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The socio-demographic factors influencing NTCA immigrants' accessibility to Mexico's health care system

Ken Nishikata
University of San Francisco, nishiken091@gmail.com

The socio-demographic factors influencing NTCA immigrants' accessibility to Mexico's health care system before and after the promulgation of The New Migration Law

Ken Nishikata
University of San Francisco
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Ken Nishikata

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Abstract

Mexico's geographical location has made the country play a centric role in trans-national migration from the Northern Triangle of Central America (NTCA) comprising Guatemala, El Salvador and Honduras. As a result, immigration has increasingly become a political issue for Mexico over the past decades[1]. Before the eruption of the Central American crisis in the 1980s, Mexico's southern border with Guatemala was recognized for its openness. However, such a tolerating status-quo changed as the number of NTCA immigrants entering Mexico increased upon the exacerbation of the crisis that placed thousands of individuals in exile. Indeed, the turmoil during the Central American crisis that took place in the 80's heavily impacted the region as a whole, catalyzing social conflict and displacement. The impact of the civil wars took a toll on a substantial portion of the local population; even after the gradual establishment of peace started taking place, NTCA immigrants continuously entered Mexico for economic rather than humanitarian reasons.

Before the ratification of The New Migration Law (*Ley de Migración)*, The 1974 General Population Law was systematically structured as a coping mechanism for the challenges of the era mainly stemming from a rapid increase in population. With this Law, Mexico virtually made it difficult for immigrants to enter the country. On July 21, 2008 however, irregular migration was decriminalized. A series of claims made by the Mexican society to reform the law to improve policy coherence and implementation measures in an immigrant-friendly manner led to the enactment of the New Migration Law on May 25th, 2011. This law in essence turned out to emphasize the protection of the immigrant's human rights. Hence, the research question is: what

[1] Mexico has traditionally been a sending country and emigration has been the central issue for local migration policy. However, this changed during the 2008-2009 crisis, when returning migration from the United States became the source of the largest inflow entering Mexico.

are the socio-demographic factors that indicate the change in health care access of immigrants from the Central American Northern Triangle in Mexico before and after the promulgation of The New Migration Law? This project seeks to determine the factors that affect the NTCA immigrant workers' accessibility to Mexico's health care system. The research will analyze two data sets: The Mexican Census of 2010 and the Intercensal Survey of 2015. The purpose of this analysis is to assess whether The New Migration Law has effectively been implemented from the lenses of health care. The hypothesis prior to conducting the analysis was that NTCA immigrants acquired increased access to Mexico's healthcare system. However, findings show that despite the shift in Law, health care access remains restricted for the NTCA immigrants. This project argues that despite the increased efforts to welcome immigrants into the country, poor governance; extended xenophobia and towards immigrants are the crucial factors that impede effective implementation of law through the lenses of health care accessibility.

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Preface

Having experienced life in Honduras and Japan, I had never been one to engage in introspection regarding the existing discrepancies in quality of life experienced by both populations. My multicultural background thus defined my life's ambition: despite the fact that we are all born equal, why do our circumstances limit us in such stringent ways that bearing extreme hardship is the only manner by which we may achieve a small amount of success? While I lived under conditions of relative prosperity in Japan, my counterparts in Honduras lived under critical conditions engrained in fear and uncertainty exacerbated by political and economic instability. Upon the completion of my bachelors degree in International Business and Economics at Sophia University in Tokyo, Japan, I had no other choice but to cast aside my naivete and place myself in an environment that allowed me to gain a better understanding of the migration experience lived by immigrants from the Northern Triangle of Central America (NTCA) comprised of Guatemala, El Salvador and Honduras. More precisely, this project seeks to determine the factors that affect the accessibility of Central Americans from the Northern Triangle to Mexico's health care system since the implementation of the 2011 New Migration Law as a means to assess the impact of the shift in Mexico's governing migration laws.

Introduction

Pro or anti-immigrant movement in a host state is fomented by framework and policy formations that determine the political climate and the coping mechanisms for immigrant migration masses. “The climate is a result of a combination of both decisions made at the federal and state level” (Griffith 2019, p. 4). Policy implementation and practice coverage heavily depends on local and national figures sharing their views on the central issue disputed. Given this, public opinion and perception fed by governing entities offering immigrant discourse entitles immigrants to a wide or limited array of rights promoting social welfare. The underlying rationale is clear: if there is high demand for immigrants surging from positive perception and a booming economy, a pro-immigrant political infrastructure will exist to facilitate the integration of the immigrant. On the other hand, if there is low demand for immigrants stemming from negative perception and a stagnated economy, an anti-immigrant and discouraging political infrastructure will exist to systematically exclude the immigrant[2]. This generates a vicious or virtuous cycle depending on the prevalent circumstance.

Mexico has undergone a shift in its legal background towards Central American immigrants since the ratification of The New Migration Law. Upon the emergence of the Central American exodus, migration from the global south has extensively been a central issue for Mexico’s government due to its intrinsic relation with globalization and the implications for the nation, ie: economic, demographic, social, cultural among others. The New Migration Law exemplifies such transition as its provisions are centered in promoting inclusiveness and the protection of human

[2] In many cases, cultural frameworks determine a low demand for migrants. As a result, governments of host nations are compelled to alter such a status-quo by persuading the public in terms of the benefits they forge in return.

rights for immigrants. The aim of this new Law is to develop a policy that "respects the human rights of migrants, is comprehensive in its coverage, facilitates the international movement of people, meets the country's labor needs, ensures equality between Mexican natives and immigrants to Mexico, recognizes the acquired rights of long-term immigrants, promotes family unity and sociocultural integration, and facilitates the return and reintegration of Mexican immigrants" (Alba & Castillo, p. 3, 2012).

Up until May of 2011, Mexico's governing migration law was the 1974 General Population Law. Its foundational objective was "to regulate those phenomena that affect the population with respect to the volume, structure, dynamics and distribution of the same within the national territory, in order to ensure that the populace may share fairly and equally the benefits of economic and social development" as stated in article 1 of The Law. The 1974 General Population Law thus served as a coping mechanism for the challenges faced by the Mexican government in terms of transnational migration before the ratification of The New Migration Law. However, after a series of claims made by the Mexican civil society and human rights organizations, President Calderon's administration took a significant step by proposing a law that was more *comprehensive* towards immigrants complemented with a drafting of amendments to the 1974 General Population Law. The New Mexican Law was eventually approved by the Congress in May of 2011. Article no. 27 of The New Migration Law (2011) states that the National Health Secretary holds accountable for the following responsibility:

I. In coordination with the health authorities at different government levels, provide the health services granted to foreigners **independent of migratory status** and in accordance with the applicable legal provisions (p. 14).

There is no doubt that health is a fundamental human right. On December 10, 2017, the World Health Organization (WHO) Director General Dr. Tedros Adhanom stated: “The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition”. Article 5 of the United Nation’s multilateral treaty governing the protection of immigrants and relatives: International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families holds that undocumented immigrants have the right to enter and remain in the host country in accordance to federal law and international agreements the country has committed to. The protection of human rights as the foundational grounds for Mexican immigration policy is also visible in the constitution. Article 1 of the Mexican Constitution prohibits discrimination against race and nationality among others, thus advocating for equality at all costs between locals and international immigrants.

Mexico’s southern border has historically been open to cross-border movement of the NTCA immigrants. Castillo and Alba (2012) refer to this as a unified economic zone where immigrant movement was disregarded as problematic because they had few impacts beyond the border region. However, such a status quo changed as the NTCA immigrant masses began to emerge upon the eruption of the Central American civil wars that worsened the Central American exodus. In 1993, the Mexican government’s endeavors to control migration was institutionalized through the creation of The National Migration Institute (Instituto Nacional de Migración, INM). As an extension to increased efforts to control migration, Mexico began to control unauthorized migration by militarizing its borders after the enactment of The North American Free Trade Agreement (NAFTA) as a hallmark of the

commencement of a new neo-liberal era. The agreement was perceived by both sides as a remedy to curb undocumented migration originating from Mexico. By allowing American market penetration and investment to generate job opportunities in Mexico, both sides contended that such a complementary dynamic would eradicate the urge for undocumented immigrants to cross borders into the United States.

Transnational agreements such as NAFTA elevated pressures in protecting immigrant rights. Subsequently, human rights advocates explicitly began to raise their voices, leading Mexico to hold the "moral responsibility" to promote the protection of vulnerable immigrant populations. The emerging phenomena thus catalyzed the Mexican Government to rearrange its fundamental discourse regarding migration. This project seeks to assess the Law's impact on Mexico's attitude towards the NTCA immigrants before and after the ratification of The New Migration Law by comparing accessibility levels to health care in the Census of 2010 and the Intercensal Survey in 2015. Following Yang and Hwang's (2016) conceptual framework, a regression analysis of the socio-demographic factors that influence accessibility to Mexico's health care system for the NTCA immigrants is conducted.

Mackenbach (2014) explains that existing empirical evidence of politics's impact on population is scarce. Politics is restricted in the array of outcomes it can prompt at a micro and macro scale. Hence, a lack of understanding on how politics work may accidentally lead to unrealistic or *romantic* expectations as expressed by Mackenbach (2014). To assess the effectiveness of the implementation of The New Migration Law and evaluate its impact on the NTCA immigrants' accessibility to health care, one ought to understand that the health care system in itself is a power structure. Although politics "can loosely be defined as the process of making and

executing collective decisions" (Mackenbach, 2014), a smooth and effective implementation deeply depends on those who actually put it into practice.

