

The Emigration Plans of the Legal Foreign Born

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Abstract

This research uses data from The New Immigrant Survey (NIS) to examine the determinants of an immigrant's intent to emigrate from the U.S. Before the release of the NIS, there was no large comprehensive data set that simultaneously had a representative sample of immigrants and information from the respondents on intent to emigrate, class of immigrant admission, economic variables, social capital and family relationships, health and demographic variables. From a policy perspective, the rate of immigrants' intent to emigrate may affect economic and social integration into the host country's society. The results from our logistic regression indicate that the employed, those that own real estate abroad, and the elderly are more likely to have plans of emigration. In contrast, younger immigrants and immigrants in large households are more likely to have intentions of residing in the U.S. for the rest of their lives. We also find that immigrants who acquire a green card through employment are no more or less likely to plan for emigration than those who acquire their green card through a family member. However, immigrants obtaining their green cards through the diversity program, refugees, asylees, parolees and other programs are less likely to plan for emigration.

Keywords: Immigration, Emigration Plans, Class of Immigrant Admission - Pathways to Legal Permanent Residence

JEL Classification: J11, J10, J19

1. Introduction

This paper examines the main factors influencing an immigrant's intention to leave or reside in the United States for the rest of his or her life. Since the U.S. Immigration and Naturalization Service does not collect data on emigration out of the United States, and there is no data set with a representative sample of U.S. immigrants that tracks them if they leave the country, studies examining the characteristics of immigrants who eventually leave are limited. Those studies that do examine emigration have limitations, such as omitting newly-arrived immigrants (Van Hook and Zhang, 2011; Aguilera, 2004; Mulder, 2003), only including legal immigrants (Borjas & Bratsberg, 1996; Jasso & Rosenzweig, 1982), or examining immigrants by demographic group, occupation, or Social Security

status (Riosmena et al., 2013; Turra & Elo, 2008; Palloni & Arias, 2004; Reagan & Olsen, 2000; Borjas & Bratsberg, 1996; Duleep, 1994; Borjas, 1989). Furthermore, several studies do not simultaneously examine the economic variables, social and family relationships, health variables, and class of admission; factors that can affect the decision to leave (Riosmena et al., 2013; Turra & Elo, 2008; Reagan & Olsen, 2000; Borjas & Bratsberg, 1996; Borjas, 1989).

This data limitation on emigration from the U.S. poses challenges for empirical work and public policy such as generalizable results, business decision-making, and public funds allocation and planning. As such, researchers have taken to using an individual's *intent* to emigrate as a proxy for the actual action, as more data on intentions are available. Asking an individual about intent requires only a cross-sectional survey and does not require a follow-up in subsequent years. With regard to the Theory of Reasoned Action (Ajzen & Fishbein, 1980), intent is used as a substitute for action in not only the economic literature, but in the demographic and sociological research.

Our study contributes to the literature by overcoming the data limitation encountered in previous research. The data we use for our study, Round 1 of the 2003 cohort of the New Immigrant Survey (NIS-2003-1), is to our knowledge the only dataset that asks U.S. immigrants about their emigration intention. It is a longitudinal survey of a stratified random, nationally representative sample of immigrants who became legal permanent residents of the United States in 2003.¹ The data is drawn from the administrative records of the U.S. Citizenship and Immigration Services (Jasso et al., 2006). In addition to being a data set composed of a representative sample of immigrants, it has information from the respondents on economic variables, social capital and family relationships, health variables and class of immigrant admission. Another unique feature of the data is that it contains immigrants who have a range of living duration in the U.S., from 2 days to approximately 37 years. This comprehensive set of variables allows us to better examine the determinants of intent to emigrate. The data set also allows us to examine the relationship between the intent to emigrate and the class of immigrant admission, a relationship that has not been examined simultaneously with other covariates before in the literature.

In the NIS-2003-1, the variable class of immigrant admission refers to the immigration pathways used to obtain legal permanent residence or a green card. There are several pathways available to an immigrant who is applying for legal permanent residence in the U.S. In this paper, these immigration pathways are categorized into four groups, namely employment-based preference; family-sponsored preference; diversity immigrants; and refugees, asylees, parolees and others. To obtain legal permanent residence through employment-based preference, a U.S. employer must file an immigrant visa petition on behalf of the immigrant employee. Similarly, to obtain legal permanent residence through family-sponsored preference, a family member with legal permanent residence status must file an immigrant visa petition on behalf of the immigrant family member. Diversity immigrants are winners of the diversity visa lottery. The Diversity Immigrant Visa Program (DV Program) makes up to 50,000 immigrant visas available annually, drawn from random selection among all entries to individuals who are from countries with low rates of immigration to the United States (U.S. Citizenship and Immigration Services, 2016). Immigrants in the group called refugees, asylees, parolees and others are refugees, asylees, parolees and immigrants who obtained their green card through other pathways not mentioned above. The different immigration pathways permit us to compare the attachment levels of immigrant groups to the U.S.

