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WAGE OUTCOMES OF ALBANIAN
IMMIGRANTS IN THE UNITED STATES**

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Working Paper #10-7

June 2010

Department of Agricultural Economics

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Abstract

Immigrants' human capital and human capital potential is not fully transferrable into wage levels in the host country. Albania is a recent case in point that offers an opportunity for study. Since the collapse of the totalitarian regime in 1990, Albania has undergone drastic demographic changes, fueled by unprecedented levels of emigration and disproportionately large shares of those who are leaving are highly skilled individuals. Albania's brain drain has received a large amount of research attention over the years, but little is known about the possible brain gain for the host country, or brain waste resulting from the over education of the immigrant labor force. This paper investigates the issue of human capital transferability by examining the labor market experience of this relatively new, little known immigrant group in the United States. The examination pays particular attention to three issues: (1) the success of Albanians relative to Italian immigrants; (2) the role of human capital; and (3) performance differences between emigrants leaving as refugees during the communist era, and those emigrating during the post-communist era. The empirical analysis uses pooled data from the 2000 US Census 5% sample, and the 2001-2007 American Community Survey (ACS) 3% sample, accessed from the Integrated Public Use Micro data Series (IPUMS-USA). Findings of this research suggest that human capital acquired at home has a positive impact on wages, but the level of skill transferability is low for Albanians and human capital acquired in the US has a slightly larger pay-off for Albanian immigrants than for Italian immigrants. Both Italians and Albanians experience returns to assimilation at a decreasing rate. Albanian immigrants earn less than Italian immigrants do, and the gender wage gap among Albanian immigrants is smaller than among Italian immigrants.

Keywords: Labor, Human Capital

JEL Codes: J24, J31

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Introduction

In the United States, economic mobility and success are so much a part of the American Dream but may be almost unachievable for some segments of the immigrant population. The trajectory from poor newcomer to millionaire is not the norm. Instead, all too often immigrants in the United States find themselves marginalized in the labor force. While highly educated immigrants may fare better than those with little human capital, they often face barriers resulting from imperfect transferability of human capital across international boundaries. As a result, they may be constrained to jobs for which they are overeducated and earn low wages. The problem is that immigrants' human capital and human capital potential is not fully utilized and translated into wage levels in the host country.

Literature on immigrant earnings profiles in the US (Borjas 1994, Stewart and Hyclak 2010) suggests that initially, immigrants earn less than natives do, but ultimately the wage levels converge. Building upon previously explored theories, this paper seeks to examine the issue of human capital transferability and to identify the components that affect wages of Albanian immigrants in the US. These issues are pivotal given that the majority of Albania's highly skilled individuals are emigrating and Albanians are a relatively new group to immigrate to the United States.

The labor market experience of this little known immigrant group in America is investigated by addressing the following questions. First, what factors influence Albanians' economic success in the United States? Particular attention will be devoted to the influence of human capital acquired in Albania and the level of assimilation to US society. Assimilation is seen as a human capital enriching process that takes place in the destination country.

Second, how do Albanian immigrants fare in comparison to a similar but more established immigrant group? Italian immigrants will be the comparison group. Italian immigration has a long history in the United States and, unlike Albanian immigration, can rely on established network channels that facilitate adjustment and entry into the labor market for newcomers.

Third, to what extents do Albanian immigrants' investment in human capital pay off, and is the pay-off smaller than for Italians? While both Albanian and Italian newcomers may experience mismatches between their education and occupations, and thus earn low wages, the problem may be particularly severe for Albanians as international transferability of educational credentials, from the by-and-large unknown Albania, is expected to be low. On the other hand, human capital investment in the form of assimilation may be more beneficial for Albanians than for Italians since Italians can rely on the assistance of a large Italian network, and may or may not choose to assimilate.

Finally, are the entry conditions of Albanian immigrants manifested in their economic performance? Prior to the regime change in 1990, emigrants from Albania entered the US as asylum seekers or refugees. Thus, moves abroad were motivated by push factors in Albania and, in the extreme, may have even been forced moves. After the regime change, the inflow from Albania exploded and the vast majority of Albanian immigrants entered the US under the

diversity program or as immediate relatives of US citizens. Thus, post-1990 moves are the outcome of two decisions of (a) leaving Albania and (b) selecting the US as the new country of residence. This difference in entry conditions among the pre-1990 cohort and the more recent immigrants may influence the willingness to assimilate and thus ultimately affect economic performance.

The remainder of this paper is organized in four sections. Following this introductory section, the next section provides salient background information and context for migration from Albania and linkages with Italy. The third section presents the data, methods and empirical results. The last section offers concluding remarks on policy implications.

