

The Refugee/Asylum Seeker

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ABSTRACT

This chapter discusses the research in economics on refugees and asylum seekers. Section 1 describes the trends in asylum seeking by source and host country. Section 2 presents a conceptual framework on why refugees might differ from other types of immigrants, and provides a new empirical analysis comparing refugees to other immigrants in the United States using a sample of immigrants recently granted legal permanent residency. Section 3 describes a conceptual framework on why investments in host-country-specific human capital might differ between refugees and other immigrants, and presents a new analysis of refugee economic integration in the United States using synthetic panel data. Section 4 synthesizes the literature on the impact of refugees on sending and receiving communities. Section 5 discusses some political economy issues surrounding refugees, and their implications for modeling host nations' asylum policy choices. The chapter closes in Section 6 with suggestions for further research.

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1. Introduction

1.1 Defining Refugees and Asylum Seekers

The United Nations Convention Relating to the Status of Refugees, originating in 1951 and expanded in scope (beyond the post-World War II Cold War context) with the 1967 Protocol, provides the framework for the international regime of refugee protection. The Convention defines a refugee as a person who “owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion, is outside the country of his nationality, and is unable to or, owing to such fear, is unwilling to avail himself of the protection of that country.”¹ Additionally, international refugee law defines a refugee as someone who seeks refuge in a foreign country because of war and violence, or out of fear of persecution. Regarding the “refugee” and “asylum seeker” distinction, typically until an individual’s request for refuge has been formally processed and approved by the host country, he or she is referred to as an asylum seeker. Asylum seekers whose applications are denied lose their legal basis for remaining in the host country and may be deported.

The United Nations High Commission for Refugees (UNHCR), an agency of the United Nations (UN), protects and supports refugees at the request of a government or the UN, and assists in their return or resettlement. As of April 1, 2011, 147 nations were signatories to the Convention, including all OECD countries. Since individual nations set their own asylum policies, there is variation among nations in the asylum application process, including where an asylum application may be filed (only in the host country, or outside it too), the allowable grounds for seeking asylum, and the standard of proof necessary to be recognized as a refugee.

The United States, for example, recognizes persecution “on account of race, religion, nationality, political opinion, or membership in a particular social group” as grounds for seeking

¹ Article 1.A.2.

asylum.² The asylum and refugee process in the United States takes place in two different agencies—the U.S. Citizenship and Immigration Services (USCIS), which is located in the Department of Homeland Security, and the Executive Office for Immigration Review (EOIR), located in the Department of Justice. There are different administrative processes depending on where the application is filed. Asylum seekers located outside of the U.S. typically need a referral to the U.S. Refugee Admissions Program (USRAP), such as from the UNHCR, in order to be considered as a refugee. Individuals with referrals receive help filling out their application for refugee status and are then interviewed abroad by a USCIS officer who determines whether they are eligible for refugee resettlement. Individuals granted refugee status receive assistance traveling to the U.S., and upon entry in the U.S. receive some training and benefits from the Office of Refugee Resettlement. On the other hand, asylum seekers located inside the U.S. file applications for asylum status, which are handled by the EOIR through one of two distinct channels: affirmative process and defensive process.³ The main difference between these two processes is that an affirmative process occurs through a USCIS asylum officer, whereas a defensive process occurs with an immigration judge as part of a removal hearing.

There is variation among countries not only in what the asylum application process entails, but also in what rights and benefits refugee status confers. However, two rights spelled out in the Convention—that refugees may not be penalized for entering or being in a country illegally, nor forcibly returned to the country where they face a well-founded fear of being persecuted—are common across signatory nations' asylum policies.

² Section 101(a)(42) of the Immigration and Nationality Act.

³ The affirmative asylum processing occurs with the USCIS, and the individual must be physically present in the United States. If the individual is not granted asylum through the affirmative process then that individual may go through a defensive asylum process with EOIR.

1.2 Trends in Asylum and Refugee Applications: Around the World and in the United States of America

In this section we provide a general portrait of the overall trends in applications for refugee and asylum status using data from the UNHCR and Yearbook of Immigration Statistics (YIS) from the United States. The UNHCR collects extensive annual data on applications filed in the major industrialized countries of Europe, North America, and Australasia, and in some years such data include applications filed in non-industrialized countries. The YIS data is compiled by the Office of Immigration Statistics in the Department of Homeland Security, and provides annual data on applications filed in the U.S.

1.2.1 World Trends

Figure 1-1 reveals a dramatic shift in asylum applications away from industrialized nations toward non-industrialized nations over the decade 1998-2000 to 2008-2010. After declining during the 1990s, total asylum applications increased to 8.7 percent between the periods of 1998-2000 and 2008-2010, to almost 2.6 million applications in the latter period. The share of asylum applications filed in non-industrialized nations increased from 49 percent to 63 percent.

South Africa was most heavily impacted—its applications increased by a factor of almost 20 between the two periods, and in 2008-2010, South Africa received 48.6 percent of all applications submitted to non-industrialized nations (after receiving only 4.5 percent in 1998-2000). Applications also surged in Ecuador by a factor of 45, in Ethiopia by a factor of 397, in Malaysia by a factor of 24, in Sudan by a factor of 17, and in Uganda by a factor of 11. Together,

these six nations received 74 percent of all asylum applications submitted in non-industrialized nations from 2008-2010, after receiving just 6.4 percent in 1998-2000.

**** FIGURE 1-1 HERE ****

The 15 nations in the European Union (EU-15) experienced the largest declines in asylum applications, with the number falling 24.7 percent number of application, and the share of the world total decreasing from 35 percent in 1998-00 to 25 percent in 2008-10. The shares to other industrialized nations either decreased or remained flat over the decade. Overall, Figures 1-1 and 1-2 depict a telling story: the median asylum seeker in the world today is seeking refuge in a developing country. This is a great contrast to six decades ago when the Convention was first established; then, western nations accounted for virtually all the refugees and asylum seekers.

Figure 1-2 shows that the variation in asylum applications submitted in industrialized nations from 1982 through 2010 is primarily a function of the variation in applications received in the European Union (EU), which has accounted for more applications over the period than the other three regions—North America, Pacific and non-EU Europe—combined. An increase in asylum applications from 1988 through 1993 was primarily absorbed by EU nations; North American, Pacific and non-EU nations all saw minor increases in the period. A second peak in applications from 2000 to 2001 was also mainly felt in the EU. Lastly, asylum applications in all four regions fell from 2001 through 2010, and while they fell more sharply in the EU than any other region, the EU continues to receive more applications than the other three regions combined.

**** FIGURE 1-2 ****

We examine asylum applications in greater detail by destination country and time in Table 1-1, which shows the average annual asylum applications for 38 destination countries in

six-year periods from 1982-97 to 2006-10. While the UNHCR tracks 38 industrialized nations in its asylum application statistics, 92.8 percent of all asylum applications submitted in industrialized nations from 1982-2010 were submitted in just 15 of those countries. Germany was the most popular destination for asylum seekers, receiving 22.7 percent of all applications over the period, followed by the U.S. (15.6 percent) and France (11.1 percent).

** TABLE 1-1 HERE **

Breaking the data up into four periods of six years each and one five-year period (2006-2010) shows a roller coaster trend, as each period alternates between increasing and decreasing applications. From the period of 1982-1987 to the period of 1988-1993, applications submitted to the top 15 industrialized destinations increased by more than 244 percent, but then decreased by 11 percent in the following period, 1994-1999. The next period, 2000-2005, saw a 27 percent increase among the top 15, but was followed by a steep, 49 percent drop in the most recent period, 2006-2010.

Considering the data on a nation-by-nation basis further reveals individual trends that at times go against the general trend. For example, while all nations participated in the significant increase between the first two periods (albeit disproportionately, e.g., Denmark's applications increased 21 percent while the UK's increased 587 percent), the overall decrease in applications from 1988-1993 to 1994-1999 was not seen in every nation. The third period reveals stark differences in trends, even among similar nations. In continental Europe, for example, applications in the third period declined in Austria, France, Germany, Italy, Norway, and Sweden, while rising in Belgium, Denmark, the Netherlands and Switzerland. The UK and U.S. also bucked the larger trend in the third period, seeing their application rates rise by 78 percent and 57 percent, respectively.

The 27 percent increase in the fourth period, 2000-2005, was more broadly distributed amongst the top 15 nations. Eleven of the 15 countries saw increases, while Switzerland's application rate remained virtually unchanged and Denmark, Germany and the Netherlands all saw decreases (for Germany, it was the second consecutive period of decline). The final period, 2006-2010, was the virtual inverse of the fourth period, with 11 nations seeing decreases in their applications. Only Belgium (2 percent growth), Greece (175 percent), Italy (18 percent) and Norway (13 percent) received an increase in applications.

Overall, 7 of the top 15 nations generally followed the trend of two periods of growth and two periods of decline, though they did not necessarily coincide with the broader, alternating trend of growth and decline. Austria, Canada, Denmark, France, Netherlands, Sweden, and Switzerland fall into this category. Germany was unique as the only nation to report one period of growth and three periods of decline; five nations (Greece, Italy, Norway, UK and the U.S.) reported three periods of growth and one of decline. Belgium was the only nation to report growth in all four periods, while Australia did not provide information for the initial period, and reported two periods of growth and one of decline.

1.2.2 Trends in the United States

Having described the overall trend in asylum applications in the world, we turn to the YIS data from the United States, which allows us to look further back in time and to examine source country information. Table 1-2 reveals that, from 1946-2000, the distribution of nations that sent the most refugees and asylees to the United States shifted in reflection of global trends and regional conflicts. In the post-World War II years, the vast majority of those seeking refuge or asylum in the United States came from European nations. Nine of the top 10 nations sending

refugees and asylees to the United States were from Europe in the periods 1946-1950 and 1951-1960, with Poland and Germany ranking first and second, respectively, in each period. The lone non-European nation in both periods was the Soviet Union, which ranked fifth in 1946-1950 and sixth in 1951-1960.

**** TABLE 1-2 HERE ****

The first major shift in incoming refugee and asylee patterns occurred from 1961-1970, when Cuba debuted at the top of the list, accounting for almost 62 percent of all refugees and asylees entering the United States. Indonesia (third), Egypt (sixth), and China (seventh) also appeared on the list for the first time, while European nations, led by Serbia & Montenegro (second), held the remaining six spots. The 1970s saw another shift in the pattern. Though Cuba remained the clear number one from 1971-1980, accounting for almost 47 percent of refugees and asylees entering the United States, Asia accounted for four nations (Vietnam, Laos, China, and Cambodia), while Iraq appeared on the list, the Soviet Union returned after being absent in the 1960s and the number of European nations on the top 10 list dwindled to three. The distribution of incoming refugees and asylees continued to shift to Asia in the 1980s, as Vietnam, Laos and Cambodia accounted for the top three spots, respectively, and along with Thailand (eighth), accounted for 60 percent of incoming refugees and asylees. European nations held just two spots on the list from 1981-1990, while Cuba (fourth), the Soviet Union (fifth), Iran (sixth), and Afghanistan (tenth) rounded out the list.

Incoming refugees and asylees in the 1990s were much more diverse. While the top 10 nations of origin accounted for between 83 percent and 96 percent of all incoming refugees and asylees in each of the previous periods, from 1991-2000, the top 10 only accounted for 74 percent. Familiar nations Vietnam and Cuba ranked first and second, respectively, and Laos

(seventh), Iran (ninth) and Thailand (tenth) were also on the list. The other half of the list was driven by the collapse of the Soviet Union in 1991. The Soviet Union, despite only being counted as a nation of origin in 1991, still ranked fourth on the list for the period of 1991-2000. The remaining four nations on the list were all former socialist republics: Ukraine (third), Russia (fifth), Bosnia-Herzegovina (sixth), and Belarus (eighth).

Figure 1-3 shows the trends in the United States in processed refugee and asylum applications (panel A) and percent of applications denied (panel B).⁴ It is apparent from panel A, that the majority of applications processed in the United States primarily come from those individuals seeking refugee status (which, as mentioned in Section 1.1, are filed abroad) and to a lesser extent asylum (filed in the U.S.). From 1980-85, for example, the average number of processed applications for individuals seeking refugee status was over half a million (608,730) applications in this five-year interval, compared to only 101,090 processed applications for individual seeking for asylum. The number of processed applications for refugee status hovered around 120,000 per year from 1998 to 1999, but declined slightly to less than 80,000 per year from 2000 to 2004. By contrast, processed applications for those seeking asylee status never exceeded 40,000 applications per year during the entire period from 1980 to 2004.

In panel B, we report on the percent of applications denied for each subgroup. Though yearly denial rates of the two groups are highly volatile, refugees seem to have become less likely to be granted entrance while asylees have become more likely. In 1980, for example, an asylum application was seven times more likely than a refugee application to be denied;

⁴ In order to make the data series in panel A consistent across time for both refugee and asylees, we define “processed” applications as those individuals whose applications were either *approved* or *denied* in a given fiscal year. In other words, our definition of processed applications excludes applications received, completed, closed, pending, and adjusted, as these specific categories have changes or have been excluded over time. The data series shown in panel B for both refugee and asylees, is defined as the total number of denied processed applications divided by the total number of processed applications for each subgroup.

however, by 2004 the positions had reversed. In 1980, only 6.4 percent of refugee applications to enter the United States were denied. Though the number shot up to 21.6 percent by 1983, the average denial rate over the five-year period from 1980 to 1984 was 14.7 percent. By 2002, a record proportion of 51.5 percent of refugee applications were denied; though the denial rate fell in 2003 and 2004, the average for the five-year period from 2000-2004 was 31.6 percent—more than double the five-year average from 20 years earlier.

While refugee application denials were on the rise from 1980-2004, the denial rate of asylum applications dropped precipitously in 1996 and remained low in the following years. In 1980, an asylum application had a 44.8 percent chance of being denied; from 1980 to 1995, the average asylum application denial rate was 68.1 percent. But in 1996, the denial rate plummeted to 14.8 percent and remained relatively low—from 1996-2004, it averaged just 12.9 percent.

** FIGURE 1-3 HERE **

2. Who Migrates? Comparing Refugees to Other Migrants

2.1 Conceptual Framework: The Migration Decision

A simple model can provide illumination on how the quantity and quality of refugees might differ from that of other migrants. Consider an individual i who is in country 0 deciding whether to migrate to country 1. Denote w_{i0} , w_{i1} and C_{i01} as individual i 's wages in country 0, wages in country 1, and direct migration costs between countries, respectively. An income maximizing agent—such as that modeled by Borjas (1987, 1999)—will migrate if the income from migrating net of migration costs exceeds the income from staying, i.e., defining $P^i \equiv I[(w_{i1} - C_{i01}) - w_{i0}]$ where $I(\cdot)$ is the index function, then an individual will migrate if $P^i > 0$. We obtain the following comparative statics:

- (1) $\partial P^I / \partial w_{i1} > 0$,
- (2) $\partial P^I / \partial w_{i0} < 0$, and
- (3) $\partial P^I / \partial C_{i01} < 0$.

That is, when the individual's country 1 wages increase, or country 0 wages decrease, or migration costs decrease, the individual is more likely to migrate.

Of course individuals are motivated by more than economic considerations when deciding whether to migrate. Following Jasso and Rosenzweig (2009), we also include a term capturing the amenities associated with residing in a particular country.⁵ Jasso and Rosenzweig give as examples of amenities the utility gain of living in the same country as one's spouse, or the utility loss of living in a place with a foreign culture. Another example, given our focus on refugees, is utility loss associated with being persecuted or living under the threat of persecution. Let A_{i0} and A_{i1} denote the amenities for individual i of residing in country 0 and country 1, respectively. A utility maximizing agent will migrate if the utility from migrating net of migration costs exceeds the utility from staying, i.e., defining $P^U \equiv I[V_{i1} - V_{i0}]$ where $I(\cdot)$ is the index function, $V_{i1} \equiv \beta_1 \cdot A_{i1} + \beta_2 \cdot (w_{i1} - C_{i01})$, $V_{i0} \equiv \beta_1 \cdot A_{i0} + \beta_2 \cdot w_{i0}$, and β_1 and β_2 are nonnegative constants, then an individual will migrate if $P^U > 0$.

As with the income maximizing model, this more general model predicts that the probability of migration is increasing in destination country wages, and decreasing in source country wages and migration costs. We also derive the following two additional results with the utility maximizing model,

⁵ We could have stayed with the income maximization framework and encapsulated these amenities into the cost term as in Borjas (1987, 1999), but we wanted to make these non-economic aspects of migration more explicit.

$$(4) \quad \frac{\partial P^U}{\partial A_{i1}} > 0 \text{ and}$$

$$(5) \quad \frac{\partial P^U}{\partial A_{i0}} < 0 .$$

That is, when the individual's country 1 amenities increase or country 0 amenities decrease, then the individual is more likely to migrate.

What does the utility maximizing model imply for the characteristics of refugees relative to other categories of migrants? It is instructive to look at the variables in turn:

- (a) A_{i0} : The key defining feature of refugees and asylum seekers is that they perceive it to be unsafe to live in country 0—staying there exposes them to serious harm, such as from violent conflict, natural disaster or persecution. In terms of the model, refugees have an extra disamenity to living in country 0 (i.e., their A_{i0} is lower, and perhaps highly negative), and this may dwarf all other elements entering the migration decision. Thus, individuals in countries with a refugee-producing event will have higher emigration rates. We can also say something about the selectivity of migrants when there is a refugee-producing event relative to when there is only “regular” migration. Imagine a set of individuals who are identical in all ways except in their wage gain from migrating (denote as $g \equiv w_{i1} - w_{i0}$), then there is some wage gain \underline{g} above which everyone migrates and below which everyone stays. A decrease in A_{i0} would bring some people with $g < \underline{g}$ across the threshold to migrate. Thus, comparing refugees, who tend to have lower A_{i0} , to other categories of migrants, g is less, and it is even possible that it is negative. In other words, because economic gain is less of a factor in the migration decisions of refugees, then refugees will also be

- less selected along dimensions that are associated with economic gain in country 1. For example, consider a natural disaster, then everyone in the country might be displaced, and there is no selection at all. Or, consider a narrower refugee-producing event, such as persecution of political dissenters, then more emigrants will have attributes that are correlated with being a political dissenter, which are not necessarily the same as attributes that are positively associated with economic gain.
- (b) w_{i0} : Low wages at home are a push factor that sends any migrant, including refugees, to look abroad for better earnings opportunities. We might expect that non-refugees' migration decision would be more sensitive to w_{i0} because they care more about the wage gain from migration, $g \equiv w_{i1} - w_{i0}$, from migration. However, a refugee-producing event might itself lead to a decline in w_{i0} , in which case it is refugees who appear more likely to migrate when w_{i0} is low. In the case of a refugee-producing event that decreases wages broadly across the population, we expect the marginal migrants to be less selected than in a situation without a refugee-producing event.⁶ In the case where wages decrease only for some subpopulation, such as political dissenters losing jobs in government, then it is the migration of this subpopulation that would increase.
- (c) A_{i1} and w_{i1} : The pull factors of higher amenities and higher wages in the destination country are expected to play a more pivotal role for non-refugees. For example, family preference migrants might have only one desired destination (e.g., where their spouse is; for spouse reunifications, A_{i1} is large and positive, and might dwarf other

⁶ If everybody's wages in the country is lowered by some constant, and none of the other variables change, then the emigration rate will rise, with the extra immigrants coming from people previously with an insufficiently small wage gain to justify migrating who now have a sufficiently large wage gain because of the fall in w_{i0} .

terms in the utility maximization equation). Economic migrants might be especially drawn to the net economic gain, and would choose destinations with higher w_{i1} . Because things like having a common language or culture, or having social connections, increase the economic gain (e.g., Bleakley and Chin (2004), Munshi (2003)), destination countries most desired by economic migrants might also have a higher A_{i1} . For refugees, even countries offering a low or negative wage gain and A_{i1} could be feasible destinations, because the push factor of negative A_{i0} could still make $P^U > 0$, thus there exists a wider set of countries that could serve as feasible destination countries for refugees compared to other types of migrants. There may in fact be little difference in what are the top choices for destination across the migrant categories—the U.S., Canada, Australia and western European countries are highly desired—but due to developed countries’ restrictive immigration policies, potential migrants often must move down their lists of feasible destinations. For non-refugee migration candidates, the list may consist only of the developed countries, so they may end up staying in country 0 because the best country to which they are able to legally migrate does not satisfy $P^U > 0$. For refugee migration candidates, there is a higher chance of emigration because more countries are feasible. Consistent with this prediction, we saw in Section 1 that many refugees migrate to non-industrialized countries, which often are neighboring countries whose economic opportunities and amenities do not differ much, but which have less immigration restrictions and still provide a safer environment.

- (d) C_{i01} : While physical costs of traveling from country 0 and country 1 may be identical among individuals within a country, several notes are worth making. First, as in

Borjas (1987), we might also include the time cost of migrating, which would imply higher migration costs for people with higher w_{i0} . If w_{i0} is lower for individuals impacted by a refugee-producing event as discussed above, then C_{i01} is also lower, and both push these individuals toward higher emigration rates. Second, it may be that there are credit constraints, and some individuals for whom $P^U > 0$ cannot afford the upfront outlay C_{i01} because of lack of wealth or ability to borrow. Then migrants will be positively selected on the basis of wealth and ability to borrow. Candidates for asylum might be less able to afford high migration costs because their assets may have been lost or confiscated, and the social network from whom they could normally borrow might be in a similar plight or be estranged from them, so this might make refugees less able to migrate to destinations entailing higher migration costs. The developed countries are often costlier to enter—not only do they tend to be more distant spatially, but also they have immigration restrictions which require a cumbersome application process or people smugglers to circumvent. Thus, unless humanitarian assistance is used to defray some of the refugees' migration costs, then the refugees who enter developed countries might be positively selected on wealth, and poorer refugee candidates might end up in neighboring countries or the countries to which transportation is provided.

This foregoing discussion highlights that refugees and asylum seekers might be expected to be primarily motivated by push factors, and consequently will tend to be less choosy about the destination country's attributes. For a refugee-producing event that affects country 0's population broadly, resultant migrants will tend to be less selected along dimensions that are associated with wage gain relative to economic migrants. For a refugee-producing event that only affects a

subpopulation of country 0, resultant migrants will mirror that subpopulation's characteristics, which may lead to more or less selection along dimensions that are associated with wage gain. All in all, although the model unambiguously predicts an increase in the quantity of refugees originating from country 0 when country 0 experiences a refugee-producing event, it has an ambiguous prediction for the quality of refugees relative to other types of migrants—the relative quality depends on a number of variables, including the nature of the refugee-producing event and the nature of selection in “regular” migration flows from country 0 to country 1.

2.2 Previous Work

In large, nationally representative data sets commonly used by social scientists, refugee status is typically not measured, making it difficult to empirically investigate how refugees compare to other migrants. In Section 2.3 below, we use a relatively new data set, the New Immigrant Survey-2003 (NIS) which provides a nationally representative sample of individuals gaining legal permanent residence in the U.S. in 2003, to provide a comparison. Redstone Akresh (2008) and Connor (2010) also use NIS data to compare refugees and other immigrants.

Before the availability of the NIS, studies on U.S. refugee migration tended to focus on more narrowly defined groups of refugees, for whom data were available or could be collected feasibly. For example, a number of studies have focused on the experience of refugees from Southeast Asia (e.g., Rumbaut 1989, Ruben and Ima 1998), and Cuba and the Caribbean (e.g., Portes and Stepick 1995) in certain U.S. cities.