In order for a law to be effectively implemented and practiced by a population, its followers must believe in its legitimacy. Compliance to a certain depends on the level of credibility held by the authorities enforcing it. Economists Tyran and Feld (2006) identify the conditions that induce law-abiding behavior. Their studies show that people demonstrate compliance if the law is accepted in a referendum. Voting, "as an institution which allows potential cooperators to signal one another their willingness to cooperate, is an act of publicly expressing support for a cooperation norm which induces expectations of higher compliance with the law" (Tyran and Feld 2006, p. 20). Therefore, in order to incentivize cooperative norms across a population, a law must be enforced in the public interest. More precisely, in the Central American and Mexican migratory context, the government of the recipient nation must successfully attain public recognition by strategically conveying its narrative in a migrant-friendly manner which highlights the benefits at a macro and micro scale of inclusively accepting NTCA immigrants into the country.

Conceptual framework addressing factors impacting health care accessibility for immigrant groups

The conceptual framework adopted for this specific study is offered by Professor and Graduate Program Director Philip Q. Yang and Professor Shann Hwa Hwang of Texas Woman's University. This framework assembles previous work on influential theories and models explaining health care usage and the health behavior model by Andersen and Newman (1973). By referring to concepts encompassing health care needs, resources, predisposing factors of immigrants, and macrostructural/contextual

factors, the presented framework seeks to explain the determinants of the existing disparities between immigrants in health care access and usage.

The first concept of needs for health care is divided into two different categories: general needs and immigrant-specific needs (Yang & Hwang, 2016). Yang & Hwang (2016) explain that general needs surge based on the health status of the immigrant that can be evaluated through self-assessment or professional means. The need for health care depends on how the individual perceives its own health status. Such needs in form self-reported or professionally evaluated are determined by gender and ethnicity. According to this theory, males are less likely to self-report poor health conditions while females are more likely to gain access to health care since they show otherwise. Additionally, poor health conditions manifested through perceived pain vary according to the ethnicity.

Immigrant-specific needs stem from health-related problems caused by environmental factors in the country of origin. The concept indicates that natives are less likely to suffer from diseases pertaining to the immigrant population. Such special needs vary from immigrant to immigrant. However, this culminates in the fact that greater special needs instigate greater health service utilization. As part of the answer for the research question, the research encompasses both genders: males and females. This applied concept will open understanding to whether or not there is a skewed distribution of healthcare depending on the gender.

While gender, ethnicity and environmental factors are claimed to play centric roles in self-reported health measurements in non-immigrant and immigrant contexts, one ought to question the extent to which immigrants act in accordance. To exemplify this argument, Constant (2017) alludes to the Healthy Immigrant Paradox. The Healthy Immigrant Paradox is a theory holding that immigrants are relatively

healthier upon arriving to the host country in comparison to the local population. However, caused by a set of specific factors, the health of the immigrant deteriorates as time passes as more fully set forth herein. Constant (2017) claims that immigrants tend to under-report their health status. Under-reported health status is due to a set of factors comprising language barriers hindering a successful perception of effective health care options; cultural beliefs that impede immigrants to report illnesses unless considered *severe*; fear of deportation and lack of self-awareness caused by failure to diagnose a disease from the provider's side.

The second concept of resources allude to the means that make healthcare accessible for immigrants. Resources are divided into three main categories: financial resources, social resources, and immigrant specific-resources. Financial resources are classified as a general factor that determine the immigrants' financial capability of accessing healthcare; the lower the income, the less likely it is for an immigrant and in general to access secondary care provided by a specialist or facility. The second set of resources are social resources and these are established connections with relatives and non-relatives as well as access to jobs as a source of income for a living in the host nation. Family connections offer protective effects over the individual by promoting and encouraging behavior that is beneficial to their health. Furthermore, social ties influence the accessibility of healthcare through the distribution of practical information reaching the individual. Immigrant specific-resources intersect with the previously explained financial resources and social resources in terms of the impact they have on the immigrant's access to healthcare. The effect of financial resources on health service utilization is generally greater and negative for immigrants than the native populations because immigrants tend to land in unskilled and low-paying jobs upon arriving to the host nation (Aguilera & Massey, 2003; Piore, 1979). Hence, the

immigrants' financial capability to access healthcare is determined by the immigrants' income in the country of destination. Furthermore, the immigrant specific-social resources are the social ties established by the immigrants in their countries of origin. These social networks are seen as a major source for "cheaper medicine and/or cheaper and 'better' health services in the homeland, which reduces their health service utilization in the host country" (Bergmark et al., 2010; Yang & Hwang, 2016, p. 6).

The third concept explained sheds light on the predisposing factors and they refer to the societal conditions that determine an immigrant's accessibility to healthcare. This concept is also sub-divided into general and immigrant-specific factors. General predisposing factors consist of, but not limited to, demographic factors, socioeconomic factors, health beliefs, and genetic factors. Yang & Hwang (2016) explain that demographic factors are composed of gender, age, race/ethnicity, marital status and education. Females are more likely to access healthcare as opposed to males and the elderly due to the differences in health needs and demands. Ethnicity and nationality are two additional determining factors of healthcare accessibility due to the genetic differences that differentiate them from the local population. Furthermore, married people are more likely to seek healthcare in comparison to single/unmarried individuals. Lastly, education as a determinant of propensity for health services, is perceived as a social status indicator as well as a resource for wealth enabling the acquisition of health services. People with higher education levels are thus more likely to access health services in comparison to less educated individuals. The higher the education, the more important health is perceived by the individuals, leading them to become aware of how susceptible they are to diseases. Immigrant-specific factors are the immigrants' migratory status that determine

accessibility to healthcare as well as the degree of assimilation to the host nation. *Undocumented* status diminishes the likelihood of an immigrant to fully integrate into the host nation and consequently prevent them from accessing healthcare needs as it associates with rights, benefits, resources and psychological status. Assimilation, as a sign of adaptation measured by an immigrant's length of stay in a host nation and language proficiency, prompts health-seeking behavior. The rationale for the concept of assimilation holds that length of stay determines the amount of accessible resources for the immigrant. Referred to as a resource, language proficiency allows the immigrant to explore effective measures to access host nations' health care systems.

Lastly, macrostructural and contextual factors are defined as the conditions at the societal or community level that are out of an individual's ability to control. Macrostructural conditions consist of government policy, the health care system, and other larger social, economic, and political conditions. This concept refers to government policy as an important role in influencing the immigrants' accessibility to health services. The framework proceeds by clarifying that policy discourse may potentially be incongruent with its ultimate purpose upon its implementation.

While policy implementation is claimed to effectively influence the accessibility to health care, there is an additional factor to consider: public trust. OECD (2013) defines trust as the act of holding a positive perception about the actions of an individual or an organization. Lack of credibility plays an essential role in the government's capacity to successfully implement policy. In 2013, OECD argued that without the successful attainment of public trust, essential means such as markets and institutions would be incapable of effectively putting policy into practice.

Lack of credibility may consequently result in the lack of willingness from the public's side to comply with rules and regulations and ultimately lead to the absence

of social cohesion. Governments, therefore ought to be highly aware of the underlying rationale and purpose of policy discourse to avoid policy skepticism. By placing a narrowed focus to invest in public trust, a government may simultaneously be capable of reducing policy enforcement costs while increasing the efficiency and effectiveness of its operations (OECD 2013). On the other hand, immigrant-specific contextual variables are the specific conditions of the immigrants upon their departure from the country of origin. The argument made through this concept is that an immigrant leaving a relatively impoverished area will have little to no knowledge about health-benefiting facilities in the country of destination. This lack of exposure to knowledge hinders immigrants' access to healthcare. In the context of the country of destination, health services for immigrants may be influenced by factors such as government policies, societal and communal levels.

To address previous studies examining health care access in a migratory and non-migratory context, the next section compiles narratives encompassing health care systems from Saudi Arabia, the United States, the European Union and Brazil. Previous studies on these locations allude not only to the contextual factors influencing its populations' accessibility to the local health care systems, but also the existing knowledge gaps that provide space for further research on health care systems and their accessibility towards immigrants.

Literature Review

I. Health care access in an immigrant context

In the conceptual framework offered by Yang & Hwang (2016) health care demand, resources, predisposing factors and macrostructural/contextual factors are referred to as the four determinants of accessibility to health care for non-immigrant and

immigrant populations. Additional efforts to understand immigrant group's accessibility to health care systems across the world include Alkhami's (2018) article consisting of expatriates in Saudi Arabia's private sector and key factors impacting their accessibility to the local health care system. According to the study, more than 80 percent of the Saudi Arabian private sector's workers are expatriates and they amount up to 56 percent of the country's labor force (Alkhamis 2018, p.4). Given these numbers, the Saudi Arabian government demanded all employers from the private sector to cover and secure access to health care, thus resulting in the implementation of the Cooperative Health Insurance Law in 1999. This is a law which demands all employers to bear the full amount of their employees' health insurance premium and determines the unified benefits packages managed by a government body called the Council of Cooperative Health Insurance (CCHI) (Alkhamis 2018).