Migration from Albania

Bounded by the Adriatic and Ionian Sea (in the Mediterranean Sea), Albania borders Montenegro in the North, Kosovo, once part of Serbia and Montenegro, in the North East, Macedonia in the East, and Greece in the South and South East (Figure 1). This little known country – slightly smaller than the state of Maryland in terms of territory – owes much of its history to its unique land structure and geographic positioning.¹



Figure 1. Map of Albania and Surrounding Countries
Source: www.theodora.com/maps

Covering an area of 28,748 square kilometers, Albania's terrain is harsh and largely inaccessible; two-thirds of the country is mountainous, making farming very challenging. However, Albania also has a 362 km coastline that contributed to its commercial and strategic importance and made it a frequent target of invasions.

Economic Context

Albania's relatively young and well educated workforce of about 1.1 million (2009 est.) is a key contributor to its economic promise. Since the opening of the borders, the composition of the labor force has changed drastically. According to the Albanian Progress Report (2009), 51

¹ Unless otherwise stated, the figures included in this section were taken from the CIA World Factbook 2010.

percent of workers were employed in agriculture in 2007, down from 72 percent in 1999. Although the majority of workers are employed in agriculture, this sector contributes only 19 percent to GDP. Productivity in agriculture remains low due to the unavailability of large plots of land, antiquated equipment, and high risk of flooding.

In recent years, Albania has experienced low levels of inflation and impressive economic growth, averaging about six percent per year during 2004-2008. Albania has gone largely untouched by the recent global recession, because of its lack of financial markets and undiversified banking sector. However, Albania suffers from an extreme trade imbalance and the unemployment rate, which has been steadily decreasing since late 1990, was still at 13.4 percent in 2007 (Albania 2009 Progress Report).²

International migration plays a pivotal role for Albania's economy as remittances, averaging 15 percent of GDP in recent years, help financing the trade imbalance. Moreover, remittances are also a key component of household income. For the period of 1994 to 1999, IMF and World Bank data report that Albania had the sixth highest ratio of remittances to GDP of the world's developing economies. These remittances are used primarily in consumption, as a supplement to household income. Recipients use them to eliminate the gap left by wages earned in Albania and the cost of living. As such, remittances have supported the country's economic position by continually closing the gap between cost of living and wages earned and by financing the trade imbalance. Additionally, remittances also contribute to the development of the economy; with approximately 17 percent used to establish a business, they play an important role for job and business creation (Kule et al. 2002).

Demographic Context

In 2010, Albania's population was estimated at 3,659,616 inhabitants with an annual growth rate of 0.56 percent. The confluence of several demographic attributes makes the Albanian population stand out. First, it is ethnically homogenous, with 95 percent of the population being ethnic Albanians.³ Second, the population is young, with a median age of 30 years, 67.4 percent of the population between the ages of 15 and 64 and only 10 percent of age 65 or older.⁴ The sharp decline in fertility rates – from 4.2 children per woman in 1980 to 2 children in 2010 – positions Albania to take advantage of a demographic dividend during the years ahead. Third, as a legacy left by the era of communism Albania has a well educated general population, with a 98.7 percent literacy rate, and many who speak multiple languages. However, the current state of the educational system in Albania is not promising. Government spending on education is relatively low in comparison to other countries, hovering around three percent of GDP from 1999 to 2007 (Albania Progress Report 2009), resulting in declining quality. At the same time, the education investment in the private sector has continued to grow but has made education unaffordable to large segments of the population. Fourth, the Albanian population has a rich history of migration, ranging from war-related forced migrations to labor migrations as a strategy

² Albania also has a large informal and unreported sector that may be as large as 50 percent of official GDP, making it difficult to accurately estimate employment rates and GDP.

³ Three percent of the population is Greek, and only two percent belong to other ethnicities, including Vlach, Roma, Serb, Macedonian, Bulgarian (Kosta 2004).

⁴ In comparison, in Italy the median age is 44 years and 20 percent of the population are 65 years or older.

of escaping poverty (Vullnetari 2007). In fact, in recent years, Albania has provided one of the most interesting case studies of migration.

Since the collapse of the totalitarian regime in 1990, unprecedented levels of emigration have contributed to drastic demographic changes. It is estimated that by 2004 more than 25 percent of Albanian citizens were living abroad (Kosta 2004). Popular destinations of Albanian emigrants are Greece, Italy, Macedonia, and Montenegro. Over time, there has been a shift in the importance of destination; while Greece and Italy remain the two most important destinations, changes in immigration policies, accessibility and ease of travel have contributed to USA, UK, and Canada gaining increasing importance as destination countries (Vullnetari 2007). Although a relatively small percentage of the US population, 0.03%, the absolute number of Albanian immigrants in the United States continues to increase, as poverty, high levels of unemployment and corruption persist in Albania.

