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### Labor Market Assimilation of Refugees in the United States: Are They Worse Off?

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## Labor Market Assimilation of Refugees in the United States: Are They Worse Off?

### Abstract

This paper aims to investigate how refugees perform in the US labor market in relation to economic immigrants and natives, and hence evaluate the effectiveness of the US humanitarian resettlement program. It is organized in the following order: literature review, theoretical model, data and methodology, descriptive statistics analysis, empirical model and results, and conclusion.

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# Labor Market Assimilation of Refugees in the United States: Are They Worse Off?

## Lily Chang

### I. Introduction

Since the founding of the country, the United States has long been a popular destination of immigration. According to American Community Survey (ACS) data, in 2015, the immigration population in the US was more than 43.3 million, which constituted 13.5% of the total population in the country (Zong & Batalova, 2017). Individuals immigrate to the US for a variety of reasons, such as better employment, family, and education. One immigrant group, in particular, has received increasing attention from labor economists: refugees. Unlike economic immigrants whose primary goal is to search for better economic opportunities, refugees flee to the US in order to escape persecution and war in their home country. In other words, economic immigrants choose to come to the US under their free will, whereas refugees do not have much liberty to choose when and where they would be resettled for humanitarian purposes. Hence refugees, in general, may have less time and fewer resources in their home country to prepare themselves for settlement in the US, namely acquiring English skills to increase the likelihood of employment, than economic immigrants do. Since refugees are less likely to attain such US-specific labor skills prior to immigration, they

are more likely to be disadvantaged in the US labor market when compared to non-refugee immigrants and natives.

This paper aims to investigate how refugees perform in the US labor market in relation to economic immigrants and natives, and hence evaluate the effectiveness of the US humanitarian resettlement program. It is organized in the following order: literature review, theoretical model, data and methodology, descriptive statistics analysis, empirical model and results, and conclusion.

I will refer to both refugees and asylees in the US when I use the term “refugees” in this paper. This is because although both groups seek humanitarian aid, they are given different definitions in the US. Refugee status is granted to someone who is outside of the US when applying for humanitarian protection, whereas asylum is granted, either affirmatively or defensively, to someone who is already present in the US or at a US port of entry (Department of Homeland Security, 2015). Despite the minor differences in the definition of these two groups, it is assumed that they are fundamentally the same when it comes to the level of US-specific human capital upon arrival in the US.

Refugees from the following five countries

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are selected for my assimilation analysis: Vietnam, Cambodia, Romania, Russia and other USSR nations, and Iraq. The labor market outcomes, such as the employment rate, usual hours worked per week, and real wages, of these refugees are compared to those of all non-refugee immigrants and all natives respectively. Both descriptive statistics and Oaxaca wage decomposition analyses are conducted to estimate the effects of refugee status on an individual's labor market performance. Human capital and demographic variables are taken into account as well. Data across two time periods, 2000 and 2011-2015, are analyzed to determine if assimilation occurs for these refugees in the US labor market.

## II. Literature Review

Although there exists a limited amount of economic literature on the specific topic of refugee assimilation in the host country labor market, a vast amount of research has been done on the labor market integration of immigrants in general in a wide range of host countries. As Aiyar et al. (2016) pointed out in their study on the recent waves of refugees in the European Union, existing literature on immigration seldom distinguishes between economic immigrants and refugees when analyzing the assimilation process of immigrants. The researchers found that immigrants, in general, had lower labor market participation rates, employment rates, and wages when compared to natives. They showed that the slow integration pro-

cess for migrants in the host countries is mostly due to lack of language skills and transferable job qualifications, as well as the presence of barriers to job search. However, over time immigrants could improve their language skills or obtain more relevant job experience, and hence the gap between immigrants and natives diminished in the labor market. Moreover, the researchers asserted that refugees may experience more restrictions in the host country labor markets as there are many legal constraints on asylum applications and employment. They also asserted that economic immigrants have the advantage over refugees in labor market assimilation because they could choose their destination country to maximize future employment outcomes, whereas the latter's primary goal would be to seek asylum to maximize personal safety (Aiyar et al., 2016).

Bevelander (2016) arrived at similar conclusions as Aiyar et al. (2016) when he conducted a more detailed comparison on the employment levels and earnings of refugees to those of family reunion migrants and labor migrants in Sweden, Canada, the US, and the Netherlands. He found that in the European countries and Canada, refugees started at a lower employment level upon arrival at host countries, but eventually they caught up economically with family reunion migrants. However, refugees integrated more slowly into host countries' labor market than labor migrants did. This is because a number of host countries

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hold screening processes to ensure smoother labor market integration for economic immigrants, and other countries have policies that admit economic immigrants to match the demand for certain jobs in the host country. However, the US is different from the other three countries examined in this respect; in the US, there is more focus on family relationship immigration flows than on economic migrants. Refugees and family reunion immigrants did not enter the country to seek employment primarily, so information on the host country's labor market situation is of less importance for their migration destination. Moreover, Bevelander found that labor market integration is mostly dependent on individual human capital, such as the investment in schooling and education both in the source and the host country, and labor experience in the host country. Hence loss and depreciation of human capital and credentials during the asylum procedure negatively affect refugees' labor market integration. Factors such as age, marital status, gender, and country of origin also play a role in determining the economic integration of various immigrant categories. Bevelander asserted that intake policies in host countries do not provide adequate assistance to refugees attempting to integrate into the local labor market, which contributes to the poorer economic performance when compared to economic and family reunion migrants and is especially significant during the first few years after arrival.

In their study on the phenomenon of “welfare migration” to a typical welfare state, Norway, Bratsberg, Raaum, and Røed (2014) examined the lifecycle patterns of employment, earnings and social insurance claims of immigrants for up to 40 years after arrival. The regression results showed that the difference in living standards between the source country and the destination country is a particularly important predictor for their long-term labor market performance. Immigrants from countries with similar income levels as Norway tended to perform well in the Norwegian labor market at similar levels as natives. On the other hand, immigrants from low-income developing countries tended to stay in Norway for longer and have higher risks of non-employment and social insurance dependency. When studying the labor market performance of refugees and family immigrants in Norway, the researchers found that these immigrant groups demonstrated clear signs of assimilation during their first decade in Norway, with employment rates and earnings levels approaching, yet never fully catching up with, those of similar natives. However, after this initial period upon arrival, assimilation halted as the performance differentials between these immigrant groups and natives widened again.

In a similar research paper on the labor market integration of refugees in Norway, Godøy (2017) examined how conditions in the local labor markets at the time of immigration influence later employment

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outcomes for refugees. She found that in 2012, the employment rate of refugees in Norway was 50.1%, in contrast to the 68.7% of the entire population and the 62.8% among all immigrants. She then confirmed the link between human capital and labor market performance by asserting that refugees face higher barriers to entry in the labor market due to limited language skills and lower educational attainment, and hence as a group, they have lower earnings and employment rates. On the other hand, it is shown that being placed in a labor market where other non-OECD immigrants do well would increase labor earnings for refugees up to 6 years after their immigration.

Poutvaara and Wech (2016) compared the labor market performance of refugees in the United States and in EU countries (Germany, Sweden, Denmark, and the UK) and investigated the factors that may contribute to the different labor outcomes of refugees between the European countries and the United States. They discovered that the employment rate of refugees increased with the length of stay in the host countries, but complete parity with natives was not achieved. The researchers explained the lower employment rate among refugees by stating that psychological traumas due to war from their home countries discourage both genders to participate in the labor force. However, the employment rate of female refugees was significantly lower than that of male refugees, which the researchers attributed to the higher number of children

refugees have and cultural barriers that discourage females from participating in the labor market. When looking at the employment rate of different refugee groups, they found that refugees of both genders from Latin America had the highest employment rate, and those from the Middle East had the lowest rates. The researchers asserted that the difference in the employment rates between these two groups cannot be explained by varying education attainment since both groups have similar education levels. The researchers also stated that refugees from countries that have been affected by war for longer tend to have lower education attainment due to more restricted access to educational institutions. The researchers concluded by saying that the US is more successful at integrating refugees into the labor market than EU countries are because of the country's rich history with receiving immigrants and thus the higher availability of low-paying entry-level jobs.