The respondents in the NIS-2003-1 sample were asked if they intend to live in the United States for the rest of their life. Our dependent variable is created from this question and used to measure the respondent's attachment to the U.S. and its determinants. Using the NIS-2003-1 and logistic regression our results reveal that several variables representing economic, social capital and family relationships, health and class of immigrant admission are statistically significant determinants of the intent to emigrate. The immigrants who have real estate located outside of the United States are approximately 8 percent more likely to have plans to emigrate than immigrants who do not own real estate outside of the United States. Similarly, a positive relationship exists for immigrants who work for pay and the intent to emigrate. Immigrants who work for pay are 4 percent more likely to have plans to emigrate

than immigrants who do not work for pay. The intent to emigrate is U-shaped with respect to age, with younger immigrants being less likely and older immigrants being more likely to have plans to emigrate. The number of individuals in the household and the intent to emigrate are negatively related. Immigrants who live in larger households are less likely to have emigration intentions, with the likelihood of emigration decreasing by 1 percent for each additional person in the household. With respect to class of admission, diversity immigrants and immigrants who belong to the refugees, asylees, parolees and other group are 8.1 and 6.3 percent less likely, respectively, to have emigration plans than immigrants in the employment-based preference group. We also find that immigrants who acquire a green card through employment are no more or less likely to plan for emigration than those who acquire their green card through a family member.

The paper is organized as follows. The next section summarizes previous studies. Section 3 describes the data. A discussion of the methodology and results follow in Section 4 and the final section concludes.

2. Literature Review

In the review of the literature, we describe the main reasons immigrants may intend to leave the receiving or host country to return to their country of birth or to go to another destination. Overall, economic theory and the literature suggests that economic factors, social capital and family relationships, and health status explain to a large degree why emigration occurs. The literature on the outward migration of immigrants from the United States is scarce.² One of the main reasons for this is the absence of nationally representative panel surveys that follow immigrants in the U.S. and contain enough observations to draw meaningful conclusions about migration out of the country. Those that have researched this topic have gotten around this issue by using various statistical techniques and/or administrative data, however, these studies suffer from problems of sample attrition, the exclusion of recently-arrived immigrants, and/or the inability to identify demographic and socioeconomic characteristics specific to immigrants who subsequently leave.³ Given these drawbacks, researchers have taken to using an individual's *intent* to migrate as a proxy for the actual action, as more data is available. Asking an individual about intent requires only a cross-sectional survey and does not require a follow-up in subsequent years.⁴ Given our assertion that studying intent is useful in describing the characteristics of those who actually end up leaving, we first review the reasons why intent is appropriate to use as a proxy, and then describe the characteristics others have found to correlate with the intent to emigrate.

2.1. Intent as a Proxy for Action

Whether intent is a good proxy for action is a question that has been debated in the literature for decades. Intent was first seen as a major predictor of action in the Theory of Reasoned Action, developed by Ajzen and Fishbein in 1980. This theory from social psychology proposes that along with an individual's pre-existing attitudes, his or her intentions are the single best predictor of what he or she ultimately chooses to do. If an individual has strong intentions to do something, he or she will exert more effort to perform the behavior, which then results in a higher likelihood that the behavior will be realized. The theory took hold not only in the psychological literature, but in the business, health, and environmental realms as well.⁵

Since Ajzen and Fishbein's theory has taken hold, social scientists have tested the theory with respect to migration. While we know of no studies using U.S. data, a few other countries have collected data over time that allow researchers to measure to what extent intentions to migrate match up with subsequent migration. Although a few studies find that intentions do not match up well with subsequent actions because of changing immigration policies, turmoil and war in the home country, and changing health over time,⁶ the majority of research supports the theory of reasoned action and

finds a statistically significant relationship between intent and action. We highlight these studies in the following paragraphs.

Three studies from European countries stand out as most relevant for our purposes. Van Dellen and Henkins (2013) used data from a representative sample of the Dutch population who were asked about international migration intentions in 2005. A 2010 follow-up survey found that 46% of the respondents who rated their possibility of emigration as "yes, certainly" had actually left the Netherlands within the 5 year follow-up period. Actual emigration for those who initially had no intentions to do so at all was extremely rare. A subsequent multivariate regression showed that the probability of actually emigrating increased with the level of certainty in which respondents declared their intent. Likewise, Steiner and Velling (1994) used data for guest workers in Germany from the 1984-1989 waves of the German Socio-Economic Panel and found intentions are good predictors of future migration behavior. Finally, Boheim and Taylor (2002) find that almost 70% of British citizens who actually moved expressed a desire to do so in the previous interview. Additionally, the probability to move for potential migrants is three times greater than for those who say they do not want to move.