Moreover, disproportionately large shares of those who were leaving were highly skilled individuals. Approximately 50 percent of researchers, lecturers, and intellectuals have left Albania since 1990, with over 26.3 percent immigrating to the US and 18.3 percent moving to Canada (Germenji and Gedeshi 2008). In addition, among destinations chosen by the highly skilled Albanian emigrants, the USA has the highest share of Albanian emigrants with a PhD earned in Albania (Germenji and Gedeshi 2008).

Albanian Emigration in Comparison

Italian immigrants in the US are an interesting comparison group for Albanian immigrants in the US. Both groups hail from Southern / South Eastern Europe, and thus share some cultural similarities based on geographic proximity. In addition, despite the fact that Italians have been immigrating to the US for hundreds of years, they remain a relatively tight-knit immigrant group, and tend to assimilate quite slowly, with Italians ethnic enclaves persisting in many US cities. Italians have, for the most part, been freely migrating to the US and as a result, have large networks of friends and family members and resources from which to draw upon. In contrast, Albanians did not start coming to the US en mass until 1990, and have had considerably less resources in the US. Therefore, in order to determine whether years of communist isolation have affected the wages of these individuals, it was important that the comparison group had not experienced the same isolation as Albania had experienced.

Table 1. Class of Admission for Albanians and Italians, 2009

	Albania	Italy
Total admissions	5,137	2,892
Diversity	38%	6%
Immediate relatives of U.S. citizens	38%	59%
Refugees and asylees	19%	2%
Family-sponsored preferences	3%	4%
Employment-based preferences	2%	29%
Other	<1%	1%

Source: DHS Yearbook of Immigration Statistics, 2009

Additionally, as shown in Table 1, there are substantial compositional differences of Italian and Albanians entering the US. A large share, approximately 38 percent, of Albanians enter via the

diversity program, and are likely to be quite representative of the larger Albanian population. In contrast, almost one-third of the Italian population enters the US with skill-based visas such as the H1-visas.

Immigrants' Human Capital: Transferability and Acquisition Abroad

Immigrants' economic performance in the host country is an area of lively debate among many economists. The topic also dominates the public debate, especially during economic recessions and in response to rising numbers of immigrants. To understand immigrants' earnings profiles, a distinction must be made between human capital acquired in the home country, and human capital acquired in the host country.

Human capital acquired in the origin is primarily based on education and job experience, ability and motivation. However, employers in the destination country have imperfect information about the quality of education and job experience from abroad. As a result, this type of human capital is not perfectly transferable and immigrants may find themselves in jobs for which they are over-educated, earn lower wages and do not reap the full benefits of their earlier investment (Chiswick and Miller, 2009). Bauer et al. (2000) suggest that the international transferability of human capital is not only influenced by the immigrant's education level but also by the similarities of origin and destination countries. Cultural differences as well as differences in labor market structure and institutional settings play a role when transferring human capital across international borders. These differences in the international transferability of human capital acquired at home suggest that Albanians' economic performance is particularly strongly affected since employers in the western world know little about Albanian culture due to Albania's long isolation under the communist regime.

Human capital acquired once an immigrant has arrived in the new country refers largely to the assimilation of the immigrant into the host society. Learning the new language and becoming familiar with, if not adapting the new set of norms and values is a necessary condition for smooth integration into the labor market. On average, as immigrants extend their stay abroad, they tend to become more assimilated (Waldorf 1994). Not surprisingly, thus, work by Chiswick (1978) found that while immigrants initially earn less than natives do, after 10-15 years in the US labor market, earnings converge and eventually exceed earnings levels of natives. Stewart and Hyclak (2010) find that significant differences in earnings profiles exist across country of origin. Although immigrants initially earn less than natives do and a wage gap exists between those of different origins, and over time, these effects dissipate. Research done by Carliner (1980), finds that, *ceteris paribus*, recent immigrants generally receive lower wages than do earlier immigrants and increases in US-specific human capital more than make up for the decrease in motivation over the years.

Human capital acquired through assimilation also hints at differences in economic performance across different immigrant groups. The degree and speed with which immigrants assimilate is a function of personal characteristics (Waldorf 1994), but also a function of the immigrant group as a whole. The literature suggests that language acquisition is inversely related to the share of the own immigrant population (Lazear 1999, Florax et al. 2005, Waldorf et al. 2010). As an important corollary, in the US, Italian immigrants who can rely on a large network of other Italian immigrants are expected to be less likely to learn English than Albanian immigrants, whose ethnic enclaves are small. Thus, although Albanians may receive lower wages than

Italians may when they first enter the US due to the poor transferability of their human capital acquired at home; Albanians may outperform Italian immigrants due to faster acquisition of US-specific human capital.