Records show that by 2016, 9.4 million out of the 12 million people insured through the Cooperative Health Insurance Law were expatriates (Alkamis 2018). However, the Saudi Arabian insurance sector still sits in the development stage as much is to be done by the different insurance companies to increase public knowledge of health insurance. Customers are said to continuously report insurance companies for non-compliance, consequently raising skepticism towards policy makers and communication effectiveness from the insurance companies' side. Effectively, the study made in this article shed light on the significant association between insured expatriates' understanding of their health insurance benefits and access to health care that indicates a strong correlation between lack of knowledge and deteriorated access to health care access and utilization.

From March 2015 to February 2016, a cross-sectional study with a response rate of 96 percent was made among 3,398 insured males expatriates in the private sector in Riyadh, Saudi Arabia (Alkhamis 2018, p. 2). Alkhamis (2018) explains that the study includes a binary dependent variable indicating lack of access to healthcare and independent variables being perceived knowledge of health insurance benefits and validated knowledge of health insurance benefits. The purpose of this study is to shed light on the influence of knowledge regarding health insurance on lack of access to health care in Saudi Arabia. Results show that 15 percent of the total insured population demonstrated low levels of accessibility to health care (Alkhamis 2018, p. 3). This 15 percent was composed of unskilled workers (17.5 percent), workers holding less than three years of work experience (28.1 percent), workers employed by companies with less than fifty employees (23.3 percent), workers that earned less than 1,200 USD (16.5 percent), workers <30 years old (20.3 percent) or >56 years old (17.9 percent) and with no education (24.7 percent) (Alkhamis 2018, p. 3). Moreover, 49.5 percent reported fair or poor health status, 29.7 percent and 16.7 percent expressed discomfort communicating in Arab and English respectively, 18 percent lacked knowledge regarding health insurance, 55.2 percent scored 1 or 0 out of 3 for perceived knowledge of health insurance and 16.9 percent scored 1 or 0 out of 4 for validated knowledge (Alkhamis 2018, p. 4). Such results refer to multiple factors that overlap with the conceptual framework studied above, including law as a macrostructural factor, perceived knowledge as an indicator of education levels and skill sets alluding to immigrant-specific factors, language capacity and health conditions resembling predisposing factors.

Complementing studies on Saudi Arabia's health care system, Luque et al (2018) analyze the challenges faced by uninsured Latino immigrant women residing

in South Carolina, where heir population growth rate has recorded an all-time high of 148 percent between the years of 2000 and 2010 (Luque et al 2018, p. 1). This is a semi-structured and interview-based study aiming to understand their accessibility to health care composed of thirty Latina immigrant women residing in community sites. The interviews consisted of standard-closed ended questions for history and demographic findings and open-ended qualitative questions assessing personal experiences. Factors triggering anxiety as well as hindering access to the health care system include language barriers, transportation difficulties, low socioeconomic status that interfered with financial capabilities to afford high-cost fees, inflexible work schedules, discrepancies in cultural norms and fear of marginalization.

Results influencing their accessibility to the local health care system were divided into four different categories: barriers and facilitators to health care, health behaviors and coping mechanisms, disease management strategies and cultural factors. Luque et al (2018) argue that in order to understand the coded multi-dimensional factors that impacted Latino immigrants' accessibility to health care, the following factors must be taken into consideration in the analysis: barriers, community positives and negatives, cost of health care, positive and negative health behaviors, coping mechanisms, clinic choice, disease management, disease perception, medications, signs of illness, the role of alternative medicine, family and their practiced religions. Such results hint that despite the voluntary efforts made to avoid the necessity for health care services, Latino women immigrants in South Carolina continuously sought for relatively affordable remedies to remain healthy by accessing black markets. Conclusions indicate that further studies are needed to assess the direct and indirect effects of federal immigration enforcement measures on health care access for the Latino immigrant population in the United States.

II. Health care access in a non-immigrant context

Souliotis et al (2016) address the factors impacting the access to the EU's health care system. Access to healthcare is generally measured in terms of the availability and utilization of health services (Souliotis et al, 2016). Efforts to conceptualize access address the differences and commonalities among suggested definitions in literary work by scholars. Findings manifest that the multidimensional aspect of the term access in the region's healthcare system is catalyzed by *economic diversity*, "which implies different views on what each country can and should afford for their publicly funded health care systems" (Souliotis et al 2016, p.154).

Efforts to tackle the barriers hindering access to health care across European countries have not been substantial due to the existing discrepancies between applied definition, approach and policy. To fill in these gaps, the Patient Access Partnership (PACT) offers the *The 5As Definition of Access* conceptual framework explaining the five general factors that impact access: *availability, adequacy, accessibility, affordability* and *appropriateness* (Souliotis et al, 2016). Accessibility in this study is perceived as a multi-dimensional process where multiple key players determine it. Given this, this study used the multi-stakeholder approach to implement the 5As questionnaires provided to different stakeholders across the twenty eight EU countries. The results obtained indicate that there was no country with high performance in all five cases and that performance levels of certain access elements differed by country. While the multi-stakeholders approach was evaluated as a useful method that exemplify the concept of health care access and was identified as "feasible, acceptable and relatively easy to use in diverse countries and various stakeholders in the context of different health care systems" (Souliotis et al 2016, p.

156), further work ought to be done in order to assert that this concept encompasses the fundamental aspects of health care accessibility in the EU context.

So far, Souliotis et al (2016) give light to the role of stakeholders as a contributing factor determining health care accessibility in the EU. Further findings indicate that in 1988, the Brazilian constitution defined health as a universal right and a nation-state's responsibility. Progressive movement towards extensive health care coverage thus resulted in the establishment of a trademark of a unified health system (UHS) in 1990. Barbosa (2018) understands this as a redressing of the Universalist nature of the Declaration of Almata. "The Unified Health System's feature..." Barbosa (2018) explains, "is the constitutional position that health is a right of the citizen and it is a duty of the State" (p. 2898). Twenty years after UHS's establishment, the Brazilian government enacted the National Policy for Men's Comprehensive Health Care System (NPMCHC).

Given this, the study offers a quantitative, exploratory and cross-sectional study with 485 adult men in the municipality of Lagarto, Sergipe in Brazil (Barbosa 2018, p. 2897). Conducted between September and November of 2017, the study aimed towards determining the general factors influencing Brazilian men's demand and accessibility to the local public health care system and compare it with results obtained in larger-scale national studies covering men's public health care demand and accessibility. Results of the studies conducted on a municipal scale explain that the majority of adult men do not make use of primary health care services on a regular basis and are unaware of the NPMCHC. An analysis of descriptive statistics found that 67.4% of men did not make regular usage of primary health care services and that women were the predominant users of primary health care services. These results overlap with the results obtained in national studies, articulating that the majority of

men express low demand for public health care services and a lack of knowledge regarding the government health program directed to the State's male population.

The predominant factors impeding the accessibility of men to health care services include delay in service provision (35.7 percent); absence of diseases (33.8 percent); lack of reception by health professional exemplified by the difficulty to schedule appointments (75 percent); lack of knowledge regarding unit operating days (39.4 percent) and lack of awareness of men health care policy (21 percent) (Barbosa 2018). Other factors include fear of discovering serious illness, lack of time, the incompatibility of schedules from the provider and receiver, impatience, embarrassment to expose one's health status, lack of specialists and the resolution of health needs and the common perception that the Basic Health Unit (BHU) is a space for women to use only (Barbosa et al 2018, p. 2899-2903).

III. The Healthy Immigrant Paradox (HIP)

This section will delve into The Healthy Immigrant Paradox as it is considered to be fundamentally relevant to this project concerning immigrant health trajectory. Simply put, The Healthy Immigrant Paradox explains that immigrants exhibit better health relative to the native population upon their arrival to the host nation. As their length of stay in the host nation increases, however, the immigrants' health deteriorates. This section offers an in-depth analysis of immigrant health trajectories in the host country through assimilation.

Immigrants fall categorically under a group of newcomers entering a new country. As new members of a particular society, however, immigrants generally portray a relatively lower socioeconomic status and access to health care (Jochem et al, 2018). Aspiring to obtain a new and improved lifestyle, immigrants take initiative to conduct different forms of self-investment as a way to boost their prospects of

success prior to departing their countries of origin. The underlying rationale is an immigrants' joint understanding of a collective set of assets they perceive as worth in devoting time and resources to. Immigrants believe that the return rates of self investment will be substantial upon successfully attaining an enhanced life quality in the receiving country. Studies offered by Jochem et al (2018) indicate that as a result of initial investment, immigrants often present health-related advantages in dimensions encompassing morality, heart and circulatory diseases, obesity and smoking. Such a phenomena is exemplified in The Human Capital Theory.

The Human Capital Theory by Mincer (1958); Schultz (1961) & Becker (1962) alludes to the importance of investing direct resources in education, training and health as the primary sources to increase their expected returns forecasted for the future. Apart from education and health, migration is also regarded as an essential form of investment since it implies a cost incurred in the present that generates a benefit in the future in terms of higher income. The equation then becomes the following: the higher the initial investment made by the immigrant, the higher the lifetime earnings will be. In this sense, The Human Capital theory is restrictively applicable to those who have sufficient capital, thereby implying that only those with good health will migrate. Contrarily, individuals who are presented with fewer opportunities and resources to succeed are less likely to invest in human capital.