The correlation between intent and action is higher if the individual intends to stay permanently at the outset. Using data comprising of rural Thai men and women, De Jong (2000) reported that while 32% of respondents intended to migrate to the city in 1992, by 1994, 23% had migrated and did not return. His multivariate regression model showed that while intentions were not predictive of temporary migration, they were a statistically significant predictor of permanent movements. Landesmann and Mara (2013) found similar results. They used a survey of Romanian immigrants in Italy and found that those who had intended to immigrate to Italy temporarily tended to amend their actual migration decisions based on changes in economic and family situations. However, immigrants that followed through with their plans had stated more permanent intentions at the outset. The higher correlation between intent and plans to stay permanently is important for our study, as immigrants in our sample were asked if they plan on staying in the U.S. "for the rest of their lives".

2.2. Predictors of the Intent to Migrate

2.2.1. Economic Factors

Education, employment, and economic integration in the host country are significant drivers in the original immigration decision (Borjas 1989; Lindstrom and Massey 1994; Van Hook and Zhang 2011), so it is not surprising that they would also be considering factors in subsequent migration decisions. Most of the literature on migration intentions shows that the more educated intend to leave (Fouarge & Ester 2008; Liebig & Sousa-Posa 2004; Van Dellen & Henkins 2013), particularly from countries with low income inequality, like the Netherlands (Van Dellen & Henkins 2013).⁷ On the other hand, Steiner and Velling (1994) find that guest workers in Germany who have higher levels of education intend to return to their home country at a lower rate than those with low education, most likely because their human capital is less transferable to the home country.

Most studies find a strong relationship between employment and income, and migration intentions. With few options available in the host country, Steiner and Velling (1994) find that unemployed guest workers are more likely to intend to leave. Liebig and Sousa-Posa (2004) and Otrachshenko and Popova (2014) also come to this conclusion, only for residents (instead of strictly immigrants) of several EU countries. Income is also positively related to the intent to migrate, with high income Dutch residents intending to leave (Van Dellen & Henkins 2013), and high income immigrants in the U.S. less likely to plan to become U.S. citizens, hence less likely to want to stay in the U.S. forever (Massey & Akresh 2006).⁸ The authors reason that an emerging global economy offers highly-educated immigrants many opportunities outside of the U.S., and if they encounter obstacles in their host country (e.g., prejudice, isolation), they have opportunities elsewhere. Finally, Steiner and Velling (1994) measure non-labor forms of income, and find that higher levels are associated with a shorter intended duration in the host country. They hypothesize that because these income sources contain relatively more interest income, immigrants are saving in the host country to build a nest egg to take with them when they return.

Many immigrants use a portion of their income to send remittances back to family and friends in their home country. Whether we would expect the existence and/or amount of remittances to increase the intent to emigrate or not depends on what these remittances are used for. One theory is that remittances are saved in the home country for use when the immigrant returns, hence increasing the intention to return to the home country someday. The other use of remittances would be to support a network back home, which would lead to decrease the intention to leave, as the immigrant makes a higher income in the host country that he or she could not make back home. Steiner and Velling (1994) find the former relationship in their analyses; as the amount of the remittance increases, the greater the likelihood of intending to leave. Similarly, Massey and Akresh (2006) find that immigrants who plan to stay in the U.S. forever remit smaller sums than those who plan to leave.

Owning a home is an important sign of economic integration into a society, as it is typically a long term investment. If it is associated with integration into society, we would expect to see the ownership of property negatively associated with a desire to leave, as it fosters a sense of permanency. Steiner and Velling (1994) and Fouarge and Ester (2008) find this result with German guest workers and members of the Eastern and Central EU states, respectively. However, Massey and Akresh (2006) find the opposite: those who own U.S. property are less likely to want U.S. citizenship. In this case, higher-income home owners could be treating home ownership as a purely economic decision, such as providing tax benefits in the present, and retirement income with which to use in their return to their home countries in the future. Interestingly, owning foreign real estate does not seem to have a similar effect, as there was no statistically significant relationship between owning property abroad and planning on becoming a citizen.

2.2.2. Demographics, Social Factors, and Health

In the 1960s and 1970s, most migrants were young, single men looking for work opportunities to make money to send back to their home countries. The idea was not to stay in the host country forever, but to work for a year or two and go back to their countries of origin, often repeating the process as economic need rose (Constant & Massey, 2003). However, economics is not the only driving factor in migration decisions, as family, life cycle, and assimilation into the host country culture play a large role, especially for women (Chort 2014; De Jong 2000). We explore the literature on these social forces in the following paragraphs.