Overall, existing literature suggests that refugees perform worse initially than non-refugee immigrants and natives do in the host country labor market as supported by the findings of Aiyar et al. (2016), Bevelander (2016), and Godøy (2017). However, over time, there are signs of assimilation as refugees improve their labor market performance (Bratsberg, Raaum, & Røed, 2014; Poutvaara & Wech, 2016). I would contribute to this field of literature by examining the labor market outcomes of refugees in the US

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in comparison to those of non-refugee (economic) immigrants and natives.

### III. Theoretical Model

This section presents the theoretical component of this paper, which consists of human capital theory and discrimination theory. The human capital theory states that human capital is the income-generating worth of an individual, and it is a function of his or her productive skills and knowledge (Rosen, 2008). Traditionally, human capital is measured by an individual's educational attainment; the higher the educational attainment level, the greater the individual's human capital. Higher human capital thus leads to higher labor productivity, and higher labor productivity leads to higher labor earnings according to this human capital theory. Age is also a proxy for measuring human capital, as it is assumed that labor market experience, a key determinant of human capital, increases as an individual ages. However, it is important to note that the initial human capital levels of refugees, which is approximated by their educational attainment and age, are only partially transferable upon arrival in their host country (Cortes, 2004). Hence it is crucial for these refugees to obtain country-specific human capital to be able to compete in the host country labor markets. Therefore, in this paper, in addition to the educational attainment level and age of refugees, I also analyze how English proficiency, which is a US-specific human capital, impacts the wages of the different refugee groups. Since

refugees are less likely to have country-specific human capital before seeking resettlement in the host country, and country-specific human capital takes time to gain, I hypothesize that refugees would perform worse than economic migrants and natives when they first arrive in the host country, but eventually catch up as assimilation occurs over time.

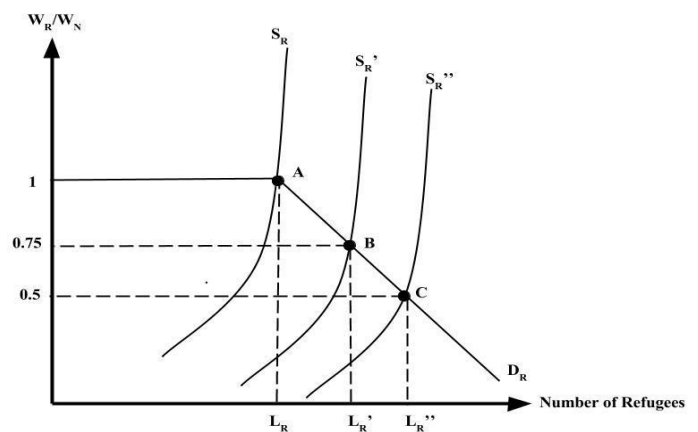
Moreover, discrimination from employers might play a part in determining the refugees' labor earnings in the US. I will approach the discrimination theory from two perspectives: taste-based discrimination and statistical discrimination. Statistical discrimination addresses the inequality between demographic groups caused by non-prejudiced stereotypes that are unrelated to racial and gender biases (Moro, 2009). As current literature suggests, refugees have limited country-specific human capital, such as English skills, upon arrival in the host country, and therefore they might be subjected to statistical discrimination due to their perceived lower human capital as a group. Employers who practice statistical discrimination are not able to accurately assess the potential productivity of an individual but can estimate the productivity of the group that the individual is in; therefore, they tend to use perceived group performance as an indicator for the likely performance of the individual. These employers may be less inclined to hire refugees as they believe that refugees, in general, have lower productivity because of the previous labor market performance of refugees.

Moreover, because these discriminating employers make their hiring decisions of individual refugee candidates based on the perceived performance of all refugees, by avoiding to hire refugees as a group, they aim to increase the productivity and hence competitiveness of their firms. Due to their competitive edge, these employers are highly likely to persevere or even grow in the long-run, and therefore hiring decisions in the labor market based on statistical discrimination against refugees are unlikely to disappear and might even worsen.

On the other hand, taste-based discrimination refers to how unjustified prejudicial feelings of individual members of a majority group could lead to negative employment outcomes for members of a discriminated-against group (Charles & Guryan, 2009). Taste-based discrimination can be attributed to common discriminatory factors in the labor market such as national origin, race, gender, and religion. Current literature also points out that discrimination exists even within the refugee population; refugees of certain national origin may experience greater degrees of discrimination from employers than other refugees, causing them to perform more poorly in the labor market. For example, Capps et al. (2015) found that although Vietnamese and Cuban refugees had similar English proficiency and educational attainment levels upon their arrival in the US, these two groups had significantly different economic outcomes in FY2009-

11. Up to 56% of Cuban refugees received household income below twice the poverty line, whereas only 35% of the Vietnamese refugees did. This suggests that human capital is unlikely to be the only contributing factor in determining labor wages. Fortunately, it is likely that this kind of taste-based discrimination against refugees would eventually disappear in the labor market as explained by the Becker model below (Borjas, 2016).

Figure 1: Taste-Based Discrimination against Refugees Explained by the Becker Model



In Figure 1, I have simplified the labor market to consist of only refugees and native workers. The vertical axis measures the ratio of refugee wages to native wages, and the horizontal axis measures the number of refugee workers. It is assumed that native wages are fixed but that refugee wages can vary depending on their labor demand and supply. Employers who have no preference of native workers over refugees would be willing to pay an equal amount of wages for both groups (the ratio of refugee wages to native wages equals to one) as shown by the horizontal portion of the demand curve for refugee workers.



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This would continue until there are no more non-discriminating employers left in the labor market (Point A) who are willing to pay refugees at a wage ratio of one, and we enter the downward-sloping portion of the demand curve. Here we start with employers with a lower extent of taste-based discrimination against refugees then gradually move on to those with more distaste against refugees. This indicates that after  $L_R$  number of refugees are hired in the labor market, the remaining prejudiced employers would only hire refugees if the wage ratio is lower than one. The lower wage is to compensate the prejudiced employers for employing the less preferred refugees, and the more discriminating an employer is against refugees, the lower the wage ratio has to be for the employer to hire refugees.

The labor wages of refugees are also determined by the supply of refugee workers in the labor market. The greater the supply of refugee workers, the more likely that the labor market equilibrium would fall at the downward-sloping portion of the demand curve where employers have a greater preference for native workers over refugees as shown by the position of the three supply curves in Figure 1. As the supply of refugee workers increases in the labor market, for example, a shift from  $S_R$  to  $S_R'$ , the equilibrium wages for these workers decrease due to the presence of discriminatory employers. However, eventually, this phenomenon would disappear as discriminatory em-

ployers face a higher labor cost when choosing to hire native workers over refugee workers. For instance, at Point B, discriminatory employers would have to pay 33% more for native workers than non-discriminatory employers. The labor costs for discriminatory employers increase along the demand curve; at Point C, they would need to pay 50% more for native workers. Since higher labor costs decrease the competitiveness of firms, in the long-run these discriminatory employers would either have to terminate their discriminatory behaviors or face potential exit from the market. To further investigate the extent to which discrimination affects the labor market assimilation of refugees in the US labor market, I would incorporate the Oaxaca decomposition in my empirical design, and this will be discussed more in depth in the empirical model section.

Drawing from conclusions based on existing literature and economic theories, I hypothesize that compared to economic migrants and natives, refugees would perform worse in the labor market upon arrival in the US. This is because they have less time and fewer resources to acquire desirable US-specific labor skills prior to their entry into the country as well as taste-based and statistical discrimination from employers. However, over time assimilation would occur for refugees as they can obtain more US-specific human capital, such as English skills and US labor market experience, and discrimination may diminish

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in the long-run as employers learn more about refugee workers and as non-discriminatory employers have a competitive advantage and increase their demand for refugee labor.

