of 1 if service member separates due being unqualified
Body Fat	1,0	Value of 1 if service member separates due to body fat standards
Dependency	1,0	Value of 1 if service member separates due to dependents/dependent care
Drugs/Alcohol	1,0	Value of 1 if service member separates due to drug and alcohol reasons
Disciplinary	1,0	Value of 1 if service member separates for disciplinary reasons

Table 5. Independent Variable Description

Variable	Value	Definition
Noncitizen	1,0	Value of 1 if service member is a noncitizen
Immigrant	1,0	Value of 1 of service member is an immigrant
Education Codes		
High School	1,0	Value of 1 if service member has a high school education
No High School	1,0	Value of 1 if service member has no high school diploma
Some College	1,0	Value of 1 if service member has attended some college
Bachelors	1,0	Value of 1 if service member has a bachelor's degree
Masters and Above	1,0	Value of 1 if service member has a master's degree or above
Other Education	1,0	Value of 1 if service member has other education
AFQT	0-93	Armed Forces Qualification Test Percentile Score
Race Codes		
White Race	1,0	Value of 1 if service member is White
Asian Race	1,0	Value of 1 if service member is Asian
Black Race	1,0	Value of 1 if service member is Black
Indian/Alaskan Native	1,0	Value of 1 if service member is American Indian or Alaskan Native
Pacific Race	1,0	Value of 1 if service member is of the Pacific Islander race
Ethnicity Codes		
Hispanic	1,0	Value of 1 if service member's ethnicity is Hispanic
Asian	1,0	Value of 1 if service member's ethnicity is Asian
Pacific Islander	1,0	Value of 1 if service member's ethnicity is Pacific Islander
Other	1,0	Value of 1 if service member's ethnicity if Other
Age	16-93	Service Member's age
Dependents	0-15	Dependent Quantity
Service Component Code		
Army	1,0	Value of 1 if member's service is Army
Air Force	1,0	Value of 1 if member's service is Air Force
Navy	1,0	Value of 1 if member's service is Navy
Marine Corps	1,0	Value of 1 if member's service is Marine Corps
Country Home of Record		
Asia	1,0	Service member's home of record country is in Asia
Middle East	1,0	Service member's home of record country is in the Middle East
Europe	1,0	Service member's home of record country is in Europe
North America	1,0	Service member's home of record country is in North America
Central America	1,0	Service member's home of record country is in Central America
Caribbean	1,0	Service member's home of record country is in the Caribbean
South America	1,0	Service member's home of record country is in South America
Africa	1,0	Service member's home of record country is in Africa
Oceania	1,0	Service member's home of record country is in Oceania

B.   SUMMARY STATISTICS

Prior to running regressions to analyze the effects of the independent variables onto the probability of reenlisting, attrition, or GI bill use, I ran the summary statistics for all my variables to get a closer look at my data. Table 6 contains the number of observations, means and standard deviations for all my variables. Noncitizens and immigrants each make up about 2% of our observations. Of all service members in the data set, a little over 10% chose to reenlist in any given year. Based on the reasons for attrition included in our analysis, disciplinary had the highest proportion of observations with .5%. Overall, there is very little pre-term attrition, therefore attrition for 5 of the reasons rarely occurred in our data.

In terms of education, most service members at least finished high school at 92.4%, which makes sense since this is a requirement for enlisting in all the services with few exceptions. The next highest proportion of education completed was "some college" at 3.4% followed by a bachelor's at 2.7%. It makes sense that a larger percentage of service members take some college courses but not all of them actually finish their bachelor's degree. For the AFQT variable, the mean average score in our data was 63.2 which coincides with a Category IIIA score. The required AFQT scores for enlistment changes often and by service but they generally require a score above 30. Therefore, it makes sense for our average to land somewhere in the middle at 63.

In terms of race and ethnicity, white makes up the largest race category at 78.3% while black comes in second at 15.6 and Asian at 3%. Other makes up the largest ethnicity category at 75.2% followed by Hispanic at 19.2%, Asian at 3% and Pacific Islander at 2.6%. Most of the blacks and the preponderance of whites consider themselves "other" in the ethnicity category, although many Hispanics would have coded themselves white in the race category, which is why it is not strange that 75.2% of the ethnicity category falls into "other."

Next, the mean age of those in our sample is 22 and their mean number of dependents is .5. Those numbers are accurate since our sample only includes those in their first term of service who are younger and tend to enlist right out of high school.

Therefore, they are usually not married and have no kids. Those that are single with kids or have one or more dependents are less likely to join due to ineligibility or dependency waiver disapproval. Lastly, as one looks at the regions of the home of record variables, it makes sense that most of our observations fall within North American at 98.7% since this includes nonimmigrants and citizens which also make up the largest percentage of our observations.

Table 6. Summary Statistics

VARIABLE	NUMBER OF OBSERVATIONS	MEAN	STANDARD DEVIATION
Noncitizen	5,553,751	0.02078	0.14263
Immigrant	5,246,922	0.02036	0.14122
Reenlist	5,634,399	0.10423	0.30556
Attrition Reason			
Drugs/Alcohol	5,634,399	0.00165	0.04057
Unqualified	5,634,399	0.00158	0.03968
Body Fat	5,634,399	0.00076	0.02762
Dependency	5,634,399	0.00114	0.0337
Disciplinary	5,634,399	0.00572	0.07239
GI Bill Ever	5,634,399	0.19118	0.39323
Education			
High School	5,496,727	0.92401	0.26498
No High School	5,496,727	0.00988	0.09891
Some College	5,496,727	0.03479	0.18324
Bachelor's	5,496,727	0.02652	0.16069
Master's and Above	5,496,727	0.00177	0.04198
Other Education	5,496,727	0.00303	0.05498
AFQT	5,526,734	63.1713	19.0594

Race			
Asian	5,389,514	0.02977	0.16995
Black	5,389,514	0.15619	0.36303
White	5,389,514	0.78343	0.41191
American Indian/ Alaskan Native	5,389,514	0.01295	0.11308
Pacific Islander	5,389,514	0.19154	0.07073

Ethnicity			
Hispanic	2,927,948	0.19154	0.39351
Asian	2,927,948	0.03016	0.17102
Pacific Islander	2,927,948	0.0259	0.15884
Other	2,927,948	0.7524	0.43162

Age	5,634,036	21.9632	3.82834

Dependent Quantity	5,501,565	0.58549	1.00482

Branch of Service			
Army	5,634,399	0.42203	0.49388
Marine Corps	5,634,399	0.22779	0.41941
Navy	5,634,399	0.06633	0.24885
Air Force	5,634,399	0.25061	0.43337

Region Home of Record			
Asia	5,481,919	0.00075	0.02736
Middle East	5,481,919	0.000035	0.005839
Europe	5,481,919	0.00126	0.0354
North America	5,481,919	0.98671	0.11453
Central America	5,481,919	0.000029	0.00539
Caribbean	5,481,919	0.000024	0.00489
South America	5,481,919	0.000011	0.00328
Africa	5,481,919	0.000091	0.00951
Oceania	5,481,919	0.000026	0.00507

1.   Summary Statistics by Group

To further summarize the data, I looked at all my variables by immigrant and citizenship to see how they differed. Table 7 provides a summary of the average of each variable by group. Out of all four categories, immigrants are more likely to reenlist at 13.3% percent while nonimmigrants, citizens and noncitizens are all on average about

10% likely to reenlist. When it comes to GI bill use, noncitizens are more likely to use the benefit at 25.4% which is over 5% higher than the average from Table 6. All other categories have about the same likelihood of use at 18 to 19%.

In terms of the education variables, nonimmigrants have higher rates of high school completion than immigrants at 93% and 84.3% respectively, yet immigrants are more likely to attain a bachelor's degree and some college. On the other hand, citizens and noncitizens have very similar values for all education variables. The majority of both citizens and noncitizens (92%) attain a high school education. For AFQT percentile scores, nonimmigrants have scores that are on average 3 points higher than immigrants. The difference is larger among noncitizens and citizens. Noncitizens have an average score of 56 while citizens have an average score of 63. The results are as expected since our literature mentions lack of English proficiency as a reason for lower qualifying scores among noncitizens.

In terms of race, most immigrants are Asian at 32.5% and the largest percentage of noncitizens are black at 24.1%. Overall, although Asian, black and Pacific Islander enlistments are low in comparison to whites, they are all well represented among non-citizen and immigrant enlistments. Additionally, noncitizens and immigrants in all three races, are more likely to join than their citizen/native counterparts. The largest percentage of whites, American Indians and Alaskan natives are nonimmigrants and citizens as one would expect. Within our ethnicity variable, one sees that the large majority of Hispanics, Asians and Pacific Islanders are immigrants and noncitizens while most in the "other" category are nonimmigrant and citizens. Pacific Islanders and Hispanics are overrepresented among noncitizens and immigrants while underrepresented among citizens and nonimmigrants.

In regards to the age value, there is a slight difference between immigrant and citizen groups. Both immigrants and noncitizens have average ages that are slightly older than nonimmigrant and citizen groups. Additionally, all groups have the same average dependent of less than 1 and while nonimmigrants and citizens are more likely to join the Army or Marine Corps, immigrants and non-citizens are more likely to join the Air Force or the Navy.