Given the immigrants' endowment on good health, theories on migration predict that those with higher human capital, in the forms of health and skills, will incur a short term cost in order to obtain higher returns on this capital. Additional work on the Healthy Immigrant Paradox provided by Jasso (2003) (as cited in Mortimer et al 2003) study migration as a self-development tool that immigrants opt for to increase the likelihood to attain an improved life trajectory. Jasso (2002) argues

that the positive auto-selection of immigrants explains their exhibition of better health conditions relative to that of the native populations'.

However, self-selection is only regarded as one of the three elements of the Immigrant Health Advantage phenomenon. In efforts to expand the analysis of the phenomenon, Jochem et al (2018) explain that The Immigrant Health Advantage stems from a combination of healthy immigrant self-selection, the role social capital in immigrant communities hold to protect them from adverse conditions and the prolonged misinterpretations of existing data that overly emphasize immigrant health.

The plot twist indicates a deterioration in the immigrants' health status which surges after the immigrant establishes in the host country. There is an existing complex set of factors that deteriorate the immigrant's health over the years whilst in the host country. Such factors are:

1) Stress endurance initiating from assimilation and acculturation barriers;
2) Acculturation to unhealthy lifestyles of natives;
3) The deterioration of the social ties once created in the host country;
4) Social and psychological instability instigated by marginalization & anti-immigrant discourse, ultimately leading to anxiety and depression;
5) Hazardous labor conditions and;
6) Physical deterioration caused by the accumulation of years lived & chronic diseases.

Studies on Hispanic healthy immigrant paradox offered by Hamilton (2015) assert that although first generation Hispanic immigrants in the United States demonstrate a health advantage over their United States-born counterparts in the beginning, their health conditions deteriorate as their socio-economic status improves. Therefore, as indicators of advanced acculturation, improvement of socio-economic

status empowered by higher education levels and enhanced skill sets are perceived as essential determinants of immigrant health and necessity for health care usage followed by health status.

Despite empirical studies on the immigrants' health prospects upon arriving at the host country, however, there exist conceptual and measurement issues that fail to reveal the immigrants' lifestyle realities (Constant, 2017). As articulated by Jochem et al (2018), immigrant health advantages surge from a positive selection and therefore are not fully accurate representatives of large-scale populations. Immigrant groups are demographically diverse and present different patterns prior to migrating as well as after having settled in the host country. Both sides are equally susceptible to contemporaneous and macrostructural factors such as plagues, recessions and even aging that causes health deterioration regardless of nativity that interplay and generate the uniqueness of each and every immigrant experience. Far beyond these factors exist conditions and laws pertaining to the countries of origin and destination, also categorized under the concept of macrostructural/contextual factors in Yang & Hwang's (2016) conceptual framework. Noticeably enough, it is precisely these set of factors that are out of the immigrants' control that trigger a wide variety of unforseen pathways for the immigrant. Therefore, the relevance of this section to this project lies on its objective to assess the impact of law on an immigrant population through the lenses of health care accessibility.

Mexico as a destination for Central American Immigrants

Mexico has increasingly become the ultimate destination for many Central American immigrants. To understand this phenomenon more in depth, this section will dive into

the potential pull and push factors creating such a dynamic between the two parameters.

From the decriminalization of irregular migration in 2008 to civil society movement catalyzing the promulgation of the New Migration Law in 2011, Mexico has applied significant changes to its political agenda on migration. The prominent changes began to surge during the National Action Party (PAN) regime under former Presidents Vicente Fox and Felipe Calderón's administrations. Fox's administration demanded migration's prioritization in Mexico's bilateral relation with the United States (Wise, 2004). Given the increase in outflow of Mexican immigrants entering the United States, Fox sought for a cooperative dynamic with the United States to establish order in migratory flow by promoting the adoption of legal channels as a deterrent for irregular migration. The aim behind such a progressive twist in Mexico's political agenda was to construct the necessary conditions that advocated for the protection of the immigrants' human rights. Although Executive and Legislative powers of the United States neglected Fox's request to collaboratively solidify measures that protected immigrants post 9.11, Fox's election in 2000 meant the takeover of a pro-immigrant party. Mexico was once and for all eradicating anti-immigrant administrations after nearly fifty years, beginning with former President Miguel Alemán Valdez (1946-1952). Fox's proposition was eventually implemented into the bilateral agenda on the grounds of equally shared cooperation and responsibility to cope with the phenomena.

The Mexican migratory propositions during Fox's administration endeavored to realize policy that apart from favoring the immigrants' human rights, it also favored their labor rights. His initiative instigated both sides to foment substantial migratory measures including the regularization of undocumented immigrants,

increase the number of available visas and temporary job opportunities for immigrants, arrangements to ensure protection at the border and impulse community development for the sending country.

During 1999, Mexico had exceeded the government's macroeconomic targets. According to the International Monetary Fund (2000), Mexico's economy had grown 3.6 percent by the end of the fiscal year, exceeding by 0.6 percent the anticipated rate in the beginning of the year. The economic boost ultimately led to the emergence of an increased number of job opportunities and a reduction in the unemployment rates. Mexico's economic strategy by 2000 was to empower extended efforts to amplify economic growth rates by continuously creating jobs, reducing inflation and instigating social expenditures (IMF, 2000). IMF (2000) added that the Mexican government's expenditures would continuously focus on its bilateral agenda concerning migration, education, health, social security and poverty reduction. This made Mexico an attractive destination for the NTCA immigrants to pursue an enhanced quality of life.

Calderón's administration also declared that "Mexico's interests in the international arena should be grounded in Mexico's transition to democracy and pluralism" (Washington Post, 2006). Hence, it became clear that the state's political interest in elevating the practice of democracy and the prolongation of immigrant rights advocacy were the central focuses in the migratory context. As a result, Mexico's government continuously promulgated the protection of human rights entitled to citizens and non-citizens. In addition, Calderón highlighted that Mexico's most important bilateral issue would become the unification of the Northern American region and respond to the demands held by immigrants to facilitate labor mobility. He viewed the consolidation of the region as the most effective way to

tackle causes and effects of irregular migration moving up north. Subsequently, a significant step taken by Calderón was his recognition that the United States Senate Judiciary Committee's attempt to foment effective immigration reform essentially led to the decriminalization of undocumented workers. Subsequently, Mexico decriminalized irregular migration in 2008.

PAN's political ideology is known for putting into practice adequate migration policy. PAN has established a pro-migrant posture by advocating for integrity and equality. The political party demanded a government agenda that explicitly promoted family protection and unity through the means of asylum grants and special visa provisions. PAN's liberal approach to Central American migration stems from the late 2000's when irregular migration became decriminalized, eventually creating a path to the enactment of The New Migration Law a few years after.

Additional to the political climate created by the government response to increased migration, the differences in femicide rates from both sides is another factor that explains the role of Mexico as a receiving country for NTCA migrants. Femicides, despite presenting high frequency rates in Mexico, still show lower rates in comparison to that of the NTCA countries. According to *El Colegio de la Frontera Norte ,* 37% of the 390,000 NTCA immigrants entering Mexico in 2014 were women, equivalent to the sum of approximately 144,000 immigrants.

Graph 1 depicts the countries with the highest female average annual homicide rates from 2007-2012 (Nájar, 2019). Femicides have largely been a social phenomena plaguing the NTCA communities. As show Nájar n on graph 1, the three countries comprising the Northern Triangle of Central America were categorized under the countries with "very high homicide rates" group after having ranked amongst the top four countries with the highest femicide rates globally. Mexico similarly has recorded

substantial femicides rates but they are relatively lower in comparison to the three Central American countries. One alternative explanation decelerating the number of cases in Mexico alludes to the expansion of circumstances that allow the law to be applicable (UNODC, 2018). This leads to the second factor: political and societal interest held by the Mexican population to promote the inclusion of Central American immigrants into its society. Although these are incomplete statistics because substantial cases go unreported, from the lower femicide rates in comparison to the Northern Triangle portrayed by the Mexican mass media, it is deduced that NTCA women immigrants are increasingly on the quest for safer environments. Given the geographical proximity existing between the two regions, one can make sense of the decisions made by the Central American immigrants to view Mexico as their alternative new home. Thus, emigration to Mexico has continuously been opted as a coping mechanism by NTCA women immigrants, allowing them to avoid surroundings jeopardizing their well-being by relying on destinations with lower femicide rates. External policy non-pertinent to Mexico and the closure of borders also play a role in Mexico's transformation. According to the *Stay in Mexico* policy of the United States, Mexico allows immigrants that have previously applied for asylum in the United States to remain in the country while their cases get filed in