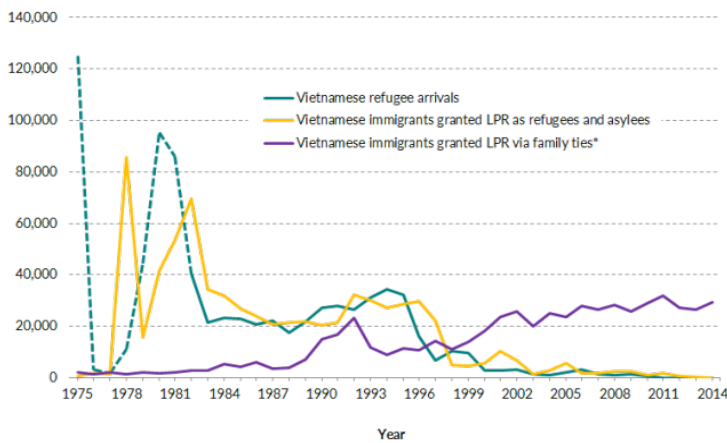
#### IV. Data & Methodology

The data used in this research are obtained from the 2000 5% US Census surveys and the 2011-2015 1% American Community Survey (ACS) conducted by the U.S. Census Bureau. I extracted data across these years to better capture the assimilation process of refugees and economic immigrants. When extracting my data, I limited my data selection to working-age individuals by identifying those who are between age 18 and 65 when the surveys were conducted. Various sources are used to determine the various refugee flows to the US. Since the US Census and ACS data do not specify the immigration type of the respondents, I have to turn to alternative methods of defining what constitutes a refugee flow to the US. After careful consideration, I decided that if the sum of refugees and asylees from a country makes up at least 70% of the total immigration flow to the US in a given year, then that country's immigrants during that year are included in my definition of major refugee groups in the US.

The primary source of refugee, asylee, and immigrant data is the Statistical Yearbook of the Immigration and Naturalization Services, which in 2002 is renamed the Yearbook of Immigration Statistics under

the Department of Homeland Security (DHS). However, the statistical yearbooks do not contain refugee or asylee data before 1982, and therefore the earliest refugee waves from Vietnam and Cambodia prior to 1982 are identified using data from the Migration Policy Institute (MPI) instead of the 70% rule. It can be seen in Figure 2 that the arrival of Vietnamese refugees in the US peaked in 1975, and then between 1978 and 1983. Combining the MPI data with the statistical yearbooks data, I defined the Vietnamese immigrants in the ACS data who immigrated to the United States in 1975, or between 1978 and 1988, as refugees. Similarly, Cambodian immigrants in the ACS data who immigrated to the US between 1978 and 1985 are defined as refugees. It is important to note that due to the limitations of identifying refugees through the 70% rule, some immigrants who are defined as refugees might have been economic or family-based immigrants, and hence the results might be biased. However, based on information I have learned from non-ACS sources such as the DHS and MPI, I am confident that most respondents in my refugee waves are in fact refugees or asylees.

Figure 2: Vietnamese Refugee Arrivals and Vietnamese Immigrants Granted Lawful Permanent Residence (LPR) as Refugees and Asylees or through Family Ties, 1975-2014 (Zong & Batalova, 2016)



Using the DHS and MPI data and the 70% rule, I identified eight major refugee groups that have arrived in the US between 1975 and 2015:

- Vietnamese refugee wave: Year of immigration is 1975 or 1978 through 1988
- Cambodian refugee wave: Year of immigration is 1978 through 1985
- Afghan refugee wave: Year of immigration is 1982 through 1988
- Romanian refugee wave: Year of immigration is 1982 through 1990
- Russian and other USSR nations refugee wave: Year of immigration is 1987 through 1995
- Laotian refugee wave: Year of immigration is 1986 through 1996
- Iraqi refugee wave: Year of immigration is 1992 through 2000 and 2008 through 2015
- Somali refugee wave: Year of immigration is 1989 through 2007 and 2010 through 2015

However, due to data availability and coding issues in ACS, I decided to select only Vietnamese, Cambodian, Romanian, Russian, and Iraqi refugees to compare with economic migrants and natives. Due to the coding of the ACS data, the Russian refugee group contains individuals born in Russia and other former Soviet Republics excluding the European states. The same cohorts of refugees are followed over time to trace their labor market assimilation process. Due to this research design, the age of the refugees would increase with the census year. The ACS data are then analyzed using descriptive statistics and multiple regression to determine whether refugees perform more poorly in the US labor market than economic immigrants and natives do. Detailed explanation of the regression model will be discussed in the empirical model section.

## V. Descriptive Statistics

Descriptive statistics are used to compare the labor market outcomes and human capital of refugees, other immigrants, and natives for all adults aged 18 to 65. Table 1 presents the average real wages of individuals across all nativity groups for respondents who were employed full-time year-round, which means that they would have worked at least 30 hours per week for at least 48 weeks in the past year. Note that the 2011-2015 time period includes a pooled sample from the five ACS annual surveys. Inflation is taken into

account by adjusting the annual labor wages to real wages using the CPI data from the Bureau of Labor Statistics, with 2015 being the base year. Thus, real wages are expressed in terms of 2015 prices. As seen in the table, average real wages for all five refugee groups increased from 2000 to 2011-2015, which indicates that overtime their US labor market outcomes did improve.

Table 1: Average Real Wages of Full-time Year-round Employed Individuals across All Nativity Groups in 2000 and 2011-2015

	2000	2011-2015
Natives	\$51,609.31	\$56,268.27
Economic Migrants	\$48,314.86	\$52,923.63
Vietnamese Refugees	\$49,526.04	\$62,733.93
Cambodian Refugees	\$36,054.31	\$45,855.05
Romanian Refugees	\$56,519.17	\$67,935.87
Russian Refugees	\$52,777.84	\$71,310.43
Iraqi Refugees	\$35,640.26	\$40,720.77

Tables 2 and 3 present the descriptive statistics summary for all nativity groups in 2000 and in 2011 to 2015, respectively. These tables include the employment rate, usual hours worked per week, as well as the educational attainment level and English proficiency of all working-age adults. All descriptive variables are taken as the mean of each nativity group.

Table 2: 2000 Descriptive Statistics							
	Natives	Economic migrants	Vietnamese refugees	Cambodian refugees	Romanian refugees	Russian refugees	Iraqi refugees
Sample Size	149908	1157842	20351	3911	1436	13308	1286
Employed	71.7%	63.5%	69.3%	57.8%	69.6%	65.5%	52.2%
Unemployed	3.8%	4.5%	3.5%	4.2%	3.4%	4.0%	5.4%
NILF	24.4%	32.0%	27.2%	38.0%	27.0%	30.5%	42.5%
Avg. usual hours worked per week	32.7	30.6	33.0	28.0	33.1	29.5	24.2
No English	0.1%	10.2%	2.3%	6.0%	0.8%	2.7%	8.7%
Some/ well English	1.6%	39.6%	58.1%	61.0%	39.3%	57.5%	62.3%
Excellent/ only English	98.3%	50.2%	39.6%	33.0%	59.9%	39.8%	29.0%
Less than High School	14.6%	37.2%	34.7%	55.4%	25.8%	22.9%	43.8%
High School	30.7%	19.8%	16.4%	20.4%	22.2%	17.9%	21.0%
SomeCollege	32.1%	20.4%	30.2%	22.8%	26.9%	24.4%	18.7%
Bachelors	15.0%	13.3%	19.5%	6.8%	15.7%	25.0%	12.5%
Masters	5.3%	5.4%	3.2%	1.6%	10.8%	14.7%	1.9%
Professional	1.6%	2.3%	2.0%	0.3%	5.2%	3.8%	1.7%
Doctorate	0.7%	1.5%	0.6%	0.3%	1.7%	3.8%	0.4%
Avg. Age	40.2	38.4	39.0	38.9	40.2	39.7	35.4
Female	50.6%	49.3%	46.4%	53.1%	49.3%	53.0%	44.1%
YrsUS	N/A	16.4	19.4	18.0	13.6	8.4	4.6
Married	58.1%	63.6%	63.2%	62.6%	66.7%	67.8%	60.3%
Avg. NChild	0.83	1.14	1.23	1.81	1.07	0.99	1.36

We can see that in both tables, Vietnamese, Romanian, and Russian refugees performed exceptionally well in the US labor market decades after their arrival in the US. In Table 2, when compared to natives and other immigrants in 2011-2015, these three refugee groups had a higher employment rate, worked more hours per week, and were more likely to obtain a bachelor's degree or higher. They also had better English proficiency than all the other groups besides natives. Moreover, these three refugee groups were older on average compared to natives and other immigrants. Since age serves as a proxy for labor market experience, which is an important indicator to an individual's human capital, it can be assumed that older individuals have more labor market experience, potentially US labor market experience, and hence have higher human capital. The key observation to be made here is that groups with higher human capital tend to have better labor market outcomes. This

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seems to agree with my hypothesis that when refugees acquire US-specific human capital, such as English proficiency and labor market experience, they improve their labor market performance over time and assimilate to the US labor market. The regression analyses in the empirical section will further test my hypothesis on the relationship between human capital and labor market outcomes of refugees.