Table 7. Summary Statistics by Immigrant and Citizen Type

	Immigrant	Non-immigrant	Non-citizen	Citizen
Reenlist	0.132574	0.101519	0.106113	0.103921
Attrition Reason				
Drugs/Alcohol	0.000964	0.001646	0.000919	0.001678
Unqualified	0.001049	0.001645	0.000806	0.001585
Body Fat	0.000534	0.000791	0.000286	0.000771
Dependency	0.000964	0.001173	0.000537	0.001142
Disciplinary	0.003061	0.005451	0.003215	0.005309
GI Bill Ever	0.188979	0.189714	0.253965	0.188965
Education				
High School	0.842525	0.929375	0.914968	0.925507
No High School	0.006444	0.010158	0.008936	0.009909
Some College	0.061866	0.031920	0.036071	0.034406
Bachelor's	0.078870	0.024037	0.035649	0.025611
Master's and Above	0.008374	0.001407	0.003181	0.001532
Other Education	0.001921	0.003104	0.001195	0.003036
AFQT	60.43855	63.35648	55.60908	63.43007
Race				
Asian	0.324672	0.018788	0.200688	0.024276
Black	0.185924	0.154799	0.241032	0.153162
White	0.424596	0.798638	0.502492	0.792048
American Indian/ Alaskan Native	0.005934	0.013029	0.007296	0.013184
Pacific Islander	0.029959	0.003770	0.025955	0.004714
Ethnicity				
Hispanic	0.352519	0.169715	0.510285	0.179812
Asian	0.225528	0.020226	0.116950	0.025495
Pacific Islander	0.158360	0.018096	0.125214	0.021774
Other	0.263593	0.791964	0.247551	0.772919
Age	23.90505	21.87029	22.78561	21.92504
Dependent Quantity	0.645709	0.584688	0.533162	0.585513

Branch of Service				
Army	0.394782	0.435635	0.197758	0.419499
Marine Corps	0.179645	0.236134	0.231469	0.226712
Navy	0.125009	0.066696	0.494153	0.065492
Air Force	0.294750	0.253470	0.067383	0.254550
Region Home of Record				
Asia	0.003357	0.000627	0.004997	0.000683
Middle East	0.000249	0.000031	0.000019	0.000035
Europe	0.001899	0.001208	0.001099	0.001240
North America	0.977392	0.988266	0.972577	0.987036
Central America	0.000058	0.000027	0.000087	0.000028
Caribbean	0.000086	0.000019	0.000083	0.000019
South America	0.000077	0.000007	0.000045	0.000009
Africa	0.000288	0.000057	0.000344	0.000078
Oceania	0.000029	0.000024	0.000102	0.000025

C.   METHODOLOGY

Due to the binary nature of my dependent variables, the method employed in this thesis was the linear probability model. Our models sought to predict the effects of various pre-accession and demographic variables on noncitizens and immigrants' probability of remaining in military service past their first term, their probability of separating for specific reasons and their probability of using the GI bill. I focused my analysis of retention on service members who made their decision to reenlist prior to the end of their first term. To measure reason for separation or attrition as well as GI bill use, I included observations for all members, who based on the data, completed their first term.

1.   Retention Beyond First Term

First, to predict retention beyond first term among noncitizens and immigrants I ran the following linear probability models on the population of first-term enlisted personnel in the U.S. military between 2001 and 2013:

$$(1)\ reenlist = \beta_0 + \beta_1 noncitizen$$

$$(2)\ reenlist = \beta_0 + \beta_1 immigrant$$

After running models 1 and 2, I ran them again controlling for education, AFQT scores, race, ethnicity, age and branch of service to see whether these variables had an effect on the noncitizen and immigrant coefficients. Including the vector of control variables Z with vector of coefficients B, I designate these models as follows:

$$(3)\ reenlist = \ \beta_0 + \ \beta_1 noncitizen + BZ$$

$$(4)\ reenlist = \ \beta_0 + \beta_1 immigrant + BZ$$

Apart from analyzing whether immigrant or citizenship status affected reenlistment in first term service members, I also looked to see whether region home of record or ethnicity affected propensity to reenlist. Our base categories for these models, as was the case in the rest of our analysis, were North America for region home of record and "other" for ethnicity. I ran all models with and without control variables. The models I employed were as follows:

$$
\begin{aligned}
(5)\ reenlist = \ &\beta_0 + \beta_1 asianoncitizen + \beta_2 middleeastnoncitizen + \beta_3 europenoncitizen \\
&+ \beta_4 southamericanoncitizen + \beta_5 centralamericanoncitizen \\
&+ \beta_6 carribeannoncitizen + \beta_7 africanoncitizen + \beta_8 oceanianoncitizen + BZ
\end{aligned}
$$

$$
\begin{aligned}
(6)\ reenlist = \ &\beta_0 + \beta_1 asianoncitizen + \beta_2 pacificislandernoncitizen + \beta_3 hispanicnoncitizen \\
&+ BZ
\end{aligned}
$$

$$
\begin{aligned}
(7)\ reenlist = \ &\beta_0 + \beta_1 asianimmigrant + \beta_2 middleeastimmigrant + \beta_3 europeimmigrant \\
&+ \beta_4 southamericaimmigrant + \beta_5 centralamericaimmigrant \\
&+ \beta_6 carribeanimmigrant + \beta_7 africaimmigrant + \beta_8 oceaniaimmigrant + BZ
\end{aligned}
$$

$$
\begin{aligned}
(8)\ reenlist = \ &\beta_0 + \beta_1 asianimmigrant + \beta_2 pacificislanderimmigrant + \beta_3 hispanicimmigrant \\
&+ BZ
\end{aligned}
$$

2.   Attrition in First Term

Second, to predict the effects of noncitizen and immigrant status on specific reasons for separation during first term I ran the following models with and without control variables:

$$(9)\ bodyfat = \ \beta_0 + \ \beta_1 noncitizen + \ BZ$$

$$(10) \; bodyfat = \beta_0 + \beta_1 immigrant + BZ$$

$$(11) \; dependency = \beta_0 + \beta_1 noncitizen + BZ$$

$$(12) \; dependency = \beta_0 + \beta_1 immigrant + BZ$$

$$(13) \; drugsalcohol = \beta_0 + \beta_1 noncitizen + BZ$$

$$(14) \; drugsalcohol = \beta_0 + \beta_1 immigrant + BZ$$

$$(15) \; disciplinary = \beta_0 + \beta_1 noncitizen + BZ$$

$$(16) \; disciplinary = \beta_0 + \beta_1 immigrant + BZ$$

$$(17) \; unqualified = \beta_0 + \beta_1 noncitizen + BZ$$

$$(18) \; unqualified = \beta_0 + immigrant + BZ$$

After running the initial models to see how immigrants and noncitizens differed from nonimmigrants and citizens in terms of separations, I also added interactions for region home of record and ethnicity, as I did for reenlistment, to predict how these variables affected reason for separation. I ran the models 19 to 22 for all five separation reasons as well as immigrants and noncitizens and with and without control variables for a total of 40 regressions.

$$(19) \; bodyfat = \beta_0 + \beta_1 asianoncitizen + \beta_2 middleeastnoncitizen + \beta_3 europenoncitizen$$
$$+ \beta_4 southamericanoncitizen + \beta_5 centralamericanoncitizen$$
$$+ \beta_6 carribeannoncitizen + \beta_7 africanoncitizen + \beta_8 oceanianoncitizen + BZ$$

$$(20) \; bodyfat = \beta_0 + \beta_1 asiaimmigrant + \beta_2 middleeastimmigrant + \beta_3 europeimmigrant$$
$$+ \beta_4 southamericaimmigrant + \beta_5 centralamericaimmigrant$$
$$+ \beta_6 carribeanimmigrant + \beta_7 africaimmigrant + \beta_8 oceaniaimmigrant + BZ$$

$$(21) \; bodyfat = \beta_0 + \beta_1 asianoncitizen + \beta_2 pacificislandernoncitizen + \beta_3 hispanicnoncitizen$$
$$+ BZ$$

$$(22) \; bodyfat = \beta_0 + \beta_1 asiaimmigrant + \beta_2 pacificislanderimmigrant + \beta_3 hispanicimmigrant$$
$$+ BZ$$

3.   GI Bill Use

To predict the propensity of noncitizens and immigrants of using the GI bill I ran the following models both with and without controls:

(23) $gibillever = \beta_0 + \beta_1 noncitizen + BZ$

(24) $gibillever = \beta_0 + \beta_1 immigrant + BZ$

As was the case in our models for retention and attrition, I then included region home of record and ethnicity interactions with our noncitizen and immigrant variables as seen in models 25 to 28 both with and without controls for a total of 8 regressions.

(25) $gibillever = \beta_0 + \beta_1 asianoncitizen + \beta_2 middleeastnoncitizen + \beta_3 europenoncitizen$
$+ \beta_4 southamericanoncitizen + \beta_5 centralamericanoncitizen$
$+ \beta_6 carribeannoncitizen + \beta_7 africanoncitizen + \beta_8 oceanianoncitizen + BZ$

(26) $gibillever = \beta_0 + \beta_1 asianimmigrant + \beta_2 middleeastimmigrant + \beta_3 europeimmigrant$
$+ \beta_4 southamericaimmigrant + \beta_5 centralamericaimmigrant$
$+ \beta_6 carribeanimmigrant + \beta_7 africaimmigrant + \beta_8 oceaniaimmigrant + BZ$

(27) $gibillever = \beta_0 + \beta_1 asianoncitizen + \beta_2 pacificislandernoncitizen + \beta_3 hispanicnoncitizen$
$+ BZ$

(28) $gibillever = \beta_0 + \beta_1 asianimmigrant + \beta_2 pacificislanderimmigrant$
$+ \beta_3 hispanicimmigrant + BZ$

THIS PAGE INTENTIONALLY LEFT BLANK

V.   RESULTS

A.   PREDICTORS OF RETENTION BEYOND FIRST TERM

The results provide a mixed picture of whether or not non-citizens are more or less likely to reenlist than their citizen counterparts; however, immigrants are consistently more likely to reenlist than non-immigrants. The results in Tables 8 and 9, show that noncitizens are more likely to reenlist, but when including control variables they are actually less likely to reenlist. The proportion of each is relatively close to 0 yet one can conclude that adding our controls has a negative effect on our coefficient for noncitizen. With such large sample sizes, such small coefficients, and the fact that the effects are only significant at the 5% level, one can conclude that non-citizens are not substantially different than citizens in terms of reenlistment. On the other hand, immigrants are significantly (1% level) more likely to reenlist than nonimmigrants regardless of controls and with very similar values of 3.7% and 3.1% respectively.