Most individuals who express an intent to migrate are still young men (Chort 2014; Van Dellen & Henkins 2013; Fouarge & Ester 2008; Liebig & Sousa-Posa 2004; De Jong 2000) and unmarried (Chort 2014; Otrachshenko & Popova 2014; Fouarge & Ester 2008; De Jong 2000). However, Steiner and Velling (1994), who examine immigrants specifically, find no relationship between gender or marital status and the intent to migrate.⁹ Furthermore, while Massey and Akresh (2006) find weak evidence that married immigrants are less likely to want to become U.S. citizens, gender does not appear to play a role in the decision. Steiner and Velling (1994) also finds that it is those nearing retirement that intend to leave, supporting the *Salmon Bias* theory, where a class of immigrants live their lives in the host country yet go home in their old age. In contrast, Van Dellen and Henkins (2013) finds no effect of health on intent to emigrate, which weakens support for the *Salmon Bias* theory¹⁰.

Not surprisingly, having children, especially those of school-age, affects intentions. Otrachshenko and Popova (2014) and Fouarge and Ester (2008) find that EU residents are more likely to intend to migrate if there are no children in the household. Furthermore, having children in school (even adult children) in the host country increased the intended length of stay for German migrant workers (Steiner & Velling 1994). It is not only the presence of children, but also general networks of family and friends, that affect migration plans. Just having an extended network abroad increases the intentions of Dutch (Van Dellen & Henkins 2013) and Mexican (Chort 2014) residents to migrate. Fouarge and Ester (2008) also found that the fear of not having social ties in the receiving country kept Europeans from intending to leave their countries of residence. In addition to the absence of social ties, isolation from not having a command of the receiving country language can decrease the probability of

intending to leave the country of origin (Fouarge & Ester 2008). Steiner and Velling (1994) shows that the degree to which an immigrant speaks the host country language increases their expected length of stay there while Massey and Akresh (2006) finds that knowing English increases immigrant satisfaction, which in turn increases the desire to become a U.S. citizen.

In addition to a command of the host country language, general assimilation and satisfaction also affect the desire to leave. Steiner and Velling (1994) find that as the years increase since arrival in the host country, the intention to leave that country diminishes, however this is not the case if there is dissatisfaction with private living conditions (Steiner & Velling 1994; Van Dellen & Henkins 2013) or the welfare and environmental state (Van Dellen & Henkins 2013).

3. Data and Variable Description

Our analysis use data from Round 1 of the 2003 cohort of the New Immigrant Survey (NIS-2003-1). The NIS-2003-1 is a nationally representative sample of immigrants who became legal permanent residents in the U.S. in 2003. The dependent variable, the **intent to emigrate**, was created from the responses to the question “Do you intend to live in the United States for the rest of your life?”. The variable is coded as missing if the respondent answered don’t know or refused to answer the question. Of the 8,573 respondents in the survey, 4,050 respondents were asked the question. In the section of the questionnaire, titled “Social Variables”, where the intent to emigrate question was asked, some of the questions were administered to all respondents and then the remaining questions were randomized; where approximately 50 percent of the respondents were asked a set of questions and the remaining 50 percent were asked another set of questions. After deleting observations for which information was missing for the dependent and independent variables the sample consists of 1,328 immigrants. The dependent variable measures an immigrant’s attachment to the U.S. This is similar to Aguilera (2004), who used the dependent variable **intent to retire in the United States** to measure an immigrant’s attachment to the U.S. We acknowledge that the intended behavior is not an actual behavior, but a planned behavior that may change. Given the studies presented in our literature review, however, we are confident that intent is a reasonable proxy for action.

We present weighted descriptive statistics for the variables in Table 1. Our choice of independent variables is based upon the intent to emigrate literature, which includes country of origin and three theoretical perspectives on the causes of the intent to migrate, which can be divided into: Economic Factors, Social Capital and Family Relationships, and Health Status. These broad categories have been found at length in the literature to affect emigration intent.¹¹ In addition - as one of our contributions to the emigration intent literature - we include class of admission status. We describe how each fits into our model below.

Economic factors are perhaps the most often cited reasons a person intends to emigrate. We include 1/0 dummy variables for the ownership of real estate inside the U.S., ownership of real estate outside of the U.S.,¹² and for being employed. The majority of the intent literature finds that the unemployed intend to leave at a higher rate than the employed (Steiner & Velling 1994; Liebig & Sousa-Posa 2004; and Otrachshenko & Popova, 2014), due to financial concerns or low prospects for economic success in the host country. Furthermore, owning real estate in the host country may foster staying in that country due to the long-term investment nature of this asset (Fouarge & Ester 2008; Steiner & Velling 1994), while owning property in another country maintains ties abroad and theoretically may increase the likelihood of intending to return. Massey and Akresh (2006), however, test this theory using the pilot NIS and find no statistically significant relationship between immigrants’ ownership of property (within or outside the U.S.) and the intention to emigrate.