On the other hand, Cambodian refugees showed some degree of employment assimilation but were not as successful as their Vietnamese, Romanian, and Russian counterparts. In 2000, they had lower employment rates and worked less hours than natives and economic migrants did. They also were the nativity group that was least likely to receive a bachelor's degree or higher. The good news is that their labor market performance improved in 2011-2015. Their employment rate and average usual hours worked per week were similar to those of natives and economic migrants, but still had not fully caught up with them. They still had the lowest percentage of individuals who had obtained a bachelor's degree or higher of all nativity groups, but the number increased from 9% in 2000 to 16.6% in 2011-2015. Their level of English proficiency also increased, and along with the increase in age, we can assume that as a group, their human capital was higher, which could explain their improved labor market outcome.

However, not all refugees seemed to have

assimilated to the US labor market after decades in the country. The labor market outcomes of Iraqi refugees are still considerably below those of native workers and economic migrants in 2011-2015. On average, their employment rate is roughly 20% lower than that of natives and economic migrants, and they worked nine hours less than the two reference groups. In fact, their labor market outcomes were worse in 2011-2015 than in 2000 despite the increase in their human capital as indicated by the increase in the number of individuals who had obtained a bachelor's degree or higher as well as English proficiency and age. This deterioration in the Iraqi refugee labor outcomes could not be explained by lower human capital, and hence supports my hypothesis that factors other than human capital, such as discrimination, play a part in determining the labor market assimilation process of refugees in the US. I will examine the extent to which discrimination affects the employment outcomes of refugees further in depth in the empirical section. Nonetheless, it is important to note that since there were still new Iraqi refugee arrivals in the US during 2011-2015 as given in their definition, these newly arrived refugees were not given sufficient time to assimilate and hence the descriptive statistics results might be biased by including these refugees in the analysis.

**Table 3: 2011-2015 Descriptive Statistics**

	Natives	Economic migrants	Vietnamese refugees	Cambodian refugees	Romanian refugees	Russian refugees	Iraqi refugees
Sample Size	825730	1455111	19231	3177	1330	12384	3557
Employed	67.3%	69.0%	75.1%	67.2%	73.1%	76.7%	49.3%
Unemployed	5.7%	5.5%	4.5%	4.6%	6.2%	4.8%	10.4%
NILF	27.0%	25.6%	20.4%	28.2%	20.7%	18.5%	40.2%
Avg. usual hours worked per week	29.2	29.2	31.7	28.7	32.1	32.1	20.3
No English	0.1%	7.5%	2.1%	3.4%	0.6%	0.8%	6.2%
Some/ well English	1.2%	38.5%	55.1%	59.1%	28.4%	38.2%	54.2%
Excellent/ only English	98.7%	53.8%	42.9%	37.6%	71.0%	61.0%	39.4%
Less than High School	9.1%	25.7%	23.3%	37.8%	8.95%	3.96%	23.9%
High School	28.0%	21.5%	15.5%	20.6%	25.8%	14.5%	25.0%
SomeCollege	34.7%	22.5%	27.4%	24.9%	28.1%	24.9%	21.0%
Bachelors	18.3%	17.5%	23.7%	12.4%	20.2%	29.9%	22.7%
Masters	7.2%	8.5%	5.6%	3.4%	10.7%	17.8%	4.4%
Professional	1.8%	2.1%	3.1%	0.5%	3.8%	4.7%	2.3%
Doctorate	0.9%	2.1%	1.4%	0.3%	2.4%	4.2%	0.8%
Avg. Age	42.4	42.2	49.3	48.7	48.0	43.8	38.4
Female	50.6%	51.4%	45.7%	52.0%	51.5%	52.9%	47.6%
YrsUS	N/A	20.5	32.2	31.1	26.2	21.2	8.0
Married	51.5%	62.9%	72.7%	66.2%	69.3%	65.2%	63.1%
Avg. NChild	0.69	1.09	1.17	1.37	0.86	0.85	1.41

## VI. Empirical Model and Results

In addition to descriptive statistics, multiple regression analyses are used to better examine the labor market integration of refugees in comparison to the two reference groups: economic migrants and natives. To determine whether discrimination exists for refugees in the US labor market, I performed the Oaxaca wage decomposition analysis to test whether the wage differentials between refugees and the two reference group arise from discrimination or differences in human capital. The decomposition analysis is run twice, first with a sample of the refugee groups and non-refugee immigrants, and secondly with a sample of the refugee groups and natives. This approach allows me to estimate the effect of being in the refugee groups compared to the two reference groups, respectively.

The Oaxaca decomposition technique focuses on the raw wage differential between the supposedly

discriminated group, which is refugees in this case, and the reference group. This raw wage differential is computed by finding the difference between the mean real wages of the refugees and the mean real wages of the reference group. The main purpose of the Oaxaca decomposition is to identify the portion of the wage differential that is due to human capital differences and the portion that is due to discrimination. To perform the decomposition, I first took the mean of the dependent and independent variables for all nativity groups (Vietnamese refugees, Cambodian refugees, Romanian refugees, Russian refugees, Iraqi refugees, economic migrants, and natives). Only individuals who were employed full-time year-round were selected to conduct the wage decomposition analysis.

Next, I ran a multiple regression analysis for each nativity group using the following regression equation:

$$RealWages = \alpha + \beta_i X_i + \varepsilon$$

where  $\alpha$  is a constant,  $\beta_i$  stands for the coefficients for the independent and controlled variables denoted by, and  $\varepsilon$  is the error term. Table 4 below presents the variables taken into account in my regression analyses along with a brief description of each variable.



Table 4: Variables and Descriptions	
Variable Name	Description
<b>Dependent</b>	
Real Wages	Annual wages of full-time year-round employed individuals adjusted for inflation, using 2015 as the reference year (2015 CPI = 100)
<b>Independent</b>	
<i>Primary</i>	
Vietnamese Refugee	1 = born in Vietnam and year of immigration is 1975 or between 1978 and 1988, 0 = not born in Vietnam and/or year of immigration not 1975 or between 1978 and 1988
Cambodian Refugee	1 = born in Cambodia and year of immigration is between 1978 and 1985, 0 = not born in Cambodia and/or year of immigration not between 1978 and 1985
Romanian Refugee	1 = born in Romania and year of immigration is between 1982 and 1990, 0 = not born in Romania and/or year of immigration not between 1982 and 1990
Russian Refugee	1 = born in Russia/other USSR nations and year of immigration is between 1987 and 1995, 0 = not born in Russia/other USSR nations and/or year of immigration not between 1987 and 1995
Iraqi Refugee	1 = born in Iraq and year of immigration is either between 1992 and 2000 or 2008 and 2015, 0 = not born in Iraq and/or year of immigration is neither between 1992 and 2000 or 2008 and 2015
<i>Demographics</i>	
Female	0 = male, 1 = female
YrsUS	Years of residence in the US since immigration; only applicable to refugees and economic migrants
Age	Age of respondent
AgeSQ	(Age * Age) of respondent
Married	1 = married, 0 = not married
NChild	Number of own children in the household
<i>Human Capital</i>	
English	1 = speaks some, well, very well, or only English, 0 = doesn't speak English at all
HighSchool	1 = graduated from high school; 0 = didn't graduate from high school
SomeCollege	1 = attended some college but didn't receive a degree; 0 = didn't attend college at all
Bachelor's	1 = received a Bachelor's degree; 0 = didn't receive a Bachelor's degree
Master's	1 = received a Master's degree; 0 = didn't receive a Master's degree
Professional	1 = received a professional degree; 0 = didn't receive a professional degree
Doctorate	1 = received a Doctorate degree; 0 = didn't receive a Doctorate degree