Besides the U.S. with the NIS, a few other countries have data sets containing socioeconomic variables of individuals with merged in administrative data on refugee status, permitting comparison of refugees to other migrants, including Sweden (e.g., Edin, Fredriksson

and Aslund 2003), Denmark (e.g., Damm 2009a) and Canada (Wanner 2003).

2.3 Refugees in the United States: A Snapshot from the New Immigrant Survey

To describe refugees in the U.S., and compare them to other categories of U.S. migrants, we use data from the New Immigrant Survey-2003 (NIS) (Jasso, Massey, Rosenzweig and Smith 2006). The NIS is a nationally representative sample of adults who became legal permanent residents of the United States between May and November 2003. A total of 8,573 adult immigrants were interviewed shortly after permanent residency was granted, between June 2003 and June 2004. To our knowledge the NIS is the only large, broad U.S. microdata set measuring refugee status. In fact, the NIS contains official administrative data (from the U.S. Citizenship and Immigration Service) on each respondent's immigrant class of admission, and we refer to those with "refugees/ asylees/ parolees" as their class of admission as refugees.⁷ We compare these refugees to immigrants in the other classes of admission. Because the NIS oversamples less common classes of admission, we always use sampling weights provided by the NIS in order to obtain statistics that are representative of the 2003 cohort of legal permanent residents. On a weighted basis, refugees account for 6.6 percent of the sample, family preference immigrants for 67.7 percent, employment preference immigrants for 9.6 percent, diversity immigrants for 8.1 percent and 8.0 percent legalization immigrants.

2.3.1 Exposure to Persecution

The most striking difference between refugees and non-refugees is in their exposure to persecution prior to migration to the U.S. To the question, "Did you or your immediate family

⁷ Parolees are individuals who do not qualify for admission as a refugee or asylee, but gain admission because it is in the public interest, or because of humanitarian reasons.

ever suffer any harm outside of the United States because of your political or religious beliefs, or your race, ethnicity or gender?” 47 percent of refugees said yes, compared to 4 percent of non-refugees. Among those refugees responding affirmatively, the frequency of specific types of persecution experienced by the respondent or immediate family was as follows: 39 percent reported incarceration; 46 percent physical punishment by public officials; 41 percent physical punishment by others; 31 percent property confiscation; 48 percent property damage; 59 percent loss of job; and 92 percent verbal or written threats. Refugees who reported any persecution on average experienced 3.5 types out of the aforementioned seven types. Since persecution and threat of persecution form the basis of admission to the U.S. as a refugee, the finding of significantly higher pre-migration exposure to persecution for refugees should not be surprising.

2.3.2 Demographic, Human Capital and Labor Market Characteristics

We tabulated various observed characteristics by refugee status, and the results are displayed in Tables 2-1 and 2-4. Table 2-1 displays the results for basic demographic characteristics. On average, refugees are 1.5 years older at the time of the survey. However, the variance in age is lower for refugees, reflecting the fact that non-refugees include many parents admitted under family preference mixed together with economic migrants who have most of their work lives ahead of them. Also, males account for a significantly higher share of migrants for the refugee class of admission relative to all other migrants, but this gender difference ceases to be significant at conventional levels if we remove the immigrants whose class of admission is spouse of a U.S. citizen or legal permanent resident (two thirds of whom are women). Refugees are less likely to be married and more likely to have children, with the gap reflecting the higher share of refugees who are either divorced or living together in a marriage-like relationship.

** TABLE 2-1 HERE **

Table 2-2 shows the education and English proficiency measures. Relative to all other migrants, refugees have completed more years of schooling, though the difference is not significant at the 5 percent level.⁸ Underlying this weak positive difference in average years of schooling is a higher high school completion rate (significant at the 1 percent level) and a lower Bachelor's degree completion rate (not significant at conventional levels; p-value is 11 percent) for refugees relative to non-refugees. Thus, refugees fall in the middle of the distribution of educational attainment among U.S. immigrants, which has grown increasingly bimodal—the U.S. attracts and admits both low skilled and very highly skilled immigrants. Refugees are clearly more educated than the family preference immigrants, whose characteristics mirror those of immigrants already in the U.S. (who are their sponsors for migration under the family preference classes of admission), and who likely have strong motivations for migration besides just economic gain (e.g., reunification with a spouse or other). However, refugees are clearly less educated than the employment preference and diversity immigrants, two classes of admission which can be plausibly characterized as economic migrants, and which have explicit qualifications in terms of education and skill level. However, some catch-up between refugees and economic migrants can be expected with more time in the U.S., as Table 2-2 shows refugees are significantly more likely to enroll in school (last row). This finding is consistent with Cortes (2004), who finds that immigrants identified as likely to be refugees in U.S. Census data are more likely to enroll in school. Refugees in the NIS are primarily enrolling in Associate's degree programs (38 percent of enrolled refugees reporting a specific level of schooling), Bachelor's

⁸ We focus on years of schooling reported at the time of the survey here, but findings are similar when we use years of schooling received in the home country. While schooling received in the home country does technically measure human capital prior to migration to the U.S., it can be noted that some people with high ability may migrate to the U.S. specifically to further their education, in which case their measured years of schooling in the home country would understate their underlying quality.

degree programs (23 percent) and Master's programs (12 percent).

** TABLE 2-2 HERE **

For English proficiency, refugees are less likely to report speaking English very well (as opposed to not at all, not well or well), though no different in ability to speak English well or very well. This observed difference likely understates the refugees' disadvantage in English proficiency upon arrival in the U.S., however, because English proficiency at the time of the survey is measured, and refugees have lived in the U.S. about a year longer relative to all other migrants (last row of Table 2-1). Although all immigrants in the NIS are part of the 2003 cohort of legal permanent residents, many of them entered the U.S. prior to 2003. Only 43 percent are new arrivals to the U.S., entering the U.S. simultaneously with being granted the green card. The rest are "adjustees" (adjusted from a temporary non-immigrant visa to the green card); all refugees, and 54 percent of non-refugees, are adjustees (second to last row of Table 2-1). Relative to non-refugee adjustees (who average 8.8 years since arrival in the U.S.) and employment preference immigrants (5.9 years), refugees (6.4 years) have significantly lower English proficiency: refugees are 8.4 percentage points (13.6 percentage points) less likely than other adjustees and 33.6 percentage points (34.0 percentage points) less likely than employment preference immigrants to speak English well or very well (very well). Based on questions asked to a subsample, we find that refugees' pre-migration exposure to English media (newspapers, magazines, television, videos, movies, radio) is significantly lower. This is consistent with other migrants preparing for life in the U.S., or being positively selected on English skills, more than refugees. However, considering that refugees are more likely to enroll in English-language classes than other migrants, some catch-up can be expected over time in the U.S.

For another measure of human capital—health—the refugees also look worse than other

migrants. In fact, among all the classes of admission, refugees look the worst; they do not lie in the middle of the distribution as for schooling. Table 2-3 shows that refugees are significantly more likely to report being in poor or fair health, rather than good, very good, or excellent health, at the time of the survey. They are also significantly more likely to report being diagnosed with a heart problem, high blood pressure, diabetes and psychological problems, among other things, and conditional on the diagnosis the conditions are reported to be more severe in terms of limiting daily activity. Additionally, 18 percent of refugees report being “troubled with pain” (compared to 9 percent for other migrants), and 17 percent report a recent spell of depression of at least two weeks (compared to 13 percent for other migrants). However, there are no significant differences in asthma diagnosis, quality of eyesight and quality of hearing, so it does not appear to be true that refugees’ poorer reported health is entirely attributable to refugees systematically interpreting the health questions differently or having more diagnosed conditions because they are more likely to have visited doctors in the U.S. (refugees are temporarily eligible for federally funded healthcare via the Refugees Medical Assistance program). Besides, measures of health based on weight and height, which can be measured more objectively, also indicate worse health for refugees: refugees have significantly higher body mass index (BMI), overweight rates and obesity rates. Refugees’ worse health status is likely in part an outcome of the refugee-producing event that they faced—the persecution or threat of persecution could have caused physical pain, emotional suffering and intense stress. Another possible explanation for their worse health relative to other classes of admission is that refugees have worse underlying health irrespective of the refugee-producing event. Refugees appear less positively selected on health relative to other migrants, and especially relative to employment preference and diversity immigrants. This mirrors what we found for education and English proficiency.

** TABLE 2-3 HERE **

Next, Table 2-4 compares refugee and non-refugee labor market measures. A summary of the results is that refugees' labor supply is not lower compared to other migrants, but they are observed to have lower pay and lower quality jobs in the U.S. than other migrants, and this is despite refugees holding relatively good jobs in their home countries. The fraction that ever worked prior to migrating to the U.S. is not different between refugees and non-refugees, nor is the typical hours and weeks of work. However, the sector of employment differs considerably, with refugees 37 percentage points more likely to have worked for a government rather than a private company. Government jobs in developing countries are often sought after because they are formal jobs offering steady and relatively high salary and high security of tenure. The fact that a disproportionate share of refugees used to hold government jobs in the home country indicates not only that their livelihoods may have been especially vulnerable in times of political upheaval, but also that it is not the lowest skilled who are entering the U.S. through the refugee admission class.

The fraction that has ever worked since migrating to the U.S. is significantly higher for refugees. This 26 percentage point difference is an overstatement of the difference in ability/willingness to work in the U.S. due to the fact that refugees have lived in the U.S. about a year longer by the time of the survey compared to other migrants, as discussed above for English proficiency. When we restrict attention to adjustees only, the labor force participation gap shrinks considerably, with refugees 7 percentage points more likely to have worked in the U.S. than non-refugees. Conditional on working, refugees' typical hours worked per week are not different from non-refugees, however their typical weekly pay is significantly lower (these results hold whether or not we restrict sample to adjustees). For the first job in the U.S., average

typical weekly pay is \$339 (in year 2003 dollars) for refugees, compared to \$482 for non-refugee adjustees and \$389 for non-refugee new arrivals (the latter is likely positively selected since some desiring employment have not had as much time as the adjustees to find a job). The pay gap between refugees and non-refugee adjustees widens from the first job to the current job; among adjustee workers with both a first job and current job reported, refugees earn \$143 less in the first job (which is 42 percent of refugees' mean weekly wages in the first job), and \$239 less in the current job (which is 53 percent of refugees' mean weekly wages in the current job). The comparisons with employment preference workers are even more dramatic. Examining the workers' primary job among reported current jobs, we find that refugees are significantly more likely to be in hourly wage rather than salaried positions and work for a government (and relatedly, work for an employer covered by a union contract) rather than a private firm, and significantly less likely to be in managerial positions.

**** TABLE 2-4 HERE ****

To summarize, comparing refugees and non-refugees from the New Immigrant Survey-2003 suggests that refugees are less positively selected on attributes associated with labor market success in the U.S.—refugees are less proficient in English, less likely to have completed college and less healthy, and are observed to earn less in the U.S. These findings hold not only for the pooled sample of male and female immigrants used in Tables 2-1 through 2-4, but also separately by gender. In Table 2-5, we present results for a subset of outcomes in which we regression-adjust for both age and sex, and it can be seen that the findings are similar (compare columns (1) and (2)).

2.3.3 Within Source Country Comparisons

An interesting question to consider is whether the observed differences in measured characteristics by refugee status arise entirely from the fact that refugees come from different countries, or if differential selectivity in migration within a country could also be playing a role. If countries that tend to send refugee-producing events also tend to be less developed, then an increase in the quantity of migrants from these countries—with no change in quality—could cause the average refugee to have lower schooling, health and earnings than the average non-refugee. To assess this, we estimated differences in mean after controlling for country of origin fixed effects, which relies on variation in refugee status within a country, and we find similar results (see Table 2-5, column (3)), indicating that they are not solely driven by refugees coming from different countries. However, the fact that the coefficients for the schooling variables decrease (in the case of years of schooling and high school completion, they switch from positive to negative signed) between columns (2) and (3) indicates that migrants from countries that send more refugees to the U.S. have higher average schooling than migrants from other countries (which is why when this between-country variation is eliminated in column (3), the refugee-non-refugee deficit in schooling increases). Likewise, for the various health indicators, the refugee disadvantage increases after controlling for country fixed effects, again indicating that refugee-sending countries tend to send healthier migrants on average. For example, for height, which is often used as an indicator of health (Steckel 1995, 2008), we find that refugee-sending countries tend to send taller migrants, but once we restrict comparison to migrants from the same country of origin in column (3), we see that on average refugees are shorter than non-refugees.

**** TABLE 2-5 HERE ****

To further explore the within-country migrant selectivity by refugee status, we restrict

analysis to five sending countries in the NIS that have at least 20 refugees and non-refugees in the sample: Cuba, Haiti, India, Russia and Ukraine. These five countries collectively account for 44 percent of the refugees interviewed. The estimation results are reported in columns (4) to (8) of Table 2-5. In each of these countries, refugees were significantly more likely to have been exposed to harm prior to migrating to the U.S. because of their political or religious beliefs, race, ethnicity or gender. However, there is heterogeneity in terms of selection in education and health. For Haiti, India, Russia and Ukraine, migrants in the refugee admission class have both lower educational attainment and worse self-reported health than other migrants, though the results for Haiti tend to be less precise. For Cuba, it is actually the refugees who have higher average completed education, and much of this difference is at the margin of college completion. Also, there is no significant difference in self-reported health, though the point estimate indicates poorer health for refugees.

The within-country comparisons for the five countries suggest the following. First, as already indicated by the country fixed effects models, the average differences by refugee status reported in Tables 2-1 through 2-4 using migrants from all countries are not entirely driven by differences in country in origin by refugee status—significant within-country-of-origin differences in migrant characteristics by refugee status exist, which is consistent with refugees being selected from the population in a different way than “regular” migration. Second, there is heterogeneity across origin countries in how refugees compare to non-refugees. Potential reasons for the heterogeneity include, among other things, the nature of the refugee-producing event (e.g., the elite in Cuba faced more persecution under the Castro regime, so it may not be surprising that Cuban refugees are significantly more educated than other migrants from Cuba), and the wage structure in the home country (e.g., compressed pay in Russia may motivate the

highest ability workers to migrate to the U.S. as economic migrants). We consider reasons for the observed differences in migrant characteristics by refugee status more formally in Section 2.

2.3.4 Discussion

Refugees are expected to be more motivated by the push factor of persecution in the source country and less motivated by economic gains in the destination country, thus the model of migration in Section 2.1 predicts that refugees will be less selected on characteristics associated with labor market success in the destination country compared to other migrants. In our analysis using NIS data, we find that refugees are much likely to report that they or an immediate family member had been persecuted prior to migrating to the U.S., which is consistent with the premise of a major disamenity in the home country pushing the individual to migrate. Consistent with the prediction of the model, we find that refugees are less selected on characteristics that are valued in the U.S. labor market. They have lower college completion rates, lower English proficient and worse health than other U.S. migrants on average. They are also observed to earn less in the U.S., and hold worse jobs (lower paying, and hourly rather than salaried). These differences are more pronounced when refugees are compared to employment preference migrants and diversity migrants, the two classes of admission which are most clearly economic migrants. Relative to the largest category of new legal permanent residents in 2003, the family preference immigrants, the refugees look better; although refugees are still worse in terms of health status, they have more years of completed schooling (especially at the high school degree margin) than family preference immigrants. Refugees are more likely to be currently enrolled in school relative to other migrants, and so with more time spent in the U.S., we expect refugees' earnings to improve. We turn to the topic of economic assimilation in the

host country in Section 3. We note that because only one wave of the NIS is currently available, it is not ideally suited to explore issues of economic immigration, therefore we turn to U.S. Census microdata to this.⁹

We emphasize that the analysis in this section is based on data for a single cohort—the 2003 cohort—of U.S. migrants gaining legal permanent resident status, and as such the findings may not apply in other contexts. First, our findings may not hold for other cohorts. Our country-specific analysis suggested that the specifics of refugee-producing events could affect selectivity of refugees relative to other migrants. Thus, our analysis of this single cohort cannot tell us how the stock of refugees in the U.S. compares to the stock of all other immigrants, as the stocks are the accumulation of all the waves of migration.

A second caveat is that our analysis concerned migrants gaining legal permanent status, and adding undocumented migrants may change the findings. Undocumented migrants tend to be less educated than other foreign-born individuals in the U.S. (see the chapter on undocumented migrants in this volume), so refugees will look better on the dimension of education when compared to them as opposed to green card holders. However, on other dimensions valued by the labor market, it is unclear how refugees compare to undocumented migrants; considering undocumented migrants' high migration costs—often involving people smugglers and physical danger—and U.S. laws restricting their participation in formal sector jobs, we might expect them to be healthier.

Lastly, our findings may not hold for other receiving countries. On the one hand, only a small fraction of refugees in the world end up as legal permanent residents of the U.S., and it can

⁹ The NIS baseline survey contains retrospective questions about some variables, permitting some ability to study assimilation. For example, Redstone Akresh (2008) and Connor (2010) use the questions on occupation prior to migration to the U.S., first occupation in the U.S., and current occupation in the U.S. to examine occupational mobility of refugees and other migrants. The public release of the second wave of the NIS, fielded in 2007-09, will enable further exploration of immigrant assimilation.

be expected that it is not random which refugees make successful green card applications to the U.S. Possibly it is the more wealthy or better connected who manage to make it to developed countries, and the other refugees stay in developing countries. On the other hand, different host countries may have different policies toward refugees, which might affect the measured differences between refugees and non-refugees.

3. Economic Assimilation of Refugees in the Host Country

3.1 Conceptual Framework: The Human Capital Investment Decision

Conditional on migrating, individuals entering as refugees may have a different assimilation profile compared to individuals entering as economic migrants. As discussed in Section 2.1, the selection into migration is different, hence their characteristics differ, and this could affect the evolution of wages and other variables in the destination country. For a source and host country pair that is typically characterized by positive selection in migration, i.e., it is the higher ability workers in the source country who receive the biggest gains from migrating and therefore they migrate, then a refugee-producing event that affects the home country's population broadly will induce relatively lower ability workers to migrate. This new tier of workers may not have the right skills to perform well in the host country's labor market, and some may decide to undertake investments in human capital valued by the host country in order to perform better.

There is another reason why refugees might invest more in human capital valued by the host country besides the initial gap in human capital generated by differential selection into migration. For the very reason that generates differential selection—refugees face persecution or well-founded fear of persecution in their home country—the expected time horizon in the host

country will likely differ. There are two cases. One case is where refugees have a longer time horizon than economic migrants, and this likely describes refugee migration to developed countries. Refugees may be thought of as migrants intending to stay in the destination; it is either unsafe to return to the home country, or there is nothing to return to. In contrast, economic migrants can return to their home country, either by design (e.g., they enter as temporary worker, earn more income in the U.S., then return to their home country) or by necessity (e.g., they are unsuccessful in finding a job so must return home, or they are deported). Cortes (2004), building on Duleep and Regets (1999), uses a simple two period model of a migrant maximizing expected utility to illustrate how a difference in probability of staying in the home country can lead to differences in human capital investments and the wage assimilation profile. Period one is for human capital investment or working in the host country, and period two is for working (in the host country if the migrant stays, or in the home country if he returns). The key theoretical result is that the optimal choice of investments in human capital valued by the host country is increasing in the probability of staying in the host country. Since refugees have higher probability of staying, the prediction is that refugees will undertake more human capital investments upon their arrival in the host country relative to economic migrants, and this is borne out in U.S. Census data.

A second case is where the refugees expect to stay a shorter length of time in the destination than the economic migrants. This likely describes migrants who are placed in refugee camps or in neighboring countries due to a refugee-producing event. These living arrangements tend to be temporary, awaiting the abatement of the violent conflict or natural disaster that spurred the refugee migration. Yet, the abatement process could be protracted, and this could lead to ex post inefficient decisions about human capital investments for refugees. For example,

refugees ex ante may have thought they would return home quickly but ex post they stay much longer in the neighboring host country (perhaps even resettling there); possibly had they known how long they would be in the neighboring country, they would have invested more in skills valued by that labor market (economic migrants might already have had these skills, or invested in them immediately). Even if the migration is of known and limited duration, refugees tend to experience disruptions to human capital investments, as temporary settlements often lack good schools and healthcare facilities. Thus, in contrast to the first case where refugees plan a longer time horizon in the destination, in this case refugees tend to invest less in human capital than economic migrants.

3.2 Previous Work

There are many metrics to measure immigrant adaptation in the host country, such as economic, social, or cultural assimilation. The most commonly analyzed metric of assimilation in the economics literature is labor market outcomes (i.e., wages, annual earnings, hours worked, employment, occupational prestige, self-employment, etc.). In general, previous studies have found that refugee immigrants fare worse initially in the host nation's labor market compared to other immigrants, and this pattern has been observed across many different countries (i.e., United States, Canada, Norway, Sweden, and Australia). Over time, however, refugees catch up, and in some cases even surpass other immigrant groups in the host country. Because refugees have a greater degree of certainty about staying in the host country than other immigrant groups (e.g., they cannot return to their mother country because of the persecution they expect to encounter), they are more likely to pursue additional human capital investment, which in turn translates into better labor market outcomes over time (Cortes 2004).

Although numerous researchers have examined occupational mobility patterns among immigrants (Rajman and Semyonov 1995; Powers and Seltzer 1998; Powers, Seltzer, and Shi 1998; Stein 1979; Finnan 1981), their work faced an important data limitation—available large individual-level datasets typically provide information only on current occupation, yet for the purpose of assessing assimilation it is useful to have information on individuals' occupational history (e.g., job prior to migration, first job in the U.S. and any subsequent job changes). An additional limitation considering our interest in how refugees perform relative to other migrants is that very few data sets contain information on immigrant class of admission (e.g., refugee, family preference migrant, economic migrant). Akresh (2008) is able to address these limitations by using data from the New Immigrant Survey-2003 (the same data set we used in Section 2.3), which provides occupation prior to migration to the U.S., the initial and current occupations held in the U.S., and administrative information on class of admission. She finds that refugees and family immigrants experience greater initial downward occupational mobility (*vis-à-vis* their pre-migration occupation) than economic immigrants, but that over time in the U.S., refugee immigrants experience more rapid upward occupational mobility than other immigrant groups.

Wanner (2003) examines immigrant earnings assimilation by class of admission in a Canadian setting. He uses data from Canada's Citizenship and Immigration Landing Information Data System (LIDS) for the years 1980 to 1995 merged with the 1996 Census of Canada Public Use Microdata File. Wanner (2003) finds that while Canada's point system used to screen immigrants for favorable labor market skills does in fact select immigrants who have higher earnings upon arrival than those who are not screened (i.e., refugee and family preferences), over time the earnings of these groups converge after controlling for human capital differences. In particular, he finds that refugee immigrants had lower earnings upon arriving to Canada, but their

earnings growth increased more rapidly than that of the economic visa holders, which resulted in an eventual convergence of earnings levels between these two groups.