Graph 1

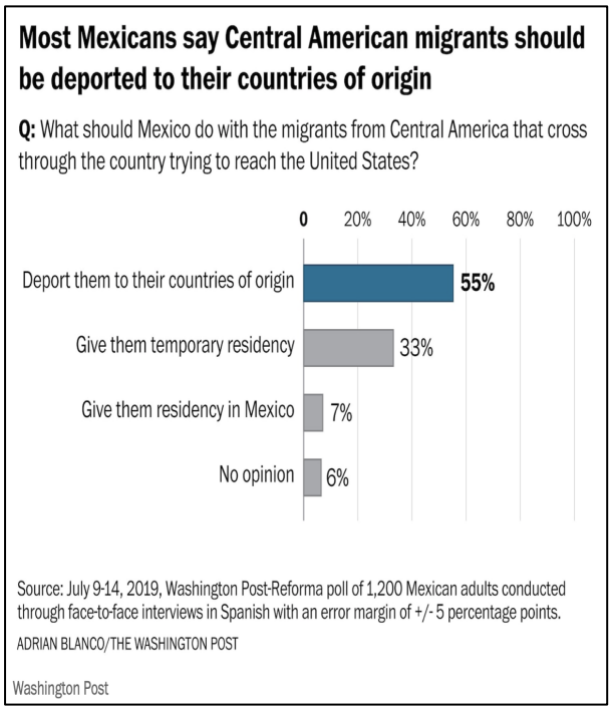
Source: Average High and Very High Female Homicide Rates (The Global Americans)

the United States (Nájar, 2019). In alliance with the amendments made to the nation's governing migration law, as a new host country, Mexico has endeavored in establishing a rather "inclusive and humanitarian" dynamic with the NTCA immigrants. Indeed, Mexico's immigration policies have evolutioned in a way that facilitates the inclusion of immigrants as a way to cope with the diversification of the population. However, this also translates to a "forced" response to the militarization of the U.S. - Mexico border. On October 26th of 2018, former President Enrique Peña Nieto publicly announced a plan called *"Estás en tu casa"* translating to "you are at home" (Jornada). This program aimed to grant NTCA immigrants documentation, temporary work permits, medical attention, and access to education for children after filing with the Mexican National Institute of Migration (INM). Despite belonging to a different political party (Institutional Revolutionary Party PRI), Trends indicates that the measures taken to deal with Central American migration explicitly stress the importance of complying with the immigrant populations' humanitarian rights.

Mexico's shift from a sending country to a host country, however, does not directly imply collective behavior from the public abiding to immigrant-benefitting law. As a matter of fact, in a survey distributed to 1,200 Mexican nationals and published by Sieff and Clement (2019), more than half of the respondents agreed that Mexico must deport Central American immigrants to their countries of origin (see graph 2). Among other results, 33 percent advocated for granting them temporary residency, 7 percent agreed that they should be granted permanent residency and 6 percent refused to offer a response (Sieff & Clement 2019). Thus, this highlights prolongued xenophobic behavior towards Central American immigrants prevalent in Mexico.

Xenophobic behavior against NTCA immigrants in Mexico stem in part from existing discrepancies between state and federal government visions regarding migration. Municipalities and states in Mexico are the forms of governments that hold the closest relation with the citizen and resident, thus making them increasingly aware of the specific needs held by the population. The narrative is different when it comes to the function of the federal government in law implementation as it has a limited understanding of the micro-level issues held by different sectors nationwide. A lack of acknowledgement of such problems triggers the implementation of inadequate and ineffective measures. Former Secretary of the Interior in the Cabinet of Peña Nieto and Governor of Hidalgo up until April 2011, Miguel Ángel Osorio Chong, explained that the biggest challenge in effective humanitarian-centered federal law implementation is to forge public policy in the different municipalities that protect societies against discriminatory rhetoric and advocate for equality (Instituto Nacional para el Federalismo y el Desarrollo Municipal, 2017). Graph 2 depicts poor legislation initiative stemming from a society and governors with scattered ideologies. Since studies show that protection of migrants is clearly not amongst the top political priorities for numerous populations across Mexico, the federal government loses its legitimacy as the voices of some its citizens is "neglected". While Mexican civil movement became a crucial component of The

Graph 2



New Migration Law's enactment, another portion of the citizens proved otherwise by advocating for the exclusion of the NTCA immigrants from the country. The sovereignty held by the Mexican states additionally empowers the local authorities to use their discretion in tolerating anti-immigrant discourse as they hold authority to regulate migration. Conclusively, it is deduced that state governments wrongfully analyze migration as a phenomena posing threats to their societies, overlooking the fact that all migrants are human beings like us.

Disparate understanding of the Law has triggered skepticism on the provisions' inconsistencies stressing the protection of marginalized immigrant populations. Incongruencies between the Law and the articles in the Mexican Constitution are speculated to empower poor implementation and practice. For instance, Article 1 of the Mexican Constitution establishes that the right to immigrate and emigrate for any individual must be subordinated by the judicial authorities. Consequently, this makes the unrestrictive nature of the Law's provisions to protect the immigrants' rights inconsistent because the Constitution grants plenary power to the authorities to police migration. The right to enter the country without documentation thus jeopardizes an immigrants' "legality" in his or her migratory status. Discrepancies such as these are substantial but have not been thoroughly analyzed by the Mexican Jurisdictional Authorities to determine the compatibility levels between The New Migration Law and the Constitution. Given this, it is argued that xenophobia and discrimination imposed against NTCA immigrants catalyzing poor abidance to the Law by the Mexican population may be grounded in a conventional understanding that such a measure attempting to regulate and control migration violates the sovereignty of the state. Moreover, such incongruencies explain

NTCA migration is viewed as a matter of national security and sovereignty rather than a phenomena concerning human rights.

The Central American exodus

Referred to as a phenomenon of the 20th century by Manuel Orozco (2018), the Central American exodus originates from the regional economic crisis known as the "lost decade" which struck Latin America during the 80's, causing the influx of migrants into Mexico to gradually elevate throughout the years. According to the United Nations Economic Commission for Latin America and the Carribean (ECLAC), NTCA countries have been demonstrating a limited development pattern from the 1990s (Hammill, 2007). Such a trend in return has been negatively impacting the national economies, even to this day. Central American migration movement from the Northern Triangle in the 21st century has been empowered by increasing levels of insecurity stemming from waves of violence catalyzed by the expansion of gangs and narcotrafficking networks, poor performance of the economy and military coup presence in Honduras among other factors. Further examination of the NTCA exodus also shows that since the mid-2000s, the average homicide rates of the three countries combined have steadily been ranging between thirty-eight to forty man-caused deaths per day (Orozco 2018, p. 5).

Statistical analysis offered by Orozco (2018) asserts the existing correlation between violence and economic factors as a key migration stimulant. According to the analysis provided:

・1 percent of increase in homicides increases migration by 120% and expansion of economic informality increases migration by 12 percent in Honduras (p. 6);

・1 percent of increase in homicides drives migration by 100 percent; expansion of economic informality and a decrease in human development index increases migration by 4 percent and 5 percent respectively in Guatemala (p. 6) and

・Increase in homicide rates and expansion of economic informality drives migration by 188 percent and 27 percent respectively in El Salvador (p. 6).

Apart from the violent waves plaguing the region, lack of opportunity in the agricultural sector is another driver of Central American agricultural and labor migration. In 2005, the Central American Free Trade Agreement (CAFTA) including Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua, a NAFTA-style deal, was passed. With an amplified market accessibility, the United States began to intensify its subsidized exports to the region. For the Central American countries, this meant cost-effective imports that would lower the overall prices of some of the foods. However, this also meant increased competition amongst the local workers in the agricultural sector, causing the displacement of many of them and leaving them without a source for a living. According to Peterson (2019), the region's agricultural sector employs nearly thirty percent of the local working population and contributed to roughly nine percent of the regional Gross Domestic Product. The influx of increased competition in the sector left the workers without the crucial means and resources for inputs that allowed them to differentiate their products in the market.

Most of the region's agricultural land is monopolized by foreign investors and rich landowners. "While subsistence farmers represent almost 60 percent of the farmers in Central America, they own only 7 percent of the growing surface" Peterson (2019) explains. This translates to minimal ownership over crucial landmass for the workers, leaving them with no incentive or reason to stay. Peterson (2019) adds that because a young age population is left with no prospects for a stable living,

transnational immigration to the north is perceived as the only way out of poverty. With poor governance performance, the newest generation of NTCA workers are inhibited from adapting to a free market incentivizing increased competition.

Understanding the root causes of the region's crisis is crucial in efforts made to understand the increase in Central American migration flow. Mexico has now become an attractive destination for NTCA immigrants. According to REDODEM (Red de Documentación de las Organizaciones Defensoras de Migrantes), Mexico was the final destination for 28.6% of NTCA immigrants registered in Mexico as of 2018. Meza and Pederzini (2019) explain that this is a substantial percentage if we take into account that the scale of immigrant flow has experienced a sustained growth during the past fifteen years. This section states that these statistics are empowered by increasing violence stemming from poor governance and the displacement of the region's labor market workers after CAFTA.

Research Methodology & Results

This section consists mainly of three parts: the research methodology's description, the data used and the results obtained in the regression analysis. The first part justifies the usage of the methodology by spotlighting the essential role a probit model plays in enabling a thorough comprehension of the factors affecting health care accessibility, either for the whole population in Mexico, including NTCA immigrants, or specifically for the NTCA immigrants in Mexico, before and after the promulgation of The New Migration Law in May 2011. Additionally, the following section includes a brief description of the 2010 Mexican census & the 2015 Mexican Intercensal Survey and the procedure followed by Mexico's National Institute of Statistics and Geography (Instituto Nacional de Estadística y Geografía, INEGI) to

obtain the two data sets. The goal of these two sections is to elaborate on the underlying rationale of the chosen methodology and the applied data sets to conduct the research.