Table 8. Noncitizen Reenlistments

VARIABLES	(1) Reenlist (No controls)	(2) Reenlist (With controls)
noncitizen	0.00219** (0.000908)	-0.00364** (0.00144)
Observations	5,553,751	2,585,168
R-squared	0.000	0.030

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 9. Immigrant Reenlistments

VARIABLES	(1) Reenlist (No controls)	(2) Reenlist (With Controls)
immigrant	0.0311*** (0.000936)	0.00371*** (0.00137)
Observations	5,246,922	2,521,743
R-squared	0.000	0.030

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

To see if ethnic or regional differences drive differences in noncitizen or immigrant reenlistments, I interacted noncitizen and immigrant with region home of record and ethnic identity and ran restricted and unrestricted models. Table 10 summarizes our results for noncitizens. As before, the results for the impact of being a non-citizen on reenlistment are inconsistent, the coefficient on noncitizens becomes negative with the inclusion of control variables or regions suggesting that any significant and positive impact on reenlistment of being a non-citizen appears to be driven by demographic characteristics of many non-citizens, not their non-citizen status itself. Our results also show, that with regional interactions, noncitizens from Asia are significantly more likely to re-enlist (1% level) than those from North America with values of 13.8% more likely without controls and 14.2% more likely with controls. Additionally, although noncitizens from all regions are no more or less likely to re-enlist than citizens, our results show that those from Europe, Central America, the Caribbean and Africa are significantly more likely to reenlist at the (1% level without controls) regardless of citizenship status.

With the ethnicity interactions I arrived at different results. Asian noncitizens were no more or less likely to reenlist than other noncitizens but Pacific Islander noncitizens were 8.7% more likely to reenlist without controls and 6.4% more likely to reenlist with controls both at the 1% significance level. Our Pacific Islander ethnic variable includes observations from the Asian race, therefore, it is likely that our Asian ethnic variable decreased in significance due to this shift in observations. Similarly, Hispanics and

50

particularly Hispanic non-citizens are significantly more likely to reenlist (at the 1% level in all models) but only about 1% more than citizens in the "other" ethnicity category.

Table 10. Noncitizen Reenlistment with Region and Ethnicity Interactions

VARIABLES	(1) Reenlist (No controls)	(2) Reenlist (With controls)	(3) Reenlist (No controls)	(4) Reenlist (With controls)
nonHS		0.0190***		0.0182***
		(0.00169)		(0.00170)
somecollege		-0.0270***		-0.0270***
		(0.00100)		(0.00100)
bachelors		-0.0543***		-0.0530***
		(0.00115)		(0.00115)
mastersandabove		-0.0669***		-0.0664***
		(0.00409)		(0.00407)
othereducation		-0.00673**		-0.00897***
		(0.00269)		(0.00270)
AFQT_PCTL_SCR_QY		-0.000816***		-0.000792***
		(1.09e-05)		(1.09e-05)
asianrace		0.00685***		0.00763***
		(0.00187)		(0.00186)
blackrace		0.0213***		0.0224***
		(0.000574)		(0.000574)
indiannative		0.0115***		0.0116***
		(0.00158)		(0.00158)
pacificrace		0.0102***		0.00888***
		(0.00335)		(0.00336)
asian		-0.00128		
		(0.00193)		
pacificislander		0.0361***		
		(0.00205)		
hispanic		0.00290***		
		(0.000585)		
PN_AGE_QY		0.00590***		0.00551***
		(6.19e-05)		(6.05e-05)
DEP_QY		0.0278***		0.0284***
		(0.000207)		(0.000206)
army		-0.0505***		-0.0495***
		(0.00119)		(0.00119)
airforce		-0.0387***		-0.0353***
		(0.00158)		(0.00158)
marines		-0.0996***		-0.0992***
		(0.00123)		(0.00123)
1.noncitizen	0.00305***	-0.00514***	-0.00930***	-0.0234***
	(0.000914)	(0.00144)	(0.00240)	(0.00257)
1.asia	0.0307***	0.0257***		
	(0.00503)	(0.00823)		
1.noncitizen#1.asia	0.104***	0.121***		
	(0.0185)	(0.0274)		
1.middleeast	0.0454**	0.0801**		

VARIABLES	(1) Reenlist (No controls)	(2) Reenlist (With controls)	(3) Reenlist (No controls)	(4) Reenlist (With controls)
	(0.0223)	(0.0353)		
1.europe	0.0306***	0.0271***		
	(0.00373)	(0.00639)		
1.noncitizen#1.europe	-0.0166	0.0670		
	(0.0248)	(0.0600)		
1.southamerica	0.0901**	0.0412		
	(0.0441)	(0.0575)		
1.noncitizen#1.southamerica	-0.195	-0.154		
	(0.157)	(0.165)		
1.centralamerica	0.0811***	0.0455		
	(0.0248)	(0.0414)		
1.noncitizen#1.centralamerica	0.100	0.203		
	(0.117)	(0.160)		
1.carribean	0.0947***	0.0845*		
	(0.0299)	(0.0478)		
1.noncitizen#1.carribean	-0.199	-0.239		
	(0.127)	(0.224)		
1.africa	0.0601***	0.0346*		
	(0.0148)	(0.0206)		
1.noncitizen#1.africa	-0.0564	-0.0567		
	(0.0518)	(0.0631)		
1.oceania	0.0589**	0.0578*		
	(0.0264)	(0.0340)		
1.noncitizen#1.oceania	0.0866	0.0506		
	(0.110)	(0.159)		
1.noncitizen#1.middleeast	-0.150			
	(0.153)			
1.asian			0.000576	0.00101
			(0.00120)	(0.00195)
1.noncitizen#1.asian			-0.0131***	-0.00428
			(0.00438)	(0.00479)
1.pacificislander			0.0547***	0.0328***
			(0.00130)	(0.00208)
1.noncitizen#1.pacificislander			0.0419***	0.0547***
			(0.00432)	(0.00485)
1.hispanic			0.0182***	0.00216***
			(0.000494)	(0.000594)
1.noncitizen#1.hispanic			0.00665**	0.0307***
			(0.00295)	(0.00333)
Observations	5,403,807	2,555,531	2,857,602	2,585,168
R-squared	0.000	0.031	0.001	0.030

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Results for our immigrant interactions are shown in Table 11. One sees that Asian immigrants are 11% more likely to reenlist than those from North America at the 1%

significance level with and without controls. All immigrants from the other regions are no more or less likely to reenlist than nonimmigrants. Those from Asia, Europe, the Caribbean, Central America, and Africa are more likely to reenlist regardless of immigrant status and once again statistically significant at the 1% level (without controls).

For our ethnic interactions with immigrants, I found that Pacific Islander and Hispanic immigrants, were more likely to reenlist. The proportion was higher for both ethnicities without controls. Pacific Islanders were 9.4% more likely to reenlist without controls and 5.5% more likely to reenlist with controls while Hispanics were 4.7% more likely to reenlist without controls and 1.2% more likely with controls. Overall, our results show that regardless of controls, both Pacific Islander and Hispanic immigrants are significantly (1% level) more likely to re-enlist than all other immigrants.

Table 11. Immigrant Reenlistments with Region and Ethnicity Interactions

VARIABLES	(1) Reenlist (No controls)	(2) Reenlist (With controls)	(3) Reenlist (No controls)	(4) Reenlist (With controls)
1.immigrant	0.0302*** (0.000940)	0.00355*** (0.00138)	0.0196*** (0.00232)	-0.00822*** (0.00240)
1.asia	0.0253*** (0.00535)	0.0212** (0.00898)		
1.immigrant#1.asia	0.0541*** (0.0169)	0.0214 (0.0226)		
1.middleeast	0.0430* (0.0241)	0.0912** (0.0387)		
1.immigrant#1.middleeast	-0.0568 (0.0635)	-0.0698 (0.0941)		
1.europe	0.0327*** (0.00385)	0.0278*** (0.00655)		
1.immigrant#1.europe	0.00988 (0.0216)	-0.0181 (0.0326)		
1.southamerica	0.0776 (0.0514)	0.0229 (0.0660)		
1.immigrant#1.southamerica	0.0433 (0.118)	0.0152 (0.168)		
1.centralamerica	0.0763*** (0.0256)	0.0317 (0.0417)		
1.immigrant#1.centralamerica	0.128 (0.125)	0.746** (0.312)		
1.carribean	0.0946*** (0.0311)	0.0728 (0.0489)		

53

VARIABLES	(1) Reenlist (No controls)	(2) Reenlist (With controls)	(3) Reenlist (No controls)	(4) Reenlist (With controls)
1.immigrant#1.carribean	-0.00157	0.283		
	(0.105)	(0.224)		
1.africa	0.0899***	0.0474**		
	(0.0177)	(0.0223)		
1.immigrant#1.africa	-0.0524	-0.0719		
	(0.0575)	(0.0763)		
1.oceania	0.0621**	0.0561		
	(0.0276)	(0.0346)		
1.immigrant#1.oceania	0.142			
	(0.175)			
1.asian			-0.00221	0.00214
			(0.00136)	(0.00206)
1.immigrant#1.asian			-0.00682*	0.00480
			(0.00366)	(0.00384)
1.pacificislander			0.0465***	0.0280***
			(0.00144)	(0.00223)
1.immigrant#1.pacificislander			0.0274***	0.0354***
			(0.00403)	(0.00433)
1.hispanic			0.0149***	0.00238***
			(0.000513)	(0.000609)
1.immigrant#1.hispanic			0.0121***	0.0178***
			(0.00309)	(0.00335)
Observations	5,111,083	2,492,813	2,763,011	2,521,743
R-squared	0.000	0.030	0.001	0.030

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

B.   PREDICTORS OF SEPARATION IN FIRST TERM

Our results in Tables 12 through 16, show that noncitizens are slightly less likely to separate for reasons of body fat, dependency, drugs or alcohol, discipline issues or for not qualifying than are citizens at the 1% level of significance. With controls, noncitizens are no more likely or less likely to attrite for reasons of body fat, dependency and for not qualifying than citizens but they are still significantly less likely (1% level) to attrite for drugs/alcohol and disciplinary reasons. Therefore, due to the difference in results from our controlled and uncontrolled regressions, we conclude that overall noncitizens are slightly less or equally likely to attrite for all reasons.