Other studies have looked at the economic adjustment of specific ethnicities of refugee immigrants in the host country (Waxman 2001; Borjas 1982; Cohen and Haberfeld 2007; Cortes 2004). Since refugees may hail from different socioeconomic statuses, which in turn would affect their integration into the host labor market, analyses that only include an indicator variable flagging whether the immigrant is a refugee may be masking the heterogeneous integration of a particular refugee group. Waxman (2001) looks at the economic integration of Bosnian, Afghan, and Iraqi refugees in Sydney, Australia. He finds that all three refugee groups are gainfully employed in Sydney, and he attributes the high employment rates of these refugee groups to their high English language competency. The significant positive relationship between English language competency and labor market integration has been observed not just for refugees, but for all immigrant groups as a whole (Chiswick and Miller 1991, 1999a, 1999b, 2002, 2010; Bleakley and Chin 2004). Borjas (1982) analyzes the earnings differentials among male Hispanic immigrants in the United States and finds vast differences in their rate of economic mobility. In particular, the rate of economic progress by Cuban immigrants exceeds that of other Hispanic groups; this result is in part of the fact that Cuban immigrants have invested more heavily in U.S. country-specific human capital than other Hispanic immigrants. Borjas' findings are consistent with the hypothesis that political refugees face higher costs of return immigration than do economic immigrants, and therefore the former have greater incentives to adapt rapidly to the U.S. labor market. Cohen and Haberfeld (2007), drawing on microdata from the U.S. Census and on Israeli Census, compare the educational levels and earnings profile assimilation of Jewish immigrants from the former Soviet Union in the U.S. and Israel during 1968-2000. FSU

immigrants were entitled to refugee visas in the U.S. They find that immigrants from the former Soviet Union to the U.S. have significantly higher educational attainment, and experience significantly faster rates of earnings assimilation, than their counterparts who immigrated to Israel. They attribute their findings to the self-selection in immigration to Israel and the United States, on both measured and unmeasured productivity-related traits. This study supports a point that we made in Section 2.1 that even if a refugee-producing event can be thought to be broad, there may be selection in the ultimate destination country of the refugees.

Other studies have focused on how resettlement policies and community characteristics affect the economic integration of refugee immigrants in the host country (Rogg 1971, 1974; Taft, North, and Ford 1979; Finnan 1982; Kelly 1986; Edin, Fredriksson, and Åslund 2003). Among the most convincing studies on the causal effect of living in ethnic “enclaves” on immigrants’ economic outcomes is Edin, Fredriksson, and Åslund (2003), who exploit a refugee placement policy in Sweden which effectively randomly assigned refugees to communities in order to obtain plausibly exogenous variation to exposure to co-ethnics. The authors find evidence of sorting across locations, and when sorting is controlled for (by using initial location assigned by the policy, rather than current location which could be endogenous), living in ethnic enclaves improves labor market outcomes for less skilled refugee immigrants. Specifically, the earnings gain associated with a standard deviation increase in ethnic concentration is 13 percent. They also find that the quality of the enclave does seem to matter: immigrants of high-income ethnic groups gain more from living in an enclave than immigrant of low-income ethnic groups.

Another popular metric used to measure economic success of refugees is dependence on public assistance. By and large, studies have found that refugees initially do place a larger burden on the public sector than other immigrants, but this difference tends to decline with time

spent in the destination country (Hansen and Lofstrom 2003, 2009; Gustafsson and Osterberg 2001; Edin, Fredriksson, and Åslund 2004). For example, Hansen and Lofstrom (2003) analyze differences in welfare utilization between immigrants and natives in Sweden using a large panel data set for the years 1990 to 1996. They find that immigrants use welfare to a greater extent than natives and those differences cannot be explained by observable characteristics, but that welfare participation does decrease with time spent in Sweden. They also find that refugees assimilate out of welfare at a faster rate than non-refugee immigrants; however, neither group is predicted to reach parity with natives.

While the aforementioned studies find a decrease in welfare dependence among refugees with time spent in the destination country, Åslund and Fredriksson (2009) and Damm (2009b) have findings which suggest that the welfare gap relative to natives or other migrants may not necessarily disappear. Åslund and Fredriksson (2009), exploiting the Swedish refugee placement policy mentioned above which effectively randomly assigned refugees to locations, find evidence of peer effects in welfare use among refugees. Their analyses distinguish between the quantity of contacts (i.e., the number of individuals of the same ethnicity) and the quality of contacts (i.e., welfare use among members of the ethnic group). They find that long-run welfare dependence increases if the refugee is placed in a welfare-dependent community. Damm (2009b) investigates the influence of regional factors on recent refugees' location choices. She finds that refugees (whose initial locations are effectively randomly assigned due to Denmark's spatial dispersal policy for refugees) are more likely to relocate when there is lower availability of social housing or a right-wing dominated government (which might be associated with ease of receiving social assistance) in the initial location.

3.3 The Economic Assimilation of Refugees in the United States: Evidence from U.S. Census and American Community Survey Microdata

In this section we compare the economic assimilation of refugees in the U.S. to that of non-refugee migrants. Ideally we would like longitudinal data on the earnings and human capital data for immigrants who are clearly identified as having either refugee or economic immigrant status. Unfortunately, this type of data does not exist. However, it is possible to simulate a panel with census microdata, which offers large enough number of observations that we can track sub-groups of immigrants (e.g., by age, year of immigration, and country of origin) over time and assess the sub-groups' assimilation even if we cannot track any individual's assimilation. We perform this analysis using pooled individual-level data from the 1980, 1990, and 2000 U.S. Census of Population and Housing and the 2005-2010 American Community Survey (ACS).¹⁰ Specifically, our study analyzes a fixed cohort of immigrants who entered the United States in the years 1975 through 1980.¹¹ We focus on the 1975-1980 arrival cohort for various reasons. First, the Census does not include educational attainment in the home country prior to immigrating to the U.S. Therefore, by focusing on the latest immigrant cohort reported in the 1980 Census, educational attainment in 1980 is a rough proxy for human capital upon arrival. Second, the 1975-1980 arrival cohort would have spent 25 to 35 years by 2010, enabling us to trace out even the longer-run part of the assimilation profile. Third, focusing on earlier cohorts of migrants, who are much more likely to be of European descent, would provide an analysis of

¹⁰ Specifically, we use the 5% samples of the Census data and the ACS samples (which are 1% samples of the U.S. population) from Integrated Public Use Microsample Series (IPUMS) (Ruggles et al. 2010). Since the most recent publicly available census microdata are from 2000, we appended the ACS data, which are also collected by the U.S. Census Bureau and follow the same questionnaire, in order to follow the immigrants over a longer time period.

¹¹ More precisely, year of immigration for the 1980 Census is 1975-1980, whereas in the 1990 Census, year of immigration is 1975-1979. The 1980 arrivals for the 1990 Census are included with the 1981 arrivals and are given a different interval of year of immigration (i.e., 1980-1981). Hence, those immigrants included in the 1980 Census, who entered the U.S. before April 1980, are excluded from the sample we analyze from the 1990 Census. To make the sample of immigrants consistent, for the 2000 Census and the 2005-2010 ACS samples we also use 1975-1979 as the year of immigration.

immigrants who are less representative of today's immigrant population in the U.S. Lastly, the 1975-1980 cohort of immigrants allows us to include many other refugee groups not present in the 1970 Census. In fact, the main refugee group in the 1970 Census would be Cubans.

It must be noted that the Census and the ACS do not have a variable measuring refugee status. We follow the methodology used by Cortes (2004), wherein she identifies refugees by country of origin and year of immigration.¹² Cortes classifies immigrants from the following countries as refugees: Afghanistan, Cuba, Soviet Union, Ethiopia, Haiti, Cambodia, Laos, and Vietnam. Individuals from the following countries and regions constitute the economic immigrants in Cortes' taxonomy: Mexico, Central America, the Caribbean, South America, Northern Europe, Western Europe, Southern Europe, Central Eastern Europe, East Asia, Southeast Asia, the Middle East/Asia Minor, the Philippines, and Northern Africa. It should be noted that what Cortes terms "economic immigrants" consists of all migrants besides the refugees; thus it includes not only the employment preference and diversity immigrants who we described in Section 2.3 as the most likely to be considered economic migrants, but also every other foreign-born person residing in the U.S., including family preference immigrants, temporary visa holders and undocumented migrants. Cortes adopts the "economic immigrants" terminology to draw a contrast to refugees, who as we discussed in Section 2.1 are less motivated by economic gains in their migration decision relative to other migrants, and below we refer to them as economic immigrants or non-refugee immigrants.

¹² An excellent source cited in Cortes (2004) for data on the timing of refugee inflows is Haines (1996). In addition, Cortes (2004) uses the yearly INS volumes of immigration statistics, which includes the total number of refugees, asylum seekers, and immigrants from each country admitted during the fiscal year. After compiling her list of refugee groups from Haines (1996), Cortes then compared them to the INS statistics. She finds that the dates and countries correspond very closely.

3.3.1 Age at Arrival Distributions of Refugees and Economic Immigrants

First we examine the age at arrival in the U.S. by refugee/non-refugee immigrant status. A priori, we would expect that refugees are closer to a random sample from the source country compared to economic immigrants (at least for refugee-producing events that impact the population broadly). Thus, while refugees should be more uniformly distributed by age at arrival, economic immigrants should be more likely to arrive during their prime working ages. Figures 3-1 and 3-2 show the age at arrival distributions of refugee and economic immigrants for immigrants who entered the United States in 1975-1980. Figures 3-1 and 3-2 use the 1980 Census data with no age restrictions imposed; later figures and analysis within this section use more census years and impose the age restrictions as we describe below. Consistent with predictions, we observe in Figure 3-1 that economic immigrants are more likely to arrive in the U.S. between the ages of 16 and 30 compared to refugee immigrants. Specifically, 45 percent of the sample is of working age for economic immigrants versus 33 for refugee immigrants. Refugees have fatter tails in their age at arrival distribution, i.e., they are more likely to arrive in the United States at younger and older ages compared to non-refugee migrants.

Figure 3-2 displays the age at arrival distributions disaggregated by gender. Interestingly, we observe the same differences in age at arrival distributions between refugee and economic immigrants for both men and women. That is, 47 percent of the sample is of working age for male economic immigrants versus 35 percent for male refugee immigrants, and 44 percent of the sample is of working age for female economic immigrants versus 32 percent for female refugee immigrants. Our data is consistent with previous studies showing female immigrants are equally likely to migrate compared to their male counterparts as far as recent migration is concerned.

Overall, Figures 3-1 and 3-2 confirm the prediction that refugee immigrants are closer to a random sample from the source country compared to economic immigrants as indicated by their arrival age. This provides assurance that following the methodology of Cortes (2004) to classify immigrants observed in Census data as refugees and non-refugees does successfully separate likely refugees from other immigrants.

3.3.2 Descriptive Statistics

Next, we present some descriptive statistics of our analytical sample used in the regression analysis. Our analytical sample consist of 201,906 foreign-born individuals (28,348 refugee and 173,558 economic immigrants) pooled over the four census “years” (1980, 1990, 2000, and grouped 2005-2010). As previously mentioned, we analyze a *synthetic fixed cohort* of immigrants who entered the United States in the years 1975-1980, and age each census sample by ten years. That is, from the 1980 Census we include foreign-born individuals ages 16 to 45, in the 1990 Census we include ages 26 to 55, in the 2000 Census we include ages 36 to 65, and lastly, the 2005-2010 concatenated ACS samples we include ages 46 to 75. Hence, by using a fixed year of immigration and aging each Census year by ten years, we are creating a synthetic panel of immigrants.

Table 3-1 shows several characteristics from the 1980 through the 2010 Censuses for this fixed cohort of 1975-1980 immigrant arrivals. Interestingly, the gender composition of each immigrant group at time of immigration is similar regardless of refugee status. We might have expected that economic immigrants are more likely to be male, if we assume that men are more likely to come to the U.S. to earn money; however, we observe about 60 percent of both refugee and economic immigrants are male (column (1) versus column (6)). The share married is also

roughly the same for refugee and economic immigrants: 72 percent. Also, both immigrant groups appear to have emigrated with about the same number of children and also have about the same number of children born in the U.S. over the next three decades. Similarly, the majority of refugee and economic immigrants live in the west region of the U.S. across all four decades.

**** TABLE 3-1 HERE ****

While family characteristics and regional residential patterns of refugee and economic immigrants are similar upon arriving in the U.S. in 1980 and do not change very much in the subsequent census years, their educational attainment levels are very different. As observed in Table 3-1, economic immigrants were more concentrated in the lower levels of education than refugees in 1980: 44 percent of economic immigrants had less than a high school degree compared to 28 percent for refugee immigrants.¹³ Furthermore, the education distribution for economic immigrants shows little or no improvement from 1980 to 1990, whereas for refugees there is evidence of rising educational attainment. We observe that in 1980, 17 percent of refugee immigrants had four or more years of college, compared to 19 percent for economic immigrants. By 1990, however, 44 percent of refugee immigrants had earned a B.A. or better, whereas the share of economic immigrants getting a B.A. or better remained flat at 19 percent in the 1990 and 2000 Censuses. Though they still lag behind refugees in educational attainment, economic immigrants showed an increase from 2000 to 2010, when 25 percent reported having a B.A. or more.

The last three rows of Table 3-1 show other measures of country-specific human capital accumulation: school enrollment, ability to speak English, and citizenship. We observe that

¹³ In Section 2.3, using NIS data, we found among migrants gaining legal permanent residency in 2003 that refugees were weakly less educated. But relative to the Census sample, the NIS sample contains more family preference and undocumented migrants, who are on average less educated than refugees, hence the result here of refugees being more educated.

refugee immigrants are more likely to be enrolled in school than economic immigrants in 1980: 27 percent versus 15 percent. We also observe that the English ability of both groups improves over time, with refugees experiencing faster rates of improvement. We observe that in 1980, 32 percent of refugee immigrants report having low English proficiency compared to 45 percent for economic immigrants. By 1990, however, only 17 percent of refugee immigrants report having low English proficiency compared to 30 percent for economic immigrants—a 50 percent improvement of speaking ability for refugee immigrants. Next, although both groups had similar citizenship status in 1980 (7 percent of refugees reported being naturalized citizens versus 8 percent for economic immigrants), refugees became considerably more likely to be U.S. citizens by 1990: 68 percent for refugees versus 39 percent for economic immigrants. This gap persists in 2000 and 2010. Overall, it seems that refugee immigrants showed the most improvement from 1980 to 1990 in accumulating more country-specific human capital. The improvement for economic immigrants occurs later and in smaller magnitude.

Table 3-2 presents the unadjusted means of log annual earnings (panel A) and years of schooling (panel B) of refugee and economic immigrants in 1980, 1990, 2000, and 2010. All dollar amounts are expressed in 2010 dollars.¹⁴ This table allows us to observe the relative gain (or loss) of refugee immigrants over the last three decades. Looking at the first column of Table 3-2 (in panel A), we observe that in 1980 the average refugee immigrant earned 10 percent less than an economic immigrant. By 1990, however, the annual earnings of refugees were 24 percent above those of economic immigrants. The relative gain of refugee immigrants from 1980 to 1990 is 34 percent. Interestingly, the same pattern is observed if we separate the sample by gender. In 1980 we observe that, on average, a male refugee earned 14 percent less than a male economic

¹⁴It should be noted that by 2010, the average age is around 60, and potentially selection in labor force participation/retirement can change the composition of the sample of wage earners in 2010 relative to earlier years.

immigrant. By 1990, the annual earnings of male refugees were 21 percent higher than those of male economic immigrants, resulting in a relative gain of 36 percent from 1980 to 1990. Similarly, the relative gain of female refugees is 32 percent over this same period. Looking at the last row of panel A, we observe that the relative gain for refugee immigrants continued in 2000 and 2010. It is worth noting that in Cortes (2004), she finds that the relative gain of refugees in annual earnings was mainly coming from a relative increase in the total annual hours worked and not hourly earnings. Below, we will investigate if that behavior observed for 1990 continued in 2000 and 2010 for refugee immigrants.

**** TABLE 3-2 HERE ****

In panel B, we observe that in 1980, the average refugee immigrant had 11.99 years of education compared to 10.70 years of education for economic immigrants. By 1990, however, educational attainment for refugee immigrants had increased to 12.68 years of education, compared to 10.53 years of education for economic immigrants. Thus, we observe a relative gain of educational attainment for refugee immigrants from 1980 to 1990 of 0.85 years of education, and this relative gain continued in 2000 and 2010, albeit in smaller magnitudes. We observe the same pattern if we separate the sample by gender, although the relative educational gains for refugee female immigrants are much smaller.

To summarize, the unadjusted statistics presented in Table 3-2 suggest that refugees experienced larger and more rapid gains in educational attainment and earnings relative to other immigrants. In the next subsection, we use regression analysis to assess the economic assimilation of refugees compared to other immigrants more rigorously.

3.3.3 Regression Results

3.3.3.1 Empirical Model Specification

In this section, we present a regression analysis to further examine and explain the reasons why refugees outperformed economic immigrants. We estimate regression models of the following form:

$$Y_{it} = \alpha_0 + \alpha_1 \cdot D^{1990} + \alpha_2 \cdot D^{2000} + \alpha_3 \cdot D^{2010} + \alpha_4 \cdot D^{Refugee} \\ + \alpha_5 \cdot D^{1990} \cdot D^{Refugee} + \alpha_6 \cdot D^{2000} \cdot D^{Refugee} + \alpha_7 \cdot D^{2010} \cdot D^{Refugee} + X_{it} \cdot \gamma + \mu_{it}$$

where Y_{it} is one of our outcome variables of interest (i.e., log annual earnings, log hourly earnings, log annual hours, years completed of schooling, occupation prestige scores, and economic standing scores), D^{1990} is a dummy variable indicating the 1990 census year, D^{2000} is a dummy variable indicating the 2000 census year, D^{2010} is a dummy variable indicating the 2010 census year (designating ACS data from the years 2005-2010), $D^{Refugee}$ is a dummy variable indicating a refugee immigrant (measured using the methodology in Cortes (2004) summarized above), and $D^{1990} \cdot D^{Refugee}$, $D^{2000} \cdot D^{Refugee}$ and $D^{2010} \cdot D^{Refugee}$ are interactions of refugee status and the 1990, 2000 and 2010 Census dummy years, respectively. The vector X_{it} is a set of control variables, such as age, age², age³, married dummy variable, educational attainment and higher order polynomials, number of own children in the household and higher order polynomials, and regional enclaves dummies (i.e., Midwest, South, and West; Northeast is the omitted category).¹⁵ Lastly, μ_{it} is an error term. Since immigrant outcomes might vary by gender, the above model specification is estimated separately for both male and female immigrants.

¹⁵ The set of controls changes depending on the outcome variable under study. See the notes of each regression table for the exact set of control variables.

The above regression model yields several results of interest. For example, if the outcome variable is log annual earnings, the coefficient α_1 gives the growth in earnings of economic immigrants from 1980 to 1990, the sum of the coefficients ($\alpha_1 + \alpha_5$) gives the growth in earnings of refugee immigrants from 1980 to 1990, the coefficient α_5 gives the earnings growth of refugee immigrants relative to economic immigrants from 1980 to 1990, and the sum of the coefficients ($\alpha_4 + \alpha_5$) gives the level of earnings of refugee immigrants relative to economic immigrants in 1990, and analogously for 2000 and 2010.

3.3.3.2 Annual Earnings

Table 3-3 presents the results of estimating the above equation with log annual earning as the dependent variable. Model 1 estimates the basic model without controls, model 2 estimates the basic model with the standard set of controls (i.e., age, age², age³, married dummy, education, and regional enclaves), and model 3 includes those controls plus state fixed effects. As seen in panel A, column (1) and panel B, column (4), annual earnings of male and female economic immigrants grew by 52 and 54 percent between 1980 and 1990, respectively (coefficient α_1). For refugees, annual earnings growth was significantly higher—88 percent for males and 86 percent for females (the sum of coefficients $\alpha_1 + \alpha_5$). Even after controlling for demographic characteristics, human capital accumulation in the U.S., and state-specific time-invariant effects, refugees still significantly outperformed economic immigrants in terms of annual earnings. From the regression results of columns (3) and (6), we observe that the annual earnings of both male and female refugees grew by about 60 percent, still much higher than the 29 and 34 percent growth, respectively, for male and female economic immigrants.

** TABLE 3-3 HERE **

Also, regardless of which controls are included, both male and female refugees initially start off at a lower earnings level compared to their economic counterparts (note the significant negative coefficients for the refugee dummy). As shown in columns (3) and (6) with the full set of controls, we observe that male refugees earned 23 percent less (coefficient α_4) than male economic immigrants in 1980, while female refugees earned 6 percent less than female economic immigrants in 1980.

However, by the next decennial Census in 1990, both male and female refugees had caught up, and in fact surpassed, the earnings levels of both male and female economic immigrants. From the model specification without any controls, the estimates in columns (1) and (4) of Table 3-3, show that the average male and female refugee in 1990 earned 22 and 29 percent (the sum of coefficients $\alpha_4 + \alpha_5$), respectively, more than male and female economic immigrants. Although somewhat lower after the inclusion of our set of controls plus state fixed effects (column (3) and (6)), the earnings level of male and female refugees in 1990 relative to that of male and female economic immigrants is still substantially higher: the average male and female refugee still earned 7 and 20 percent more, respectively, than their comparable male and female economic immigrant in 1990.

Our analysis thus far has shown that despite the fact that refugee immigrants start off in 1980 at a lower earnings level compared to their economic counterparts, by the next Census year in 1990, refugees had caught up and surpassed the earnings levels of economic immigrants. But did this growth in relative earnings continue for refugee immigrants over the next 10 or 20 years? To answer this question, we turn to rest of the coefficients reported in Table 3-3. In particular, we are interested in coefficients of the last two interactions between the refugee status variable and the 2000 and 2010 Census dummy variables. As shown in columns (3) and (6), the earnings

growth of male and female refugee immigrants relative to male and female economic immigrants continued even after 20 and 30 years upon arriving in the U.S. The relative earnings gain of male and female refugee immigrants from 1980 to 2000 was 32 and 27 percent (coefficient α_6), respectively; and the relative earnings gain of male and female refugee immigrants from 1980 to 2010 was 29 and 22 percent (coefficient α_7).

Figure 3-3 plots the estimated coefficients shown in Table 3-3 of columns (3) and (6) to illustrate the earnings growth path for both refugee and economic immigrants by gender. As shown in this graph, though both immigrant groups experience earnings gains with time spent in the U.S., the earnings gains are greater for male and female refugee immigrants than their male and female economic immigrant counterparts.

3.3.3.3 Hourly Earnings and Annual Hours

Since annual earnings is the product of hourly earnings and annual hours, the growth in annual earnings can be decomposed into growth in the hourly wage and growth in annual hours. In this section, we further investigate whether refugee immigrants were earning more per hour or simply working more hours. Tables 3-4 and 3-5 present the regression models for these two dependent variables: log hourly earnings and log annual hours. We use the same specifications as for the log annual earnings analysis reported in Table 3-3. The main finding from Tables 3-4 and 3-5 is that the relatively faster growth of annual earnings for refugees is primarily due to an increase in annual hours worked.¹⁶ For example, for the unadjusted models (columns (1) and (4))

¹⁶ In Section 1.3, using NIS data, we found among migrants gaining legal permanent residency in 2003 that refugee workers had similar hours worked per week and weeks worked per year than non-refugee immigrant workers. This finding using the Census data that refugees workers have higher annual hours may arise from the possibility that the Census data contains more non-refugees who have lower labor supply; for example, Table 2-4 indicated fewer weeks worked per year for family preference workers compared to refugees, and the Census data likely has more family preference immigrants than the NIS sample.

of Tables 3-4 and 3-5, about two-thirds of the growth in annual earnings is attributable to the increase in annual hours worked, while only one-third is attributable to hourly earnings growth. Interestingly, these results are generally similar for both male and female refugee immigrants. After conditioning on the full set of controls plus state fixed effects (columns (3) and (6)), more than 80 percent ($0.2532/0.3013=0.8404$) of the growth in annual earnings is attributable to the increase in annual hours worked, while less than 20 percent ($0.0481/0.3013=0.1596$) is attributable to hourly earnings growth in 1990. These growth differentials by refugee status observed between 1980 and 1990 persist over the next 10 and 20 years (i.e., comparing 2000 and 2010 to 1980).