The Oaxaca wage decomposition equations that measure the extent to which discrimination and skill differences contribute to the raw wage differential between the five refugee groups and the two reference groups are as presented below:

1.  $\Delta \overline{RealWages} = \overline{RealWages}_{EM} - \overline{RealWages}_R = (\alpha_{EM} - \alpha_R) + (\beta_{iEM} - \beta_{iR})\overline{X}_{iR} + \beta_{iEM}(\overline{X}_{iEM} - \overline{X}_{iR}) + \varepsilon$ , or,
2.  $\Delta \overline{RealWages} = \overline{RealWages}_N - \overline{RealWages}_R = (\alpha_N - \alpha_R) + (\beta_{iN} - \beta_{iR})\overline{X}_{iR} + \beta_{iN}(\overline{X}_{iN} - \overline{X}_{iR}) + \varepsilon$

where  $\overline{RealWages}_R$  is the mean of the refugees' real wages,  $\overline{RealWages}_{EM}$  is the mean of the economic migrants' real wages,  $\overline{RealWages}_N$  is the mean of the natives' real wages, and  $\overline{X}_{iR}$ ,  $\overline{X}_{iEM}$ ,  $\overline{X}_{iN}$  and denote the mean of the independent and controlled variables as listed in Table 4 for refugees, economic migrants, and natives respectively.

The raw wage differential is consisted of two

parts; the first part,  $(\alpha_{EM} - \alpha_R) + (\beta_{iEM} - \beta_{iR})\overline{X}_{iR}$  is called the differential due to discrimination, and it measures the extent to which the wage gap is affected by discrimination against refugees. It would be positive if employers perceive that the skills of economic migrants as more valuable than those of refugees ( $\beta_{iEM} > \beta_{iR}$ ), or they simply prefer economic migrants over refugees ( $\alpha_{EM} > \alpha_R$ ). The second part of the equation  $\beta_{iEM}(\overline{X}_{iEM} - \overline{X}_{iR})$ , measures the wage differential that arises from differences in skills, such as human capital, which cannot be attributed to discrimination. In other words, this second part looks at what the refugees should be paid according to their skills if they were treated as economic migrants, and hence is called the differential due to skills. If there exist discrepancies in the demographic and human capital variables of refugees and the economic migrants, then we can argue that part of the wage gap is due to differences in skills in these groups, not discrimination (Borjas, 2016). The same analysis is conducted to break down the wage differential between natives and refugees into differential due to discrimination and differential due to skills to determine the effects of discrimination on refugee labor market assimilation in the US.

The constants ( $\alpha$ ), coefficients ( $\beta_i$ ), and mean values of each variable ( $X_i$ ) obtained through the regression and descriptive analyses for each nativity

group are inserted into the decomposition equations.

The final decomposition regression equations are expressed as:

Equation 1:

$$\begin{aligned} \overline{RealWages_{EM}} - \overline{RealWages_R} = & (\alpha_{EM} - \alpha_R) + (\beta_{1EM} - \beta_{1R})\overline{Female_R} + \\ & \beta_{1EM}(\overline{Female_{EM}} - \overline{Female_R}) + (\beta_{2EM} - \beta_{2R})\overline{YrsUS_R} + \beta_{2EM}(\overline{YrsUS_{EM}} - \overline{YrsUS_R}) + \\ & (\beta_{3EM} - \beta_{3R})\overline{Age_R} + \beta_{3EM}(\overline{Age_{EM}} - \overline{Age_R}) + (\beta_{4EM} - \beta_{4R})\overline{AgeSQ_R} + \beta_{4EM}(\overline{AgeSQ_{EM}} - \\ & \overline{AgeSQ_R}) + (\beta_{5EM} - \beta_{5R})\overline{Married_R} + \beta_{5EM}(\overline{Married_{EM}} - \overline{Married_R}) + (\beta_{6EM} - \\ & \beta_{6R})\overline{NChild_R} + \beta_{6EM}(\overline{NChild_{EM}} - \overline{NChild_R}) + (\beta_{7EM} - \beta_{7R})\overline{English_R} + \beta_{7EM}(\overline{English_{EM}} - \\ & \overline{English_R}) + (\beta_{8EM} - \beta_{8R})\overline{HighSchool_R} + \beta_{8EM}(\overline{HighSchool_{EM}} - \overline{HighSchool_R}) + \\ & (\beta_{9EM} - \beta_{9R})\overline{SomeCollege_R} + \beta_{9EM}(\overline{SomeCollege_{EM}} - \overline{SomeCollege_R}) + (\beta_{10EM} - \\ & \beta_{10R})\overline{Bachelors_R} + \beta_{10EM}(\overline{Bachelors_{EM}} - \overline{Bachelors_R}) + (\beta_{11EM} - \beta_{11R})\overline{Masters_R} + \\ & \beta_{11EM}(\overline{Masters_{EM}} - \overline{Masters_R}) + (\beta_{12EM} - \beta_{12R})\overline{Professional_R} + \\ & \beta_{12EM}(\overline{Professional_{EM}} - \overline{Professional_R}) + (\beta_{13EM} - \beta_{13R})\overline{Doctorate_R} + \\ & \beta_{13EM}(\overline{Doctorate_{EM}} - \overline{Doctorate_R}) \end{aligned}$$

Equation 2:

$$\begin{aligned} \overline{RealWages_N} - \overline{RealWages_R} = & (\alpha_N - \alpha_R) + (\beta_{1N} - \beta_{1R})\overline{Female_R} + \beta_{1N}(\overline{Female_N} - \\ & \overline{Female_R}) + (\beta_{2N} - \beta_{2R})\overline{Age_R} + \beta_{2N}(\overline{Age_N} - \overline{Age_R}) + (\beta_{3N} - \beta_{3R})\overline{AgeSQ_R} + \\ & \beta_{3N}(\overline{AgeSQ_N} - \overline{AgeSQ_R}) + (\beta_{4N} - \beta_{4R})\overline{Married_R} + \beta_{4N}(\overline{Married_N} - \overline{Married_R}) + \\ & (\beta_{5N} - \beta_{5R})\overline{NChild_R} + \beta_{5N}(\overline{NChild_N} - \overline{NChild_R}) + (\beta_{6N} - \beta_{6R})\overline{English_R} + \\ & \beta_{6N}(\overline{English_N} - \overline{English_R}) + (\beta_{7N} - \beta_{7R})\overline{HighSchool_R} + \beta_{7N}(\overline{HighSchool_N} - \\ & \overline{HighSchool_R}) + (\beta_{8N} - \beta_{8R})\overline{SomeCollege_R} + \beta_{8N}(\overline{SomeCollege_N} - \overline{SomeCollege_R}) + \\ & (\beta_{9N} - \beta_{9R})\overline{Bachelors_R} + \beta_{9N}(\overline{Bachelors_N} - \overline{Bachelors_R}) + (\beta_{10N} - \beta_{10R})\overline{Masters_R} + \\ & \beta_{10N}(\overline{Masters_N} - \overline{Masters_R}) + (\beta_{11N} - \beta_{11R})\overline{Professional_R} + \beta_{11N}(\overline{Professional_N} - \\ & \overline{Professional_R}) + (\beta_{12N} - \beta_{12R})\overline{Doctorate_R} + \beta_{12N}(\overline{Doctorate_N} - \overline{Doctorate_R}) \end{aligned}$$

Again, all labor wages are expressed in real terms by adjusting the annual labor wages to real wages using the CPI data from the Bureau of Labor Statistics, with 2015 being the base year. Equation 1 is run for each of the two time periods (2000 and 2011-2015) on the same cohort of refugees to capture the assimilation process of the refugees in comparison to economic migrants. Equation 2 focuses on the wage gap between natives and refugees across both periods; the *YrsUS* variable is removed from the equation since it is not applicable to the native population.