Table 12. Noncitizen Body Fat Separation

VARIABLES	(1) Body Fat (No controls)	(2) Body Fat (With controls)
noncitizen	-0.000485*** (8.20e-05)	-0.000193 (0.000143)
Observations	5,553,751	2,585,168
R-squared	0.000	0.000

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 13. Noncitizen Dependency Separation

VARIABLES	(1) Dependency (No controls)	(2) Dependency (With controls)
noncitizen	-0.000605***	-0.000251
Observations	5,553,751	2,585,168
R-squared	0.000	0.001

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 14. Noncitizen Drugs/Alcohol Separation

VARIABLES	(1) Drugs/Alcohol (No controls)	(2) Drugs/Alcohol (With controls)
noncitizen	-0.000759*** (0.000121)	-0.000679*** (0.000189)
Observations	5,553,751	2,585,168
R-squared	0.000	0.000

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 15. Noncitizen Disciplinary Separation

VARIABLES	(1) Disciplinary (No controls)	(2) Disciplinary (With controls)
noncitizen	-0.00209***	-0.000950***
	(0.000215)	(0.000331)
Observations	5,553,751	2,585,168
R-squared	0.000	0.001

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 16. Noncitizen Unqualified Separation

VARIABLES	(1) Unqualified (No Controls)	(2) Unqualified (With controls)
noncitizen	-0.000779***	-0.000160
	(0.000118)	(0.000197)
Observations	5,553,751	2,585,168
R-squared	0.000	0.000

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Tables 17 through 21 show us that like noncitizens, without controls, immigrants are less likely at the 1% level to attrite for any of these reasons. Yet, they are no more likely or less likely to attrite for all reasons but disciplinary than nonimmigrants with controls added. Once again, due to the difference in results from our controlled and uncontrolled regressions I find that immigrants are equally likely or significantly less likely to attrite for all five attrition reasons than nonimmigrants.

Table 17. Immigrant Body Fat Separation

VARIABLES	(1) Body Fat (No controls)	(2) Body Fat (With controls)
immigrant	-0.000257***	-0.000288**
	(8.66e-05)	(0.000138)
Observations	5,246,922	2,521,743
R-squared	0.000	0.000

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 18. Immigrant Dependency Separation

VARIABLES	(1) Dependency (No controls)	(2) Dependency (With controls)
immigrant	-0.000209**	-9.16e-05
	(0.000106)	(0.000164)
Observations	5,246,922	2,521,743
R-squared	0.000	0.001

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 19. Immigrant Drugs/Alcohol Separation

VARIABLES	(1) Drugs/Alcohol (No controls)	(2) Drugs/Alcohol (With controls)
immigrant	-0.000682***	-0.000238
	(0.000125)	(0.000182)
Observations	5,246,922	2,521,743
R-squared	0.000	0.000

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 20. Immigrant Disciplinary Separation

VARIABLES	(1) Disciplinary (No controls)	(2) Disciplinary (With controls)
immigrant	-0.00239***	-0.00128***
	(0.000227)	(0.000319)
Observations	5,246,922	2,521,743
R-squared	0.000	0.001

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 21. Immigrant Unqualified Separation

VARIABLES	(1) Unqualified (No controls)	(2) Unqualified (With controls)
immigrant	-0.000596***	0.000129
	(0.000125)	(0.000190)
Observations	5,246,922	2,521,743
R-squared	0.000	0.000

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Interactions with regional and ethnic variables shows some heterogeneity among noncitizen groups. Our results from Tables 22 to 26 show what happens when interacting regional and ethnic variables with our noncitizen variable. I find that noncitizens from Europe are 1.2% more likely to attrite for dependency issues than are other noncitizen groups (at the 1% level and with no controls). Additionally, enlistees from the Middle East are more likely to attrite due to body fat regardless of citizenship status without controls (5% significance level) and with controls (1% significance level). They are also more likely to attrite for disciplinary issues without controls (1% significance level) and with controls (5% significance level). Enlistees from Europe are less likely to attrite due

to disciplinary reasons or reasons of not qualifying, regardless of citizenship status at the 5% and 1% significance level and both without controls. Finally, Asians, are less likely to attrite for reasons of not qualifying, regardless of citizenship status and at the 5% significance level.

With the ethnicity interactions, Asian noncitizens are less likely than other citizens to attrite for disciplinary issues (without controls) although the proportion is very close to 0 (-0.3%). Additionally, enlistees from all ethnicities are significantly less likely (1% level) to attrite for body fat, disciplinary, drugs/alcohol or not for not qualifying than enlistees in the "other" categories, regardless of citizenship status and without controls. Hispanics are also significantly less likely (1% level) to attrite for all reasons, regardless of citizenship status and with controls added.

Table 22. Noncitizen Body Fat Separation with Interactions

VARIABLES	(1) Body Fat (No controls)	(2) Body Fat (With controls)	(3) Body Fat (No controls)	(4) Body Fat (With controls)
1.noncitizen	-0.000485***	-0.000192	-0.000842***	-0.000264
	(8.39e-05)	(0.000144)	(0.000243)	(0.000256)
1.asia	-0.000227	0.000491		
	(0.000462)	(0.000823)		
1.noncitizen#1.asia	-6.91e-05	-0.00123		
	(0.00170)	(0.00274)		
1.middleeast	0.00465**	0.0120***		
	(0.00204)	(0.00353)		
1.europe	-0.000323	-0.00109*		
	(0.000343)	(0.000639)		
1.noncitizen#1.europe	2.73e-05	0.000306		
	(0.00228)	(0.00600)		
1.southamerica	-0.000781	-0.000812		
	(0.00405)	(0.00576)		
1.noncitizen#1.southamerica	0.000485	3.77e-05		
	(0.0144)	(0.0165)		
1.centralamerica	-0.000781	-0.000798		
	(0.00228)	(0.00414)		
1.noncitizen#1.centralamerica	0.000485	5.11e-05		
	(0.0107)	(0.0160)		
1.carribean	-0.000781	-0.000902		
	(0.00275)	(0.00478)		
1.noncitizen#1.carribean	0.000485	0.000498		
	(0.0117)	(0.0224)		
1.africa	-0.000781	-0.000952		
	(0.00136)	(0.00206)		

VARIABLES	(1) Body Fat (No controls)	(2) Body Fat (With controls)	(3) Body Fat (No controls)	(4) Body Fat (With controls)
1.noncitizen#1.africa	0.000485 (0.00476)	0.000630 (0.00631)		
1.oceania	-0.000781 (0.00242)	-0.00103 (0.00340)		
1.noncitizen#1.oceania	0.000485 (0.0101)	0.00102 (0.0159)		
1.noncitizen#1.middleeast	-0.00495 (0.0140)			
1.asian			-0.000523*** (0.000122)	-0.000323* (0.000194)
1.noncitizen#1.asian			0.000843* (0.000444)	0.000246 (0.000477)
1.pacificislander			-0.000436*** (0.000132)	-0.000286 (0.000207)
1.noncitizen#1.pacificislander			0.000716 (0.000438)	-2.41e-05 (0.000483)
1.hispanic			-0.000362*** (5.02e-05)	-0.000217*** (5.92e-05)
1.noncitizen#1.hispanic			0.000464 (0.000299)	9.65e-05 (0.000332)
Observations	5,403,807	2,555,531	2,857,602	2,585,168
R-squared	0.000	0.000	0.000	0.000

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 23. Noncitizen Dependency Separation with Interactions

VARIABLES	(1) Dependency (No controls)	(2) Dependency (With controls)	(3) Dependency (No controls)	(4) Dependency (With controls)
1.noncitizen	-0.000619*** (0.000102)	-0.000273 (0.000171)	-0.000781*** (0.000288)	-0.000456 (0.000304)
1.asia	0.000789 (0.000561)	0.000810 (0.000975)		
1.noncitizen#1.asia	0.00215 (0.00207)	-0.00138 (0.00325)		
1.middleeast	-0.00115 (0.00249)	-0.00130 (0.00418)		
1.europe	0.000986** (0.000416)	-0.000360 (0.000756)		
1.noncitizen#1.europe	0.0116*** (0.00277)	0.0365*** (0.00711)		
1.southamerica	-0.00115 (0.00492)	-0.00102 (0.00682)		
1.noncitizen#1.southamerica	0.000619 (0.0176)	-5.05e-05 (0.0196)		

VARIABLES	(1) Dependency (No controls)	(2) Dependency (With controls)	(3) Dependency (No controls)	(4) Dependency (With controls)
1.centralamerica	-0.00115 (0.00277)	-0.00152 (0.00490)		
1.noncitizen#1.centralamerica	0.000619 (0.0130)	-0.000368 (0.0190)		
1.carribean	-0.00115 (0.00334)	-0.00214 (0.00566)		
1.noncitizen#1.carribean	0.000619 (0.0142)	0.000850 (0.0266)		
1.africa	-0.00115 (0.00165)	-0.00169 (0.00244)		
1.noncitizen#1.africa	0.000619 (0.00578)	0.000539 (0.00748)		
1.oceania	-0.00115 (0.00295)	-0.00148 (0.00403)		
1.noncitizen#1.oceania	0.000619 (0.0123)	0.00157 (0.0188)		
1.noncitizen#1.middleeast	0.000619 (0.0170)			
1.asian			-0.000540*** (0.000144)	0.000116 (0.000230)
1.noncitizen#1.asian			0.000281 (0.000526)	0.000365 (0.000566)
1.pacificislander			-0.000224 (0.000156)	-6.86e-06 (0.000246)
1.noncitizen#1.pacificislander			0.000385 (0.000518)	0.000391 (0.000573)
1.hispanic			-0.000276*** (5.94e-05)	3.26e-05 (7.02e-05)
1.noncitizen#1.hispanic			5.97e-05 (0.000354)	0.000253 (0.000394)
Observations	5,403,807	2,555,531	2,857,602	2,585,168
R-squared	0.000	0.001	0.000	0.001

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 24. Noncitizen Drugs/Alcohol Separation with Interactions

VARIABLES	(1) Drugs/Alcohol (No controls)	(2) Drugs/Alcohol (With controls)	(3) Drugs/Alcohol (No controls)	(4) Drugs/Alcohol (With controls)
1.noncitizen	-0.000758*** (0.000124)	-0.000695*** (0.000191)	-0.000714** (0.000314)	-0.000939*** (0.000339)
1.asia	-0.000316	0.000985		