The coefficients for “Refugee” in Tables 3-4 and 3-5 indicate that upon arrival to the U.S., refugees work significantly fewer hours than economic immigrants but earn hourly wages that are no lower (for women, refugees hourly wages are significantly higher). Thus, the initial disadvantage in log annual earnings that was observed in Table 3-3 is entirely attributable to the differences in hours worked by refugee status, as refugees actually have higher hourly earnings in 1980.

**** TABLES 3-4 and 3-5 HERE ****

3.3.3.4 Occupational Distribution

We explore the occupational attainment of refugees relative to economic immigrants in Table 3-6, which shows the distribution of employed immigrants among seven broad categories of occupations: (1) managerial and professional, (2) technical, sales, and administrative support, (3) service, (4), farming, forestry, and fishing, (5) precision production, craft, and repair, (6) operations, fabricators, and laborers, and (7) military. As seen in panel A, in 1980, the top three

occupations for refugee immigrants were in operations, fabricators, and laborers (32 percent); technical, sales, and administrative support (25 percent); and service (16 percent). For economic immigrants, the top three occupations in 1980 (shown in panel C) were in operations, fabricators, and laborers (31 percent); technical, sales, and administrative support was tied with service (both 19 percent); and managerial and professional (14 percent). By 1990, however, the top three occupations for refugee immigrants were in technical, sales, and administrative support (29 percent); managerial and professional (23 percent); and in operations, fabricators, and laborers (22 percent). On the other hand, in 1990, the top three occupations for economic immigrants were in operations, fabricators, and laborers (27 percent); technical, sales, and administrative support (20 percent); and managerial and professional was tied with service (both 17 percent).

It is apparent in panels B and D that refugee immigrants experienced greater occupational mobility from 1980 to 1990 than their economic immigrant counterparts. As seen in panel B, there was a 10 percent increase in managerial and professional occupations for refugee immigrants, but only a 3 percent increase in those same occupations for economic immigrants (shown in panel D). Panel E shows the occupational gain (or loss) of refugees relative to economic immigrants over time. Over time, refugee immigrants tend to be employed in more skilled occupations compared to economic immigrants. A story consistent with these findings is that refugees are investing more in human capital that is valued in the U.S. In the next subsection, we will investigate whether refugee immigrants indeed obtained more education compared to their economic immigrant counterparts.

** TABLE 3-6 HERE **

3.3.3.5 Educational Attainment

As mentioned in Section 3.1, an important distinction between refugee and economic immigrants is their time horizons in the U.S. That is, lacking the option of immigrating back to their country of origin, refugee immigrants tend to have a longer time horizon in the host country, and hence may be more likely to invest in country-specific human capital. This may take the form of improving language skills, becoming naturalized citizens, or enrolling in the host nation's schools to raise educational attainment. In Table 3-1, we saw evidence of higher school enrollment rates for refugees in 1980, and more rapid increase in English proficiency and U.S. citizenship rate between 1980 and 1990, which are consistent with refugees investing more in host-country-specific human capital upon their arrival. This could be why initially, the hours worked for refugees is significantly lower.

Table 3-7 shows the results of estimating the regression models with years of completed schooling as the dependent variable. These models are estimated using the same sample that we used to analyze earnings assimilation, i.e., the sample of individuals with positive wages. The main results are as follows. First, the coefficient for the "Refugee" dummy is always positive and significant, indicating that in this sample of foreign-born individuals arriving in the U.S. 1975-1980, refugees are more educated than economic immigrants around the time of arrival. As shown in columns (3) and (6) with the full set of controls, male refugees have 1.33 more years of education (coefficient α_4) compared to male economic immigrants in 1980, while female refugees have an additional 0.75 years of education compared to female economic immigrants in 1980. Second, refugees experience a significantly larger increase in educational attainment. The estimated coefficients for "Refugee x 1990 Dummy" indicate that among male immigrants, refugees gained one extra year of schooling relative to economic migrants between 1980 and

1990 (panel A, column (3)) and among female immigrants, the relative gain for refugees was 0.4 years (panel B, column (6)). The schooling gap between refugee and economic immigrants does not widen in 1990 and 2000, suggesting that refugees make larger investments in host-country-specific human capital initially upon arrival, and by 1990 appear to be done with such investments.¹⁷ In additional analysis, we find that most of the schooling gains made by refugees bring them over the margin of B.A. degree completion. In contrast, the schooling gains made by economic immigrants, which are already smaller in magnitude to begin with, are over the margin of high school degree completion. Given the evolution of the U.S. wage structure over the period 1980 to 2000s (e.g., Autor, Katz and Kearney 2008), which has increasingly favored highly educated workers, these differential education gains by refugee status can be expected to be magnified into large differential earnings gains by refugee status.

** TABLE 3-7 HERE **

3.3.3.6 Socioeconomic Standing in the U.S.

Earnings may not adequately capture economic well-being, as higher earnings could be reflective of compensating differentials for unattractive jobs. This motivates us to analyze two additional measures of economic status available from the IPUMS. The first measure is an updated Duncan socioeconomic index, called the Hauser and Warren socioeconomic index (HWSEI), which assigns higher scores to occupations with higher earnings and more educated

¹⁷ The coefficients for “Refugee x 2000 Dummy” are not materially different from those for the previous decade, but those for “Refugee x 2010 Dummy” actually look lower, which is surprising considering we do not think of an individual’s educational attainment as capable of declining. This smaller measured refugee-non-refugee gap in educational attainment in 2010 appears to arise from selective exit from employment, as when we use the full sample of immigrants rather than the subset with positive earnings, the interactions with the refugee dummy are basically flat over the three decades, 1990, 2000 and 2010.

workers.¹⁸ The second measure is an updated Siegel Prestige score, called PRENT by Nakao and Treas, which assigns scores to occupations in accordance with the occupational prestige ratings measured in the 1989 General Social Survey. Both HWSEI and PRENT have been transformed into z-scores (variance of one and mean of zero).

Table 3-8 reports the regression results using HWSEI and PRENT as the dependent variables. In practice, the results for the two indices are quite similar. The coefficient for “Refugee” indicates that upon arrival, refugees hold more prestigious jobs than economic migrants. This is not surprising, as refugees have significantly higher education even at the outset. This finding is consistent with the Table 3-4 result of (weakly) higher hourly wages, though the significantly lower hours worked generate the significantly lower annual earnings in 1980. Next, shifting focus to the interaction terms, we find that the socioeconomic standing of refugees increased relative to economic immigrants over the decade 1980 to 1990. This relative socioeconomic standing increase was sustained over the next 10 and 20 years, indicating that refugees entered more prestigious occupations by 1990 and stayed in them over the rest of their work lives. These results, taken together with the earlier results, suggest that the refugees’ larger earnings gains are accompanied by larger increases in occupational prestige. In other words, following an initial human capital investment stage in the U.S., refugees are more likely to shift to jobs that not only pay more, but are considered by Americans to be more attractive jobs.

** TABLE 3-8 HERE **

¹⁸ Specifically, Hauser and Warren regressed occupational prestige ratings measured in the 1989 General Social Survey on occupational earnings and education measured in the census microdata. The resulting statistical model was used to generate socioeconomic scores for the entire range of 1990 occupation categories.

3.3.4 Discussion

The results presented in this Section 3.3 are consistent with the human capital investment model described in Section 3.1. Upon arrival in the U.S., refugees are observed to undertake more investments in human capital that is valued in the U.S. We observe they are more likely to enroll in school in 1980, and this leads to greater gains in years of completed schooling, B.A. degree completion, and English proficiency relative to economic migrants. It takes time and resources to undertake these investments, hence it is not surprising that in 1980, we observe significantly fewer hours worked for refugees relative to economic migrants. The lower labor supply is what is responsible for the lower annual earnings observed for refugees relative to economic migrants. But once the investment period is complete, then the model predicts more rapid earnings growth for refugees relative to economic immigrants, and this is exactly what we observed in Table 3-3. The higher annual earnings reflect not only more hours worked (Table 3-5), but also some returns for the additional human capital investments—hourly wages do increase (Table 3-4), there is a shift toward occupations with higher wages and better wage growth (Table 3-6), and there is a shift toward occupations considered more prestigious (Table 3-8).

These findings on the economic assimilation of refugees relative to non-refugees were obtained using a particular cohort of adult immigrants to the U.S., namely those immigrating between 1975 to 1980. These patterns may not necessarily apply to earlier or later cohorts of migrants, as the selectivity in migration by refugees and non-refugees could be different over time. It can already be seen that some of the differences by refugee status found here are different from what we found in Section 2.3 using NIS data, which is a random sample of immigrants gaining legal permanent status in 2003; not only is the cohort of arrival different (the

NIS contains later cohorts), but the range of migrants covered is different (the NIS contains only new green card holders, the Census contains all types of migrants). Nor would these results necessarily apply to other countries, because not only might immigrant selectivity vary by country, but also each country has its own set of asylum and immigrant policies which impact labor market outcomes and the relative incentives to invest in host-country-specific human capital.

4. Impacts of Refugees on Sending and Receiving Communities

Thus far, we have focused discussion on refugees themselves—who they are and how they adjust to life in the host country. Refugees, however, might also be expected to have effects on their sending and receiving communities. There is a large literature in economics examining the effects of immigrants on native outcomes in the host country, and to lesser extent, on the people left behind in the source country. In this section, we focus our discussion on a subset of papers that target their analysis on the impacts of refugees.

4.1 Impacts in Host Countries

Countries incur various costs in assisting refugees and operating their refugee regime. For individuals recognized as refugees, countries might provide or subsidize housing, food, healthcare, language and job training, schooling, etc., if only initially. In Section 3.2, we discussed some existing studies on the welfare dependence of refugees relative to non-refugees; the general finding is that refugees are more likely than other migrants to receive transfer payments from the government, though with more time spent in the host country the differential decreases. Aside from the direct transfer payments and services to refugees, there are other fiscal

costs associated with refugees. For example, countries also expend resources to process asylum applications, provide temporary aid while cases are pending, deport rejected applicants, and maintain border security. It is difficult to assess which costs are incremental costs specific to refugees, and which costs would have been incurred anyway regardless of refugees (e.g., a country would have maintained border security operations anyway, though the regular flow of refugees might necessitate more agents; some migrants who apply for asylum may have entered in some other class of admission in a counterfactual world with no refugee regime). It can be noted that even countries that are not generous in the assistance to refugees incur costs for the state apparatus of handling refugees (e.g., keeping tight borders is costly, as is operating temporary detention centers for refugees, though both might reduce the number of refugees and asylum seekers in the country). Aside from the fiscal costs associated with refugees, there are some other ways refugees might impact non-refugees. We discuss some of these spillover effects next.

4.1.1 Refugee Camps

Some refugee-producing events generate such large migration flows into neighboring nations that the only feasible way to address the migrants' immediate humanitarian needs is to set up refugee camps. These camps are intended to be temporary, until the situation improves in the home country enough to permit repatriation, or a permanent solution such as resettlement in willing host nations is implemented. In situations recognized by the UNHCR as refugee crises, the UNHCR leads humanitarian efforts at these camps, and funds them in partnership with other humanitarian aid organizations.

These camps impose various costs on the host country. First, typically the host country's

security forces contribute to maintaining order, and preventing instability from spreading to its own population. Salehyan and Gleditsch (2006) argue that refugees contribute to diffusing conflict to neighboring states hosting them. Second, the influx of refugees generates a large increase in demand for food, shelter and other goods and services, which can be disruptive to local markets. Alix-Garcia and Saah (2010), using data on Tanzanian households and variation in refugees provided by the Burundi and Rwandan genocides, find that increased exposure to refugees (closer proximity to the camps) tended to increase the prices of agricultural goods, except for those goods provided by aid. Third, especially for camps operating for longer durations, refugees may increasingly spill into the local communities in order to re-establish their lives, such that locals face increased competition for jobs, schools, healthcare, etc. Furthermore, there could be public health challenges, since refugees are moving from their homes to new environments with which their immune systems are unfamiliar, they might have been deprived of adequate medical care for considerable time leading up to their flight, and often face crowded and unsanitary conditions in the camps (the camps are hastily put together, and on land that was probably previously uninhabited for a reason). Montalvo and Reynal-Querol (2007), using country panel data and variation in refugees generated by civil wars, find that refugees significantly increase the incidence of malaria in refugee-receiving countries. Baez (2011), using household survey microdata on Tanzania, which received large inflows of refugees due to the genocides in Burundi and Rwanda, finds that refugees reduce Tanzanian children's human capital. In particular, child mortality increases, and conditional on survival, child height decreases, rate of infectious diseases increase, and educational attainment decreases.

Jacobsen (2002) argues that states can actually benefit economically from the presence of refugees. Her study focuses on Africa in the late 1990s and early 2000s. Jacobsen describes how

international food and other material aid can make it out into the host community, both incidentally and deliberately so as to assuage the local population who may not be very enthusiastic about hosting refugees. She also mentions infrastructure improvements that have resulted from refugee inflows and the accompanying foreign aid in Zambia, Tanzania, and Uganda. In Tanzania, refugee-related funding provided the government with the financial flexibility to undertake development projects that it could not afford on its own. Jacobsen also names cases where the entrepreneurial instincts of the refugees themselves brought economic benefits to the host nation, referring to water, communications, and construction initiatives on the part of Liberian refugees in Ghana, for example. Jacobsen does, however, raise the issue that these benefits do not necessarily extend to the entire host population and may not justify the costs associated with hosting refugees. For example, in the aforementioned Alex-Garcia and Saah (2010) study, which found that prices increase in agricultural commodities in Tanzania due to refugees inflows from Burundi and Tanzania, Tanzanian households in rural areas experienced welfare gains due to the price increases (because they are net producers of the goods and benefit from higher prices) while urban households are worse off (because they are net consumers).

4.1.2 Resettlement

When safe repatriation on a timely basis cannot be expected, refugees might seek a new country to settle in. Legal restrictions on immigration form an important constraint in the decision of where to resettle—though developed countries might be sought-after destinations, they also tend to have highly restrictive immigration policies, and the demand for a refugee status visa to enter these countries far exceeds the quotas these countries offer. Thus, refugees may choose less desirable countries which have the virtue of being easier to enter, or they take

great risks to enter a desired country illegally and upon entry apply for asylum.

Countries have various motivations to provide assistance to refugees—e.g., for humanitarian reasons, to promote international stability—but face constraints which rein in the actual assistance provided. For example, as discussed above, helping refugees imposes a fiscal burden, and it may be politically unpopular to incur such costs to help non-constituents, especially during economic downturns. Additionally, there may be concerns that generous policies toward refugees might encourage more immigration than otherwise would occur, because genuine refugees change their choice of destination to the more generous one, or individuals whose situations are less dire and who otherwise would not have migrated decide to migrate under a more generous refugee policy regime. Martin, Schoenholtz and Fisher (2005) provide an overview of the potential impacts of refugees and the refugee regime on developed countries, and highlight issues that are unique to refugees versus other categories of migrants.

A large literature examines the impact of immigration on natives in the host countries, and Section IV of this Handbook discusses some of these studies. We therefore focus our discussion here on empirical studies in economics that use data on refugees. These studies are often framed around a broader question about immigrants, rather than about the impacts of refugees per se, however they use refugees and refugee policy to form an identification strategy. One set of such studies use the refugee-producing event, such as a natural disaster or violent conflict, to provide variation in natives' exposure to the immigrants. For example, Card (1990) uses the influx of migrants provided by the Mariel Boatlift to learn about the effect of unskilled immigrants on native labor market outcomes. Angrist and Kugler (2003) uses the influx in immigrants from the former Yugoslavia generated by the Bosnian and Kosovo wars to identify the effect of exposure to immigrants on the labor market outcomes of EU natives.

A second set of such studies exploit administrative rules affecting the spatial distribution of refugees within the host country to learn about neighborhood, social network and peer effects. In the case of large refugee inflows, a common policy has been to disperse the refugees across municipalities upon their arrival in the host country, with the intention that the burden of hosting refugees be shared among communities rather than placed on a small handful of traditional immigrant-receiving communities. The implementation of this policy had led to refugees being effectively randomly assigned to locations in a number of settings, and this has been exploited to deal with problems of endogeneity in an individual's neighborhood, social network or peer group that typically arises when estimating the effects of those variables using observational data. Edin, Fredriksson and Aslund (2003) and Aslund et al. (2011) use the Swedish refugee placement policy to estimate the impacts of living in an ethnic enclave on immigrant labor market outcomes and children's educational outcomes, respectively. Damm (2009) uses the Danish policy to examine the impacts of living in an ethnic enclave on immigrant labor market outcomes. A large resettlement agency in the U.S. also effectively randomly assigns refugees across U.S. cities, and Beaman (2012) exploits this to learn about the dynamic effects of social network size in labor market outcomes.

A caveat to these studies using refugees and refugee policy to form an identification strategy for a broader research question is that to the extent that refugees differ in material ways from other migrants, the impacts of refugees may well differ from the impacts of immigration in general. Thus, before these estimates can be applied to other migrants, a careful consideration of differences between the refugees studied and other migrants should be undertaken.

4.2 Impacts in Sending Countries

It is difficult to isolate the impacts of refugees on the refugee-sending country from the impacts of other variables that led to, or that are simultaneous with, the emigration. Relatedly, when refugees who fled are repatriated, it is difficult to separate the effect of the repatriated refugees on local communities from the effects of the conditions that made repatriation possible. In part for these reasons, there has been little research on the impacts of refugees on the sending countries. This paucity of research has been noted by Koser and Van Hear (2005), who provide an overview of the potential impacts of refugees on the sending countries.

4.2.1 Departure of Refugees

The refugees were part of the home country economy, so their departure can be expected to have economic consequences for the home country. The impact can be expected to differ depending on the size of the outflow, and the labor market characteristics of the refugees relative to the rest of the population. The smaller the outflow, and the greater the substitutability between refugees and the stayers in production, then the smaller the predicted impact of refugee migration on the home country's economy. To the extent that it is the educated and skilled workers leaving, then the refugee migration is associated with "brain drain". For example, Akbulut-Yuksel and Yuksel (2011) find that the Jewish expulsions in Nazi Germany decreased the educational attainment of Germans who were school-aged at the time of the expulsions; because Jews accounted for a significant share of professors, teachers and professionals, there were deleterious effects on the human capital formation of other Germans.

Besides the direct impact of the refugees' departure on the host country, refugee migration could also have indirect impacts via remittances and influence on international aid.

The plight of the refugees may lead to more international attention to their issues, and generate more funds for the agenda of the refugees. There is a literature on the impacts of remittances (see Chapter IV.6 in this Handbook), but a couple of points pertaining to refugees can be noted. First, because the home country has been devastated by the refugee-producing event, and its economy may still be crippled, remittances may be an important source of funds to help rebuild the country. That is, remittances might be used more productively in refugee-sending places. Second, in the case of political refugees, potentially the remittances and aid can contribute to prolonging violent conflict (e.g., the political refugees are on the losing side of the conflict, flee their home country, and send back funds which are partly used to sustain the opposition). Our statement is not that this is good or bad (i.e., prolonged conflict has to be compared to the alternative, and this varies in different settings), but that remittances can feed the refugee-producing event and potentially generate even more refugees.

4.2.1 Return of Refugees

An important principle of the Convention is non-refoulement, i.e., a refugee cannot be returned to his or her persecutor. Thus, if signatories are abiding by the Convention, then repatriation should not occur until the home country becomes safe for the refugee. In practice, there are sometimes strong political pressures to repatriate—on the one hand, it is costly to operate refugee camps indefinitely, and on the other hand, potential host nations might be unwilling to offer permanent resettlement—leading to skepticism about whether a repatriation policy is recommended because conditions have truly improved in the home country or because of political expediency. Toff (2007) discusses some of the issues related to refugee repatriation.

While the more general literature on the impacts of return migration (see Chapter IV.7 of

this Handbook) might inform on the impacts of repatriation of refugees on the home country, an important consideration is that refugees tend to have considerably less to return to—the refugee-producing event could have destroyed homes, businesses and communities. Additionally, refugees might face more problems with reintegration because of the trauma they have been exposed to, or because of the marginalization (presumably short of persecution) they may continue to experience. And just as for the impact of refugee outflows on home countries, the impact of refugee repatriation can be expected to depend on the characteristics of the returnees versus stayers. Who returns among those who chose to flee is potentially endogenous; factors that affect the decision to return (rather than stay in camps or be permanently settled) can be correlated with outcomes. Kondylis (2008) finds that, relative to stayers, refugees returning to Rwanda after 1994 are on average younger, have fewer children, have higher agricultural yield (though the difference in yield appears to arise from returnees sorting into regions that have higher productivity, and is not observed in within-prefecture comparisons), and higher returns to labor.

5. Political Economy Issues

5.1 Asylum Policies

Although the signatory nations to the 1951 United Nations Convention Relating to the Status of Refugees and the 1967 Protocol follow the same set of guiding principles in forming their asylum policies, the asylum policies they implement vary considerably. In this subsection, we describe some of the dimensions along which asylum policies have differed across time and space.

One commonly used measure of the generosity (or toughness) of a country's asylum

policy is the asylum recognition rate, which gives the percent of asylum applications with decisions rendered that successfully resulted in recognition as a refugee (either under the 1951 Convention or some other humanitarian ground). As discussed in Section 1, there is a great deal of variation across time and across countries. While much of the time variation may be due to the composition of the case load—some years may have more severe cases than others, i.e., the applications relate to specific refugee-producing events that are universally regarded as dire and warranting refuge—the regional variation is harder to reconcile completely in this way. For example, in 1997-2002, the North American neighbors U.S. and Canada had recognition rates of 33.5 percent and 56.4 percent, respectively (Hatton 2009, Table 4). Also, the Scandinavian countries Denmark, Norway and Sweden had recognition rates of 54.7, 37.3 percent and 44.4 percent, respectively, though in 2002-06 the ranking of the three countries by recognition rate actually reversed relative to 1997-2002 (Hatton 2009, Table 4).

In fact, there is considerable variation in recognition rates across regions within the same country. For example, Holzer, Schneider and Widmer (2000) find significant differences in recognition rates across Swiss cantons, even after controlling for case composition (e.g., age, sex, year, and country of origin of applicant). Similarly, using data on asylum cases in the U.S., Ramji-Nogales, Schoenholtz and Schrag (2009) find significant differences in recognition rates across individual asylum officers and judges, even for cases brought up within the same region or court involving applicants of the same nationality.

A higher recognition rate might be *prima facie* evidence of a more generous host country, as it is admitting a higher share of people applying for asylum there. However, it could also be consistent with a host country that makes it difficult for potential asylum candidates to enter the country in the first place (so the total number of applications is low, though conditional on entry

to file an application, recognition rates are high). Conversely, a host country might be stringent on granting refugee status, but offer very generous aid to refugees who have been admitted. Thus, to get a more complete understanding of a country's policy stance toward refugees, it is useful to consider a wider set of policies that relate to refugees besides the recognition rate.