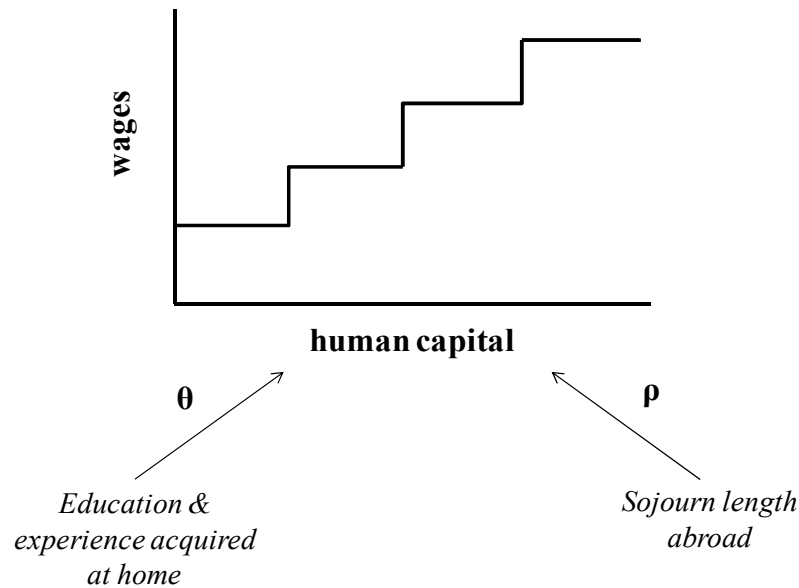


Figure 2. Decomposition and Capitalization of Immigrants' Human Capital

Figure 2 illustrates the hypothesized impact of immigrants' human capital on wages. An immigrant's human capital is decomposed into the portion acquired in the home country, typically proxied by education and experience, and the portion acquired in the host country, often measured via the sojourn length. The wage capitalization of human capital acquired at home depends on its transferability into the host country, θ . We hypothesize that the rate of transferability for Italians is greater than for Albanians, $\theta_I > \theta_A$, because of Italians' long immigration history to the United States and the familiarity of Italian culture in the U.S. The degree to which the sojourn length in the host country is translated into wage-gaining human capital depends on the speed of assimilation, ρ . We hypothesize the speed of assimilation to be faster for Albanians than for Italians, $\rho_A > \rho_I$, because the lack of established social networks and the relative newness of Albanians to the United States may force Albanians to quickly learn English and assimilate at a faster rate than Italians.

Empirical Analysis

Data description

The empirical analysis uses data of the United States census and the American Community Surveys. The data are accessed from the Integrated Public Use Micro data Series (IPUMS-USA), a project of the Minnesota Population Center intended to collect, harmonize, and distribute

United States census data.⁵ The extracted data set pools data from the 2000 Census 5% sample, and the 2001-2007 American Community Survey (ACS) 3% sample. The logic behind pooling samples from several years is to overcome the low number of observations of Albanian-born respondents.

The 2000 Census 5% sample is a 1-in-20 national random sample of the population that comes from the long-form census data. The ACS is a monthly rolling sample of households designed to replace the census long form. It samples about 3 million households across the nation. Years 2001, 2002, 2003, and 2004 are a 1-in-232, 261, 236, and 239 national random sample of the population, respectively. Years 2005-2007 are 1-in-100 national random samples of the population. Each of these samples are weighted samples; the weights are used to adjust for mixed sampling procedures and differential rates of “no response,” and provide the highest level of precision in accounting for persons residing in small localities. In addition, use of these weights reduces possible bias and creates estimates that are consistent counts of persons and housing units at the county level and higher.

The extracted sample includes individuals born in Albania or Italy who reside in the United States at the time of the survey.⁶ In addition, several important selection criteria are applied. The sample includes only persons of age 66 or younger who were in the labor force during the year preceding the survey, had a positive wage, worked at least 20 weeks during that year and at least 20 hours per week. Moreover, at the time of immigration, the selected persons were at least 25 years of age. This selection criterion ensures that the respondents obtained all or at least almost all of their formal education in their respective home country. In total, the data set includes $n = 4,583$ observations, split between 1,151 Albanian and 3,432 Italian immigrants. Table 2 summarizes the selection criteria.