I. Probit model

Health care accessibility is the dependent variable in the estimations. Health care accessibility is regarded as a dependent variable because its value depends on that of other variables, contextually being, among others, the socio-demographic factors of the whole sample used. As a dependent variable, health care accessibility is considered a binary variable because of its nature which interest lies in the response probability. A binary response model is therefore the following:

$p(\mathbf{x}) \equiv P(y = 1 \mid \mathbf{x}) = P(y = 1 \mid x_1, x_2 \ldots., x_k)$ (Woolridge, 2011)

Where x is representative of the explanatory variables and y is the dependent variable. A binary variable is any kind of variable that only takes up to two polar opposite values i.e. yes or no; 1 or 0. Accessibility to health care is determined by the relative ease to reach the health care system and its service providers. The dependent variable, by definition, is representative of the access to Mexico's public health services through the means of labor ties or labor ties of a family member. For instance, if *y* is a health care accessibility indicator, *x* contains the characteristics that affect *y*. Therefore, health care accessibility as the dependent variable will indicate whether total population or NTCA immigrants have access to health care, mediated by, for example, their socio-demographic factors.

Given the binary nature of the dependent variable, probability regressions open access to a better understanding of the factors influencing NTCA immigrants' accessibility to health care in Mexico. Probit regressions are multi-functional because:

1) They give light to the correlations existing between the given independent and dependent variables;

2) Provide an estimate of the degree of influence to which each independent variable holds accountable for.

Offered by Mateos & Meza (2019) and Woolridge (2011), a linear probability model is a follows:

$$\mathbf{P\ (y = 1 \mid x) = \beta_0 + \beta_1 X_1 + \beta_2\ X_2 + \beta_3 X_3 + \ldots + \beta n\ \ Xn + \varepsilon_i.}$$

In a linear probability model, $\boldsymbol{\beta_1}$ alludes to the change in the probability given a one-unit increase in $\mathbf{X_1}$ if assumed that $\mathbf{X_1}$ is not "functionally related to the other explanatory variables" (Woolridge, 2011). In this scenario, the equation would be: $\beta_1 = \partial P(\ y = 1 \mid \mathbf{x}) / \partial x_1$ **.** Thus, parameters *βi* correspond to the estimations made on the independent variables' effect on the access to health care. In this model, the role of β_i is to measure the effects of the explanatory variables on a probability.

This project runs the regressions using the following independent variables: age; education; monthly salary; gender (female); household position; recent migrant (≤5years) and nationality in a first instance. These variables were extracted from the Mexican census of 2010 and the Intercensal Survey of 2015 in alliance with Yang & Hwang's (2016) conceptual framework. A binary variable that indicates origin; (1 if immigrant from NTCA country: Guatemala, El Salvador or Honduras and 0 if native) is used to distinguish the natives with the immigrant population. The coefficient of each independent variable references its effect on the accessibility to health care. If a coefficient is positive and statistically significant, that means both variables hold a positive correlation. A positive correlation between two variables hint that both sides move in tandem or in the same direction. Therefore, in this scenario, the independent variable does affect the outcome of the event happening in respect to having access to

health care. Contrarily, if the given coefficient is negative and statistically significant, that means both variables hold a negative correlation. Therefore, in this scenario too, the independent variable does affect the outcome of the event happening in respect to having access to health care. A non-significant relation between two variables refers to a non-existing correlation. Apart from the regressions for the whole sample, regressions for each nationality are conducted separately.

II. Data Sets

The two data sets analyzed are the Mexican census of 2010 and the Intercensal survey of 2015. The Mexican census of 2010 and Intercensal survey of 2015 encompasses approximately 2.9 million households and 6.1 households respectively (Mateos & Meza 2019, p. 29). Both data sets are representative of the Mexican population on a national, state, and municipal level as well as localities consisting of over fifty-thousand residents. Moreover, while the two data sets are not representative of the immigrant population, they provide substantial observations of the NTCA immigrants that open understanding of the underlying reality regarding their health care accessibility. The 2010 census represents the Mexican population before the ratification of The New Migration Law while the results obtained from the 2015 Intercensal survey is representative of the same population under The New Migration Law. The average age of the respondents from both data sets range from fifteen to sixty-four years old. Additionally, both data sets are composed of respondents who are: self-employed; employed and unemployed; individual contractors; daily-paid workers and outside of the labor market.

"For data to be used beyond its original purpose, it must be discoverable within and across disciplines" Parsons et al (2011) explain. This project endeavors to merge Yang & Hwang's (2016) conceptual framework with the previously mentioned

data sets. Used as the two optimal research paradigms for the research purpose along with the conceptual framework, the Mexican 2010 census and 2015 Intercensal Survey provide the necessary tools to explore the domain of Central American accessibility to health care in Mexico. The necessary components of the data sets encompass a set of specific socio-demographic factors comprising either the whole population or the NTCA immigrant population. A specific criterion offered by Parsons et al (2011) was adopted when assessing the adequacy of both data sets: discoverable and available for anyone, relevance with the conceptual framework, practical use for a purposeful usage and credibility of the source.

Law, in the context of transnational migration, is an uncontrollable condition without the means to cause any sort of amendment to it. Yang & Hwang's (2016) conceptual framework refers to such macrostructural and contextual factors as determinants of immigrant health care accessibility. Effectively, this is the framework's section that justifies the comparison that will further be conducted between Mexico's two governing migration laws in order to understand if the change in law discourse had a tangible effect in Central American immigrants' accessibility to Mexico's health care system.

III. Results

The following section will navigate through the results obtained after running the regressions using the Mexican Census of 2010 and the Mexican Intercensal Survey of 2015. The data used for this project originate from the Mexican National Institute of Statistics and Geography (INEGI).

Descriptive Statistics

Table 1

2010				
Health coverage through private and/or public means	**Mexicans**	**Salvadorans**	**Guatemalans**	**Hondurans**
Healthcare access	14.19%	10.56%	6.45%	7.46%

Table 2

2015				
Health coverage through private and/or public means	**Mexicans**	**Salvadorans**	**Guatemalans**	**Hondurans**
Healthcare access	22.93%	14.75%	6.16%	9.11%

Tables 1 and 2 present descriptive statistics and represent brief summaries of the NTCA and Mexican populations' access to health care. The descriptive statistics are representative of the Mexican population but are not representative of the NTCA immigrant populations situated in Mexico. Although the tables imply a substantial number of observations, the results ought to be taken with caution as the data for 2010 is a sample of the census to which an expanded questionnaire consisting of labor variables is applied.

According to the results, the Mexican; Salvadoran and Honduran population experienced an increase in health care access by 8.74 percentage points; 4.19

percentage points and 1.65 percentage points respectively, while Guatemalans experienced a decrease in the same matter by a minimum of 0.29 percentage points. However, it is important to note that the numbers on these two tables lack accuracy, because they do not take into account factors like the demographics of the groups sampled. For example, it could be the case that more people presenting higher education levels are entering Mexico, which would explain the increase in access to health care. By using control variables, the regression analysis will reflect a rather realistic panorama by shedding light to the socio-demographic factors that hint increased or decreased accessibility to Mexico's health care for the NTCA immigrants. The analysis will continue to compare the factors affecting health care accessibility for the entire Mexican population or for the NTCA immigrants in Mexico in 2010 and 2015 respectively. As mentioned in the introduction, the hypothesis is that with the change in Mexico's governing migration law, NTCA immigrants should convey increased access to health care.

Probit estimation with the whole sample

Table 3. Probit Regressions with the whole sample

Mexican Census 2010			**Mexican Intercensal Survey 2015**		
Number of Observations: 165,284 **Pseudo R2 = 0.0912**			**Number of Observations: 38,316,465** **Pseudo R2 = 0.0709**		
Health care access	Coefficient	P>| z |	Health care access	Coefficient	P>| z |
Age	.0156537	0.000	Age	.0232284	0.000
Education	-.00007	0.000	Education	.0727619	0.000
Monthly Salary	-5.89e-06	0.000	Monthly Salary	-3.87e-06	0.000
Gender (Female)	.179661	0.000	Gender (Female)	.1450842	0.000
Head of Household	-.0325823	0.000	Head of Household	.0089487	0.000
Guatemalan	.1370543	0.000	Guatemalan	-.4471574	0.000
Salvadoran	.00067711	0.801	Salvadoran	-.6351716	0.000

Honduran	.2702548	0.000	Honduran	-.5515778	0.000
Indigenous	-0.119738	0.603	Indigenous	-.1088976	0.000
Low Degree of marginalization	.0486306	0.000	Low Degree of marginalization	-.1191503	0.000
Medium Degree of marginalization	.1217472	0.000	Medium Degree of marginalization	-.2401536	0.000
High Degree of marginalization	.0784975	0.000	High Degree of marginalization	-.3611149	0.000
Very High Degree of marginalization	-.3796648	0.000	Very High Degree of marginalization	-.5824678	0.000
Industrial Sector	.2131486	0.000	Industrial Sector	.2540156	0.000
Commercial Sector	.116379	0.000	Commercial Sector	.0432829	0.000
Service Sector	.1473094	0.000	Service Sector	.0586414	0.000

Source: Mexican census 2010 & Intercensal survey 2015, INEGI

The coefficients highlighted in the table above denote the immigrants' nationality in an equation alluding to health care access encompassing a population ranging between fifteen and sixty-four years of age. Table 3 divides the NTCA immigrants by nationality as independent variables influencing the whole sample's access to health care. The coefficient correlation for the Salvadoran immigrant population in 2010 indicates that Salvadoran immigrants in Mexico have equal access to health care as the local Mexican population because the coefficient proves to be statistically insignificant. Hence, nationality in the Salvadoran context is a non-influential variable in the determination of health care accessibility. The coefficients for Guatemalans and Hondurans for the same year reflect a positive correlation. Such positive correlation coefficients reference that Guatemalan and Honduran immigrants hold higher prospects for health care access relative to the Mexican population. Adversely, the three nationalities on the Intercensal Survey of 2015 demonstrate negative

coefficients, hence a negative correlation. The negative correlations allude to the fact that having either one of these nationalities negatively influences accessibility to health care. Lastly, the degrees of marginalization of the states where each individual situates in and the sectors where the respondents insert are added as control variables in the estimations. It is important to denote that these controlling variables are also included in the regression estimations by nationality.