VARIABLES	(1) Drugs/Alcohol (No controls)	(2) Drugs/Alcohol (With controls)	(3) Drugs/Alcohol (No controls)	(4) Drugs/Alcohol (With controls)
	(0.000682)	(0.00109)		
1.noncitizen#1.asia	-0.000626	-0.00125		
	(0.00251)	(0.00364)		
1.middleeast	-0.00170	-0.00158		
	(0.00302)	(0.00469)		
1.europe	-0.000480	-0.00164*		
	(0.000506)	(0.000848)		
1.noncitizen#1.europe	-0.000462	0.000949		
	(0.00337)	(0.00796)		
1.southamerica	-0.00170	-0.00118		
	(0.00598)	(0.00764)		
1.noncitizen#1.southamerica	0.000758	0.00132		
	(0.0214)	(0.0219)		
1.centralamerica	-0.00170	-0.00130		
	(0.00337)	(0.00549)		
1.noncitizen#1.centralamerica	0.000758	0.000341		
	(0.0159)	(0.0213)		
1.carribean	-0.00170	-0.00130		
	(0.00406)	(0.00635)		
1.noncitizen#1.carribean	0.000758	0.000678		
	(0.0172)	(0.0298)		
1.africa	-0.00170	-0.000797		
	(0.00201)	(0.00274)		
1.noncitizen#1.africa	0.000758	0.000254		
	(0.00703)	(0.00838)		
1.oceania	0.00593*	-0.00107		
	(0.00358)	(0.00452)		
1.noncitizen#1.oceania	-0.00688	1.82e-05		
	(0.0149)	(0.0211)		
1.noncitizen#1.middleeast	0.000758			
	(0.0207)			
1.asian			-0.000917***	-0.000402
			(0.000157)	(0.000256)
1.noncitizen#1.asian			1.39e-05	0.000101
			(0.000573)	(0.000631)
1.pacificislander			-0.00112***	-0.000688**
			(0.000170)	(0.000274)
1.noncitizen#1.pacificislander			0.000199	0.000222
			(0.000565)	(0.000639)
1.hispanic			-0.000455***	-0.000548***
			(6.47e-05)	(7.83e-05)
1.noncitizen#1.hispanic			0.000171	0.000491
			(0.000386)	(0.000439)
Observations	5,403,807	2,555,531	2,857,602	2,585,168
R-squared	0.000	0.000	0.000	0.000

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 25. Noncitizen Disciplinary Separation with Interactions

VARIABLES	(1) Disciplinary (No controls)	(2) Disciplinary (With controls)	(3) Disciplinary (No controls)	(4) Disciplinary (With controls)
1.noncitizen	-0.00225***	-0.00103***	-0.00265***	-0.00204***
	(0.000219)	(0.000334)	(0.000574)	(0.000593)
1.asia	-3.71e-05	-0.00158		
	(0.00120)	(0.00191)		
1.noncitizen#1.asia	0.000459	0.00732		
	(0.00443)	(0.00635)		
1.middleeast	0.0219***	0.0203**		
	(0.00533)	(0.00818)		
1.europe	-0.00210**	-0.00112		
	(0.000893)	(0.00148)		
1.noncitizen#1.europe	0.00563	-0.00300		
	(0.00593)	(0.0139)		
1.southamerica	-0.00530	-0.00369		
	(0.0105)	(0.0133)		
1.noncitizen#1.southamerica	0.00225	0.000854		
	(0.0376)	(0.0383)		
1.centralamerica	-0.00530	-0.00466		
	(0.00594)	(0.00959)		
1.noncitizen#1.centralamerica	0.00225	0.00180		
	(0.0279)	(0.0372)		
1.carribean	-0.00530	-0.00447		
	(0.00715)	(0.0111)		
1.noncitizen#1.carribean	0.00225	-0.000623		
	(0.0304)	(0.0520)		
1.africa	-0.00289	-0.00409		
	(0.00355)	(0.00478)		
1.noncitizen#1.africa	-0.000162	0.00126		
	(0.0124)	(0.0146)		
1.oceania	-0.00530	-0.00481		
	(0.00631)	(0.00788)		
1.noncitizen#1.oceania	0.00225	0.00397		
	(0.0263)	(0.0368)		
1.noncitizen#1.middleeast	-0.0249			
	(0.0365)			
1.asian			-0.00226***	-0.000194
			(0.000288)	(0.000449)
1.noncitizen#1.asian			0.00235**	0.00260**
			(0.00105)	(0.00110)
1.pacificislander			-0.00291***	-0.00145***
			(0.000311)	(0.000480)
1.noncitizen#1.pacificislander			0.00174*	0.00285**
			(0.00103)	(0.00112)
1.hispanic			-0.00158***	-0.000861***
			(0.000118)	(0.000137)
1.noncitizen#1.hispanic			0.00120*	0.000960
			(0.000706)	(0.000768)
Observations	5,403,807	2,555,531	2,857,602	2,585,168

63

VARIABLES	(1) Disciplinary (No controls)	(2) Disciplinary (With controls)	(3) Disciplinary (No controls)	(4) Disciplinary (With controls)
R-squared	0.000	0.001	0.000	0.001

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 26. Noncitizen Unqualified Separation with Interactions

VARIABLES	(1) Unqualified (No controls)	(2) Unqualified (With controls)	(3) Unqualified (No controls)	(4) Unqualified (With controls)
1.noncitizen	-0.000799***	-0.000155	-0.00113***	-0.000271
	(0.000121)	(0.000200)	(0.000327)	(0.000354)
1.asia	-0.00135**	-0.000724		
	(0.000666)	(0.00114)		
1.noncitizen#1.asia	0.000522	-0.000257		
	(0.00245)	(0.00380)		
1.middleeast	-0.00162	-0.00188		
	(0.00295)	(0.00490)		
1.europe	-0.00162***	-0.00180**		
	(0.000494)	(0.000886)		
1.noncitizen#1.europe	0.000799	0.000365		
	(0.00329)	(0.00832)		
1.southamerica	-0.00162	-0.00124		
	(0.00584)	(0.00798)		
1.noncitizen#1.southamerica	0.000799	-0.000255		
	(0.0208)	(0.0229)		
1.centralamerica	-0.00162	-0.00135		
	(0.00329)	(0.00575)		
1.noncitizen#1.centralamerica	0.000799	0.000894		
	(0.0155)	(0.0223)		
1.carribean	-0.00162	-0.00112		
	(0.00396)	(0.00664)		
1.noncitizen#1.carribean	0.000799	0.000180		
	(0.0168)	(0.0311)		
1.africa	0.000785	0.00309		
	(0.00196)	(0.00286)		
1.noncitizen#1.africa	-0.00161	-0.00408		
	(0.00687)	(0.00876)		
1.oceania	-0.00162	-0.00178		
	(0.00350)	(0.00472)		
1.noncitizen#1.oceania	0.000799	0.000777		
	(0.0146)	(0.0220)		
1.noncitizen#1.middleeast	0.000799			
	(0.0202)			
1.asian			-0.000824***	-0.000206
			(0.000164)	(0.000268)
1.noncitizen#1.asian			0.00160***	0.00112*
			(0.000599)	(0.000658)

VARIABLES	(1) Unqualified (No controls)	(2) Unqualified (With controls)	(3) Unqualified (No controls)	(4) Unqualified (With controls)
1.pacificislander			-0.000862***	-0.000248
			(0.000177)	(0.000286)
1.noncitizen#1.pacificislander			0.000512	-0.000460
			(0.000590)	(0.000667)
1.hispanic			-0.000679***	-0.000424***
			(6.76e-05)	(8.17e-05)
1.noncitizen#1.hispanic			0.000513	6.37e-05
			(0.000403)	(0.000458)
Observations	5,403,807	2,555,531	2,857,602	2,585,168
R-squared	0.000	0.000	0.000	0.000

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Our results from Tables 27 to 31 show what happened when regional and ethnic variables are interacted with the immigrant variable. None of our immigrants from the various regions are significantly more likely or less likely to attrite for any reasons than our nonimmigrants. Also, service members from the Middle East were more likely to separate for body fat reasons without controls (5% level), with controls (1% level) and also more likely to separate for disciplinary issues (1% level) than those from North America regardless of immigrant status. Additionally, those from Europe were less likely to separate for disciplinary issues regardless of immigrant status at the 5% level as well as for reasons of not qualifying with and without controls at the 5% and 1% levels respectively.

Although, there are no significant results among our ethnicity immigrant interactions, the results show that Asians, Pacific Islanders and Hispanics are all less likely to attrite for reasons of body fat, dependency, drugs/alcohol, disciplinary or for reasons of not qualifying regardless of immigrant status and all at the 1% level without controls. With controls added, Hispanics are all less likely to attrite for all reasons except dependency at the 1% significance level. Additionally, Pacific Islanders are less likely to attrite for drugs/alcohol and disciplinary issues regardless of immigrant status with controls and at the 5% and 1% significance levels respectively.

Table 27.Immigrant Body Fat Separation with Interactions

VARIABLES	(1) Body Fat (No controls)	(2) Body Fat (With controls)	(3) Body Fat (No controls)	(4) Body fat (With controls)
1.immigrant	-0.000260***	-0.000286**	-0.000598**	-0.000560**
	(8.84e-05)	(0.000139)	(0.000238)	(0.000241)
1.asia	-0.000163	0.000697		
	(0.000503)	(0.000907)		
1.immigrant#1.asia	-0.000377	-0.00128		
	(0.00159)	(0.00228)		
1.middleeast	0.00565**	0.0146***		
	(0.00226)	(0.00391)		
1.immigrant#1.middleeast	-0.00619	-0.0152		
	(0.00597)	(0.00951)		
1.europe	-0.000304	-0.00112*		
	(0.000362)	(0.000661)		
1.immigrant#1.europe	-0.000236	0.000521		
	(0.00204)	(0.00329)		
1.southamerica	-0.000800	-0.000759		
	(0.00483)	(0.00666)		
1.immigrant#1.southamerica	0.000260	-7.30e-05		
	(0.0111)	(0.0170)		
1.centralamerica	-0.000800	-0.000819		
	(0.00241)	(0.00421)		
1.immigrant#1.centralamerica	0.000260	0.000156		
	(0.0117)	(0.0315)		
1.carribean	-0.000800	-0.000947		
	(0.00292)	(0.00494)		
1.immigrant#1.carribean	0.000260	0.000231		
	(0.00983)	(0.0226)		
1.africa	-0.000800	-0.00112		
	(0.00167)	(0.00225)		
1.immigrant#1.africa	0.000260	0.000727		
	(0.00541)	(0.00770)		
1.oceania	-0.000800	-0.00112		
	(0.00259)	(0.00350)		
1.immigrant#1.oceania	0.000260			
	(0.0165)			
1.asian			-0.000566***	-0.000364*
			(0.000140)	(0.000207)
1.immigrant#1.asian			0.000782**	0.000556
			(0.000376)	(0.000386)
1.pacificislander			-0.000417***	-0.000320
			(0.000148)	(0.000224)
1.immigrant#1.pacificislander			0.000505	0.000503
			(0.000414)	(0.000436)
1.hispanic			-0.000345***	-0.000200***
			(5.27e-05)	(6.12e-05)
1.immigrant#1.hispanic			0.000450	0.000268
			(0.000318)	(0.000336)
Observations	5,111,083	2,492,813	2,763,011	2,521,743
R-squared	0.000	0.000	0.000	0.000