Hatton (2009), in his analysis on the relationship between country's asylum policies and number of asylum applications, classifies policies affecting refugees in three broad categories: (1) policies impacting the ability of asylum seekers to gain access to the country's territory; (2) policies related to the processing of asylum applications and the toughness of meeting the country's definition of refugee; and (3) policies affecting individuals gaining refugee status. It is difficult to form an overall measure of policy stance because countries vary considerably in the number of policies as well as the nature of policies even within a narrowly defined topic. Hatton therefore uses his indices of policy stance in the three broad categories to reveal time trends in policy stance within countries, and avoids making cross-country comparisons (i.e., he aims to describe whether a country has become more or less generous toward refugees over time, rather than whether one country is more generous than another country). He finds that on average major developed countries toughened their stance toward refugees on an overall basis between 1997 and 2006, as well as in each of the three policy categories. There have been fewer major negative changes in policies pertaining to welfare (which pertain to individuals recognized as refugees), and more negative shifts in the index arising from policies that keep would-be applicants out, or that make it harder for an application to be successful. There is heterogeneity in the trend in policy stance among countries, though; for example, Poland became more generous over the time period, whereas Australia, the United Kingdom and the Netherlands became considerably tougher. Using panel data on asylum applications for source country-receiving country pairs,

Hatton finds that the shifts in toward tougher policies do reduce the number of asylum applications to developed countries.

A number of research papers attempt to explain the fluctuations in policy stance across countries and over time. In the following subsections, we summarize three major sets of variables that have been found to be associated with asylum policies.

5.1.1 Studies Linking Asylum Policies of Nations to Economic Concerns

Numerous studies have found links between the asylum policies of nations to economic influences, such as economic conditions in the host country and the economic attributes of the asylum seekers themselves. These economic influences take at least three different forms: the economic attributes of the asylum seekers, economic conditions in the host country at the time of the refugee inflows, and external economic factors.

Studies that consider the effect of economic characteristics of refugees on their chances of admittance usually take into account the ability of these asylum seekers to integrate into the host country's workforce. Howard (1980), in an examination of Canadian asylum procedures in the 1970s, describes how that country sought to admit those applicants with the greatest ability to integrate into Canadian society and avoid becoming drains on the public purse, stressing the importance of employability and entrepreneurial skills in the selection process. She suggests that such highly skilled asylum seekers were at an advantage relative to others who may have been less skilled, even if the threats of political persecution they faced were greater. Zucker (1983) argues a point similar to that of Howard, focusing on the issue of U.S. reluctance to admit asylum seekers from Haiti in the early 1980s, and suggesting that such reluctance stems at least in part from an unwillingness to allow people into the country whose lack of employable skills

made them a likely drain on social spending. Lankov (2004) examines the case of refugees from North Korea attempting to enter South Korea via China, and he argues that a major reason that many are turned away is that most North Koreans lack the education and skills to successfully adjust to life in the modern South. To bolster this argument, he points out that North Korean refugees in South Korea had only a 50 percent employment rate, at a time when South Korea's unemployment rate was only three to four percent. He goes on to argue that those who do find work earn much less than the national average. Basok (1990) discusses the case of Costa Rica in the 1980s, and she argues that one reason for greater willingness to admit Nicaraguans as refugees relative to Salvadorans was their relative youth, the higher proportion of them that were male, and their greater preponderance of agricultural workers, which may have given them an advantage in finding employment in Costa Rica.

Many articles have looked at how destination countries may be influenced by their own economic conditions in setting asylum policies. Hatton (2009) and Neumayer (2005), using panel data on source-destination country pairs and destination country fixed effects estimation, find significant negative effects of destination unemployment rate on asylum applications and recognition rates, respectively. Crisp (1984) discusses the case of Djibouti in the late 1970s, then a newly independent state. At the time, suffering from drought and the destruction of regional trade resulting from a war between Somalia and Ethiopia, the government of Djibouti was eager to repatriate the more than forty thousand refugees of Ethiopian nationality who had arrived in the country. Thus, the desire to repatriate Ethiopian refugees was primarily motivated by Djibouti's economic hardships, and probably not by a change in the safety of living conditions in Ethiopia. In a discussion of efforts by France and Germany to manage foreign labor migration, Bach (1993) briefly discusses how a lack of government funding to help resettle admitted

refugees impairs the ability of local organizations to effectively serve their communities and can aggravate hostilities on the part of local populations towards migrants in general and refugees in particular. In a study of changes to asylum policies in the late 1970s, Stein (1983) wonders if increasing economic difficulties in major developed world destination countries, such as the United States, Canada, France, and Australia, might weaken the commitment of these countries to accept refugees, particularly those with lower skills. He argues that popular hostility to economic migrants in an environment of economic hardship might spill over to genuine refugees suspected of being economic migrants themselves. In a similar vein, Gibney (1999) suggests that weak labor and housing markets or public austerity in a destination country can stoke animosity among local populations toward refugees and increase pressure to apply tighter restrictions on admittance. In her study of Costa Rica, Basok (1990) suggests that the occurrence of a financial crisis in that nation at the time of the heaviest inflows of asylum seekers from El Salvador contributed to a greater reluctance to grant them refugee status. She compares this situation with that of asylum seekers from Nicaragua who faced an easier task achieving refugee status at a time when the crisis had eased. Finally, consistently violent conflict has been found to be associated with asylum applications and recognition rates (e.g., Hatton 2009, Neumayer 2005), and negative economic shocks are a cause of violent conflict (Miguel, Satyanath and Sergenti (2004)).

Some studies have also examined how countries adjust their refugee policies so as to maintain good relationships with major trading partners and aid donors. Crisp (1984) argues that the Djibouti government was eager to restart a rail link between the capital, Djibouti City, and Addis Ababa, the capital of Ethiopia, so as to revive the economy somewhat and saw appeasing Ethiopian demands for repatriation of refugees as an avenue for doing so. Lankov (2004) argues

that a further reason that South Korea displays such unwillingness to admit refugees from the North who enter via China is a reluctance to complicate relations with China, a trading partner and political power of growing importance. Lankov describes how China does not wish to be seen as a transit route for refugees from the North to the South. Also, Basok (1990) argues that Costa Rica took up a refugee policy stance that aligned with U.S. strategic objectives (taking a harder line against refugees from El Salvador, a U.S. ally, and being more lenient with refugees from Nicaragua, a U.S. foe) because, in the midst of its financial crisis, Costa Rica was heavily dependent on U.S. aid.

5.1.2 Studies Linking Asylum Policies of Nations to External Political Concerns

External political concerns have also been cited for country's choices of asylum policies. A number of studies have made arguments that the decision whether or not to admit refugees from a certain country was intimately related to the nature of the relationship between destination country and origin state, while others have made observations on how asylum decisions sometimes take into account the concerns of some third state.

Scheinman (1983) asserts that "the granting or withholding of refugee status has become an instrument of the receiving state's diplomacy toward the sending state" (p. 80), a view expounded in several other articles. Howard (1980) details suspicions among many refugee advocates in the 1970s that Canadian authorities held a bias in favor of asylum seekers fleeing communist or leftist states such as Hungary, Czechoslovakia, Uganda, and Vietnam, and were far more hostile towards left-wing asylum seekers escaping political persecution in right-wing dictatorial states like Argentina, Chile, and Uruguay. She suggests that this policy is motivated by a fear of allowing left-wing "subversives" into the country. Zucker (1983) draws a similar

conclusion, specifically with regard to Haitian asylum seekers in the United States, asserting that a major reason for U.S. reluctance to grant the Haitians refugee status was the presence of a U.S.-friendly right-wing dictator (Jean-Claude Duvalier) in Haiti. She also takes note that the U.S. rarely denied refugee status to escapees from communist nations. In a paper on the legal framework of refugee determination procedures in the late 1960s and early 1970s, Evans (1972) discusses how the U.S. Department of State can introduce foreign policy considerations, including U.S. relations with the origin state, as evidence for or against recognition of asylum seekers' claims. In the African context, Jacobsen (2002) draws attention to the case of Tanzania in the late 1990s, where refugees from Rwanda were expelled after allegations that they were pursuing military and political goals from their camps. Refugees from Burundi were not subject to the same treatment despite similar allegations. Jacobsen suggests that this situation emerged because relations between Tanzania and Burundi were much cooler than those between Tanzania and Rwanda and the Tanzanian government was subsequently less eager to curb the questionable activities of Burundian refugees. Basok (1990) argues that Costa Rican willingness to admit asylum seekers from Nicaragua stemmed from opposition to the Sandinista government in that country. Similar to the argument raised by Howard in the Canadian context, Basok suggests that, while they were admitting Nicaraguan refugees, Costa Rican elites were applying pressure on left-wing asylum seekers from El Salvador on the grounds that they were "subversives" seeking to spread their political ideology among the people.

Basok's article also touches on another avenue through which external political factors may impact asylum policy: the desire to maintain good relations with some third party state. In the case of Costa Rica in the 1980s, as Basok describes, this third party state was the U.S., whose geopolitical objectives in the region the Costa Rican government wanted to further as a way of

maintaining closer ties with a major aid donor. To this end, Costa Rica maintained a more welcoming stance towards asylum seekers from Nicaragua than towards those from El Salvador. As mentioned above, Lankov (2004) describes how South Korea resisted granting refugee status to many North Koreans to discourage them from using China as an escape route to the South. This was driven in part by a desire to keep up healthy relations with China, who was growing in economic and political importance to the whole region, including South Korea. Lankov does point out, however, that North Korean refugees applying for asylum in South Korea via other Asian nations hardly have better experiences. The South Korean case is also unique for another reason, as Lankov argues that, despite the adversarial nature of relations between North Korea and South Korea, the South does not want to encourage the collapse of the state in the North for fear of an uncontrollable economic, political, and humanitarian catastrophe, and, for this reason, is sometimes unwilling to accept North Korean asylum seekers.

5.1.3 The Role of the UNHCR's Policies in the Asylum Policies of Nations

Several studies argue that decisions by the United Nations High Commissioner for Refugees (UNHCR) impact the asylum policies chosen by nations. Crisp (1984), in his analysis of the situation facing Ethiopian refugees in Djibouti in the late 1970s, argues that the UNHCR was too cautious in its attempts to protect the Ethiopians from forcible repatriation. He details how the organization was trying not to push the Djibouti authorities too hard on protection issues for fear of provoking a backlash and a mass deportation, but Crisp questions the usefulness of the Refugee Convention and Protocol under which the UNHCR operates if they are not to be forcefully applied. While Crisp takes the UNHCR to task for not more effectively preventing repatriation, Stein and Cuny (1994) argue that the organization is too inflexible about repatriation

and should be more willing to assist in the repatriation process when the refugees themselves are pushing to return home. This includes cases in which the conditions that caused the flight in the first place are still present in the origin country. The authors argue that the UNHCR needs to rethink its standards for when it becomes involved in the repatriation process, taking more account of the wishes of the refugees.

Other topics besides repatriation have also stimulated discussion about the UNHCR. In an essay reflecting on the first fifty years of the existence of the UNHCR, Goodwin-Gill (2001) suggests that, especially after 1980, the UNHCR has become increasingly unaccountable, disorganized, incapable of preventing displacement episodes, overly dependent on the financial generosity of donor states, and impotent in holding states up to their commitments. An article with a more specific focus (on the situation of Palestinian refugees in Gaza) is that of Feldman (2007). The thrust of Feldman's argument is that the labeling of displaced Palestinians in the Gaza Strip as "refugees" (as compared to the "natives" of Gaza) after the founding of Israel in 1948 has had long-lasting adverse consequences in Gazan society. This labeling has led to tensions and resentments between the refugees and the natives, not least since only refugees were legally entitled to formal aid, despite the fact that natives were also suffering grievously. It should be noted that Feldman's analysis is concerned not with the UNHCR but with the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA), the U.N.'s organ for refugee issues in the Palestinian territories. Odhiambo-Abuya (2004) examines the efforts of the UNHCR in Kenya in dealing with refugees from Somalia, Sudan, and Ethiopia in the 1990s. He argues that excessive delays in refugee status determination procedures, caused by a lack of funding, leaves asylum applicants in a state of limbo that enhances their suffering. Odhiambo-Abuya notes also that most asylum seekers are unable to work or otherwise attend to

their own needs while awaiting a decision on their claim. He also criticizes the wording of the letter rejecting asylum seekers' claims, saying that it is too vague and impairs the applicant's ability to effectively appeal.

5.2 Modeling Host Countries' Policy Choices

In this subsection, we discuss potential models of host nation behavior to explain the observed policy differences described in Section 5.1. A simplistic model might have the host nation choosing to allocate its scarce resources over two potential uses: refugee assistance (e.g., number of refugees to admit, quality of services to offer), and all other things. With standard assumptions about preferences, then the usual result is obtained: the optimal allocation is such that the last dollar spent on each good (here, refugee and non-refugee uses) provides the same marginal utility. Even this simplistic model offers explanations for some of the differences in asylum countries observed in Section 5.1. For example, relative to countries that are richer or time periods when its economy is stronger, a country observed at a particular time period may have a lower chosen level of refugee assistance. As another example, encapsulated in the utility function may be ideological alignment with the refugee-sending countries, or national security implications to the host country of a particular refugee-sending stream, and this would produce differences across countries in generosity even if they are responding to the same refugee-producing event.

The simplistic model, though, does not generate the result of under-provision of refugee assistance by all nations collectively, which is major concern voiced by the UNHCR, human rights advocates and individuals seeking protection. One way to generate this result is to treat a country's refugee assistance as having a positive externality, or as a public good: if one nation

provides more refugee assistance, then other nations benefit too (say, because they derive the positive utility from helping a refugee whether or not they themselves have paid for the help), however each nation does not fully consider the benefits of its refugee assistance on other nations in choosing the optimal bundle. Thus, each nation chooses a level of refugee assistance that is too low vis-à-vis the social optimum. Though signatories to the Convention express a desire to help refugees, any given signatory has an incentive to free ride and wait for other countries to undertake the costs of helping refugees. When one country toughens its policy stance toward refugees, and takes in a smaller number of these refugees, then it is leaving a larger burden for other countries. If other countries do not shoulder the increase in burden, then there is a cut in overall assistance for refugees. Thus in general when one country increases its toughness, the remaining countries bear a greater share of the overall burden of assisting refugees or the overall level of assistance decrease. Thielemann (2006) and Surke (1998) discuss some potential policies to attain a more equitable distribution of the cost of helping refugees. Countries have not been able to agree upon a burden-sharing scheme, and even among European Union members—a relatively small set of nations with some common regional interests and a stated desire to work together—this has not been possible. As a result, perhaps except in cases where one developed nation has a major stake (e.g., failure to respond adequately could seriously undermine its national security), there tends to be under-provision of assistance to refugees.

Thus far, we have considered the host nation as the sole decision-maker. But there are other agents that are making choices that impact a given host nation's choice of policies toward refugees, and we consider several in the following subsections.

5.2.1 The Role of Other Host Nations

In choosing its asylum policies, a host country might consider what other countries' policies are expected to be. After all, if it chooses tougher policies in order to ebb the flow of asylum applicants, but other countries toughen theirs even more, then its objective would not be attained. A simple prisoner's dilemma model can illustrate the inefficiency that can arise when countries behave strategically in setting their asylum policies. Consider two host countries simultaneously deciding whether to provide assistance to refugees (Yes or No). A country incurs cost c per refugee it assists. A country reaps benefit b per refugee assisted, regardless of whether it or the other country paid for the assistance. Figure 5-1 illustrates the payoff matrix expressed on a per refugee basis (the first value listed in each box is for country 1 and the second value is for country 2) for this static prisoner's dilemma. Where α is the share of total refugees and therefore costs borne by country 1, and $2 \cdot b - c > 0 > b - c$ captures the idea that while it is valuable to aid refugees (e.g., for humanitarian reasons, to promote international stability), unilateral action is very costly. The unique solution to this static game is (No, No): Yes is a strictly dominated strategy, and for any strategy that country 2 can play, country 1 is better off choosing No (if country 2 pursues Yes, country 1 is better off choosing No ($b > b - \alpha \cdot c$) and if country 2 pursues No, country 1 is better off choosing No ($0 > b - c$), and vice versa. Thus, the countries forgo the higher total payoff that comes from providing assistance to refugees.¹⁹ With coordination, such as explicit sharing rules agreed upon before a refugee crisis occurs, efficiency can be improved. Additionally, in a repeated game, there may be more scope for cooperation, as deviating from cooperation might trigger punishments that could make the present discounted value of the payoff stream from always cooperating exceed the payoff stream from renegeing

¹⁹ The payoffs displayed in Figure 5-1 indicate the same total payoff whenever refugee assistance is provided. If the marginal cost of refugee assistance is increasing though, then bilateral action (i.e., the (Yes, Yes) strategy) yields a higher payoff than unilateral action.

today and being punished in all future periods. On the other hand, it is not automatic that improved coordination or cooperation among potential host nations would improve refugees' well-being, as collusive behavior can undermine that objective. For example, all nations might agree to a particular burden-sharing rule, but at a lower level of generosity than what would have prevailed in the absence of collective action.

**** FIGURE 5-1 HERE ****

5.2.2 The Role of the UNHCR

The UNHCR stands to impact individual countries' asylum policies by setting international standards and reducing coordination problems. A more active way the UNHCR might influence individual countries' asylum policies is in its decisions about when to intervene. There are numerous situations that involve individuals fleeing from harm, and the UNHCR exercises some discretion over whether and how to provide assistance. Recognition by the UNHCR as a refugee crisis has major implications, such as access to UN resources for protecting refugees, greater availability of other sources of aid from humanitarian organizations and others parties who work in association with the UN, and clearer grounds for claiming asylum among migrants fleeing the situation. While one perspective is that the UNHCR sets policies first, then potential host nations set theirs holding UNHCR policies fixed, given the discretion UNHCR has about responding to negative shocks producing migrant flows, setting up temporary camps, and condoning repatriation, there is the possibility that UNHCR's policies are in part responses to decisions made by host nations.

5.2.3 The Role of the Refugees

Refugees are meant to be the innocent people who are caught in the middle of armed conflict, natural disaster or other negative event, and forced to flee to escape the harm. However, in some cases, refugees may be the combatants (though technically they are not supposed to, as the protection spelled out in the Convention does not apply to combatants; however, combatant can claim to be refugees, and individual claims are difficult to verify especially during times of mass migration) or may become combatants. More generally, refugees or the refugee regime can be manipulated in order to achieve geopolitical goals. This is argued in Stedman and Tanner (2003). For example, knowing that refugees receive aid from the UNHCR and humanitarian organizations, people on the losing side of a violent conflict might flee across borders, become part of a refugee camp, gather strength by recruiting new members in the camp and devising new strategies, and return to the home country to renew the conflict. Thus the refugee regime is being exploited to gain access to international aid as well as new recruits for the political cause. Refugees may be manipulated in the sense that at a vulnerable time, they are being recruited and in some cases coerced to join a political cause. In the general case we might think of host nations and the UNHCR making decisions with geopolitical motivations mixed in with the humanitarian one, and the situation highlighted here is that political factions can take advantage of the international aid and attention that comes with being recognized as refugees to further their agenda. This behavior in turn impacts UNHCR and host nation policies. For example, it may extend the duration of a violent conflict, which would generate more refugee flows and make solutions like temporary camps (because the conflict is expected to carry on for years) and repatriation (because the home country is still not safe) infeasible.

5.2.4 The Role of Non-refugee Migrants

While host countries may be interested in helping genuine refugees, they may fear that having a more generous policy stance toward refugees will encourage migrants who do not actually face persecution to use the asylum route to enter the country. Thus, the behavior of potential migrants who do not truly meet the requirements as refugees, but could provide an asylum application that has a chance of meeting the standards for being recognized (verification of individual claims of persecution is difficult, and some mistakes get made), impose constraints on the host country in its choice of asylum policies. Bubb, Kremer and Levine (2011) offer a theoretical model capturing the public good nature of refugee protection, together with the interplay between asylum policies and economic migration. The model has the result that as economic migration increases, host countries may toughen their asylum policies to deter economic migrants from using the asylum route to enter. They argue that lower costs of international travel and rising income inequality has increased the incentives for economic migration over time, and this could be a reason why, although the 1951 Convention was relatively effective at achieving refugee burden-sharing among nations in the past, it fails today.

5.2.5 The Role of Administrators of the Asylum Policies of Nations

Administrators of a country's asylum policies, such as judges, bureaucrats and law enforcement officers, affect how generous or tough those policies actually are toward refugees and asylum seekers. For example, a tough law that is never enforced does not de facto reduce refugee assistance. Holzer, Schneider and Widmer (2000) and Ramji-Nogales, Schoenholtz and Schrag (2009) find significant differences in recognition rates for apparently similar cases across regions within Switzerland and the U.S., respectively. The U.S. study also finds significant

differences across judges within the same court, and asylum officers in the same regional office. The two studies find that characteristics of the administrator handling the case, such as political leanings and gender, impact the disposition of the case.

Administrator discretion has been found to play a role not only in the disposition of asylum applications, but also in the distribution of international aid to refugees. Aldrich (2010) finds considerable variation in the amount of aid received by households among 62 inland fishing villages suffering similar damage from the 2004 Indian Ocean tsunami. For example, villages with more poor and lower caste households received significantly less resources from the large disaster relief fund. Technically these individuals impacted by the tsunami are not refugees—they did have to move temporary relief camps, but as there was no crossing of country borders they would be considered internally displaced persons rather than refugees. Nevertheless, this case does illustrate the role of the government bureaucrat in mediating assistance to refugees.

These observed differences in outcomes (i.e., recognition rate, aid) among apparently similar refugees clearly indicate the high degree of discretion that administrators have in enforcing the country's asylum laws. In setting its asylum policies, a country has to consider how a particular policy will be enforced. One issue is simply the cost of enforcement (e.g., more border patrol officers are needed to prevent would-be asylum seekers from entering the country). The other issue relates to how to implement policies changes in areas that have a major discretionary component (e.g., in deciding whether to grant asylum to an applicant, the applicant's claim of persecution in the home country must be assessed).

6. Tentative Conclusions

The 1951 Convention Relating to the Status of Refugees and 1967 Protocol form the basis of the international refugee regime. The early waves of refugees were displaced by World War II and the Cold War that ensued afterwards. By contrast, more recent waves are more heterogeneous not only geographically, but also in terms of the shocks that lead individuals to seek refuge. While many asylum seekers are fleeing civil wars and natural disasters, some originate from settings where there was no single precipitating disaster. Host nations, the UNHCR and humanitarian organizations are all given the challenging task of assisting large and diverse number of migrants requesting recognition as a refugee given limited resources.

In this chapter, we offered an economic framework for considering why the selection in migration and the assimilation process might differ between refugee and non-refugee migrants, and why asylum policies might differ among countries and across time. We examined a great number of studies pertaining to these issues, much of which were descriptive in nature and relied heavily on case studies, and were conducted by researchers besides economists (e.g., sociologists, political scientists, legal scholars). We also performed two complementary empirical analyses to understand the nature of selectivity and assimilation of recent refugees coming to the United States.

To conclude this chapter, rather than summarize all the findings, we focus on a few points below.

- (a) First, there is no bright-line rule for defining a refugee versus an economic migrant.

Our conceptual model of migration illustrated in Section 2 makes this point clear.

The model reveals that refugees are motivated by some of the same underlying variables that enter an economic migrant's decision, refugees, however, do have a

larger push factor—that is, exposure to harm in their home country. Indeed, an important difference between these two migrant groups is that refugees are significantly more likely to have suffered from harm in the home country. This is probably not surprising, as the basis for applying for asylum is a claim of persecution or well-founded fear of persecution. Intertwined with this greater exposure to harm is that refugees tend to be in worse physical and mental health than non-refugees. The higher exposure to traumatic events and worse health status for refugees raise the possibility that a host country integration program that works for non-refugee migrants may not necessarily be as successful for refugees.