The quantitative analysis alludes to a key finding. Health care accessibility did not increase for the three nationalities despite the promulgation of The New Migration Law. Instead, the negative coefficient correlations indicate that health care accessibility adversely decreased for the three nationalities in 2015 relative to 2010. These results are key since they set the tone for the proceeding regression analysis and it hints at the scale to which The New Migration Law is effectively practiced through the lenses of health care. The next section will continue to estimate the same probit equation. However, the samples will be divided by Guatemalan, Salvadoran and Honduran nationalities and the aim is to further analyze how the independent variables influence the likelihood of each group to access Mexico's health care system before and after the promulgation of The New Migration Law.

Continuing, this part of the section will seek to understand the effect of each controlling variable on each NTCA immigrant population by nationality. The probit tables are divided in the order of Guatemalan, Salvadoran and Honduran immigrants.

Table 4
Healthcare Access・Probit estimation for Guatemalans

Number of Observations 2010: (15,773)
Pseudo R2 = 0.2786
Number of Observations 2015: (18,557)
Pseudo R2 = 0.0627

Healthcare Controlling Variables	2010	2015
Age	**.0088007** **(0.197)**[3]	**.024058** **(0.001)**
Education	**.0554754** **(0.000)**	**.0414248** **(0.000)**
Monthly income	**8.96e-06** **(0.000)**	**4.42e-06** **(0.033)**
Gender (Female)	**.3852284** **(0.000)**	**.1665115** **(0.000)**
Head of Household	**.1388944** **(0.000)**	**.0189157** **(0.540)**
Recent immigrant (≤5years)	**-.6233314** **(0.000)**	**-.1734147** **(0.000)**
Ethnicity (Indigenous)	**-.3734611** **(0.000)**	**-.2587092** **(0.000)**
Degree of marginalization		
・Low	**.4266535** **(0.000)**	**.450064** **(0.000)**
・Medium	**-.4554509** **(0.000)**	**-.1934025** **(0.003)**
・High	**.0359388** **(0.581)**	**-.1265488** **(0.055)**
・Very high	**-.6400328** **(0.000)**	**-.0433937** **(0.448)**
Industrial Sector	**.7429686** **(0.000)**	**-.1972251** **(0.000)**
Commercial Sector	**-.0568345** **(0.318)**	**-.4493721** **(0.000)**
Service Sector	**.1429563** **(0.005)**	**-.4139015** **(0.000)**

Source: Census 2010 & Intercensal Survey 2015, INEGI

3 All numbers inside the parenthesis are the p-values. Those highlighted in red are statistically insignificant.

Table 4 illustrates the results for the Guatemalan immigrant population. The sample sizes in the data sets are 15,779 respondents for 2010 and 18,557 respondents for 2015 respectively. Unlike in 2015, age was not a determinant factor for a Guatemalan immigrant's accessibility to health care in 2010 as the coefficient shows statistical insignificance. However, since age owns a positive coefficient correlation in 2015, the higher the age, the higher the prospects for health care attainability show to be for Guatemalan immigrants during this year. The coefficients for *Monthly income* portray positive correlations but a substantial decrease in its value is observable in 2015 at a 95 percent level of statistical significance relative to 2010. While income levels positively influence Guatemalan immigrants' health care access, its coefficient value deteriorates throughout time. Therefore, it is deduced that Guatemalan immigrants with higher monthly income levels have higher access to health care in 2010 relative to that of 2015. The coefficients of the controlling variable *education* remain positive in both years, thus indicating that higher education levels increase the Guatemalan immigrants' likelihood to access health care. However, a decrease in the coefficient's value explains that despite the correlation between education and health care access remains positive, a decrease in the independent variable's coefficient hints that the mean of the dependent variable negatively changed given a one-unit shift in the independent variable in 2015.

Similarly, variables *Gender / Female* manifest positive coefficient correlations in both years. However, the coefficient value in 2010 is higher than in 2015. This means that Guatemalan female immigrants presented lower health care accessibility in 2015 than in 2010. Variable *Head of Household* alludes to respondents who resemble the main source of income for their families or themselves. The positive coefficient correlation value of 2010 for this variable explains that head of household

status increases the Guatemalan immigrants' likelihood to attain health care. Contrarily, the coefficient value in 2015 for the same variable shows to be statistically insignificant, meaning that Guatemalan immigrants who are heads of households do not show higher health care accessibility with respect to the individuals that do not lead their families. The variable *recent migrant (≤5years)* holds negative correlation coefficients in both years with a higher correlation coefficient in 2015. Hence, the interpretation is that Guatemalan immigrants who spent equal to or less than five years in Mexico have lower health care access relative to Guatemalan immigrants who spent more than five years in Mexico. Given the increase in the coefficient, however, it is also noted that recent Guatemalan immigrants during this year experienced higher levels of health accessibility. The underlying implications of such a trend allude to the concept of resources explained in Yang & Hwang's (2016) conceptual framework. The rationale is therefore that social resources that facilitate health care access depends on the time spent in the receiving country. Both coefficients for variable *indigeneity* also point to negative correlation coefficients but similarly to the variable *recent migrant (≤5 years)*, the value increases in 2015 by a smaller scale. Therefore, indigenous Guatemalan immigrants experienced higher levels of health care access in 2015 than in 2010 despite the negative correlation between the two parameters.

Table 5
Healthcare Access · Probit estimation for Salvadorans

Number of Observations 2010: (3,749)
Pseudo R2 = 0.2248
Number of Observations 2015: (5,126)
Pseudo R2 = 0.1622

Healthcare Controlling Variables	**2010**	**2015**
Age	**-.0781275** **(0.000)**	**.1856456** **(0.000)**

Education	**.0482369 (0.000)**	**.0386716 (0.000)**
Monthly income	**-5.16e-07 (0.888)**[4]	**6.14e-06 (0.008)**
Gender (Female)	**-.1368254 (0.040)**	**.1116034 (0.039)**
Head of Household	**.0589804 (0.340)**	**-.0472138 (0.346)**
Recent Migrant (≤5years)	**.2033174 (0.007)**	**-.3369748 (0.000)**
Ethnicity (Indigenous)	**Omitted**	**.1519386 (0.035)**
Degree of marginalization		
・Low	**.3251954 (0.000)**	**.2703338 (0.000)**
・Medium	**.5363044 (0.000)**	**-.433662 (0.000)**
・High	**.924705 (0.000)**	**-.2471209 (0.002)**
・Very high	**-1.13671 (0.000)**	**-.8215535 (0.000)**
Industrial sector	**.6335667 (0.000)**	**-.1035236 (0.191)**
Commercial sector	**.8684556 (0.000)**	**-.3046991 (0.000)**
Service sector	**.3858617 (0.003)**	**-.3432722 (0.000)**

Source: Census 2010 & Intercensal Survey 2015, INEGI

Table 5 is representative of the Salvadoran immigrant population. Sample sizes were 3,749 respondents and 5,126 respondents for 2010 and 2015 accordingly. Records show a similar trend conveyed by the Guatemalan immigrant population.

To begin with, variables *age; monthly income* and *gender (female)* in 2015 reveal an increase in their coefficient values relative to 2010. Out of these variables, *Age* and *Gender (Female)* experience a transition from a negative correlation

4 All numbers inside the parenthesis are the p-values. Those highlighted in red are statistically insignificant.

coefficient to a positive correlation coefficient. Positive correlation coefficients for variable *age* imply that, similarly to the Guatemalan immigrant population, Salvadoran immigrants with elder ages have higher access to Mexico's health care. With a 95 percent level of statistical significance in both years, variable *Gender (Female)* refer to female Salvadoran immigrants having higher access to health care in 2015 than in 2010. The remaining coefficient of the variable *Monthly Income* transitions from being statistically insignificant in 2010 to having a positive correlation in 2015. Hence, this references a positive change for Salvadoran immigrants with a monthly income by owning higher health care accessibility in 2015 than in 2010 given one percent increase in monthly income. Moreover, the coefficients for *education* remain positive with the exception that the value decreases in 2015. Education for Salvadoran immigrants in 2015 as a result had a positive impact on health care accessibility but on a smaller scale in comparison to that of 2010.