If the differential due to discrimination,  $(\alpha_{EM} - \alpha_R) + (\beta_{iEM} - \beta_{iR})\overline{X_{iR}}$  or  $(\alpha_N - \alpha_R) + (\beta_{iN} - \beta_{iR})\overline{X_{iR}}$  is positive, I can confirm my hypothesis that refugees are disadvantaged in the US labor market in comparison to economic migrants and natives due to discrimination.

Tables 5 and 6 below present the wage decomposition results for refugees versus economic migrants and natives for years 2000 and 2011-2015 respectively. The regression results that contain the constant and coefficients of each variable for each nativity group are included in the appendix. The first row shows the real wage advantage the reference groups (economic migrants and natives) have over each of the five refugee groups  $(\overline{RealWages_{EM}} - \overline{RealWages_R}$  or  $\overline{RealWages_N} - \overline{RealWages_R})$ . A positive number indicates that on average, the reference groups earn more than the refugees and hence enjoy a positive wage advantage over the refugees. On the other hand, if it is a negative number, on average, the reference groups earn less than the refugees and hence have a negative wage advantage relative to refugees.

The figures in Tables 5 and 6 indicate that discrimination plays a significant role in determining the wage differentials between refugees and the two reference groups as the wage differential due to discrimination does not equal to zero. For example, in Table 5, the Russian refugees earned \$4,462 more



than economic migrants did in 2000, and if they were treated as economic migrants and paid according to their skills, they should have earned \$12,030 more than economic migrants did. However, this is countered by the wage advantage of \$7,585 that economic migrants enjoyed over Russian refugees due to the existence of discrimination. Similarly, on average, economic migrants earned \$7,745 more than Iraqi refugees did in 2000 due to differences in their skills, and on top of that, they enjoyed another wage advantage of \$4,925 over the refugees due to discrimination against Iraqi refugees, which amounts to a total wage gap of \$12,674 between the two groups. It is worth noting that discrimination can also work in favor of the refugees. In 2000, Romanian refugees had a wage advantage over economic migrants of \$1,335, which suggests that employers found these refugees a more favorable group to employ based on non-human capital reasons.

Similar results can be found when comparing the real labor wages of the refugee groups and of natives. As seen in Table 5, if Russian refugees received the same returns to their human capital and demographic variables as natives and are paid entirely according to these variables, they should have earned \$13,858 more than natives did in 2000. However, discrimination caused them to earn \$12,693 less than natives, so natives enjoyed a total wage advantage of \$1,168 over the Russian

refugees instead. For Iraqi refugees, discrimination accounts for \$11,599, which is 73%, of the \$15,969 wage gap between them and the natives in 2000.

Table 5: Wage Advantage of Economic Migrants and Natives over Refugees in Year 2000					
Versus Economic Migrants					
	Vietnamese refugees	Cambodian refugees	Romanian refugees	Russian refugees	Iraqi refugees
Real Wage Advantage of Economic Migrants over Refugees	-\$1,211.18	\$12,260.55	-\$8,204.30	-\$4,462.98	\$12,674.60
Wage Advantage due to skills	-\$2,025.13	\$8,881.07	-\$6,848.12	-\$12,030.50	\$7,745.75
Wage Advantage due to discrimination	\$774.67	\$3,420.65	-\$1,335.72	\$7,585.64	\$4,925.21
Error term	-\$39.27	\$41.16	\$20.46	\$18.07	-\$3.64
Versus Natives					
	Vietnamese refugees	Cambodian refugees	Romanian refugees	Russian refugees	Iraqi refugees
Real Wage Advantage of Natives over Refugees	\$2,083.27	\$15,555.00	-\$4,909.86	-\$1,168.53	\$15,969.05
Wage Advantage due to skills	-\$1,410.10	\$8,730.08	-\$7,825.66	-\$13,858.20	\$4,367.63
Wage Advantage discrimination	\$3,482.76	\$6,822.13	\$2,936.34	\$12,693.93	\$11,599.35
Error term	-\$10.61	-\$2.79	\$20.54	\$4.31	-\$2.06

When comparing the results in Table 5 and 6, we can see that the labor market outcomes improved for refugees in 2011-2015. Those refugees who were already earning more than economic migrants and natives in 2000 gained a greater wage advantage over the reference groups in 2011-2015. For example, in 2000, Russian refugees earned on average \$4,462 more than economic migrants and \$1,168 more than natives, but in 2011-2015, they earned \$18,386 more than economic migrants and \$15,042 more than natives. In some cases, the refugees who previously received lower wages than the reference groups ended up having a positive wage advantage over the reference groups. For instance, on average, Vietnamese refugees received \$2,083 less in labor wages in comparison to na-

tives in 2000, but they turned out to earn \$6,465 more than natives in 2011-2015. In other cases, even those refugees who did not enjoy a wage advantage over the reference groups managed to decrease the size of the wage gap between them and the reference groups, such as the Cambodian and Iraqi refugees. However, for Iraqi refugees, the size of differential due to discrimination increased from 2000 to 2011-2015 despite the decrease in the magnitude of the actual wage gap. Another intriguing result is that employers preferred Romanian refugees over both economic migrants and natives in 2011-2015. This further suggests that there are differing characteristics that besides the human capital and demographic variables that are controlled for among the five refugee groups that would affect the labor market outcomes of refugees in the US.

Table 6: Wage Advantage of Economic Migrants and Natives over Refugees in Years 2011-2015					
Versus Economic Migrants					
	Vietnamese refugees	Cambodian refugees	Romanian refugees	Russian refugees	Iraqi refugees
Real Wage Advantage of Economic Migrants over Refugees	-\$9,810.30	\$7,068.59	-\$15,012.20	-\$18,386.80	\$12,202.87
Wage Advantage due to skills	-\$9,039.29	\$2,982.92	-\$6,966.02	-\$17,205.50	\$3,068.40
Wage Advantage due to discrimination	-\$775.12	\$4,079.28	-\$8,115.96	-\$1,218.27	\$9,121.34
Error term	-\$4.17	-\$6.39	-\$69.74	-\$36.99	-\$13.13
Versus Natives					
	Vietnamese refugees	Cambodian refugees	Romanian refugees	Russian refugees	Iraqi refugees
Real Wage Advantage of Natives over Refugees	-\$6,465.66	\$10,413.23	-\$11,667.60	-\$15,042.20	\$15,547.51
Wage Advantage due to skills	-\$7,977.69	\$3,007.45	-\$6,615.25	-\$15,730.60	-\$1,588.04
Wage Advantage due to discrimination	\$1,509.86	\$7,400.63	-\$5,121.23	\$653.34	\$17,125.61
Error term	-\$2.18	-\$5.15	-\$68.88	-\$35.08	-\$9.93

## VII. Conclusion

As one of the world's top destinations for immigration and humanitarian resettlement, the United States continues to welcome immigrants from a great variety of background. With the growing size of the refugee population in the country, it is important to measure the success of integrating refugees in the US labor market in comparison to economic immigrants and natives and hence evaluate the effectiveness of the US resettlement program for refugees. In this paper, I chose to focus on refugees from five countries: Vietnam, Cambodia, Romania, Russia and other USSR states, and Iraq. I used data over two time periods, 2000 and 2011-2015, to create snapshots of each refugee group's assimilation experience.