The social capital and family relationships perspective of emigration can be summarized as immigrants fulfilling their social and family obligations (Massey 1999; Massey et al. 2002; Constant & Massey 2003). To capture these covariates, we use the following variables: years of U.S. education, duration of time in the U.S., the number of individuals living in the household, and 1/0 dummy variables for having children less than 18 years of age, being married, or being a male. In addition,

respondents rate their ability to speak English on a four-point scale, with 1 representing 'very well', and 4 representing 'not at all'.

Table 1: Weighted Descriptive Statistics

Variables	Mean	Standard Error	Minimum	Maximum
Dependent Variable				
Intent to emigrate	0.123	0.011	0	1
Independent Variables				
Economic Variables				
U.S. education (years)	0.927	0.083	0	17
Own Real estate located outside of the U.S.	0.034	0.005	0	1
Own real estate in U.S.	0.247	0.014	0	1
Work for Pay	0.591	0.015	0	1
Social Capital and Family Relationships				
Duration in the U.S. (days)	2314.17 (6.3 years)	77.959	3	13490
Number of individuals in the household	4.162	0.058	1	16
Children less than 18 years of age	0.503	0.016	0	1
Speak English	2.599	0.033	1	4
Married	0.673	0.014	0	1
Male	0.462	0.016	0	1
Health Status and Age				
Diagnosed health problems	0.276	0.014	0	1
Age	38.213	0.407	18	94
Age squared	1636.41	36.809	324	8836
Class of Immigrant Admission				
Family-sponsored preference	0.527	0.015	0	1
Employment-based preference	0.075	0.006	0	1
Diversity immigrants	0.056	0.005	0	1
Refugees, asylees, parolees and others	0.343	0.014	0	1
N=1328				

Assimilation into the host country is an often-cited factor in the intent to emigrate (Chort 2014; Van Dellen & Henkins 2013; Fouarge & Ester 2008, Massey & Akresh 2006; Steiner & Velling 1994). Hence immigrants who went to school in the U.S. may be more settled with life in this country and be more likely to intend to stay. Likewise, the longer the time already living in the host country and the better the command of the language, the higher the likelihood of assimilation and hence the desire to stay (Fouarge & Ester 2008; Steiner & Velling 1994). We predict that immigrants with school aged children would be less likely to have emigration plans because they might believe that remaining in the U.S. provides better opportunities for the children in general (Otrachshenko & Popova, 2014; Fouarge & Ester, 2008; Steiner & Velling, 1994). Additionally, larger size households may be less likely to intend to leave, as a larger household typically means that more family members are in the U.S. Similarly, being married also strengthens the ties in the host country (given the spouse remains in the host country), leading to married individuals being less likely to intend to emigrate (Chort 2014; Otrachshenko & Popova 2014; Fouarge & Ester 2008; De Jong 2000). Finally, males intend to emigrate at a higher rate (Chort 2014; Van Dellen & Henkins 2013; Fouarge & Ester 2008; Liebig & Sousa- Posa 2004; De Jong 2000); this has historically been due to finding work elsewhere, rather than for social reasons.¹³

An immigrant's health status and age have been found to influence the plans for emigration (Steiner & Velling 1994). To represent the health status of the immigrants, we use a 1/0 dummy variable to denote whether the person has a diagnosed health problem.^{14, 15} We also include a continuous age variable. For most older immigrants their plans to emigrate may be reflecting their retirement plans and as such we predict that they will be more likely to have emigration plans. In

addition, ill health often accompanies old age, which may strengthen their intent to leave if the Salmon Bias hypothesis holds. Alternatively, if the relative quality of health care in the sending country is poor compared to the host country, they may be less likely to intend to leave.

In addition to the aforementioned variables, we include in the analysis the immigrants' countries of origin. Eighteen countries of origin are represented in our sample and majority of the immigrants came from Mexico, El Salvador, India, Philippines and the Peoples Republic of China. Countries of origin are often used in migration studies, as the explicit and implicit costs of travel between the home and host countries may vary depending on various factors, such as distance, country turmoil, wage differentials, and/or immigration policies.¹⁶ Hence we predict that the higher the migration costs, the less likely the intent to leave.