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 28. Immigrant Dependency Separation with Interactions

VARIABLES	(1) Dependency (No controls)	(2) Dependency (With controls)	(3) Dependency (No controls)	(4) Dependency (With controls)
1.immigrant	-0.000213**	-0.000116	-0.000240	-0.000467
	(0.000108)	(0.000165)	(0.000282)	(0.000286)
1.asia	0.000414	-0.000498		
	(0.000612)	(0.00107)		
1.immigrant#1.asia	0.00434**	0.00835***		
	(0.00193)	(0.00270)		
1.middleeast	-0.00118	-0.00134		
	(0.00275)	(0.00462)		
1.immigrant#1.middleeast	0.000213	0.000344		
	(0.00726)	(0.0112)		
1.europe	0.000805*	-0.000332		
	(0.000441)	(0.000783)		
1.immigrant#1.europe	0.00328	-0.000728		
	(0.00248)	(0.00390)		
1.southamerica	-0.00118	-0.000987		
	(0.00588)	(0.00788)		
1.immigrant#1.southamerica	0.000213	-0.00128		
	(0.0135)	(0.0201)		
1.centralamerica	-0.00118	-0.00152		
	(0.00293)	(0.00499)		
1.immigrant#1.centralamerica	0.000213	-0.000599		
	(0.0143)	(0.0373)		
1.carribean	-0.00118	-0.00218		
	(0.00355)	(0.00585)		
1.immigrant#1.carribean	0.000213	0.000944		
	(0.0120)	(0.0268)		
1.africa	-0.00118	-0.00177		
	(0.00203)	(0.00267)		
1.immigrant#1.africa	0.000213	0.000272		
	(0.00658)	(0.00911)		
1.oceania	-0.00118	-0.00151		
	(0.00315)	(0.00414)		
1.immigrant#1.oceania	0.000213			
	(0.0200)			
1.asian			-0.000647***	-5.08e-06
			(0.000166)	(0.000246)
1.immigrant#1.asian			0.000739*	0.000910**
			(0.000445)	(0.000458)
1.pacificislander			-0.000113	-1.09e-05
			(0.000175)	(0.000266)
1.immigrant#1.pacificislander			-0.000372	0.000196
			(0.000490)	(0.000516)
1.hispanic			-0.000246***	3.25e-05
			(6.24e-05)	(7.25e-05)
1.immigrant#1.hispanic			0.000283	0.000490
			(0.000376)	(0.000399)
Observations	5,111,083	2,492,813	2,763,011	2,521,743
R-squared	0.000	0.001	0.000	0.001

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 29. Immigrant Drugs/Alcohol Separation with Interactions

VARIABLES	(1) Drugs/Alcohol (No controls)	(2) Drugs/Alcohol (With controls)	(3) Drugs/Alcohol (No controls)	(4) Drugs/Alcohol (With controls)
1.immigrant	-0.000682***	-0.000237	-0.000470	-0.000406
	(0.000127)	(0.000184)	(0.000306)	(0.000318)
1.asia	-0.000392	0.00128		
	(0.000725)	(0.00120)		
1.immigrant#1.asia	-0.000592	-0.00187		
	(0.00229)	(0.00301)		
1.middleeast	-0.00167	-0.00164		
	(0.00326)	(0.00517)		
1.immigrant#1.middleeast	0.000682	0.000536		
	(0.00861)	(0.0126)		
1.europe	-0.000344	-0.00167*		
	(0.000522)	(0.000875)		
1.immigrant#1.europe	-0.000641	0.000725		
	(0.00294)	(0.00435)		
1.southamerica	-0.00167	-0.00107		
	(0.00696)	(0.00881)		
1.immigrant#1.southamerica	0.000682	-2.85e-05		
	(0.0160)	(0.0225)		
1.centralamerica	-0.00167	-0.00127		
	(0.00347)	(0.00557)		
1.immigrant#1.centralamerica	0.000682	-0.00115		
	(0.0169)	(0.0417)		
1.carribean	-0.00167	-0.00126		
	(0.00421)	(0.00653)		
1.immigrant#1.carribean	0.000682	-0.00121		
	(0.0142)	(0.0299)		
1.africa	-0.00167	-0.000925		
	(0.00240)	(0.00298)		
1.immigrant#1.africa	0.000682	0.000329		
	(0.00779)	(0.0102)		
1.oceania	0.00681*	-0.00115		
	(0.00374)	(0.00462)		
1.immigrant#1.oceania	-0.00779			
	(0.0237)			
1.asian			-0.000857***	-0.000385
			(0.000180)	(0.000273)
1.immigrant#1.asian			0.000214	0.000328
			(0.000483)	(0.000509)
1.pacificislander			-0.00105***	-0.000670**
			(0.000190)	(0.000295)
1o.immigrant#0b.pacificislander			0	0
			(0)	(0)
1.immigrant#1.pacificislander			9.62e-05	0.000268
			(0.000532)	(0.000574)
1.hispanic			-0.000497***	-0.000558***
			(6.77e-05)	(8.07e-05)
1.immigrant#1.hispanic			0.000104	0.000190
			(0.000408)	(0.000443)
Observations	5,111,083	2,492,813	2,763,011	2,521,743
R-squared	0.000	0.000	0.000	0.000

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 30. Immigrant Disciplinary Separation with Interactions

VARIABLES	(1) Disciplinary (No controls)	(2) Disciplinary (With controls)	(3) Disciplinary (No controls)	(4) Disciplinary (With controls)
1.immigrant	-0.00237***	-0.00130***	-0.00241***	-0.00177***
	(0.000230)	(0.000322)	(0.000560)	(0.000557)
1.asia	-0.000336	-0.00227		
	(0.00131)	(0.00210)		
1.immigrant#1.asia	0.000134	0.00494		
	(0.00413)	(0.00527)		
1.middleeast	0.0204***	0.00983		
	(0.00588)	(0.00903)		
1.immigrant#1.middleeast	0.0150	0.0629***		
	(0.0155)	(0.0220)		
1.europe	-0.00196**	-0.00101		
	(0.000941)	(0.00153)		
1.immigrant#1.europe	-0.00110	-0.00194		
	(0.00529)	(0.00761)		
1.southamerica	-0.00543	-0.00401		
	(0.0125)	(0.0154)		
1.immigrant#1.southamerica	0.00237	0.000831		
	(0.0287)	(0.0393)		
1.centralamerica	-0.00543	-0.00471		
	(0.00625)	(0.00974)		
1.immigrant#1.centralamerica	0.00237	-0.00124		
	(0.0305)	(0.0729)		
1.carribean	-0.00543	-0.00439		
	(0.00759)	(0.0114)		
1.immigrant#1.carribean	0.00237	-0.00172		
	(0.0255)	(0.0523)		
1.africa	-0.00193	-0.00431		
	(0.00433)	(0.00521)		
1.immigrant#1.africa	-0.00112	0.00158		
	(0.0140)	(0.0178)		
1.oceania	-0.00543	-0.00493		
	(0.00673)	(0.00808)		
1.immigrant#1.oceania	0.00237			
	(0.0428)			
1.asian			-0.00213***	-0.000153
			(0.000330)	(0.000479)
1.immigrant#1.asian			0.00177**	0.00134
			(0.000885)	(0.000892)
1.pacificislander			-0.00251***	-0.00135***
			(0.000349)	(0.000518)
1.immigrant#1.pacificislander			0.000398	0.000956
			(0.000975)	(0.00101)
1.hispanic			-0.00144***	-0.000830***
			(0.000124)	(0.000141)
1.immigrant#1.hispanic			0.000676	0.000275
			(0.000748)	(0.000777)
Observations	5,111,083	2,492,813	2,763,011	2,521,743
R-squared	0.000	0.001	0.000	0.001

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 31. Immigrant Unqualified Separation with Interactions

VARIABLES	(1) Unqualified (No controls)	(2) Unqualified (With controls)	(3) Unqualified (No controls)	(4) Unqualified (With controls)
1.immigrant	-0.000612***	0.000134	-0.000498	0.000117
	(0.000128)	(0.000193)	(0.000321)	(0.000332)
1.asia	-0.00136*	-0.000658		
	(0.000728)	(0.00126)		
1.immigrant#1.asia	0.000294	-0.000368		
	(0.00230)	(0.00316)		
1.middleeast	-0.00168	-0.00195		
	(0.00328)	(0.00541)		
1.immigrant#1.middleeast	0.000612	0.000272		
	(0.00865)	(0.0132)		
1.europe	-0.00168***	-0.00184**		
	(0.000525)	(0.000916)		
1.immigrant#1.europe	0.000612	0.000469		
	(0.00295)	(0.00456)		
1.southamerica	-0.00168	-0.00122		
	(0.00700)	(0.00923)		
1.immigrant#1.southamerica	0.000612	-0.000336		
	(0.0160)	(0.0235)		
1.centralamerica	-0.00168	-0.00135		
	(0.00349)	(0.00584)		
1.immigrant#1.centralamerica	0.000612	0.000121		
	(0.0170)	(0.0437)		
1.carribean	-0.00168	-0.00109		
	(0.00423)	(0.00684)		
1.immigrant#1.carribean	0.000612	-0.000951		
	(0.0142)	(0.0314)		
1.africa	0.00181	0.00368		
	(0.00241)	(0.00312)		
1.immigrant#1.africa	-0.00288	-0.00443		
	(0.00783)	(0.0107)		
1.oceania	-0.00168	-0.00184		
	(0.00376)	(0.00484)		
1.immigrant#1.oceania	0.000612			
	(0.0239)			
1.asian			-0.000806***	-0.000179
			(0.000189)	(0.000285)
1.immigrant#1.asian			0.000442	-0.000109
			(0.000507)	(0.000532)
1.pacificislander			-0.000803***	-0.000215
			(0.000200)	(0.000309)
1.immigrant#1.pacificislander			0.000229	-5.29e-05
			(0.000558)	(0.000600)
1.hispanic			-0.000624***	-0.000418***
			(7.10e-05)	(8.43e-05)
1.immigrant#1.hispanic			0.000231	0.000122
			(0.000428)	(0.000463)
Observations	5,111,083	2,492,813	2,763,011	2,521,743
R-squared	0.000	0.000	0.000	0.000

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

C. PREDICTORS OF GI BILL USE

The results from Table 32 show that noncitizens are 6.5% more likely to use the GI bill than are citizens. The values for our noncitizen models with and without controls were significant (1% level) but the value increased to 8.9% with controls. Like noncitizens, as shown in Table 33, immigrants are also more likely to use the GI bill but our results are only significant (1% level) with controls. Our values show that a much larger number of noncitizens tend to make use of the GI bill as compared to citizens than do immigrants.