Table 2. Sample Selection Criteria

Criterion	Specification
Birth place	Albania, Italy
Age at entry to US	25+
Age at survey	<65
Wage	> \$0
Weeks worked per year	> = 20
Hours worked per week	> 20

Table 3 shows the data definitions and summary statistics of the variables used in this study, listed separately for the entire sample as well as for the two subsamples defined by the immigrant’s place of birth. The variable of interest is the immigrant’s hourly wage. For the year preceding the survey, the IPUMS data provides the pre-tax wage and salary income (INCWAGE), the weeks worked during the year, and the usual hours worked per week. These variables are combined to calculate the hourly wage for each person.^{7 8} As shown in Table 3, on

⁵ Steven Ruggles, Matthew Sobek, Trent Alexander, Catherine A. Fitch, Ronald Goeken, Patricia Kelly Hall, Miriam King, and Chad Ronnander. *Integrated Public Use Microdata Series: Version 4.0* [Machine-readable database]. Minneapolis, MN: Minnesota Population Center [producer and distributor], 2009. <http://usa.ipums.org/usa/>

⁶ Persons born in Albania or Italy born to US American parents are excluded.

⁷ Since the data refer to different years, wages are deflated with the consumer price index for the years 2000-2007, using 2007 as the base price.

average, Albanians earn almost \$16,000 per year less than Italians do, although they work a similar number of weeks per year. However, on average, Albanians work only 41 hours per week, compared to 43 hours per week worked by Italian immigrants. Overall, the hourly wage gap between Italians and Albanians amounts to about \$6. Additionally, Albanians are underrepresented in the lowest and highest educational attainment categories, with just 11 percent in the less than high school and postgraduate degree categories. However, the two groups are relatively similar if looking at tertiary education, 35 and 34 percent of Albanians and Italians respectively, having earned either a bachelor or postgraduate degree. Further demonstrating the fact that Albanians are a relatively new immigrant group in the US, average duration in the US for Albanians is 6 years, compared to 17 years for Italians.

Table 3. Descriptive Statistics

Variable	Variable Definition	Entire Sample		Albanians Only		Italians Only		Diff. of Means
		n=4584		n=1152		n=3432		
		Mean	S.D.	Mean	S.D.	Mean	S.D.	
ln wage	ln hourly wage	2.853	0.660	2.568	0.555	2.949	0.665	-0.381 *
lnwage	Pre-tax wage and salary income for the past year	39004	29209	27149	17819	42983	31146	-15834 *
Wkswork1	Weeks worked in the previous year for profit	48.004	7.658	47.307	8.152	48.238	7.472	-0.931 *
Uhrswork	Usual number of hours worked in the previous year	42.638	10.437	41.485	8.612	43.025	10.956	-1.540 *
<i>Human Capital Variables</i>								
LtHS	1 = less than HS	0.238	0.426	0.114	0.318	0.280	0.449	-0.167 *
HS	1= HS,GED, or some college;	0.421	0.494	0.540	0.499	0.381	0.486	0.159 *
Bachelor	1= Bachelor's degree;	0.141	0.348	0.236	0.425	0.110	0.312	0.127 *
Postgraddeg	1= Postgraduate degree;	0.199	0.399	0.110	0.313	0.229	0.420	-0.118 *
Duration	Survey yr – yr of immigration	14.351	11.493	6.226	4.781	17.079	11.797	-10.853 *
<i>Immigration-specific variables</i>								
Albania	1=place of birth is Albania;	0.251	0.434	1.000	0.000	0.000	0.000	-
Immigpre90	1=immigrated before 1990;	0.434	0.496	0.038	0.192	0.566	0.496	-0.528 *
Yrimmig	Year of immigration	1988	12	1997	5	1985	12	12.030 *
Ageentry	Age at entry	33.123	7.549	36.645	8.239	31.941	6.913	4.704 *
Engproficient	1=person speaks english;	0.816	0.387	0.674	0.469	0.864	0.343	-0.190 *
Citizn	1=person is naturalized	0.413	0.492	0.332	0.471	0.441	0.497	-0.109 *
<i>Traditional wage predictors</i>								
Age	Person's age	47.475	10.844	42.871	8.636	49.020	11.070	-6.149 *
Female	1=female; 0=male	0.356	0.479	0.388	0.488	0.346	0.476	0.042 *
Marriage	1=married	0.787	0.409	0.898	0.302	0.750	0.433	0.149 *
Child	1=at least one child	0.569	0.495	0.801	0.399	0.491	0.500	0.310 *
Bluecollar	1=blue-collar occupation	0.333	0.471	0.443	0.497	0.296	0.457	0.147 *
<i>Locational controls</i>								
NewEngland	1=person lives in NewEngland	0.148	0.355	0.253	0.435	0.113	0.316	0.141 *
MidAtlantic	1=person lives in MidAtlantic	0.375	0.484	0.313	0.464	0.396	0.489	-0.083 *
EMidwest	1=person lives in EMidwest	0.131	0.337	0.232	0.422	0.097	0.296	0.135 *
WMidwest	1=person lives in WMidwest	0.016	0.124	0.016	0.124	0.016	0.124	0.000
AtlanticSouth	1=person lives in AtlanticSouth	0.164	0.370	0.142	0.350	0.171	0.376	-0.028
ESouth	1=person lives in ESouth	0.010	0.102	0.007	0.083	0.012	0.107	-0.005
WSouth	1=person lives in WSouth	0.025	0.156	0.015	0.121	0.028	0.166	-0.014 *
MountainWest	1=person lives in MountainWest;	0.031	0.172	0.011	0.106	0.037	0.189	-0.026 *
PacificWest	1=person lives in PacificWest	0.100	0.300	0.010	0.102	0.131	0.337	-0.120 *