Finally, we represent the class of immigrant admission by four 1/0 dummy variables: family-sponsored preferences; employment-based preferences; diversity immigrants; and refugees, asylees, parolees and others. Table 2 provides details of the class of immigrant admission used in the NIS-2003-1. Definitions of the categories were obtained from the Office of Immigration Statistics (2016) and NIS-2003-1. Although no U.S. studies to our knowledge have included class of immigrant admission as a predictor of intent, several studies of immigrant migration to other host countries have found this factor to be a significant determinant of emigration. Bilgili and Siegel (2012) finds that African immigrants to the Netherlands who arrive for family reasons are less likely to leave, as are individuals who come to the host country for political reasons or instability in the home countries (Carling & Pettersen 2014; Flauhaux 2015; de Haas & Fokkema 2010; Edin et al. 2000). Likewise, Baruch et al. (2007) hypothesizes that individuals who come to the host country for educational reasons are more likely to want to return to their home countries with their newly acquired human capital, but only if economic conditions in the home countries allow for more economic opportunities (Hazen & Alberts 2006).

Table 2: Classification of Immigration Visa Admission Categories by NIS-2003-1

Family-Sponsored Preferences	Employment-based Preferences	Diversity Immigrants	Refugees, Asylees, Parolees and Other
1. Spouse of U.S. Citizen 2. Spouse of Legal Permanent Resident 3. Parent of U.S. Citizen 4. Child of U.S. Citizen 5. Brothers or sisters of U.S. citizens (at least 21 years of age) and their spouses and children.	1. Priority workers. 2. Professionals with advanced degrees or aliens of exceptional ability. 3. Skilled workers, professionals and unskilled workers. 4. Certain special immigrants. 5. Employment creation immigrants (investors).	1. Immigrant lottery winners from countries that have sent fewer than 50,000 immigrants to the U.S. in the previous five years who have met either the 12 years of education or two years of work experience requirement.	1. Refugees 2. Asylees 3. Parolees 4. IRCA Legalization 5. Other

4. Econometric Model, Methodology, and Results

We use a multiple logistic regression model clustering on country of birth to examine the determinants of an immigrant's intention to leave or reside in the United States for the rest of his or her life. The model has the form:

$$\text{intenttoemigrate}_i = \alpha + \beta_1 \text{employment}_i + \beta_2 \text{diversity}_i + \beta_3 \text{refugeesother}_i + \gamma'X_i + \varepsilon_i \quad (\text{Model 1})$$

where **intenttoemigrate** is a dummy variable that takes a value of 1 if an immigrant does not intend to live in the United States for the rest of his or her life, **employment** is a dummy variable that takes the value of 1 if an immigrant obtained legal permanent residence through employment, **diversity** is a

dummy variable that takes the value of 1 if an immigrant obtained legal permanent residence through the diversity visa lottery program, **refugeesother** is a dummy variable that takes the value of 1 if an immigrant obtained legal permanent residence as a refugee, asylee, parolee or through other programs, with the omitted category being immigrants who obtained legal permanent residence through the family category. **X** depicts a series of control variables representing economic factors, social capital and family relationships, and health status as described above. Table 3 presents the selected marginal effects, standard errors and the p-values. Our results corroborate the Van Hook and Zhang (2011) model specification by finding that simultaneously economic factors, social capital and family relationships, and health status have an effect on emigration.¹⁷ The statistically significant variables are significant at the 0.05 level or less.

We find that those who work for pay are 4.1% more likely than the unemployed to intend to leave. This result is contrary to most of the intent literature, which find that it is those without work who leave (Otrachshenko & Popova 2014; Liebig & Sousa-Posa 2004; Steiner & Velling 1994). Massey and Akresh (2006), however, use the pilot NIS and find that income is negatively correlated with the intention to become a U.S. citizen. Given that the former studies are not in the U.S., while Massey and Akresh (2006) and ours are, this result could be specific to the U.S. where job skills acquired here may provide relatively more economic gain abroad than in the U.S. The other economic variable that is statistically significant in our model is owning real estate outside the U.S. The average immigrant in the sample who owns real estate abroad is 8% more likely to indicate an intent to emigrate. This result is consistent with the theory that investing in real estate in an immigrant's home country shows a desire to establish a long-term connection with the home country and may increase the likelihood of emigration.

Table 3: Weighted Logistic Estimates of Intent Probability of Emigration: Marginal Effects for Continuous Variables and Delta Effects for Discrete Variables