The coefficient variable *recent migrant (≤5years)* reduces to a negative coefficient correlation between 2010 and 2015. Unlike in 2015, ≤5 years of experience upon arrival to Mexico for Salvadoran immigrants in 2010 positively influenced their health care attainability. An alternative explanation of this phenomena is increased xenophobia held by the local population against Salvadoran immigrants in the form of collective discrimination. Trends alluding to the influence of variable *Ethnicity (Indigenous)* on the Salvadoran immigrants remain unclear as the coefficient correlation in 2010 is omitted in the estimation, possibly due to a shortage in observations. However, the value of the same variable's coefficient in 2015 is positive with a 95 percent level of significance and this implies a positive impact on health care accessibility for the indigenous Salvadoran immigrant population. Lastly,

Head of household status shows no influence on Salvadoran immigrant health care accessibility as the coefficients remain statistically insignificant in 2010 and 2015

Table 6
Healthcare Access・Probit estimation for Hondurans

Number of Observations 2010: (4,872)
Pseudo R2 = 0.1870
Number of Observations 2015: (7,096)
Pseudo R2 = 0.1247

Healthcare Controlling Variables	2010	2015
Age	**-.1280417 (0.000)**	**-.0333385 (0.012)**
Education	**.0867762 (0.000)**	**.0496754 (0.000)**
Monthly income	**-.0000258 (0.000)**	**-.0000183 (0.000)**
Gender (Female)	**.0416711 (0.457)**[5]	**.4733025 (0.000)**
Head of Household	**-.0774833 (0.143)**	**-.2895487 (0.000)**
Recent Migrant (≤5years)	**-.6857056 (0.000)**	**-.5158781 (0.000)**
Ethnicity (Indigenous)	**Omitted**	**.1684677 (0.003)**
Degree of marginalization ・Low	**.3846622 (0.000)**	**.0612934 (0.313)**
・Medium	**-.1848672 (0.014)**	**-.0128887 (0.858)**
・High	**-.2830183 (0.000)**	**.0429045 (0.506)**
・Very high	**-.5709835 (0.000)**	**-.3094439 (0.000)**
Industrial sector	**.7134272 (0.000)**	**-.3025482 (0.000)**
Commercial sector	**.2287578 0.068)**	**-.9134491 (0.000)**

5 All numbers inside the parenthesis are the p-values. Those highlighted in red are statistically insignificant.

Service sector	**.3598221 (0.003)**	**-.7903009 (0.000)**

Source: Census 2010 & Intercensal Survey 2015, INEGI

Lastly, the sample sizes for the Honduran group are of 4,872 respondents and 7,096 respondents in 2010 and 2015 respectively. Variables *age; monthly income* and *recent migrant (≤5 years)* in the Honduran immigrant context experience an increase in its coefficient correlation values in 2015 relative to those observable in 2010. Despite the negative values presented by the three variables in both years, an increase in the coefficient values allude to an increase in health care access for Honduran immigrants: with higher ages; who own a source of income per month and that have situated in Mexico for less than or equal to five years. However it is also emphasized that the presented negative values hint prolonged negative influence of the variables on Honduran immigrant health care access. Variable *education* owns positive coefficient correlation values in both years. However, the coefficient value of 2015 points to a decrease. As a result, the narrative following this change is that Honduran immigrants with higher education levels hold less advantage to access Mexican health care in comparison to those with lower education levels in 2015 than in 2010.

Additional coefficients demonstrating an upscale movement belong to variable *Gender (Female).* This variable holds statistically insignificant coefficient correlations in 2010, representing no influence of gender on Honduran immigrants' access to health care. Subsequent to the enactment of the New Migration Law in 2015, however, it is understood that female Honduran immigrants present higher coefficient correlations. As a result, it is claimed that female Honduran immigrants experienced increased access to Mexico's health care in 2015. Another variable displaying a different trend is that of the *Head of Household.* In 2010, the variable presented no influence on Honduran immigrants entitled to the status in terms of their

experienced health care accessibility. Further down the lines, however, accessibility to health care for Honduran immigrants with the status decreased in 2015. Therefore, *head of household* status provided a negative influence subsequent to The New Migration Law.

Contrarily, changes in influence brought by variable *Ethnicity (Indigenous)* to Honduran immigrants in terms of their health care accessibility remains unclear. Since the coefficient correlation value of the same variable in 2010 is omitted, the positive correlation portrayed in 2015 does not allude to an increase or decrease in coefficients. However, the positive correlation between health care accessibility and indigeneity in 2015 holds that indigenous Honduran immigrants encountered higher access to Mexico's health care.

Summary of Results

The following section briefly summarizes the specific groups that experienced an increase in health care accessibility after the promulgation of The New Migration Law. The assessment criteria is grounded in observable changes from negative to positive in the value presented by each correlation coefficient of the controlling variables Age; Education; Monthly income; Gender (Female); Head of Household; Recent Migrant (≤5years) and Ethnicity (Indigenous). The common thread shared by the three groups is the restricted array of variables that promote higher health care access. Although the three groups present deteriorated access to health care in 2015, it is obsrved that certain sub-groups within each nationality experienced increased health care access as a positive effects of the Law.

As for the Guatemalan group, immigrants with a relatively higher age range; who have been situated in Mexico less than or equal to five years and holding

indigenous roots benefitted with increased access rates to Mexico's health care. Subsequent to the Guatemalan group, Salvadoran immigrants that are females; with a relatively higher age range and a source of monthly income experienced higher rates of health care access. Lastly, Honduran immigrants that are females; who have been situated in Mexico for less than or equal to five years; with a relatively higher age range and source of income presented higher health care accessibility.

Conclusion

From the regression analysis conducted, this project concludes that the hypothesis of an effective implementation of The New Migration Law through the lenses of health care accessibility is rejected. Despite the endeavors made by the Mexican Federal Government as well as civil society advocating for the protection of the NTCA immigrants, they continuously face barriers impeding their access to Mexico's health care system. Such barriers allude to a specific set of socio-demographics that effectively complicate health care access for Guatemalan, Salvadoran and Honduran immigrants. Through the findings, it is discovered that the variables alluding to the socio-demographic factors negatively influencing health care access for Guatemalan immigrants are education; monthly income; gender (female) and head of household status while age; recent migrant (≥ 5years) and indigeneity show a positive influence in 2015 relative to 2010. The implication for variables education and monthly income is that lower education levels and lower income levels ironically facilitate health care accessibility, hence contradicting the conceptual framework's narrative on such variables as determinants of health care access. Similarly, for Salvadorans, variables holding a negative influence include education and recent migrant (≤5 years) while age; monthly income and gender (female) positively influence health care access in

2015 in comparison with 2010. Head of household status remains as a non-influential variable in the Salvadoran immigrant context. Furthermore, the role of indigeneity in Salvadoran health care access remains unclear as the coefficient in 2010 was omitted. Lastly, education and head of household status are the two variables that negatively influenced Honduran immigrants' health care access while age; monthly income; gender (female) and recent migrant (≥ 5 years) showed to be variables that contrarily facilitated health care access in 2015 subsequent to the promulgation of The New Migration Law. The role of indigeneity remains unclear as the coefficient for 2010 was omitted. Despite the promulgation of the The New Migration Law, NTCA immigrants continuously face barriers to access Mexico's health care system.

Through the analysis, it is speculated that the lack of effective results seen from The New Migration Law stems from the population's lack of will to abide by the Law through the means xenophobic behavior, inability of the federal government to take the necessary measures to instigate obedience and the "unconstitutional" nature of the Law's provisions. A lack of credibility towards the Federal government causes state governments to function in a rather individualistic manner by prioritizing the interests held by the majority of the local societies. As a form of anti-immigrant rhetoric, Mexico has extensively faced a lack of abidance by the local authorities to ensure the protection of immigrants. Although the grounds of The New Migration Law is based on inclusiveness and equality, the reality observed in the regression analysis proves otherwise.

Migration deriving from the NTCA region will continue as observable in the 2018 and 2019 caravans. Given Mexico's performance as a new receiving country for the NTCA migration masses, much is to be done in order for the Law to be effectively practiced. The Mexican population must detach itself from the vicious cycles

empowering anti-immigrant rhetoric and view the phenomena as solely a humanitarian crisis rather than an issue jeopardizing the state's sovereignty and national security. In order to do so, state governments ought to use the Law as their foundational basis of the local policies and measures attempting to control and regulate migration inflow while simultaneously promoting the protection of vulnerable immigrant groups.

The acknowledgement of space for improvement in this research is a fundamental and progressive attempt to promote integrity and empowerment in the resolution of the major global conflicts impacting our contemporary world in numerous ways. For future endeavors to further analyze this topic, a qualitative research ought to be conducted. This will encompass a series of interviews with health care workers; politicians; individuals laboring in the Mexican political realm and immigrants. These interviews will aim to explore the underlying reasons behind the lack of abidance to law manifested by the Mexican population. Quantitative methodology does not provide an in-depth analysis of individual experiences and consequently overlooks the emotional aspect of immigration. As an academic in the immigration field, I must acknowledge that while numbers talk, they fail to do so extensively. In order to understand the NTCA immigrant experience in Mexico, we must also acknowledge and explore the deep connection between migration and the emotional aspect of the phenomena. For further efforts to understand health care coverage across the NTCA immigrant population in Mexico, qualitative methods will also open access to the understanding of the immigrants' perception of Mexico's health care system and the repercussions embedded in its potential loopholes.

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