Table 32. Noncitizen GI Bill Use

VARIABLES	(1) GI Bill Ever (No controls)	(2) GI Bill Ever (With controls)
noncitizen	0.0650*** (0.00117)	0.0889*** (0.00173)
Observations	5,553,751	2,585,168
R-squared	0.001	0.011

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 33. Immigrant GI Bill Use

VARIABLES	(1) GI Bill Ever (No controls)	(2) GI Bill Ever (With controls)
immigrant	-0.000735 (0.00121)	0.00686*** (0.00165)
Observations	5,246,922	2,521,743
R-squared	0.000	0.010

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

After adding regional interactions, as shown in Table 34, I found that Asian and South American noncitizens were 2.5% and 18.5% less likely to use the GI bill. Additionally, regardless of citizenship status, those from Europe were less likely to use the GI bill (with and without controls) than those from North America, and those from Central American were more likely to use the GI bill (with and without controls) than those from North America. The proportions are particularly large for people from Central America who are 30% more likely to use the GI without controls and 19.4% more likely with controls. When I added ethnicity interactions, I found that Asian, Pacific Islander and Hispanic noncitizens were more likely to use the GI bill. Asian noncitizens were 13.2% more likely to use the bill, Pacific Islanders noncitizens were 10.6% more likely and Hispanic noncitizens were 13% more likely to use it.

Table 34. Noncitizen GI Bill Use With Interactions

VARIABLES	(1) GI Bill Ever (No controls)	(2) GI Bill Ever (With controls)	(3) GI Bill Ever (No controls)	(4) GI Bill Ever (With controls)
1.noncitizen	0.0683***	0.0887***	0.0785***	0.0737***
	(0.00118)	(0.00173)	(0.00292)	(0.00310)
1.asia	-0.0403***	-0.0145		
	(0.00648)	(0.00988)		
1.noncitizen#1.asia	-0.0531**	0.00582		
	(0.0239)	(0.0329)		
1.middleeast	-0.0490*	-0.0768*		
	(0.0287)	(0.0424)		
1.europe	-0.0408***	-0.0439***		
	(0.00481)	(0.00767)		
1.noncitizen#1.europe	0.0377	-0.00970		
	(0.0319)	(0.0720)		
1.southamerica	0.177***	0.0621		
	(0.0568)	(0.0691)		
1.noncitizen#1.southamerica	-0.430**	-0.286		
	(0.203)	(0.198)		
1.centralamerica	0.302***	0.194***		
	(0.0320)	(0.0497)		
1.noncitizen#1.centralamerica	-0.126	-0.484**		
	(0.151)	(0.192)		
1.carribean	0.0308	0.0764		
	(0.0385)	(0.0574)		
1.noncitizen#1.carribean	-0.117	0.171		
	(0.163)	(0.269)		
1.africa	-0.0162	-0.00159		
	(0.0191)	(0.0248)		

VARIABLES	(1) GI Bill Ever (No controls)	(2) GI Bill Ever (With controls)	(3) GI Bill Ever (No controls)	(4) GI Bill Ever (With controls)
1.noncitizen#1.africa	-0.102	-0.0874		
	(0.0668)	(0.0758)		
1.oceania	0.0289	0.00593		
	(0.0340)	(0.0408)		
1.noncitizen#1.oceania	-0.282**	-0.130		
	(0.142)	(0.190)		
1.noncitizen#1.middleeast	0.0459			
	(0.197)			
1.asian			0.0375***	0.0136***
			(0.00146)	(0.00234)
1.noncitizen#1.asian			0.0160***	0.0226***
			(0.00533)	(0.00576)
1.pacificislander			0.00392**	-0.0145***
			(0.00158)	(0.00251)
1.noncitizen#1.pacificislander			-0.0235***	-0.00412
			(0.00525)	(0.00584)
1.hispanic			0.0424***	0.0194***
			(0.000602)	(0.000715)
1.noncitizen#1.hispanic			0.00940***	0.0286***
			(0.00359)	(0.00401)
Observations	5,403,807	2,555,531	2,857,602	2,585,168
R-squared	0.001	0.011	0.004	0.011

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

For immigrants, as shown in Table 35, I did not see significant results from our interaction of immigrant status and region home of record although, those from Asia (without controls) and Europe (with and without controls) were less likely to use the GI bill at the 1% level regardless of immigrant status. Additionally, those from Central American were 18.3% more likely to use the bill with controls and 27.4% more likely without controls. With our ethnic interactions, there were no statistically significant results, but our results showed that Asians and Hispanics were more likely to use the GI bill, regardless of immigrant status and both with and without controls and at the 1% significance level. On the other hand, Pacific Islanders are 2% less likely to use the GI bill regardless of immigrant status at the 1% significance level than "other" immigrants.

Table 35.Immigrant GI Bill Use With Interactions

VARIABLES	(1) GI Bill Ever (No controls)	(2) GI Bill Ever (With controls)	(3) GI Bill Ever (No controls)	(4) GI Bill Ever (With controls)
1.immigrant	-0.00156	0.00584***	0.0109***	0.00138
	(0.00122)	(0.00165)	(0.00281)	(0.00288)
1.asia	-0.0425***	-0.0183*		
	(0.00694)	(0.0108)		
1.immigrant#1.asia	0.0357	0.0206		
	(0.0219)	(0.0271)		
1.middleeast	-0.0242	-0.0553		
	(0.0312)	(0.0464)		
1.immigrant#1.middleeast	-0.160*	-0.134		
	(0.0824)	(0.113)		
1.europe	-0.0409***	-0.0421***		
	(0.00500)	(0.00785)		
1.immigrant#1.europe	-0.0320	-0.0498		
	(0.0281)	(0.0391)		
1.southamerica	0.167**	-0.0124		
	(0.0667)	(0.0791)		
1.immigrant#1.southamerica	-0.351**	-0.124		
	(0.153)	(0.202)		
1.centralamerica	0.274***	0.183***		
	(0.0332)	(0.0500)		
1.immigrant#1.centralamerica	0.542***	0.608		
	(0.162)	(0.374)		
1.carribean	0.0510	0.0869		
	(0.0403)	(0.0587)		
1.immigrant#1.carribean	-0.235*	-0.255		
	(0.136)	(0.269)		
1.africa	0.00678	-0.0223		
	(0.0230)	(0.0267)		
1.immigrant#1.africa	-0.0574	0.0764		
	(0.0746)	(0.0915)		
1.oceania	0.0518	0.0106		
	(0.0358)	(0.0415)		
1.immigrant#1.oceania	-0.236			
	(0.227)			
1.asian			0.0363***	0.0139***
			(0.00166)	(0.00248)
1.immigrant#1.asian			-0.00401	0.000284
			(0.00445)	(0.00462)
1.pacificislander			-0.00225	-0.0200***
			(0.00175)	(0.00268)
1.immigrant#1.pacificislander			0.0231***	0.0283***
			(0.00490)	(0.00521)
1.hispanic			0.0452***	0.0199***
			(0.000623)	(0.000732)
1.immigrant#1.hispanic			-0.00514	0.00437
			(0.00376)	(0.00402)
Observations	5,111,083	2,492,813	2,763,011	2,521,743
R-squared	0.000	0.010	0.002	0.010

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

VI.   CONCLUSION AND RECOMMENDATIONS

A.   CONCLUSION

Overall our analysis showed that immigrants reenlist at higher rates than nonimmigrants, citizens and noncitizens. Additionally, both immigrants and noncitizens separate less and make more use of the GI bill than their nonimmigrant and citizen counterparts. First, in terms of reenlistment, both immigrants and noncitizens from Asia reenlist at higher rates than citizens from North America. Additionally, immigrant and noncitizen service members from Europe, Central America, the Caribbean and Africa all reenlist at higher rates than those from North America regardless of immigrant or citizenship status. Our ethnicity interactions showed that Pacific Islander noncitizens and immigrants also reenlist at higher rates than those in the "other" category while Hispanic immigrants and Hispanics in general reenlist at higher rates than do "other" ethnicities.

While they may be drivers of difficulty enlisting for some immigrants/non-citizens, in terms of separations, noncitizens and immigrants as a whole were less likely to separate for all five reasons (body fat, dependency, drugs/alcohol, disciplinary and unqualified) even when I included regional and ethnic interactions. Our only exception were noncitizens from Europe who were 1.2% more likely to attrite for dependency issues. In fact, the results showed that all ethnic categories, regardless of citizenship/immigrant status were less likely to attrite for all reasons than were those in the "other" category which included Eskimos, U.S. or Canadian Indian Tribes as well as other Alaskan natives.

Lastly, in terms of GI bill usage, both noncitizens and immigrants were more likely to use the GI bill but our results were more significant among noncitizens who overall were 6.5% more likely to use the benefit than were citizens. However, this propensity varied substantially by region and ethnicity. However, this propensity varies substantially by region and ethnicity. With regional interactions, the results were more substantial and one finds that Asian and South American noncitizens were 2.5% and 18.5% less likely to use the GI bill. Also, our results showed that a large percentage of

Central Americans are more likely to use the GI bill both with and without controls. Additionally, all ethnicities were over 10% more likely to use the GI bill than the "other" category.