* significantly different from zero for $\alpha = 0.05$

⁸ Hourly wage = annual wage / (wks worked x hrs per week)

Data for three additional sets of variables are obtained. The first one account for information that plays a role when dealing with immigrant populations, including the birthplace, the timing of immigration, the age at entry, the immigrant's English language proficiency, and whether the immigrant is naturalized. One quarter of the sample is Albanian and on average, they arrived in 1997, about 12 years later than the average Italian immigrant did. Also important is that only about four percent of the Albanian immigrants arrived prior to 1990 and thus most likely entered the US as refugees of a communist regime. The difference in age at entry into the US is quite remarkable. Albanians, on average, are almost five years older than Italian immigrants are when they arrive in America. Comparing the averages for Albanians and Italians further suggests that both immigrant groups have a surprisingly high share of persons being proficient in the English language, 67 percent, and 87 percent for Albanians and Italians, respectively. These percentages are substantially higher than, for example, those for immigrants from Mexico or the Caribbean (Duncan and Waldorf 2009, Waldorf et al. 2008) where naturalized immigrants have been in the US about seven years longer than those without citizenship have and are more likely to speak English at home. In terms of citizenship, 44 percent of the Italians are naturalized, compared to only 33 percent of the Albanian immigrants. Although the naturalization rate for Albanians is significantly lower than for Italians, it is actually quite high considering that their average length of stay in the US is only six years and that it usually takes at least five years before immigrants become eligible to apply for US citizenship.⁹

The second set of variables includes traditional predictors of wages, namely age, sex, marital status, having a child, and occupation. Italian immigrants are about six years older, on average, than Albanian immigrants are. Interestingly, in both subsamples, men outnumber women by a wide margin with women only accounting for about one third of each group. More than three quarters of the sampled immigrants are married, but among the Albanian immigrants the share is substantially higher than among the Italian immigrants, with the difference amounting to statistically significant 15 percentage points. Not surprisingly, 80 percent of the sampled Albanians have at least one child compared to only 49 percent of the Italian immigrants. Given that the share of poorly educated Italians is so much higher than the equivalent share among the Albanians, it is interesting to note that blue-collar occupations are substantially more prevalent among Albanians (44.3 percent) than among Italians (29.6 percent).

Third, a series of dummy variables is used to specify immigrants' location within the US. Regarding the regional¹⁰ spread of both immigrant groups, Albanians are most heavily

⁹ There is no universal minimum sojourn length for citizenship (Duncan and Waldorf 2009) and the five year requirement does not include the years during which an immigrant had a temporary visa but only refers to the number of years since acquiring a permanent residence permit (green card). Immigrants married to US residents are eligible to apply for US citizenship three years after being issued a green card.

¹⁰ Regional definitions: **New England:** Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont, **Mid Atlantic:** New Jersey, New York, Pennsylvania, **East North, Central Division:** Illinois, Indiana, Michigan, Ohio, Wisconsin **West North Central Division:** Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, **South Atlantic Division:** Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia, **East South Central Division:** Alabama, Kentucky, Mississippi, Tennessee, **West South Central Division:** Arkansas, Louisiana, Oklahoma/Indian Territory, Texas

concentrated in New England, Mid Atlantic, and East Midwest regions. In fact, almost 80 percent of the sampled Albanians live in these three regions. The Italian immigrants are also highly concentrated in the Eastern portion of the US, with 40 percent residing in just one of the nine regions, the Mid Atlantic region.

Models

In order to understand the role of human capital in explaining variations in economic performance and to understand wage difference between immigrant groups, we estimate a series of multivariate linear regression models. Although there is no theoretical foundation for a particular specification of the functional form, wage regressions are frequently formulated as semi-log models where the dependent variable is the natural log of wages, $\ln Y$, and the right hand side summarizes the linear predictor without using logarithmic transformations of the explanatory variables, X_1, \dots, X_k :

$$\ln Y = \beta_0 + \sum_{j=1} \beta_j X_j + \varepsilon \quad (1)$$

The first model is a base model that expresses wages as a function of human capital. Human capital acquired at home enters the model as three educational attainment dummies, (less than high school is used as the omitted category). Human capital acquired in the US is proxied by the duration of stay in the US. Note that the effect of duration on wages is allowed to be nonlinear. In addition to these key variables, the model also controls for the impacts of all immigration specific variables, traditional wage predictors, and location.