- (b) For refugee-producing events that affect the home country broadly, we might expect the influx of refugees to be less favorably selected on labor market and other characteristics compared to those of non-refugee migrants, and these characteristics may be heavily valued in the destination country. By contrast, a refugee-producing event that only affects a narrower subpopulation, would have different implications for differences between refugees and non-refugees. Thus, in predicting the economic, social, and cultural assimilation of refugees in the host country and the impact of an influx of refugees on native's livelihood, it would be informative to think first and foremost about the nature of the refugee-producing event. In the case of the United States, we find evidence that refugees fall in the middle of the skill distribution, as proxied by their educational attainment upon arrival. That is, refugees are more educated than family preference and undocumented migrants, but less educated than employment preference and diversity migrants. However, if refugees are more likely to be in the middle of the skill distribution, and job polarization continues in the

United States, then perhaps refugees in the long-run will have a more difficult time in obtaining jobs that are well matched with their skill set. Additionally, their skill set may overlap more with native workers, so would likely be less complementary to native workers than very low skilled and very high skilled migrants.

- (c) It is notoriously difficult to estimate the causal effects of immigration, and researchers have sometimes used refugee flows to provide exogenous variation in migration flows. An important issue about these studies using such an identification strategy is the external validity of their results. Are the estimated parameters indicative of the causal effect of immigration, or only the much more specific effect of a particular wave of refugees?
- (d) Lastly, policy debates have ensued in developed countries about the growing burden of refugees, and the unequal distribution of the responsibility of helping refugees among these nations. However, these discussions tend to forget that the vast majority of the world's refugees are hosted by developing countries. In fact, the share of asylum applications filed in non-industrialized nations increased from 49 percent to 63 percent between the periods of 1998-2000 and 2008-2010. Also, developed countries have restrictive immigration policies which make it difficult for individuals seeking refuge to enter, leaving a disproportionate share of the world's refugee burden to be borne by developing countries.

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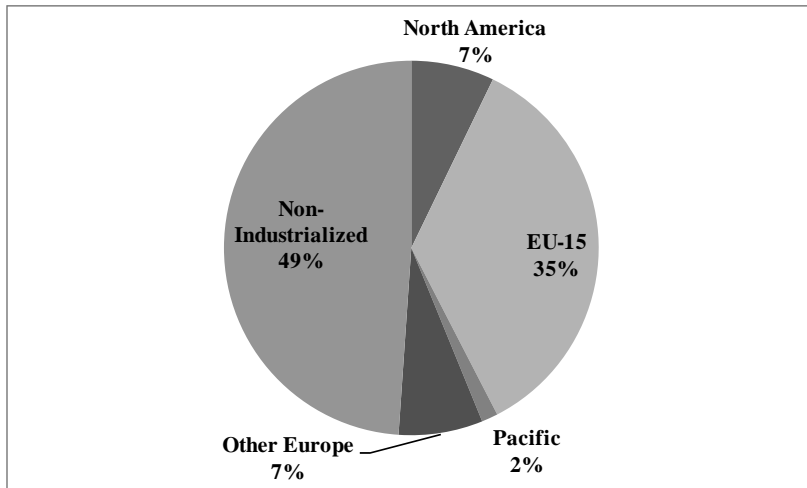
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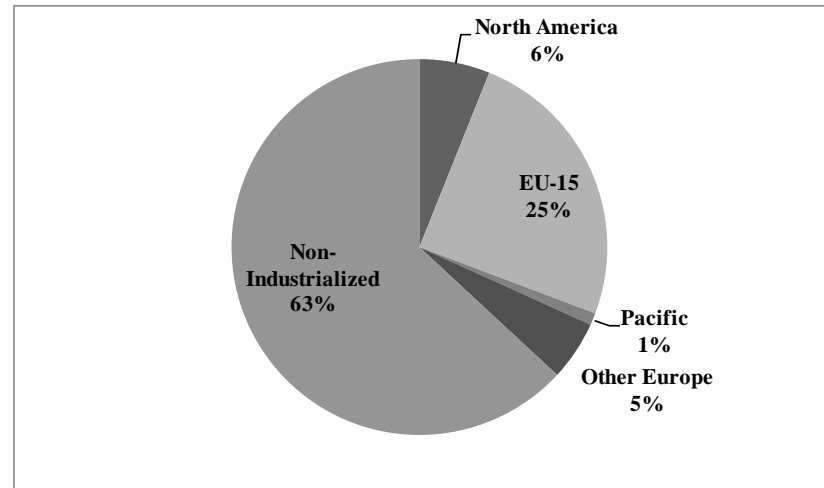
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Figure 1-1: Asylum Applications by Destination, Percentage of World Total

Panel A: 1998-2000



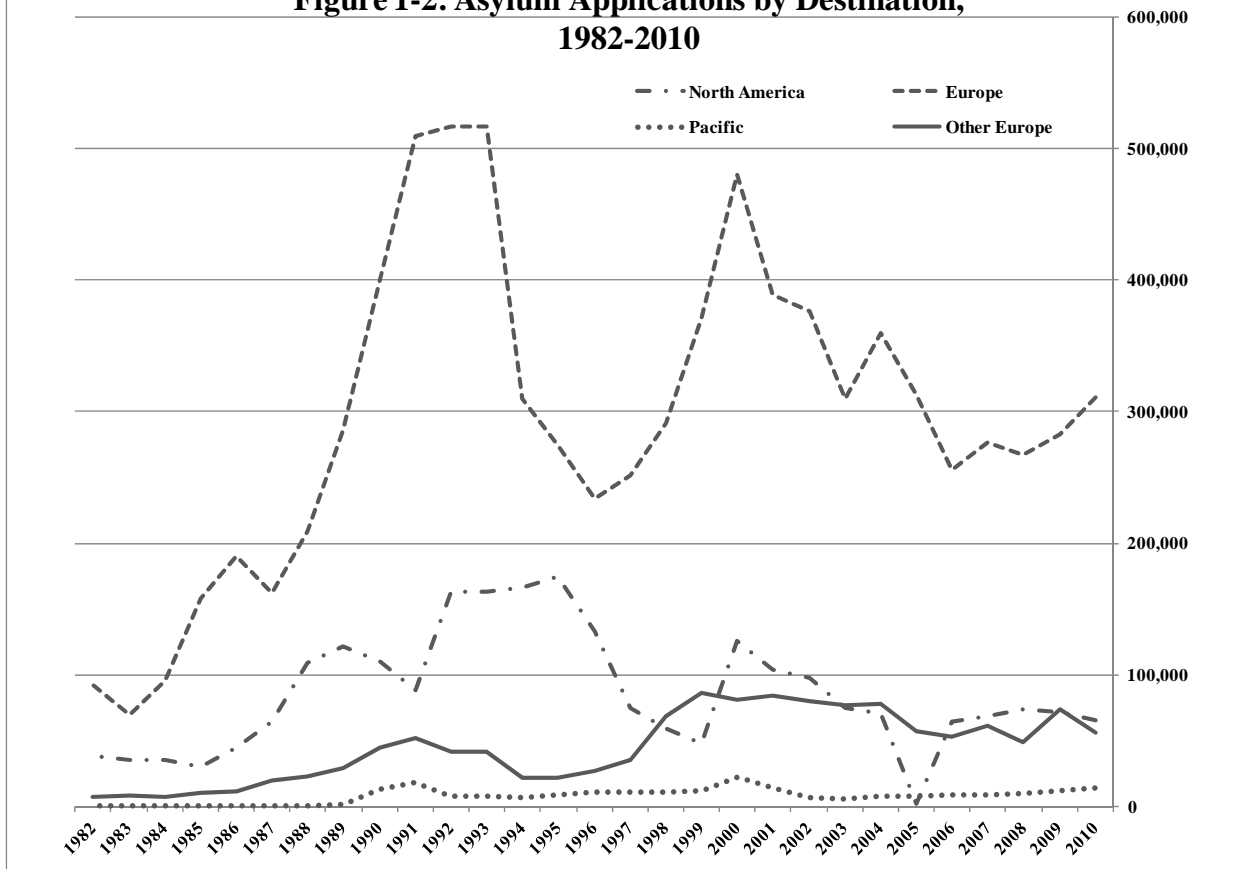
Panel B: 2008-2010



Source: UNHCR, Statistical Yearbook, several volumes from 1998-2000 and 2008-2010.

Notes: Total number of asylum applications for 1998-2000 and 2008-2010 are 1,585,984 and 2,201,114, respectively.

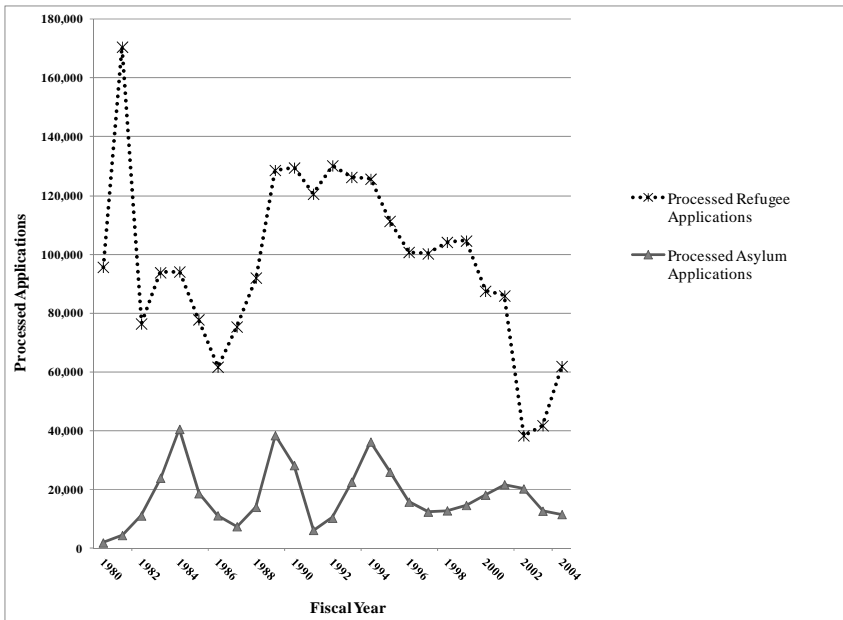
**Figure 1-2: Asylum Applications by Destination,
1982-2010**



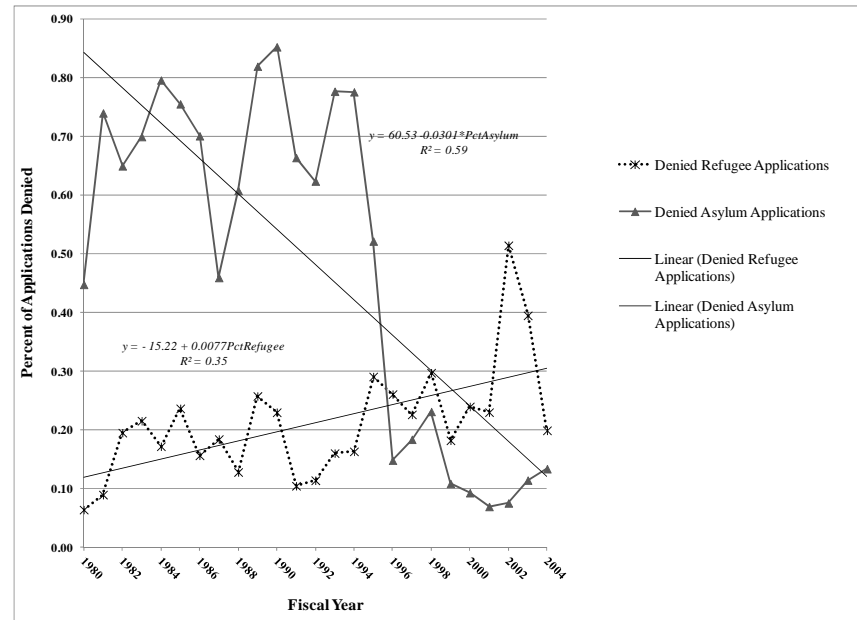
Source: UNHCR, Statistical Yearbook, several volumes from 1982-2010.

Figure 1-3: Refugee and Asylum Applications in the U.S., 1980-2004

Panel A: Number of Processed Applications

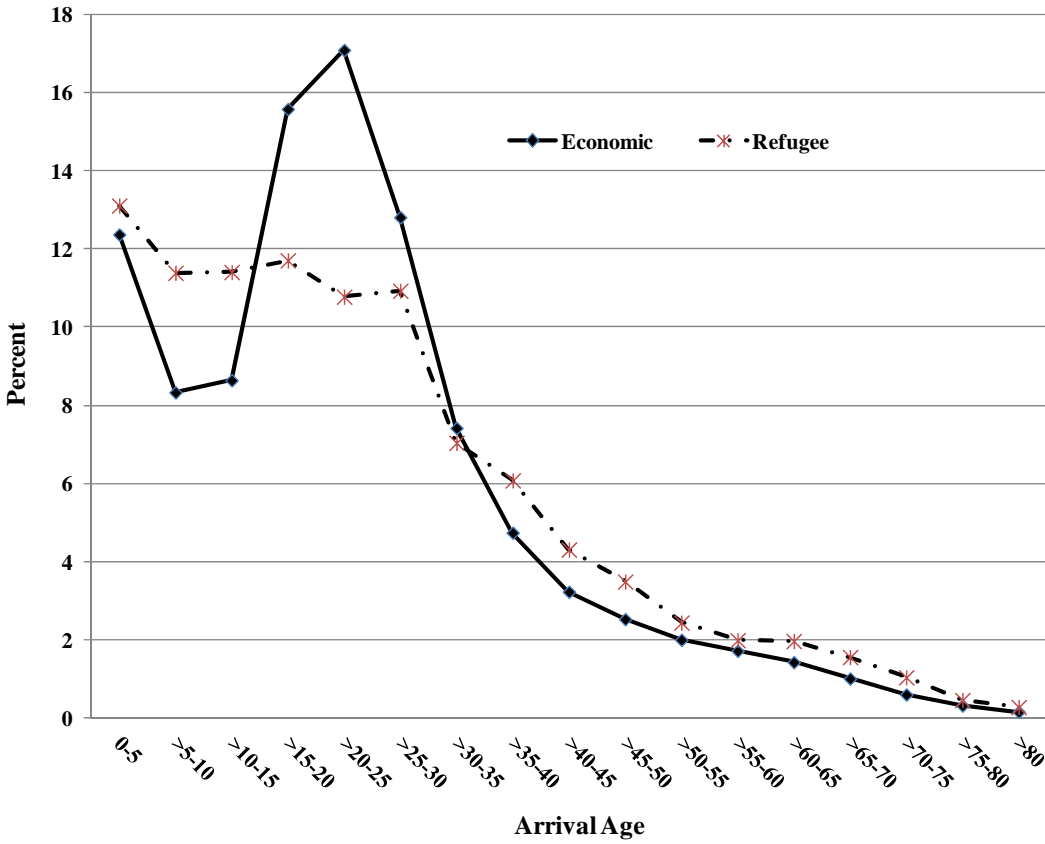


Panel B: Percent of Applications Denied



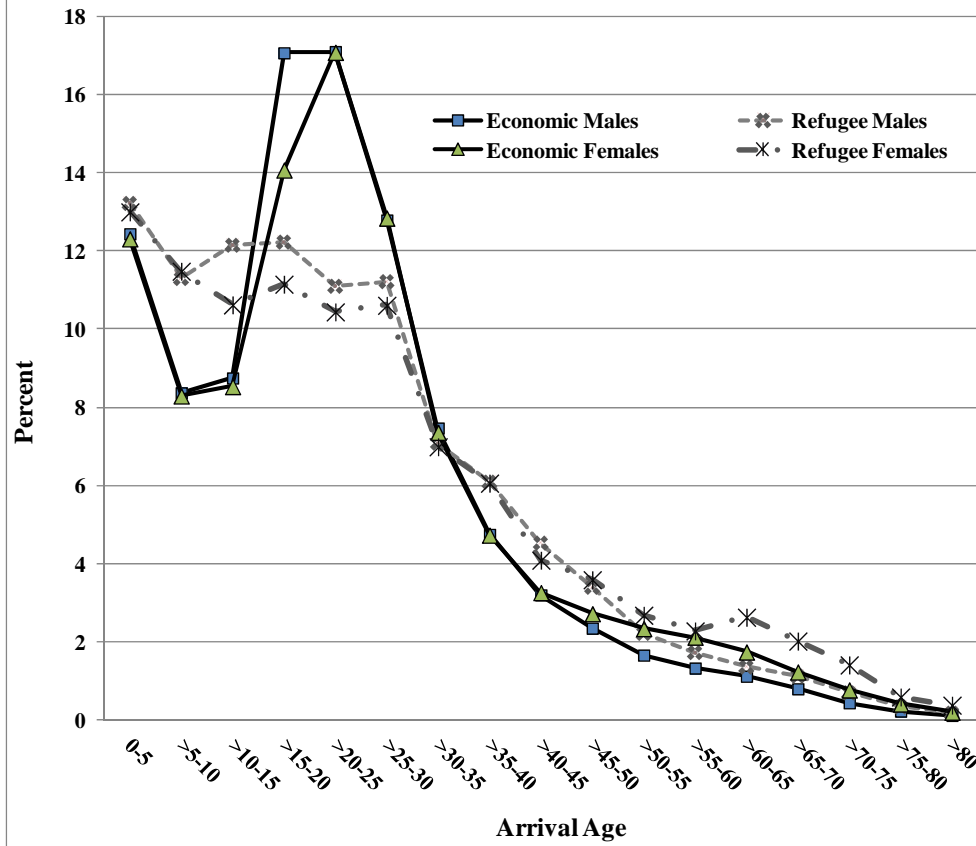
Source: Several volumes of the Yearbook of Immigration Statistics (YIS), Immigration and Naturalization Service (INS), 1980-2005, Table 32.

Figure 3-1: Arrival Age Distributions of Entering Immigrants, 1975-1980



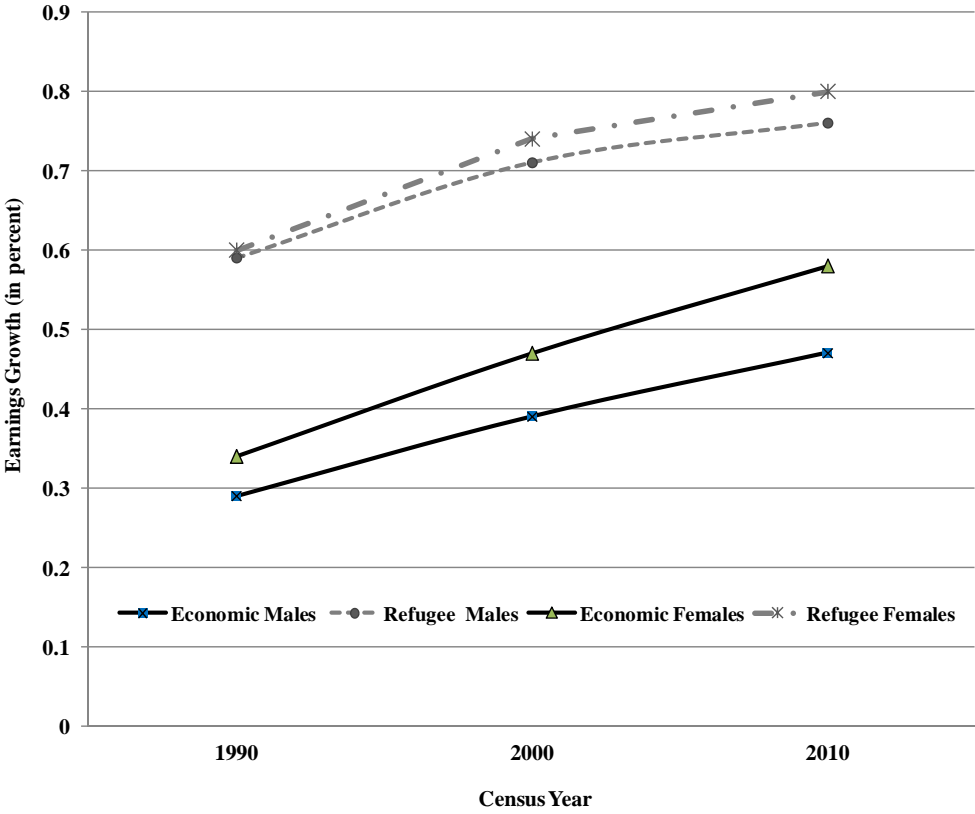
Source: Integrated Public Use Micro Series (IPUMS) 5% samples for 1980.

Figure 3-2: Arrival Age Distributions of Entering Immigrants by Gender, 1975-1980



Source: Integrated Public Use Micro Series (IPUMS) 5% samples for 1980.

Figure 3-3: Growth in Earnings for Economic and Refugee Immigrants, Year of Immigration 1975-80



Source: Integrated Public Use Micro Series (IPUMS) 5% samples for 1980, 1990, 2000. American Community Survey (ACS) 1% samples for 2005-2010.

Figure 5-1: Payoff Matrix for Host Nations

		Country 2	
		Yes	No
Country 1	Yes	$b - \alpha \cdot c, b - (1 - \alpha) \cdot c$	$b - c, b$
	No	$b, b - c$	$0, 0$

Table 1-1: Asylum Applications by Destination Country, 1982-1987 to 2006-2010

Asylum applications by destination	(1)	(2)	% Change:	(3)	% Change:	(4)	% Change:	(5)	% Change:
	1982-87	1988-93	[(2) - (1)]/(1)	1994-99	[(3) - (2)]/(2)	2000-05	[(4) - (3)]/(3)	2006-10	[(5) - (4)]/(4)
Australia*	-	90,481		163,666	81%	176,407	8%	106,000	-40%
Austria*	86,867	269,711	210%	171,912	-36%	445,269	159%	218,824	-51%
Belgium*	55,363	126,350	128%	167,638	33%	231,677	38%	236,515	2%
Bulgaria	-	204		8,605	4118%	32,853	282%	10,454	-68%
Canada*	144,866	402,970	178%	392,566	-3%	538,021	37%	342,102	-36%
Cyprus	-	-		3,461		63,357	1731%	108,438	71%
Czech Rep.	-	10,815		47,215	337%	168,377	257%	35,249	-79%
Denmark*	61,249	73,845	21%	188,077	155%	111,707	-41%	28,763	-74%
Estonia	-	-		97		203	109%	295	45%
Finland	239	28,376	11773%	18,669	-34%	44,884	140%	45,773	2%
France*	461,224	1,161,183	152%	478,146	-59%	1,368,480	186%	713,811	-48%
Germany*	792,463	3,653,494	361%	2,369,030	-35%	1,303,223	-45%	421,687	-68%
Greece*	22,723	44,828	97%	36,899	-18%	98,701	167%	271,086	175%
Hungary	-	16,359		54,519	233%	77,322	42%	41,854	-46%
Iceland	3	33	1000%	97	194%	1,200	1137%	848	-29%
Ireland	-	213		38,080	17778%	200,572	427%	81,228	-60%
Italy*	58,866	93,154	58%	78,245	-16%	199,872	155%	236,832	18%
Japan	1,839	649	-65%	2,433	275%	7,674	215%	23,172	202%
Latvia	-	-		224		210	-6%	504	140%
Liechtenstein	-	-		1,186		1,518	28%	1,404	-8%
Lithuania	-	-		1,597		3,248	103%	2,865	-12%
Luxembourg	-	114		6,834	5895%	19,502	185%	11,913	-39%
Malta	-	297		2,151	624%	9,804	356%	23,643	141%
Netherlands*	73,389	427,873	483%	821,651	92%	571,750	-30%	185,588	-68%
New Zealand	27	8,019	29600%	23,027	187%	24,746	7%	5,961	-76%
Norway*	23,392	117,574	403%	79,896	-32%	221,535	177%	249,499	13%
Poland	-	9,573		40,426	322%	107,149	165%	123,880	16%
Portugal	8,037	7,914	-2%	5,977	-24%	2,176	-64%	2,147	-1%
Rep. of Korea	-	-		215		1,254	483%	6,173	392%
Romania	-	500		17,053		18,111	6%	11,297	-38%
Slovakia	-	468		9,251	1877%	126,413	1266%	18,659	-85%
Slovenia	-	-		3,407		45,897	1247%	4,182	-91%
Spain	22,539	131,071	482%	101,759	-22%	110,091	8%	58,511	-47%
Sweden*	94,495	542,181	474%	165,652	-69%	574,203	247%	522,212	-9%
Switzerland*	119,213	489,872	311%	513,057	5%	513,026	0%	215,233	-58%
Turkey	15,790	83,464	429%	80,171	-4%	71,642	-11%	140,187	96%
UK*	62,997	432,939	587%	772,155	78%	1,983,469	157%	521,253	-74%
US*	543,044	1,026,424	89%	1,611,312	57%	1,837,044	14%	837,247	-54%
Total	2,648,625	9,250,948	249%	8,476,356	-8%	11,312,587	33%	5,865,289	-48%
<i>Top 15* Total</i>	<i>2,600,151</i>	<i>8,952,879</i>	<i>244%</i>	<i>8,009,902</i>	<i>-11%</i>	<i>10,174,384</i>	<i>27%</i>	<i>5,106,652</i>	<i>-49%</i>
Top 15* percent of all industrialized	0.98	0.97		0.95		0.90		0.87	

Source: UNHCR, Statistical Yearbook, several volumes from 1982-2010.