Independent Variables	Marginal Effects	Standard Errors	P-values
Economic Variables			
U.S. education (years)	-0.009	0.005	0.061
Own Real estate located outside of the U.S.	0.076***	0.023	0.001
Own real estate in U.S.	0.015	0.017	0.371
Work for Pay	0.041**	0.019	0.032
Social Capital and Family Relationship			
Duration in the U.S. (days)	-0.000	0.000	0.245
Number of individuals in the household	-0.010**	0.004	0.016
Children less than 18 years of age	-0.004	0.019	0.824
Speak English	0.006	0.011	0.584
Married	0.012	0.021	0.567
Male	-0.006	0.021	0.790
Health Status and Age			
Diagnosed health problems	0.038	0.023	0.107
Age	-0.009**	0.003	0.012
Age squared	0.000**	0.000	0.020
Class of Immigrant Admission (omitted category-family-sponsored preference)			
Employment-based preference	-0.001	0.047	0.987
Diversity Immigrants	-0.081***	0.017	0.000
Refugees, asylees, parolees and others	-0.063***	0.017	0.000
N=1967; * p<0.10; ** p<0.05, ***p<0.01			

The only factor in the social capital and family relationships category that is statistically significant is the number of individuals in the household. Our results show that each additional person in the household decreases emigration intent by 1%. This result is consistent with the theory that the unification of family encourages immigrants to stay in the host country. Immigrants tend to live in

extended families, and the larger the number of individuals living in the household, the greater the pull of family unification towards intending to stay.

An immigrant's age is negatively correlated with intent to emigrate, except at older ages. With both age and age squared statistically significant, we observe a U-shaped relationship of age with respect to intent to leave. The plans of older immigrants are possibly reflecting their retirement destination plans. This result is consistent with Steiner and Velling (1994), but not consistent with much of the other intent literature, that find a positive relationship between age and intent to leave, even as young adults.¹⁸ While we find age to be correlated with intentions, having a diagnosed health condition is not statistically related to emigration plans at less than the 5% level.¹⁹ Because the p-value is still relatively small at .11, it is worth reporting that the coefficient estimate is positive, supporting the Salmon Bias hypothesis that immigrants in ill-health return to their home country expecting to live out their final days.

To exploit one of the main advantages of the data, we include a control variable representing the class of immigrant admission. The family-sponsored preference group is the omitted category in the regression. In comparison to an average immigrant in the family-sponsored preference group, an immigrant who obtained their green card through the diversity program, and refugees, asylees, parolees and others are 8 and 6 percent less likely to have plans of emigration, respectively. These immigrants have a very high probability of not having the opportunity to visit or reside in the U.S. under normal circumstances and hence face very high costs of emigration, which deters outmigration. In contrast to published results indicating that more educated immigrants and immigrants who are more attached to the host country's labor market intend to leave,²⁰ our results show that employment-based immigrants are neither more nor less likely than family-sponsored immigrants to have plans to emigrate.

5. Conclusion

This paper uses the NIS-2003-1 to examine the factors influencing an immigrant's intention to leave or reside in the United States for the rest of his or her life. The NIS-2003-1 is more suitable to address the issue of intent to emigrate as it has a representative sample of immigrants, includes information from the respondents on the intent to emigrate, and contains the class of immigrant admissions. Utilizing these features of the NIS-2003-1 we contribute to the literature by overcoming the data limitation encountered in previous research and present estimates of the impact of class of immigrant admissions on the intent to emigrate, which to the best of our knowledge has not been presented before. The results from our logistic model suggest that the class of immigrant admissions are significant determinants of intent to emigrate, as it indicates which type of immigrants are most likely to emigrate from the U.S. The immigrants who obtained their green card through the diversity program, and refugees, asylees, parolees and other programs are less likely to have emigration plans compared to immigrants who obtained their green card through family sponsorship. This result should reinforce the agenda of policy makers to implement well-crafted integration policies for these immigrants and their children so as to provide them with the opportunity to be successful permanent residents of the U.S. Immigrants in the employment-based preference groups are more likely to have prestigious occupations than immigrants from the other three class of immigrant admission groups. Our results reveal that immigrants who belong to the employment-based preference group are neither more nor less likely to have plans for emigration in comparison to immigrants who belong to the family-sponsored preference group, thus suggesting that occupation and plans for emigration are unrelated. The results also indicate that the employed, those that own real estate abroad, and the elderly are more likely to have plans of emigration from the U.S. In contrast, younger immigrants and immigrants in large households are more likely to have intentions of residing in the U.S. for the rest of their lives.

The NIS-2003-1 has major advantages for this type of study, however, its limitation of grouping some countries into regions reduces the sample size and prohibits researchers from identifying the effects of each country of origin. It is also a relatively older dataset, however, given that our results are generally consistent with previous studies on intent, the fundamental driving forces

behind immigrants planning to leave their host countries appear indifferent to time. In addition, given that immigration policies and attitudes towards immigrants do change over time, to fully understand emigration intentions today a more current dataset surveying U.S. immigrants is needed.