The second model includes the important interaction terms, $X_1 * X_j$, between the birth place dummy, X_1 , and all other independent variables, $X_j, j=2, \dots, k$.

$$\ln Y = \beta_0 + \beta_1 X_1 + \sum_{j \geq 2} \beta_j X_j + \sum_{j \geq 2} \gamma_j X_1 * X_j + \varepsilon \quad (2)$$

The parameter γ_j represents the difference in the effect of X_j on $\ln Y$ between the two immigrant groups. More specifically, since the birth place variable is coded as 1 for Albanian immigrants, a one-unit change in the variable X_j implies a $100\beta_j\%$ change of Italian wages but a $100(100(\beta_j + \gamma_j))\%$ change in Albanian wages.

The third model focuses only on Albanians and expands the base model (Model 1) by adding interaction terms between the dummy variable measuring arrival in the US during the communist era in Albania (immig-pre 1990) and all other variables. Significant parameters on the interaction terms will signal that the effect of X_j on $\ln Y$ differ for the earlier than for the later wave of Albanian immigrants. All models are estimated in SAS as semi-log regression models, with observations weighted by 'person weights' provided by IPUMS.

Results

This section begins the discussion of the results by first sketching profiles of Albanian and Italian immigrants' economic performance in the United States. Subsequently, the models are

discussed with a special focus on the differences in the role of human capital for Albanian's versus Italian's wages. The section concludes with a discussion of how entry conditions –as refugee or non-refugee– affect Albanians' economic success in the United States.

Table 4. Estimation Results

n= 4,583	Model 1			Model 2		
	b		SE _b	b		SE _b
Intercept	2.446	***	0.167	2.244	***	0.209
<i>Human Capital Variables</i>						
HS	0.090	***	0.024	0.105	***	0.028
Bachelor	0.239	***	0.031	0.323	***	0.039
Postgraddeg	0.447	***	0.031	0.509	***	0.036
Duration	0.028	***	0.004	0.026	***	0.005
Duration2	-0.0005	***	0.0001	-0.0003	***	0.0001
<i>Immigration-specific variables</i>						
Albania	-0.299	***	0.023	0.217		0.350
Immigpre90	-0.124	***	0.038	-0.120	***	0.043
Ageentry	0.008		0.009	0.013	**	0.011
Ageentry2	-0.0001		0.0001	-0.0001		0.0001
Engproficient	0.078	***	0.024	0.144	***	0.034
Citizn	0.0001		0.020	-0.047	*	0.024
<i>Traditional wage predictors</i>						
Female	-0.245	***	0.018	-0.299	***	0.022
Marriage	0.042	*	0.023	0.057	**	0.025
Child	0.059	***	0.020	0.072	***	0.022
Bluecollar	-0.064	***	0.020	-0.092	***	0.026
<i>Locational controls</i>						
MidAtlantic	0.0001		0.026	-0.037		0.035
EMidwest	-0.050		0.030	-0.037		0.045
WMidwest	-0.088		0.059	-0.342	***	0.079
AtlanticSouth	-0.103	***	0.031	-0.156	***	0.040
ESouth	-0.110		0.101	-0.187	*	0.109
WSouth	0.237	***	0.053	0.114	*	0.062
MountainWest	-0.167	***	0.057	-0.238	***	0.063
PacificWest	0.005		0.036	-0.062		0.042
<i>Two-way interaction variables</i>						
AHS				-0.091		0.055
ABachelor				-0.230	***	0.068
APostgraddeg				-0.237	***	0.073
ADuration				0.018	*	0.010
ADuration2				-0.001	***	0.0003
AImmigpre90				0.357	***	0.126
AAgeentry				-0.015		0.019
AAgeentry2				0.00004		0.0002
AEngproficient				-0.156	***	0.048
ACitizn				0.124	***	0.045
AFemale				0.185	***	0.038
AMarriage				-0.114	**	0.061
AChild				-0.005		0.048
ABluecollar				0.105	**	0.042
AMidAtlantic				0.045		0.054
AEMidwest				-0.018		0.061
AWMidwest				0.575	***	0.119
AAtlanticSouth				0.083		0.064
AESouth				0.095		0.282
AWSouth				0.466	***	0.124
AMountainWest				0.221		0.158
APacificWest				0.346	**	0.164
R-Squared	0.208		-	0.235		

Table 4 summarizes the estimation results for the first two models. According to Model 1, which explains about 21 percent of the wage variation, Albanians earn on average almost 30 percent less than members of the more established Italian community. Model 2, accounting for about 23 percent of the wage variation, paints a more nuanced picture. It suggests that there is no Albanian factor per se, but that the factors influencing immigrants' wages operate differently for Albanians than for Italians, thereby creating substantial differences between the Albanian and Italian wage profiles. Taken together, models 1 and 2 also suggest that where the immigrants live, who they are and under what circumstance they came to the US have a significant influence on their economic performance.