By analyzing US Census and ACS data with descriptive statistics, it is shown that in Year 2000 (see Table 2), refugees on average had lower employment rates, worked fewer hours per week, and earned lower wages compared to economic migrants and natives. This phenomenon can be largely attributed to the lower levels of human capital, especially US-specific human capital, possessed by these refugees, as indicated by their limited English skills and lower educational attainment levels. This finding is in accordance with the human capital theory, which states that higher levels of human capital would lead to better outcomes in the labor market. Since refugees initially had lower US-specific human capital and their human capital

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from their home country is only partially transferable in the US labor market, they performed more poorly in comparison to economic migrants and natives when they first arrived. Discrimination from employers against refugees might also have impacted the labor market performance of refugees in the short-run. This is supported by evidence from my Oaxaca wage decomposition analysis as indicated by the wage differential due to discrimination figures.

However, over time, most refugee groups exhibit signs of assimilation to the labor market. They became more likely to be employed, worked for longer hours per week, and received higher earnings than they previously did. Even within the refugee groups, there are varying degrees of success in labor market assimilation. Vietnamese, Romanian, and Russian refugees are found to do exceptionally well, with their labor market performance, as well as educational attainment, eventually exceeding that of other immigrants and native workers. Cambodian refugees also improved their labor market outcomes and demonstrated signs of closing the gap between them and the reference groups. Their success in assimilation can be seen to stem from improvements in human capital, especially US-specific ones, which requires time to acquire. They became more likely to obtain higher educational attainment levels and spoke better English. Discrimination against these refugees might have diminished in the long run as employers learned more

about them. In fact, the 2011-2015 Oaxaca decomposition results show that employers preferred Vietnamese, Romanian, and Russian refugees over economic migrants and natives, and thus discrimination worked in favor of these refugees. Hence the empirical results support my hypothesis that in the short-run, refugees perform worse than economic immigrants and natives do in the US labor market, but they do assimilate in the long-run.

On the other hand, Iraqi refugees did not experience as smooth an assimilation experience as the other refugee groups did. In 2011-2015, they experienced higher unemployment rates and worked fewer hours than they did in 2000 despite an improvement in educational attainment and English proficiency among the Iraqi refugees. This suggests that human capital theory cannot solely explain the assimilation processes of refugees in the US. The Oaxaca decomposition results show that in 2011-2015, although the Iraqi refugees did manage to close the wage gaps with the reference groups slightly when compared to the 2000 results, economic migrants and natives enjoyed a greater wage advantage due to discrimination over Iraqi refugees than before. Hence discrimination worsened for these refugees. The increased anti-Islam sentiment in the US in recent years provides a possible explanation to this phenomenon.

Since my empirical results support my hypothesis that discrimination plays a crucial part in

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determining the labor market assimilation process of refugees, it would be helpful if future research can investigate more in depth the discriminatory factors that lead to the varying degrees of success in assimilating to the US labor market experienced by the five refugee groups. Another suggestion for future research is to create interaction terms between the refugee status and human capital variable. Creating interaction terms for educational attainment would help us determine whether obtaining a bachelors, masters, professional, or doctorate degree would lead to the same returns on earnings for refugees, economic migrants, and natives, and hence provide a better insight for how human capital contributes to the labor market assimilation for refugees. Closer examination on the situations in different refugee source countries might also help us understand the discrepancies in the assimilation process of the different refugee groups.

Overall, my research finds that refugees are initially worse off in the US labor market upon their arrival years than non-refugee immigrants and natives in terms of employment rate, usual hours worked per week, and labor wages, but over time they improve their labor market outcomes and assimilate. This is largely due to their gain in US-specific human capital skills, which increases with their years of US residence. However, the discrepancy in the results among the five refugee groups after controlling for human capital variables also suggests that discrimi-

nation might affect the labor market assimilation of refugees, especially more so for Iraqi refugees. This is supported by the results from performing the Oaxaca wage decomposition analysis. Hence when designing the humanitarian resettlement programs in the US, policymakers should focus more on job training resources to improve the refugees' human capital, such as language classes to improve English proficiency and easier access to higher education institutions, in order to better integrate refugees in the labor market. Another important aspect of humanitarian resettlement would be to create a refugee-friendly environment and thus hopefully minimizing the effects of discrimination. In conclusion, this paper supports the assertions of existing literature on the labor market performance of refugees versus economic immigrants and natives while shedding light on relevant issues that should be further investigated to help better estimate the relationship between refugee status and employment.

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## Appendix

Table 1: Regression Results of Refugees and Economic Migrants in 2000

Variable Name	Vietnamese Refugees	Cambodian Refugees	Romanian Refugees	Russian Refugees	Iraqi Refugees	Economic Migrants
Constant	-53206.2	-13642.9	-69086.5	-11381.4	9498.984	-15298
Female	-10722.8*** (-13.432)	-7587.09*** (-6.086)	-19066.3*** (-4.244)	-13965.8*** (-11.941)	-7381.66** (-1.997)	-15184.5*** (-102.013)
YrsUS	783.538*** (7.298)	340.054 (0.994)	242.152 (0.295)	2631.071*** (9.67)	737.982 (0.97)	368.132*** (51.861)
Age	3208.543*** (9.795)	2238.466*** (4.472)	3820.517*** (2.597)	1967.472*** (4.681)	424.72 (0.369)	1592.122*** (32.934)
AgeSQ	-38.051*** (-9.732)	-27.5*** (-4.484)	-45.685*** (-2.59)	-28.575*** (-5.641)	-3.221 (-0.219)	-16.113*** (-27.747)
Married	4102.188*** (4.16)	3057.227** (2.048)	-1286.83 (-0.23)	3288.597** (2.202)	-2363.64 (-0.606)	5042.562*** (29.941)
NChild	-1.518 (-0.004)	-1085.25** (-2.23)	2496.618 (1.383)	-726.65 (-1.227)	418.787 (0.302)	-6.345 (-0.101)
English	6951.683 (1.543)	-2340.32 (-0.438)	37799.29 (0.912)	-3687.01 (-0.535)	4770.868 (0.416)	4498.821*** (14.016)
High-School	4180.39*** (3.196)	2521.275 (1.535)	387.131 (0.049)	595.201 (0.201)	6278.261 (1.373)	7074.809*** (33.091)
Some-College	13196.07*** (11.621)	7606.283*** (4.635)	5206.33 (0.687)	6067.76** (2.122)	12075.16** (2.542)	15438.77*** (73.195)
Bachelor's	35697.14*** (28.827)	22701.71*** (9.876)	16817.8** (2.098)	22834.69*** (8.229)	18837.03*** (3.716)	37638.97*** (164.056)
Master's	50022.08*** (24.114)	40483.63*** (8.358)	39185.9*** (4.551)	35620.79*** (12.297)	31494.68*** (3.547)	57140.88*** (188.209)
Professional	68973.55*** (25.936)	66653.72*** (7.571)	73987.2*** (6.651)	37371.34*** (9.885)	48658.13*** (4.981)	81353.72*** (186.359)
Doctorate	62941.37*** (13.514)	62982.44 (6.205)	70050.43*** (4.757)	48189.65*** (13.6)	57376.98*** (2.919)	66312.85*** (135.652)
Adjusted R-Square	0.193	0.168	0.147	0.120	0.105	0.202
Sample Size	10526	1630	703	6110	416	496463

\*Significant at the 0.10 level; \*\*Significant at the 0.05 level; \*\*\*Significant at the 0.01 level