Table 1-2: Top Ten Refugee and Asylee Sending Countries to the United States, 1946-2000

Top 10 Countries	1946-1950		% Total of all countries	1951-1960		% Total of all countries	1961-1970		% Total of all countries
1	Poland	78,529	0.3681	Poland	81,323	0.1652	Cuba	131,557	0.6181
2	Germany	36,633	0.1717	Germany	62,860	0.1277	Serbia & Montenegro ²	18,299	0.0860
3	Latvia	21,422	0.1004	Italy	60,657	0.1232	Indonesia	7,658	0.0360
4	Lithuania	18,694	0.0876	Hungary	55,740	0.1132	Romania	7,158	0.0336
5	Soviet Union ³	14,072	0.0660	Serbia & Montenegro ²	44,755	0.0909	Czechoslovakia ¹	5,709	0.0268
6	Serbia & Montenegro ²	9,816	0.0460	Soviet Union ³	30,059	0.0610	Egypt	5,396	0.0254
7	Czechoslovakia ¹	8,449	0.0396	Greece	28,568	0.0580	China ⁴	5,308	0.0249
8	Estonia	7,143	0.0335	Latvia	16,783	0.0341	Spain	4,114	0.0193
9	Hungary	6,086	0.0285	Netherlands	14,336	0.0291	Hungary	4,044	0.0190
10	Austria	4,801	0.0225	Romania	12,057	0.0245	Poland	3,197	0.0150
	<i>Total for all countries</i>	<i>213,347</i>	<i>0.9639</i>	<i>Total for all countries</i>	<i>492,371</i>	<i>0.8269</i>	<i>Total for all countries</i>	<i>212,843</i>	<i>0.9041</i>
Top 10 Countries	1971-1980		% Total of all countries	1981-1990		% Total of all countries	1991-2000		% Total of all countries
1	Cuba	251,514	0.4662	Vietnam	324,453	0.3201	Vietnam	206,857	0.2025
2	Vietnam	150,266	0.2786	Laos	142,964	0.1410	Cuba	144,612	0.1416
3	Soviet Union ³	31,309	0.0580	Cambodia	114,064	0.1125	Ukraine	109,739	0.1075
4	Laos	21,690	0.0402	Cuba	113,367	0.1118	Soviet Union ³	90,533	0.0886
5	China ⁴	13,760	0.0255	Soviet Union ³	72,306	0.0713	Russia	60,404	0.0591
6	Serbia & Montenegro ²	11,297	0.0209	Iran	46,773	0.0461	Bosnia-Herzegovina	37,591	0.0368
7	Cambodia	7,739	0.0143	Poland	33,889	0.0334	Laos	37,265	0.0365
8	Iraq	6,851	0.0127	Thailand	30,259	0.0299	Belarus	24,581	0.0241
9	Romania	6,812	0.0126	Romania	29,798	0.0294	Iran	24,313	0.0238
10	Poland	5,882	0.0109	Afghanistan	22,946	0.0226	Thailand	22,759	0.0223
	<i>Total for all countries</i>	<i>539,447</i>	<i>0.9401</i>	<i>Total for all countries</i>	<i>1,013,620</i>	<i>0.9183</i>	<i>Total for all countries</i>	<i>1,021,266</i>	<i>0.7429</i>

Source: Several volumes of the Yearbook of Immigration Statistics, Immigration and Naturalization Service (INS), 1978-2000, Table 32.

Notes: ¹Prior to 1993, data include independent republics; beginning in 1993 data are for unknown republic only. ²Yugoslavia (unknown republic) prior to February 7, 2003. Prior to 1992, data include independent republics; beginning in 1992, data are for unknown republic only. ³Prior to 1992, data include independent republics; beginning in 1992 data are for unknown republic only. ⁴Includes People's Republic of China and Taiwan. Prior to 1982 the word asylum is not used in the Yearbook of Immigration Statistics therefore no data was collected on asylum cases. The method of counting refugees changes prior to 1981. Therefore, all data for years prior to 1983 is from yearbooks with later dates that provided historical numbers. Homeland security changed its formatting in 2005 and no longer lists refugees and asylum seekers in a useful format.

Table 2-1: Basic Demographics Characteristics of New U.S. Permanent Residents by Class of Admission, New Immigrant Survey-2003

	Refugees	All Non-Refugees		Specific Category of Non-Refugee:					
	mean (std. dev.)	mean (std. dev.)	difference vs. refugees (p-value)	Family		Employment		Diversity	
	(1)	(2)	(3)	mean (sd) (4)	diff (p-val) (5)	mean (sd) (6)	diff (p-val) (7)	mean (sd) (8)	diff (p-val) (9)
Age	40.60 (11.804)	39.09 (13.868)	1.51 (0.005)	40.03 (15.115)	0.57 (0.310)	37.13 (8.370)	3.48 (<0.001)	34.03 (9.462)	6.57 (<0.001)
Male	0.51 (0.500)	0.43 (0.495)	0.08 (<0.001)	0.40 (0.489)	0.12 (<0.001)	0.51 (0.500)	0.01 (0.751)	0.56 (0.496)	-0.05 (0.062)
Married	0.65 (0.477)	0.75 (0.435)	-0.10 (<0.001)	0.77 (0.424)	-0.11 (<0.001)	0.82 (0.380)	-0.17 (<0.001)	0.67 (0.469)	-0.02 (0.359)
Has children	0.77 (0.424)	0.70 (0.460)	0.07 (<0.001)	0.71 (0.454)	0.06 (0.004)	0.66 (0.473)	0.10 (<0.001)	0.52 (0.500)	0.25 (<0.001)
Adjustee (not new arrival)	1.00 (0.000)	0.54 (0.498)	0.46 (<0.001)	0.52 (0.500)	0.48 (<0.001)	0.71 (0.452)	0.29 (<0.001)	0.08 (0.271)	0.92 (<0.001)
Years since migrating to U.S. (CIS Non-Immigrant Visa)	6.69 (3.530)	1.86 (3.590)	4.83 (<0.001)	2.17 (3.694)	4.52 (<0.001)	1.75 (2.907)	4.94 (<0.001)	0.50 (0.912)	6.19 (<0.001)
Years since migrating to U.S. (Years since most recent arrival)	6.40 (4.355)	5.37 (6.564)	1.02 (<0.001)	4.53 (6.143)	1.87 (<0.001)	5.89 (4.475)	0.51 (0.029)	1.06 (2.356)	5.34 (<0.001)
Years since migrating to U.S. (Sum of total time in U.S.)	6.43 (4.343)	5.51 (6.600)	0.92 (<0.001)	4.89 (6.250)	1.54 (<0.001)	6.09 (4.520)	0.34 (0.145)	1.13 (2.425)	5.30 (<0.001)
Observations	554	8,019		4,234		1,673		1,451	

Notes: Data are from the New Immigrant Survey-2003 Adult Sample, and sample weights are used to obtain the statistics reported above. The p-value reported in the odd-numbered columns from columns (3)-(9) are associated with the null hypothesis that the difference between the group named in the column heading and the refugees is zero; robust standard errors are used. The number of observations reported in the bottom row gives the total individuals in the class of admission interviewed by the NIS, and the actual number of observations used for calculating a given variable's statistics may be slightly less due to missing values for that variable.

Table 2-2: Education and English Proficiency Characteristics of New U.S. Permanent Residents by Class of Admission, New Immigrant Survey-2003

	Specific Category of Non-Refugee:									
	Refugees	All Non-Refugees			Family		Employment		Diversity	
	mean (std. dev.) (1)	mean (std. dev.) (2)	difference vs. refugees (p-value) (3)	mean (sd) (4)	diff (p-val) (5)	mean (sd) (6)	diff (p-val) (7)	mean (sd) (8)	diff (p-val) (9)	
Years of schooling upon arrival to U.S.	11.66 (4.400)	11.28 (5.057)	0.38 (0.057)	10.85 (4.973)	0.80 (<0.001)	15.08 (3.626)	-3.42 (<0.001)	14.32 (3.141)	-2.66 (<0.001)	
Years of schooling completed	12.36 (4.442)	12.11 (4.954)	0.26 (0.207)	11.65 (4.900)	0.71 (0.001)	16.02 (3.675)	-3.65 (<0.001)	14.56 (3.267)	-2.20 (<0.001)	
Completed high school degree or higher	0.69 (0.463)	0.64 (0.481)	0.05 (0.009)	0.60 (0.489)	0.09 (<0.001)	0.91 (0.289)	-0.22 (<0.001)	0.89 (0.315)	-0.20 (<0.001)	
Completed B.A. or higher	0.25 (0.432)	0.28 (0.449)	-0.03 (0.110)	0.24 (0.425)	0.01 (0.597)	0.66 (0.474)	-0.41 (<0.001)	0.41 (0.492)	-0.16 (<0.001)	
Speaks English very well	0.15 (0.357)	0.22 (0.413)	-0.07 (<0.001)	0.19 (0.396)	-0.04 (0.010)	0.49 (0.500)	-0.34 (<0.001)	0.19 (0.396)	-0.04 (0.024)	
Speaks English well or very well	0.49 (0.500)	0.48 (0.499)	0.01 (0.596)	0.43 (0.496)	0.05 (0.021)	0.82 (0.381)	-0.34 (<0.001)	0.50 (0.500)	-0.02 (0.534)	
Currently enrolled in an English class	0.16 (0.371)	0.13 (0.339)	0.03 (0.058)	0.14 (0.348)	0.02 (0.185)	0.05 (0.214)	0.12 (<0.001)	0.21 (0.404)	-0.04 (0.040)	
Currently enrolled in school (besides for English class)	0.14 (0.348)	0.09 (0.286)	0.05 (0.001)	0.10 (0.294)	0.05 (0.004)	0.08 (0.267)	0.06 (<0.001)	0.07 (0.261)	0.07 (<0.001)	

Notes: See Notes in Table 2-1.

Table 2-3: Health Characteristics of New U.S. Permanent Residents by Class of Admission, New Immigrant Survey-2003

	Refugees	All Non-Refugees			Specific Category of Non-Refugee:					
	mean	mean	difference vs.	Family		Employment		Diversity		
	(std. dev.)	(std. dev.)	refugees (p-value)	mean (sd)	diff (p-val)	mean (sd)	diff (p-val)	mean (sd)	diff (p-val)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
In "poor" or "fair" health	0.17 (0.374)	0.09 (0.290)	0.08 (<0.001)	0.10 (0.297)	0.07 (<0.001)	0.03 (0.176)	0.14 (<0.001)	0.02 (0.145)	0.15 (<0.001)	
Reports being "troubled by pain"	0.18 (0.388)	0.09 (0.292)	0.09 (<0.001)	0.10 (0.296)	0.09 (<0.001)	0.06 (0.240)	0.12 (<0.001)	0.04 (0.197)	0.14 (<0.001)	
Reports having recent depression spell of ≥ 2 weeks	0.17 (0.375)	0.13 (0.338)	0.04 (0.028)	0.14 (0.345)	0.03 (0.080)	0.07 (0.261)	0.10 (<0.001)	0.09 (0.290)	0.08 (<0.001)	
Diagnosed with high blood pressure	0.14 (0.346)	0.09 (0.291)	0.05 (0.003)	0.10 (0.303)	0.04 (0.021)	0.06 (0.245)	0.07 (<0.001)	0.04 (0.188)	0.10 (<0.001)	
Diagnosed with heart problem	0.04 (0.198)	0.02 (0.123)	0.03 (0.004)	0.02 (0.132)	0.02 (0.010)	0.00 (0.067)	0.04 (<0.001)	0.00 (0.047)	0.04 (<0.001)	
Diagnosed with psychological problem	0.04 (0.190)	0.02 (0.137)	0.02 (0.034)	0.02 (0.140)	0.02 (0.044)	0.02 (0.122)	0.02 (0.014)	0.01 (0.083)	0.03 (<0.001)	
Diagnosed with asthma	0.04 (0.186)	0.03 (0.163)	0.01 (0.320)	0.03 (0.158)	0.01 (0.239)	0.04 (0.192)	0.00 (0.784)	0.01 (0.101)	0.03 (0.003)	
Height (centimeters)	167.81 (9.306)	165.58 (9.560)	2.24 (<0.001)	165.15 (9.535)	2.66 (<0.001)	167.34 (9.456)	0.47 (0.347)	169.56 (8.984)	-1.75 (0.001)	
Body Mass Index BMI)	25.79 (4.056)	24.87 (4.233)	0.93 (<0.001)	24.77 (4.252)	1.03 (<0.001)	24.17 (3.567)	1.62 (<0.001)	23.81 (3.754)	1.98 (<0.001)	
Overweight (BMI ≥ 25)	0.55 (0.498)	0.44 (0.497)	0.11 (<0.001)	0.44 (0.496)	0.12 (<0.001)	0.37 (0.483)	0.18 (<0.001)	0.35 (0.476)	0.20 (<0.001)	
Obese (BMI ≥ 30)	0.17 (0.377)	0.11 (0.311)	0.06 (0.001)	0.10 (0.306)	0.07 (<0.001)	0.06 (0.233)	0.11 (<0.001)	0.06 (0.241)	0.11 (<0.001)	

Notes: See Notes in Table 2-1.

Table 2-4: Labor Market Characteristics of New U.S. Permanent Residents by Class of Admission, New Immigrant Survey-2003

	Refugees		All Non-Refugees		Specific Category of Non-Refugee:					
	mean		mean	difference vs.	Family		Employment		Diversity	
	(std. dev.)		(std. dev.)	refugees (p-value)	mean (sd)	diff (p-val)	mean (sd)	diff (p-val)	mean (sd)	diff (p-val)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Ever worked before migrating to U.S.	0.58 (0.494)	0.57 (0.495)	0.01 (0.646)	0.55 (0.498)	0.03 (0.202)	0.68 (0.466)	-0.10 (<0.001)	0.71 (0.455)	-0.13 (<0.001)	
Conditional on working before, worked for a government	0.62 (0.487)	0.25 (0.430)	0.37 (0.000)	0.24 (0.429)	0.37 (<0.001)	0.21 (0.408)	0.41 (<0.001)	0.36 (0.479)	0.26 (<0.001)	
Conditional on working before, typical hours worked per week	43.36 (11.665)	43.37 (12.153)	-0.01 (0.989)	43.59 (12.668)	-0.24 (0.797)	42.97 (10.260)	0.39 (0.660)	44.29 (11.653)	-0.93 (0.347)	
Conditional on working before, typical weeks worked per year	47.86 (11.373)	46.27 (13.636)	1.59 (0.029)	45.74 (14.278)	2.12 (0.005)	47.56 (11.793)	0.30 (0.709)	48.36 (10.046)	-0.50 (0.510)	
Ever worked since migrating to U.S.	0.84 (0.365)	0.59 (0.493)	0.26 (<0.001)	0.53 (0.499)	0.31 (<0.001)	0.80 (0.402)	0.04 (0.028)	0.53 (0.499)	0.31 (<0.001)	
Conditional on working since, first job's typical weekly pay	338.87 (230.830)	448.23 (411.633)	-109.35 (<0.001)	364.92 (297.136)	-26.04 (0.216)	878.34 (596.439)	-539.47 (<0.001)	311.61 (208.839)	27.27 (0.169)	
Conditional on working since, first job's typical weekly pay, males	344.49 (171.283)	496.17 (456.759)	-151.68 (<0.001)	403.82 (343.117)	-59.33 (0.022)	964.72 (624.206)	-620.23 (<0.001)	336.13 (232.750)	8.36 (0.703)	
Currently working	0.74 (0.438)	0.54 (0.499)	0.21 (<0.001)	0.48 (0.500)	0.27 (<0.001)	0.74 (0.436)	0.00 (0.919)	0.55 (0.497)	0.19 (<0.001)	
Conditional on currently working, current weekly pay	451.47 (269.175)	598.49 (499.594)	-147.02 (<0.001)	479.99 (353.895)	-28.52 (0.242)	1164.53 (663.900)	-713.06 (<0.001)	383.55 (288.301)	67.92 (0.006)	
Conditional on currently working, current weekly pay, males	470.74 (214.410)	681.13 (545.700)	-210.40 (<0.001)	535.66 (368.429)	-64.92 (0.023)	1330.19 (682.380)	-859.45 (<0.001)	417.01 (319.800)	53.73 (0.061)	
Conditional on currently working, primary job is a salaried position	0.20 (0.402)	0.30 (0.457)	-0.09 (<0.001)	0.25 (0.431)	-0.05 (0.069)	0.66 (0.475)	-0.45 (<0.001)	0.22 (0.415)	-0.02 (0.497)	
Conditional on currently working, primary job is for a government	0.11 (0.310)	0.05 (0.226)	0.05 (0.002)	0.06 (0.243)	0.05 (0.013)	0.04 (0.204)	0.06 (<0.001)	0.03 (0.183)	0.07 (<0.001)	
Conditional on currently working, primary job's typical weekly hours	40.17 (10.242)	40.65 (10.438)	-0.48 (0.525)	40.32 (10.801)	-0.15 (0.852)	42.35 (9.282)	-2.19 (0.008)	39.67 (10.382)	0.50 (0.579)	
Conditional on currently working, primary job's typical yearly weeks	49.76 (8.581)	46.11 (14.377)	3.65 (<0.001)	45.32 (15.129)	4.44 (<0.001)	49.21 (10.043)	0.55 (0.335)	42.61 (17.530)	7.15 (<0.001)	

Notes: See Notes in Table 2-1.

Table 2-5: Regression-Adjusted Mean Differences Between Refugees and Non-Refugees, New Immigrant Survey-2003

	Unadjusted difference (1)	Control for sex and age (2)	(2) + Control for country F.E. (3)	Specification in column (2) restricting sample to migrants from:				
				Cuba (4)	Haiti (5)	India (6)	Russia (7)	Ukraine (8)
Exposed to harm prior to migrating to U.S.	0.43 (<0.001)	0.42 (<0.001)	0.43 (<0.001)	0.11 (0.021)	0.33 (<0.001)	0.40 (<0.001)	0.66 (<0.001)	0.59 (<0.001)
Observations	8437	8437	8437	143	145	732	118	143
Years of schooling	0.24 (0.237)	0.15 (0.471)	-1.26 (<0.001)	1.14 (0.078)	-1.25 (0.236)	-4.31 (<0.001)	-1.62 (0.011)	-1.32 (0.003)
Observations	8457	8457	8457	143	144	737	119	143
Completed high school degree or higher	0.05 (0.011)	0.06 (0.007)	-0.07 (0.002)	0.07 (0.449)	-0.07 (0.520)	-0.29 (0.015)	-0.11 (0.127)	-0.22 (0.004)
Observations	8457	8457	8457	143	144	737	119	143
Completed B.A. or higher	-0.03 (0.085)	-0.05 (0.014)	-0.12 (<0.001)	0.20 (0.014)	-0.09 (0.211)	-0.39 (<0.001)	-0.20 (0.052)	-0.13 (0.029)
Observations	8457	8457	8457	143	144	737	119	143
In "poor" or "fair" health	0.08 (<0.001)	0.08 (<0.001)	0.10 (<0.001)	0.05 (0.185)	0.11 (0.090)	0.19 (0.057)	0.13 (0.055)	0.27 (0.001)
Observations	8484	8484	8484	143	145	736	119	143
Height (centimeters)	2.21 (<0.001)	1.58 (<0.001)	-0.86 (0.037)	-1.19 (0.399)	2.31 (0.182)	5.02 (<0.001)	0.32 (0.823)	-1.88 (0.125)
Observations	7432	7432	7432	132	97	680	109	132
Body Mass Index (BMI)	0.95 (<0.001)	0.60 (0.002)	1.15 (<0.001)	0.89 (0.274)	-0.18 (0.864)	0.99 (0.054)	1.05 (0.179)	1.98 (0.011)
Observations	7432	7432	7432	132	97	680	109	132
Overweight	0.11 (<0.001)	0.07 (0.003)	0.11 (<0.001)	0.00 (0.961)	0.01 (0.908)	0.27 (0.018)	0.11 (0.291)	0.27 (0.008)
Observations	7432	7432	7432	132	97	680	109	132
Obese	0.06 (<0.001)	0.06 (0.002)	0.08 (<0.001)	0.08 (0.211)	0.13 (0.200)	-0.06 (<0.001)	0.16 (0.027)	0.12 (0.099)
Observations	7432	7432	7432	132	97	680	109	132

Notes: The sample is comprised of individuals from the New Immigrant Survey-2003 Adult Sample with non-missing age, sex and country of origin, and sample weights are used to obtain the statistics reported above. Each cell is from a separate regression, and reports the difference in mean between refugees and non-refugees, and below in parentheses the p-value associated with the null hypothesis that the difference is zero; robust standard errors are used. The sample is identical in columns (1)-(3), with column (1) having only the dummy for "refugee" as a regressor, column (2) adds sex, age and age squared as controls, and column (3) also adds country of origin dummies as controls. Columns (4)-(7) apply the column (2) specification to samples comprised of migrants from a single country.