Based on our results I can state that both immigrants and noncitizens are a reliable source of manpower especially due to their regional and ethnic backgrounds. Although I did not get results showing that noncitizens reenlist at larger proportions as I did with immigrants, or that both groups separate at substantially lesser rates than do citizens and nonimmigrants, ethnicities as well as regional characteristics particular to both noncitizens and immigrants, do make service members more likely to reenlist and less likely to attrite. For these reasons and because they provide a wealth of language and cultural skills that the military can capitalize on, continuing to study the various other pre-accession predictors of noncitizen and immigrant service can assist the military in effectively recruiting these groups.

Additionally, based on the results from GI bill usage, it is clear noncitizens and immigrants both value the GI bill as an incentive. Specifically, those who originate from other regions besides North America, tend to value the GI bill even more as do all ethnicities. Therefore, by continually offering it, the DoD can continue to meet its military manpower needs.

B. RECOMMENDATIONS

Although there were a large number of variables available from our DMDC database, had I had data available on those who accessed into the services under the MANVI program, I could have taken a closer look at a special category of immigrants who are currently serving in the military but have yet to even attain LPR. As our pool of eligible recruits continues to diminish, the U.S. military will have to rely on creative ways to attract new talent. I recommend DMDC attains data on those service members who have enlisted under the MANVI program so that in the future, if the services have to expand the ratings available under the program, there is data to defend or argue against expansion based on results.

Also, in future studies, it would be beneficial to look just at Hispanics to see how the various ethnic groups within the category differ. Since our results from Central America and South America differed so much, it would also be beneficial to compare these two regions and break them up into separate countries to analyze them even further. Are there elements such as education or even effects of civil-military relations which affect how immigrants and noncitizens from the various countries perform once in the service? Lastly, apart from country of origin, I think it would be very beneficial to look at the effect of state of origin on performance. This could yield important information on how well or how poorly noncitizens and immigrants from the various states perform which is not just important for the Navy to know so that it distributes its resources accordingly but also so states' can assess the health of their populations.

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF REFERENCES

Acosta, Y. D., Larsen, L. J., & Grieco, E. M. (2014). *Noncitizens under age 35: 2010–2012*. Retrieved from https://www.census.gov/prod/2014pubs/acsbr12-06.pdf

Air Force Recruiting Service (2005, April 1). *Recruiting procedures for the Air Force* (AFRS Instruction 36–2001). Randolph, TX: Enlisted Programs Management Branch.

Amazing immigration quotes from U.S. veterans. (2016, November 11). Retrieved June 12, 2017, from https://citizenpath.com/immigration-quotes-u-s-veterans/

American Competitiveness in the Twenty-first Century Act of 2000, Pub. L. No106-313, 114 Stat. 1251 (2000). Retrieved from https://www.uscis.gov/ilink/docView/PUBLAW/HTML/PUBLAW/0-0-0-22204.html

Arias, W., & Dal, S. (2006). *Hispanics in the U.S. military* (Master's thesis). Retrieved from http://hdl.handle.net/10945/2671

Asch, B. J., Christopher B., Klerman, J. A., Kleykamp, M., & Loughran, D.S. (2009). *Military enlistment of Hispanic youth: obstacles and opportunities*. Santa Monica, CA: RAND Corporation. Retrieved from https://www.rand.org/pubs/monographs/MG773.html

Asch, B.J., Hosek, J.R., Warner, J.T. (2007). New economics of manpower in the post-Cold War era. *Handbook of Defense Economics, 2*(1), 1075–1138.

Asch, B. J., Mattock, M. G., & Hosek, J. (2017). *The blended retirement system: retention effects and continuation pay cost estimates for the armed services*. Santa Monica, CA: RAND Corporation. Retrieved from https://www.rand.org/pubs/research_reports/RR1887.html

Commander Navy Recruiting Command. (2017, May 10). *Navy Recruiting Manual-Enlisted* (COMNAVCRUITCOMINST 1130.8K). Millington, TN: Policy and Programs Division.

Cunha, J. M., Sullivan, R., Can, M., & Yalcinkaya, H. (2014). Expedited citizenship for sale: estimating the effect of Executive Order 13269 on noncitizen military enlistments. *Applied Economics, 46*(10-12), 1291–1300. Retrieved from 10.1080/00036846.20193.870658

Department of the Army. (2016, August 31). *Regular Army and Reserve Components Enlistment Program* (Army Regulation 601–210). Washington, DC: Author.

Department of Homeland Security Office of Immigration Statistics. (2017). U.S. lawful permanent residents: 2016 [Fact Sheet]. Retrieved from https://www.dhs.gov /sites/default/files/publications/Lawful_Permanent_Residents_2016.pdf

Department of the Navy. (2015, July 30). *Military accessions vital to the National Interest (MANVI) Program* (COMNAVCRUITCOM Instruction 1133.13A). Millington, TN: Commander, Navy Recruiting Command.

Hazard, Henry. Our new citizens of the Armed Forces overseas. *Immigration and Naturalization Service Monthly Review, 1*(8). Retrieved from https://www.uscis.gov/sites/default/files/USCIS/History%20and%20Genealogy/ Our%20History/INS%20History/WWII/INSMRev1944.2.pdf

Hattiangadi, A. U., Quester, A. O., Lee, G., Lien, D. S., MacLeod, I. D., Reese, D. L., & Shuford, R. W. (2005). *Non-citizens in today's military: final report* (CRM D0011092.A2).Retrieved from https://www.cna.org/CNA_files/PDF/ D0011092.A2.pdf

Hernandez, J. (2003). *An exploratory study of Hispanic officer recruiting in the Mexican-American community of South-Central Los Angeles: Implications for the officer corps of the future* (Master's thesis). Retrieved from http://hdl.handle.net/10945/ 974

Lee, M. M., & Wasem, R. E. (2003). *Expedited citizenship through military service: policies and issues* (CRS Report No. RL31884). Retrieved from Congressional Research Service website: https://fas.org/sgp/crs/natsec/RL31884.pdf

Maligat, L. G. (2000). *Study of the U.S. navy's Philippines enlistment program, 1981–1999* (Master's thesis). Retrieved from https://calhoun.nps.edu/handle/10945/ 9294

Marine Corps Recruiting Command. (2011, November 9). *Marine Corps Recruiting Command Enlistment Processing Manual* (MCRCO 1100.1). Quantico, VA: Author.

McFarland, J., Hussar, B., de Brey, C., Snyder, T., Wang, X., Wilkinson-Flicker, S., Gebrekristos, S., Zhang, J., Rathbun, A., Barmer, A., Mann, F. B., & Hinz, S. (2017). *The condition of education 2017* (NCES 2017–144). Washington, DC: National Center for Education Statistics. Retrieved January 2018 from https://nces.ed.gov/pubsearch/ pubsinfo.asp?pubid=2017144

McIntosh, M. F., & Sayala, S. (2011). *Non-citizens in the enlisted U.S. military*. Retrieved from https://www.cna.org/CNA_files/PDF/D0026449.A1.pdf.

Miller, W. (1948). Foreign born in the Unites States Army during world war II, with special reference to the alien. *Immigration and Naturalization Service Monthly Review, 6*(4), 48–54. Retrieved from https://www.uscis.gov/sites/default/files/USCIS/History%20and%20Genealogy/Our%20History/INS%20History/WWII/INSMRev1948.10.pdf

O'Neil, L. G., & Senturk, O. S. (2004). *Noncitizens in the U.S. military* (Master's thesis). Retrieved from http://hdl.handle.net/10945/1640

The blended retirement system explained. (2018). Military. Retrieved from https://www.military.com/benefits/military-pay/blended-retirement-system.html

U.S. Citizenship and Immigration Services (n.d.a). Citizenship for family members. Retrieved November 20, 2018, from https://www.uscis.gov/military/citizenship-family-members

U.S. Citizenship and Immigration Services (n.d.b). Military naturalizations during WWII. Retrieved January 7, 2018, from https://www.uscis.gov/history-and-genealogy/our-history/agency-history/military-naturalization-during-wwii

U.S. Citizenship and Immigration Services. (n.d.c). Naturalizations through military service [Fact Sheet]. Retrieved from https://www.uscis.gov/news/fact-sheets/naturalization-through-military-service-fact-sheet

U.S. Citizenship and Immigration Services (n.d.d). Temporary (nonimmigrant) workers. Retrieved November 20, 2018, from https://www.uscis.gov/working-united-states/temporary-nonimmigrant-workers

U.S. Citizenship and Immigration Services. (n.d.e). *USCIS policy manual*. Washington, DC: Author. Retrieved from https://www.uscis.gov/policymanual/HTML/PolicyManual.html

U.S. Citizenship and Immigration Services (2012). *Overview of INS history*. Washington, DC: Author. Retrieved from https://www.uscis.gov/sites/default/files/USCIS/History%20and%20Genealogy/Our%20History/INS%20History/INSHistory.pdf

U.S. Citizenship and Immigration Services (2016). U.S. naturalizations: 2016 [Fact Sheet]. Retrieved from https://www.dhs.gov/sites/default/files/publications/Naturalizations_2016.pdf

U.S. immigration before 1965. (2009). Retrieved from http://www.history.com/topics/u-s-immigration-before-1965/print

Warner, J., Simon, C. (2005). "Estimates of army enlistment supply 1988–2005." Briefing presented to the military recruiting summit, November 2, 2005, Clemson University, SC, Arlington, VA.

Warner, J., Simon, C., & Payne, D. (2003). The military recruiting productivity slowdown: the roles of resources, opportunity cost and the tastes of youth. *Defense & Peace Economic*s, *14*(5), 329–342. DOI: 10.1080/10242690302923

Yalcinkaya, H., & Can, M. (2013). *The effect of Executive Order 13269 on noncitizen enlisted accessions in the U.S. military* (Master's thesis). Retrieved from http://hdl.handle.net/10945/32921

INITIAL DISTRIBUTION LIST

1.   Defense Technical Information Center
        Ft. Belvoir, Virginia

2.   Dudley Knox Library
        Naval Postgraduate School
        Monterey, California