Table 2: Regression Results of Refugees versus Economic Migrants in 2011-2015

Variable Name	Vietnamese Refugees	Cambodian Refugees	Romanian Refugees	Russian Refugees	Iraqi Refugees	Economic Migrants
Constant	-55952.2	-968.201	-211633	-141916	-18698.9	-45309.2
Female	-10828.3*** (-11.399)	-9282.31*** (-5.24)	-22484.5*** (-4.439)	-18465.2*** (-12.823)	-8244.1*** (-2.915)	-15559.4*** (-125.526)
YrsUS	1229.792*** (9.907)	636.683 (1.628)	835.164 (0.998)	1548.937*** (5.576)	947.365*** (5.216)	405.656*** (72.283)
Age	2129.964*** (3.6)	811.616 (0.749)	10038.05*** (4.742)	6459.94*** (12.398)	1824.075** (2.023)	2660.724*** (61.876)
AgeSQ	-23.779*** (-3.873)	-8.505 (-0.75)	-110.123*** (-4.791)	-76.665*** (-13.019)	-17.404 (-1.601)	-27.994*** (-56.596)
Married	5356.656*** (4.529)	1606.767 (0.788)	-2518.87 (-0.424)	8911.632*** (5.04)	9025.527*** (2.74)	6234.327*** (44.029)
NChild	1252.207*** (2.766)	562.912 (0.753)	994.585 (0.443)	-364.029 (-0.503)	-5230.79*** (-4.592)	331.643*** (5.978)
English	3561.228 (0.697)	-4672.53 (-0.568)	19722.52 (0.408)	19274.73 (1.032)	-5706.59 (-0.552)	5496.6*** (19.261)
High-School	2730.901 (1.639)	6075.662 (2.358)	9692.988 (0.878)	2528.535 (0.476)	6028.287 (1.442)	7212.529*** (38.168)
SomeCollege	15519.47*** (10.718)	12100.07*** (4.918)	20244.94** (1.849)	10163.28** (1.991)	6505.343 (1.494)	17144.09*** (89.695)
Bachelor's	45895.91*** (30.183)	39513.46*** (13.336)	41626.16*** (3.635)	40458.93 (8.061)	23901.82*** (5.873)	43859.23*** (223.908)
Master's	69620.67*** (31.99)	60541.23*** (13.483)	56833.01*** (4.606)	61077.92 (11.934)	36860.85*** (5.752)	68640.38*** (292.964)
Professional	121246.6*** (44.59)	110159.5*** (10.812)	166971.4*** (10.988)	95627.81*** (16.826)	95481.66*** (2.921)	114087*** (294.311)
Doctorate	90021.59*** (24.776)	52080.64*** (4.142)	115259.7*** (6.432)	85386.81 (14.837)	35043.07*** (3.504)	85498.34*** (230.464)
Adjusted R-Squared	0.278	0.213	0.252	0.208	0.238	0.262
Sample Size	12137	1825	764	7572	1038	768672

\*Significant at the 0.10 level; \*\*Significant at the 0.05 level; \*\*\*Significant at the 0.01 level



Table 3: Regression Results of Refugees and Natives in 2000

Variable Name	Vietnamese Refugee	Cambodian Refugee	Romanian Refugee	Russian Refugee	Iraqi Refugee	Natives
Constant	-43787.1	-8672.01	-64232.2	5641.516	11568.42	-30445.8
Female	-10555.9*** (-13.195)	-7500.72*** (-6.031)	-19107.9*** (-4.258)	-13948.6*** (-11.837)	-7383.14** (-1.998)	-18032.1*** (-50.446)
Age	3322.391*** (10.129)	2278.353*** (4.567)	3787.265*** (2.584)	2000.79*** (4.725)	469.303 (0.408)	2523.145*** (21.431)
AgeSQ	-38.673*** (-9.869)	-27.851*** (-4.548)	-45.241*** (-2.576)	-28.423*** (-5.569)	-3.729 (-0.253)	-23.923*** (-16.737)
Married	3915.074*** (3.962)	3088.535** (2.069)	-1286.29 (-0.23)	3249.888** (2.16)	-2236.08 (-0.573)	5648.326*** (14.08)
NChild	5.121 (0.014)	-1152.16** (-2.39)	2494.619 (1.383)	-496.016 (-0.832)	473.714 (0.342)	1053.642*** (6.029)
English	8567.923* (1.899)	-2154.04 (-0.404)	36910.9 (0.894)	798.829 (0.115)	4882.025 (0.426)	6323.01 (0.607)
HighSchool	4712.309*** (3.599)	2700.493* (1.654)	244.277 (0.031)	-534.803 (-0.179)	6931.721 (1.532)	5648.176*** (8.243)
SomeCollege	14402.63*** (12.788)	7784.018*** (4.771)	5148.004 (0.68)	5654.866** (1.963)	12707.24*** (2.701)	14516.04*** (21.384)
Bachelor's	37524.56*** (30.865)	22996.96*** (10.09)	16728.12** (2.09)	22119.97*** (7.915)	19233.27*** (3.807)	37265.52*** (50.56)
Master's	52314.72*** (25.45)	40768.09*** (8.431)	38986.27*** (4.545)	34435.26*** (11.809)	32242.22*** (3.645)	49114.19*** (52.157)
Professional	71546.63*** (27.076)	67033.24*** (7.622)	73971.61*** (6.654)	36281.15*** (9.529)	49325.34*** (5.062)	77462.6*** (59.012)
Doctorate	65420.11*** (14.049)	63125.71*** (6.22)	70137.93*** (4.767)	46057.75*** (12.926)	55828.18*** (2.85)	59715.08*** (31.105)
Adjusted R-Squared	0.189	0.168	0.147	0.120	0.105	0.171
Sample Size	10526	1630	703	6110	416	77835

\*Significant at the 0.10 level; \*\*Significant at the 0.05 level; \*\*\*Significant at the 0.01 level



Table 4: Regression Results of Refugees versus Natives in 2011-2015

Variable Name	Vietnamese Refugee	Cambodian Refugee	Romanian Refugee	Russian Refugee	Iraqi Refugee	Natives
Constant	-40844.1	11546.37	-192955	-108158	-23764.2	-58989.7
Female	-10819*** (-11.344)	-9272.24*** (-5.232)	-22867.4*** (-4.528)	-18671.3 (-12.944)	-7339.15*** (-2.568)	-19030.5*** (-118.65)
Age	2837.452*** (4.812)	1029.184 (0.957)	10155.71*** (4.805)	6370.568*** (12.208)	2030.17** (2.226)	2972.938*** (57.321)
AgeSQ	-29.364*** (-4.784)	-10.231 (-0.906)	-111.297*** (-4.849)	-75.523*** (-12.808)	-17.355 (-1.577)	-26.722*** (-44.111)
Married	5270.656*** (4.439)	1706.842 (0.837)	-3086.31 (-0.522)	8948.105*** (5.05)	9151.997*** (2.744)	6535.548*** (36.259)
NChild	1057.628** (2.329)	515.172 (0.689)	1129.425 (0.504)	-314.191 (-0.433)	-5169.62*** (-4.481)	2511.755*** (30.815)
English	5579.798 (1.089)	-4138.59 (-0.503)	20568.74 (0.426)	20701.41 (1.107)	223.139 (0.021)	17026.31*** (3.864)
HighSchool	3775.104** (2.261)	6625.831*** (2.593)	9570.085 (0.867)	2089.315 (0.393)	7062.854* (1.67)	7055.788*** (17.228)
SomeCollege	17323.78*** (12.012)	12666.09*** (5.198)	20080.94* (1.835)	9507.651* (1.86)	8061.171* (1.833)	16536.86*** (41.094)
Bachelor's	49157.52*** (32.982)	40422.17*** (13.885)	41748.84*** (3.646)	39877.73*** (7.931)	23299.41*** (5.655)	42346.51*** (102.375)
Master's	73709.4*** (34.358)	61531.8*** (13.825)	56262.94*** (4.565)	60307.54*** (11.764)	36953.56*** (5.694)	54934.57*** (119.331)
Professional	125596.5*** (46.618)	111363.3*** (10.954)	166978.5*** (10.988)	95563.97*** (16.781)	96390.14*** (12.884)	106300.3*** (171.014)
Doctorate	93818.25*** (25.862)	53160.85*** (4.232)	115745.3*** (6.461)	84142.84*** (14.603)	35578.02*** (3.513)	76361.27*** (98.013)
Adjusted R-Squared	0.272	0.213	0.252	0.204	0.218	0.219
Sample Size	12137	1825	764	7572	1038	424607

\*Significant at the 0.10 level; \*\*Significant at the 0.05 level; \*\*\*Significant at the 0.01 level