Table 3-1: Characteristics of Refugees and Economic Immigrants for the Fixed Cohort Year of Immigration 1975-1980*

	Panel A: Refugee Immigrants					Panel B: Economic Immigrants				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	All Years	1980	1990	2000	2010	All Years	1980	1990	2000	2010
Gender:										
Male	0.57	0.60	0.57	0.57	0.55	0.58	0.61	0.58	0.57	0.55
Female	0.43	0.40	0.43	0.43	0.45	0.42	0.39	0.42	0.43	0.45
Marital Status:										
Married	0.72	0.57	0.73	0.77	0.78	0.72	0.58	0.75	0.77	0.76
Number of children:										
	1.32 (1.44)	1.03 (1.49)	1.51 (1.51)	1.54 (1.46)	1.17 (1.24)	1.37 (1.44)	0.78 (1.27)	1.67 (1.52)	1.73 (1.48)	1.25 (1.27)
None	0.39	0.53	0.34	0.31	0.39	0.38	0.62	0.30	0.27	0.37
One-three	0.53	0.39	0.56	0.61	0.57	0.54	0.34	0.59	0.62	0.58
Four-nine	0.08	0.08	0.10	0.08	0.04	0.08	0.04	0.11	0.11	0.05
Regional Enclaves:										
Northeast	0.19	0.22	0.20	0.20	0.17	0.16	0.20	0.16	0.15	0.15
Midwest	0.09	0.14	0.09	0.08	0.08	0.10	0.13	0.09	0.10	0.10
South	0.31	0.29	0.30	0.31	0.33	0.22	0.19	0.22	0.23	0.25
West	0.40	0.35	0.42	0.42	0.42	0.51	0.48	0.53	0.52	0.50
Educational attainment:										
	12.55 (3.92)	11.99 (3.70)	12.68 (3.90)	12.56 (4.04)	12.90 (3.97)	10.77 (4.69)	10.70 (4.57)	10.53 (4.75)	10.51 (4.78)	11.34 (4.59)
None	0.04	0.03	0.05	0.05	0.05	0.05	0.03	0.06	0.08	0.05
Less than High School	0.16	0.28	0.12	0.12	0.10	0.36	0.44	0.37	0.35	0.30
High School	0.28	0.28	0.25	0.30	0.29	0.23	0.19	0.20	0.25	0.25
1-3 years of college	0.26	0.24	0.31	0.24	0.24	0.15	0.14	0.17	0.13	0.15
4+ years of college	0.26	0.17	0.27	0.28	0.32	0.21	0.19	0.19	0.19	0.25
Other: Country Specific										
School enrollment	0.12	0.27	0.13	0.06	0.04	0.08	0.15	0.11	0.05	0.03
Low English ability	0.21	0.32	0.17	0.18	0.19	0.32	0.45	0.30	0.29	0.27
Citizenship status	0.65	0.07	0.68	0.84	0.92	0.44	0.09	0.39	0.58	0.69
Observations	28,348	6,469	7,260	7,265	7,354	173,558	40,432	44,439	45,134	43,553

Notes: Sample selection of foreign-born individuals ages 16-45 in 1980, ages 26-55 in 1990, ages 36-65 in 2000, ages 46-75 in 2010. Standard deviations are in parentheses. *Year of immigration 1975-1980 for 1980, 1975-1979 for 1990, 2000, and 2010.

Sources: Integrated Public Use Micro Series (IPUMS) 5% samples for 1980, 1990, and 2000; and several pooled annual samples of the American Community Survey (2005, 2006, 2007, 2008, 2009, and 2010) were used to construct an equivalent 5% sample for 2010 census.

Table 3-2: Means of Log Annual Earnings and Educational Attainment By U.S. Censuses and Immigrant Type

	Panel A:				Panel B:			
	Log Annual Earnings (2010 Dollars)				Educational Attainment (years)			
	1980	1990	2000	2010	1980	1990	2000	2010
Pooled Sample								
Refugee	9.44	10.29	10.44	10.46	11.99	12.68	12.56	12.90
Economic	9.54	10.05	10.20	10.27	10.70	10.53	10.51	11.34
Δ Refugee		0.85	1.00	1.03		0.68	0.56	0.90
Δ Economic		0.51	0.66	0.73		-0.17	-0.18	0.65
Refugee Relative Δ		0.34	0.34	0.29		0.85	0.74	0.26
Male Sample								
Refugee	9.59	10.46	10.60	10.62	12.19	12.96	12.83	13.11
Economic	9.73	10.25	10.39	10.45	10.51	10.20	10.09	10.88
Δ Refugee		0.87	1.01	1.03		0.77	0.64	0.91
Δ Economic		0.52	0.65	0.71		-0.31	-0.41	0.37
Refugee Relative Δ		0.36	0.36	0.32		1.08	1.05	0.54
Female Sample								
Refugee	9.20	10.06	10.23	10.27	11.69	12.31	12.19	12.64
Economic	9.23	9.77	9.95	10.06	11.00	10.99	11.08	11.90
Δ Refugee		0.86	1.03	1.07		0.62	0.50	0.94
Δ Economic		0.54	0.72	0.83		-0.01	0.08	0.91
Refugee Relative Δ		0.32	0.31	0.24		0.63	0.42	0.04

Notes: Sample selection of foreign-born individuals ages 16-45 in 1980, ages 26-55 in 1990, ages 36-65 in 2000, ages 46-75 in 2010. Year of immigration 1975-1980 for 1980, 1975-1979 for 1990, 2000, and 2010. The Census Bureau top-codes annual earnings at \$75,000 in the 1980 census; we construct an equivalent top code for annual earnings in the 1990, 2000, and 2010 censuses. For example, in the 1990 census we assign annual earnings of \$118,962 (this was calculated as \$75,000x(130.70/82.40); the annual CPI's in 1980 and 1990 were 82.40 and 130.70) to all top-coded observations. Log annual earnings are in 2010 dollars.

Sources: Integrated Public Use Micro Series (IPUMS) 5% samples for 1980, 1990, and 2000; and several pooled annual samples of the American Community Survey (2005, 2006, 2007, 2008, 2009, and 2010) were used to construct an equivalent 5% sample for 2010 census.

Table 3-3: Log Annual Earnings Regression Results for Male and Female Immigrants

	Panel A: Male Sample			Panel B: Female Sample		
	(1)	(2)	(3)	(4)	(5)	(6)
Dummy 1990	0.5150*** (0.008)	0.2930*** (0.008)	0.2903*** (0.008)	0.5387*** (0.011)	0.3393*** (0.012)	0.3396*** (0.012)
Dummy 2000	0.6509*** (0.008)	0.3880*** (0.010)	0.3894*** (0.010)	0.7182*** (0.011)	0.4649*** (0.014)	0.4733*** (0.014)
Dummy 2010	0.7131*** (0.008)	0.4681*** (0.012)	0.4715*** (0.012)	0.8310*** (0.011)	0.5635*** (0.016)	0.5771*** (0.016)
Refugee	-0.1434*** (0.019)	-0.2492*** (0.018)	-0.2284*** (0.018)	-0.0325 (0.023)	-0.0799*** (0.023)	-0.0594*** (0.023)
Refugee x Dummy 1990	0.3554*** (0.023)	0.3101*** (0.021)	0.3013*** (0.021)	0.3230*** (0.029)	0.2768*** (0.028)	0.2645*** (0.028)
Refugee x Dummy 2000	0.3592*** (0.024)	0.3257*** (0.022)	0.3150*** (0.022)	0.3088*** (0.029)	0.2871*** (0.027)	0.2706*** (0.027)
Refugee x Dummy 2010	0.3172*** (0.024)	0.3003*** (0.022)	0.2884*** (0.022)	0.2379*** (0.029)	0.2414*** (0.028)	0.2245*** (0.028)
Constant	9.7342*** (0.006)	7.0701*** (0.092)	6.9806*** (0.092)	9.2328*** (0.008)	6.9375*** (0.120)	6.8623*** (0.119)
Controls	No	Yes	Yes	No	Yes	Yes
State Fixed Effects	No	No	Yes	No	No	Yes
Observations	116,444	116,444	116,444	85,462	85,462	85,462
Adjusted R-squared	0.108	0.273	0.278	0.101	0.231	0.237

Notes: Sample selection of foreign-born individuals ages 16-45 in 1980, ages 26-55 in 1990, ages 36-65 in 2000, ages 46-75 in 2010. Year of immigration 1975-1980 for 1980, 1975-1979 for 1990, 2000, and 2010. The Census Bureau top-codes annual earnings at \$75,000 in the 1980 census; we construct an equivalent top code for annual earnings in the 1990, 2000, and 2010 censuses. For example, in the 1990 census we assign annual earnings of \$118,962 (this was calculated as \$75,000x(130.70/82.40)); the annual CPI's in 1980 and 1990 were 82.40 and 130.70) to all top-coded observations. Controls include age, age², age³, married dummy variable, educational attainment and higher order polynomials of education, and regional enclaves (i.e., midwest, south, west, and northeast is the omitted category). Log annual earnings are in 2010 dollars. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Sources: Integrated Public Use Micro Series (IPUMS) 5% samples for 1980, 1990, and 2000; and several pooled annual samples of the American Community Survey (2005, 2006, 2007, 2008, 2009, and 2010) were used to construct an equivalent 5% sample for 2010 census.

Table 3-4: Log Hourly Earnings Regression Results for Male and Female Immigrants

	Panel A: Male Sample			Panel B: Female Sample		
	(1)	(2)	(3)	(4)	(5)	(6)
Dummy 1990	0.2419*** (0.006)	0.1679*** (0.007)	0.1668*** (0.007)	0.2420*** (0.007)	0.1999*** (0.008)	0.2009*** (0.008)
Dummy 2000	0.3559*** (0.007)	0.2577*** (0.009)	0.2598*** (0.009)	0.3545*** (0.008)	0.3024*** (0.010)	0.3086*** (0.010)
Dummy 2010	0.4060*** (0.007)	0.2835*** (0.010)	0.2872*** (0.010)	0.4291*** (0.008)	0.3452*** (0.011)	0.3548*** (0.011)
Refugee	0.0725*** (0.012)	0.0006 (0.012)	0.0140 (0.012)	0.0498*** (0.015)	0.0312** (0.015)	0.0425*** (0.015)
Refugee x Dummy 1990	0.1161*** (0.016)	0.0541*** (0.016)	0.0481*** (0.016)	0.1088*** (0.019)	0.0528*** (0.018)	0.0453** (0.018)
Refugee x Dummy 2000	0.1230*** (0.017)	0.0638*** (0.017)	0.0564*** (0.016)	0.1288*** (0.020)	0.0860*** (0.019)	0.0768*** (0.019)
Refugee x Dummy 2010	0.1127*** (0.018)	0.0722*** (0.017)	0.0640*** (0.016)	0.0722*** (0.020)	0.0518*** (0.019)	0.0419** (0.019)
Constant	2.4962*** (0.005)	1.7531*** (0.067)	1.6821*** (0.067)	2.2900*** (0.006)	1.7800*** (0.080)	1.7230*** (0.080)
Controls	No	Yes	Yes	No	Yes	Yes
State Fixed Effects	No	No	Yes	No	No	Yes
Observations	116,444	116,444	116,444	85,462	85,462	85,462
Adjusted R-squared	0.055	0.217	0.221	0.053	0.219	0.224

Notes: Sample selection of foreign-born individuals ages 16-45 in 1980, ages 26-55 in 1990, ages 36-65 in 2000, ages 46-75 in 2010. Year of immigration 1975-1980 for 1980, 1975-1979 for 1990, 2000, and 2010. Controls include age, age², age³, married dummy variable, educational attainment and higher order polynomials of education, and regional enclaves (i.e., midwest, south, west, and northeast is the omitted category). Log hourly earnings are in 2010 dollars. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Sources: Integrated Public Use Micro Series (IPUMS) 5% samples for 1980, 1990, and 2000; and several pooled annual samples of the American Community Survey (2005, 2006, 2007, 2008, 2009, and 2010) were used to construct an equivalent 5% sample for 2010 census.

Table 3-5: Log Annual Hours Regression Results for Male and Female Immigrants

	Panel A: Male Sample			Panel B: Female Sample		
	(1)	(2)	(3)	(4)	(5)	(6)
Dummy 1990	0.2732*** (0.006)	0.1251*** (0.006)	0.1234*** (0.006)	0.2968*** (0.009)	0.1395*** (0.010)	0.1386*** (0.010)
Dummy 2000	0.2950*** (0.006)	0.1303*** (0.008)	0.1296*** (0.008)	0.3638*** (0.009)	0.1625*** (0.012)	0.1647*** (0.012)
Dummy 2010	0.3071*** (0.006)	0.1846*** (0.008)	0.1842*** (0.008)	0.4020*** (0.008)	0.2183*** (0.013)	0.2223*** (0.013)
Refugee	-0.2158*** (0.015)	-0.2499*** (0.014)	-0.2424*** (0.015)	-0.0824*** (0.020)	-0.1111*** (0.019)	-0.1019*** (0.019)
Refugee x Dummy 1990	0.2393*** (0.017)	0.2559*** (0.017)	0.2532*** (0.017)	0.2142*** (0.023)	0.2240*** (0.023)	0.2192*** (0.023)
Refugee x Dummy 2000	0.2362*** (0.018)	0.2619*** (0.017)	0.2586*** (0.017)	0.1800*** (0.023)	0.2011*** (0.022)	0.1938*** (0.022)
Refugee x Dummy 2010	0.2046*** (0.018)	0.2281*** (0.017)	0.2243*** (0.017)	0.1657*** (0.023)	0.1896*** (0.022)	0.1826*** (0.022)
Constant	7.2380*** (0.005)	5.3170*** (0.078)	5.2986*** (0.078)	6.9428*** (0.007)	5.1576*** (0.104)	5.1392*** (0.104)
Controls	No	Yes	Yes	No	Yes	Yes
State Fixed Effects	No	No	Yes	No	No	Yes
Observations	116,444	116,444	116,444	85,462	85,462	85,462
Adjusted R-squared	0.054	0.092	0.093	0.048	0.069	0.072

Notes: Sample selection of foreign-born individuals ages 16-45 in 1980, ages 26-55 in 1990, ages 36-65 in 2000, ages 46-75 in 2010. Year of immigration 1975-1980 for 1980, 1975-1979 for 1990, 2000, and 2010. Controls include age, age², age³, married dummy variable, educational attainment and higher order polynomials of education, and regional enclaves (i.e., midwest, south, west, and northeast is the omitted category). Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Sources: Integrated Public Use Micro Series (IPUMS) 5% samples for 1980, 1990, and 2000; and several pooled annual samples of the American Community Survey (2005, 2006, 2007, 2008, 2009, and 2010) were used to construct an equivalent 5% sample for 2010 census.

Table 3-6: Occupational Distribution of Refugee and Economic Immigrants

Occupational Type	Panel A: Refugee Immigrant				Panel B: Change for Refugees		
	1980	1990	2000	2010	$\Delta\text{Ref}_{(1990-1980)}$	$\Delta\text{Ref}_{(2000-1980)}$	$\Delta\text{Ref}_{(2010-1980)}$
Managerial & Professional	0.13	0.23	0.25	0.29	0.10	0.12	0.16
Technical, Sales, & Admin. Support	0.25	0.29	0.26	0.25	0.04	0.01	0.01
Service	0.16	0.14	0.16	0.17	-0.02	0.00	0.01
Farming, Forestry, & Fishing	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Precision Production, Craft, & Repair	0.13	0.12	0.12	0.10	-0.01	-0.01	-0.03
Operations, Fabricators, & Laborers	0.32	0.22	0.20	0.18	-0.10	-0.11	-0.14
Military	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Occupational Type	Panel C: Economic Immigrant				Panel D: Change for Economic		
	1980	1990	2000	2010	$\Delta\text{Econ}_{(1990-1980)}$	$\Delta\text{Econ}_{(2000-1980)}$	$\Delta\text{Econ}_{(2010-1980)}$
Managerial & Professional	0.14	0.17	0.18	0.23	0.03	0.05	0.09
Technical, Sales, & Admin. Support	0.19	0.20	0.19	0.21	0.01	0.01	0.02
Service	0.19	0.17	0.18	0.20	-0.02	-0.01	0.01
Farming, Forestry, & Fishing	0.06	0.07	0.06	0.05	0.00	0.00	-0.01
Precision Production, Craft, & Repair	0.11	0.13	0.14	0.11	0.02	0.03	0.01
Operations, Fabricators, & Laborers	0.31	0.27	0.24	0.20	-0.04	-0.07	-0.11
Military	0.01	0.01	0.00	0.00	-0.01	-0.01	-0.01

Occupational Type	Panel E: Occupational Gain/Loss of Refugees Relative to Economic Immigrants		
	$\Delta\text{Ref}_{(90-'80)} - \Delta\text{Econ}_{(90-'80)}$	$\Delta\text{Ref}_{(00-'80)} - \Delta\text{Econ}_{(00-'80)}$	$\Delta\text{Ref}_{(10-'80)} - \Delta\text{Econ}_{(10-'80)}$
Managerial & Professional	0.07	0.07	0.07
Technical, Sales, & Admin. Support	0.02	0.00	-0.02
Service	0.00	0.00	0.00
Farming, Forestry, & Fishing	-0.01	0.00	0.01
Precision Production, Craft, & Repair	-0.03	-0.04	-0.04
Operations, Fabricators, & Laborers	-0.06	-0.04	-0.03
Military	0.00	0.01	0.01

Notes: Sample selection of foreign-born individuals ages 16-45 in 1980, ages 26-55 in 1990, ages 36-65 in 2000, ages 46-75 in 2010. Year of immigration 1975-1980 for 1980, 1975-1979 for 1990, 2000, and 2010.

Sources: Integrated Public Use Micro Series (IPUMS) 5% samples for 1980, 1990, and 2000; and several pooled annual samples of the American Community Survey (2005, 2006, 2007, 2008, 2009, and 2010) were used to construct an equivalent 5% sample for 2010 census.

Table 3-7: Educational Attainment Regression Results for Male and Female Immigrants

	Panel A: Male Sample			Panel B: Female Sample		
	(1)	(2)	(3)	(4)	(5)	(6)
Dummy 1990	-0.3107*** (0.043)	-0.7567*** (0.049)	-0.6597*** (0.048)	-0.0089 (0.048)	0.1143** (0.055)	0.1963*** (0.054)
Dummy 2000	-0.4123*** (0.043)	-1.0300*** (0.060)	-0.8728*** (0.059)	0.0798* (0.047)	0.3925*** (0.066)	0.5096*** (0.066)
Dummy 2010	0.3729*** (0.043)	-0.4515*** (0.069)	-0.2629*** (0.067)	0.9089*** (0.046)	1.1577*** (0.074)	1.3141*** (0.074)
Refugee	1.6875*** (0.066)	1.5988*** (0.065)	1.3276*** (0.066)	0.6977*** (0.082)	0.8408*** (0.079)	0.7468*** (0.079)
Refugee x Dummy 1990	1.0784*** (0.093)	0.9942*** (0.092)	1.0156*** (0.094)	0.6261*** (0.114)	0.3925*** (0.109)	0.3728*** (0.110)
Refugee x Dummy 2000	1.0523*** (0.095)	0.9565*** (0.093)	0.9722*** (0.095)	0.4197*** (0.115)	0.1835* (0.111)	0.1724 (0.112)
Refugee x Dummy 2010	0.5417*** (0.096)	0.5519*** (0.095)	0.5701*** (0.097)	0.0358 (0.111)	-0.1772 (0.108)	-0.1910* (0.109)
Constant	10.5057*** (0.030)	0.1355 (0.388)	-0.5666 (0.380)	10.9953*** (0.035)	-0.8667** (0.436)	-0.9471** (0.431)
Controls	No	Yes	Yes	No	Yes	Yes
State Fixed Effects	No	No	Yes	No	No	Yes
Observations	116,444	116,444	116,444	85,462	85,462	85,462
Adjusted R-squared	0.034	0.095	0.128	0.014	0.088	0.110

Notes: Sample selection of foreign-born individuals ages 16-45 in 1980, ages 26-55 in 1990, ages 36-65 in 2000, ages 46-75 in 2010. Year of immigration 1975-1980 for 1980, 1975-1979 for 1990, 2000, and 2010. Controls include age, age², age³, married dummy variable, number of own children in the household and higher order polynomials of this variable, and regional enclaves (i.e., midwest, south, west, and northeast is the omitted category). Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Sources: Integrated Public Use Micro Series (IPUMS) 5% samples for 1980, 1990, and 2000; and several pooled annual samples of the American Community Survey (2005, 2006, 2007, 2008, 2009, and 2010) were used to construct an equivalent 5% sample for 2010 census.

Table 3-8: Occupational Standing Scores (Z-scores) Regression Results for Male and Female Immigrants

	Panel A: Male Sample				Panel B: Female Sample			
	Hause-Warren		Nakao-Treas		Hause-Warren		Nakao-Treas	
	Socioeconomic Index (HWSEI)	Prestige Score (PRENT)	Socioeconomic Index (HWSEI)	Prestige Score (PRENT)	Socioeconomic Index (HWSEI)	Prestige Score (PRENT)	Socioeconomic Index (HWSEI)	Prestige Score (PRENT)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dummy 1990	-0.4102*** (0.009)	-0.3992*** (0.009)	-0.3827*** (0.008)	-0.3748*** (0.008)	-0.1916*** (0.011)	-0.1825*** (0.011)	-0.2511*** (0.009)	-0.2443*** (0.009)
Dummy 2000	-0.4227*** (0.010)	-0.4040*** (0.010)	-0.3800*** (0.009)	-0.3662*** (0.009)	-0.0873*** (0.013)	-0.0724*** (0.013)	-0.1713*** (0.011)	-0.1578*** (0.011)
Dummy 2010	-0.3481*** (0.012)	-0.3268*** (0.012)	-0.2969*** (0.011)	-0.2810*** (0.011)	0.0937*** (0.014)	0.1132*** (0.014)	-0.0133 (0.012)	0.0046 (0.012)
Refugee	0.1261*** (0.014)	0.1079*** (0.014)	0.1230*** (0.012)	0.1103*** (0.012)	0.0818*** (0.017)	0.0773*** (0.017)	0.0639*** (0.013)	0.0606*** (0.014)
Refugee x Dummy 1990	0.2688*** (0.021)	0.2652*** (0.021)	0.2051*** (0.018)	0.2021*** (0.018)	0.1388*** (0.024)	0.1313*** (0.024)	0.1529*** (0.020)	0.1458*** (0.020)
Refugee x Dummy 2000	0.2381*** (0.021)	0.2326*** (0.021)	0.1767*** (0.018)	0.1720*** (0.018)	0.1019*** (0.024)	0.0923*** (0.024)	0.1185*** (0.020)	0.1068*** (0.020)
Refugee x Dummy 2010	0.1949*** (0.020)	0.1898*** (0.020)	0.1285*** (0.017)	0.1239*** (0.017)	0.0490** (0.023)	0.0414* (0.023)	0.0686*** (0.019)	0.0593*** (0.019)
Constant	-1.5936*** (0.067)	-1.7083*** (0.066)	-1.3052*** (0.061)	-1.4035*** (0.061)	-0.8894*** (0.082)	-0.9509*** (0.082)	-0.6833*** (0.070)	-0.7653*** (0.070)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State Fixed Effects	No	Yes	No	Yes	No	Yes	No	Yes
Observations	116,444	116,444	116,444	116,444	85,462	85,462	85,462	85,462
Adjusted R-squared	0.056	0.072	0.054	0.068	0.018	0.030	0.026	0.038

Notes: Sample selection of foreign-born individuals ages 16-45 in 1980, ages 26-55 in 1990, ages 36-65 in 2000, ages 46-75 in 2010. Year of immigration 1975-1980 for 1980, 1975-1979 for 1990, 2000, and 2010. Controls include age, age², age³, married dummy variable, and regional enclaves (i.e., midwest, south, west, and northeast is the omitted category). Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Sources: Integrated Public Use Micro Series (IPUMS) 5% samples for 1980, 1990, and 2000; and several pooled annual samples of the American Community Survey (2005, 2006, 2007, 2008, 2009, and 2010) were used to construct an equivalent 5% sample for 2010 census.