Endnotes

1. NIS-2003-2, wave 2 of the survey, came out in 2014. We did not exploit the longitudinal nature of the survey by using this wave for a couple of reasons. First, the sample size was 46% smaller than in the first wave (Massey et al., 2017). Second, only half of the NIS-2003-1 sample was initially asked the intent to emigrate question, which further reduces the size of the NIS-2003-2 sample. Lastly, we do not know if those who were not found in the second wave had emigrated, moved within the U.S., or died.
The original plans for the NIS were to track the 2003 respondents for re-interview in the second wave. Initially, the U.S. Citizenship and Immigration Services had agreed to supply change of address updates to the NIS interviewers, however, they retracted that agreement and the interviewers were forced to try to locate the respondents themselves (Massey et al., 2017).
2. The obvious U.S. data of choice for following immigrants over time would be the Panel Study of Income Dynamics (PSID). We considered using this dataset but upon examination found the immigrant sample to be too small to draw meaningful conclusions. Longitudinal data from other developed countries, such as the Socio-economic Panel in Germany (Steiner & Velling, 1994) and Mexican Family Life Panel (Chort, 2014), have data on both intent and actual action.
3. For example, Van Hook and Zhang (2011) use the residual method, an indirect technique that uses the decennial Census and survey sampling weights, to estimate an emigration rate. The weakness of this method is the inability to measure immigrants who arrived in the U.S. between the two censuses and the inherent problems of attrition. Furthermore, Aguilera (2004) uses the Legalized Population Survey, however, this survey only questions immigrants who have been in the U.S. for a minimum of 10 years.
4. Obviously following up in a subsequent time period to see if the individual actually did as intended would be ideal. However, the authors know of no surveys in the U.S. that record actual migration of immigrants out of the country.
5. See, for example, Roberto et al. (2011), Chien-Ta and Oh (2009), and Mishra et al. (2014).
6. See Adda and Mestres (2006) on tightening immigration policies, Flahaux (2015) on turmoil in the home country, and Van Dellen and Henkins (2013) on declining health and its effect on returning to the country of origin.
7. In countries like the Netherlands, high earners are 'taxed', while low earners are 'subsidized'.
8. Massey and Akresh (2006) is the only other study of which we are aware that uses the NIS. They use the pilot, fielded in 1996 and 1997. They run several regressions, including those with dependent variables measuring who is satisfied with living in the U.S., who intends to become a citizen, and who intends to stay in the U.S. permanently (our question of interest). Because they use **intention to become a citizen** as a regressor in their model describing who wants to stay in the U.S. forever (and it is the only statistically significant estimate), we describe the predictors of who intends to become a citizen in this literature review.
9. While being married per se does not affect the intent to leave, the presence of a partner who does not want to migrate does affect the intent to leave.
10. The Salmon Bias theory predicts that elderly immigrants in poor health are more likely to return to their countries of birth and is predominately used in the literature on Mexican immigrants in the U.S. The reference to salmon describes the lifecycle of the salmon, which lays its eggs upstream and then returns to its birthplace to die.
11. In general, for the literature on intent to emigrate, see: Chort (2014), Otrachshenko & Popova (2014), Van Dellen & Henkins (2013), Fouarge & Ester (2008), Massey & Akresh (2006), Liebig & Sousa-Posa (2004), Steiner & Velling (1994), De Jong (2000). For the literature on actual emigration, see, e.g., Vega & Brazil (2015), Van Hook & Zhang (2011), Dustmann et al. (2011), Turra & Elo (2008), Van Hook et al. (2006), Constant & Massey (2003), Borjas & Bratsberg (1996), Borjas (1989), and Jasso & Rosenzweig (1982).
12. Both primary and secondary real estate are included.
13. Most of the literature cited finds that it is young men in particular that typically intend to emigrate.
14. These conditions are: high blood pressure, diabetes, cancer, chronic lung disease, heart problem, stroke, emotional problems, arthritis, asthma, and pain.
15. Pandey and Kagotho (2010) use this measure in their research on immigrants and health insurance disparities.
16. Massey and Akresh (2006) use country of origin as a predictor of intent to become a U.S. citizen.
17. Van Hook and Zhang (2011) examines actual emigration, rather than intent. However, as we explained in the literature review, evidence shows that intent is a good proxy for action.
18. The studies supporting the young intending to leave also find that they are young men specifically. Most of this research, with the exception of Van Dellen and Henkins (2013), focus on migration to a higher income area or one with more economic opportunity, suggesting that young men leave to work and either remit back to the home

countries or eventually return with financial resources. Given that the U.S. is a high income country, this reasoning would not hold. See Chort (2014), Otrachshenko and Popova (2014), and De Jong (2000).

19. Steiner and Velling (1994) and Van Dellen and Henkins (2013) also find no statistically significant effect of health on intent to return.
20. See, e.g., Van Dellen and Henkins (2013), Fouarge and Ester (2008), and Liebig and Sousa-Posa (2004)

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