Gender, marital status, and having children –three traditional wage predictors– influence immigrants' economic performances. Model 1 suggests that, *ceteris paribus*, married immigrants earn 4.2 percent more than unmarried immigrants, women earn 24.5 percent less than men, and having children increases wages by 5.9 percent relative to the wages of childless immigrants. Interestingly, Model 2 suggests that the marriage premium only exists for Italian immigrants whereas Albanian immigrants pay a marriage penalty of -5.8 percent. Moreover, among Albanian immigrants, the gender gap is significantly smaller (-11.4%) than among Italian immigrants (-29.9%). In contrast, the magnitude of the effect of children on wages does not differ significantly between Albanians and Italians.

Occupational differences also affect wages: overall, those having a blue-collar job earn 6.4 percent less than those who have a different type of job. However, disaggregating the effect by national origin, Model 2 suggests that the effect is only felt by Italians. Among Italian immigrants, blue-collar workers earn 9.2 percent less than white collar workers. Among Albanian immigrants, the difference between blue and white collar workers is estimated to be positive (+1.3%) although not significantly different from zero.

The immigration-specific variables, with the exception of immigrants' age at entry, do affect economic performance, but not always in the expected direction. The estimates for Model 1 suggest that, *ceteris paribus*, those who immigrated before 1990 earn 12.4 percent less than the more recent immigrants and that immigrants who are proficient in English earn 7.8 percent more than those who do not speak English. Surprisingly, neither the immigrant's age at entry nor whether the immigrant has acquired US citizenship is a relevant factor for wages earned. However, there are substantial differences between Albanian and Italian immigrants, as shown in Table 5. Among Albanian immigrants, those who came to the US before Albania opened its doors in 1990 and presumably entered as refugees earn substantially more, +23.7 percent, than the more recent immigrants, and those who chose to naturalize also have an income advantage over those who did not. English proficiency does not translate into higher wages for Albanian immigrants. Among the Italian immigrants, however, English proficiency is the most important immigration-specific variable influencing their wages. Italians who speak English earn 14.4 percent more than those who do not. Having acquired US citizenship even has a weak negative influence on wages (-4.7%) and more recent immigrants earn significantly more (+12 percent) than those who entered the US before 1990.

Table 5. Estimated Wage Differences ^{a)} for Selected Immigration-specific Characteristics

Attribute	Albanians	Italians
Immigrated before 1990	23.7%	-12.0%
English proficiency	-1.2%	14.4%
Acquired US citizenship	7.7%	-4.7%

^{a)}Estimated differences based on Model 2

With regard to locational variations in wages earned, it is estimated that –compared to wages earned by immigrants residing in New England– immigrants living in the East Midwest, West Midwest, Atlantic South, East South, and Mountain West earn significantly less.¹¹ These differences may be attributable to the high cost of living in the metropolitan areas of New England. Surprisingly, however, immigrants residing in the West South Central Division (AK, LA, OK, and TX) are estimated to earn substantially more than immigrants in New England, and the magnitude of the gap is quite substantial. The gap is predominantly due to Albanian immigrants. On average, Albanians living in the West South Central Division earn 58 percent more than those in New England. For Italians, the gap only amounts to 11.4 percent. Interesting is also the wage gap in the Western Midwest (IA,KS, MN, MO, NE, ND, SD) where Albanians earn 23.3 percent more than in New England, whereas Italians earn 34.2 percent less.

Overall, the magnitude and direction of factors influencing wages of Albanian and Italian immigrants in the US differ substantially. Keeping human capital variables constant, high earners among Albanian immigrants are naturalized unmarried men without children who live in the western South Central Division and entered the US before 1990. Among Italian immigrants, those with the highest wages are married men with children residing in New England, who are proficient in English but have not acquired US citizenship.

As mentioned earlier, an immigrant’s human capital is decomposed into the portion acquired in the home country and the portion acquired since entry in the U.S. As expected, both types of human capital have positive effects on immigrants’ wages. Based on Model 1, human capital acquired in the country of origin affects wages, such that relative to not having a high school degree, wages are increased by 9%, 23.9%, and 44.7% by the attainment of a high school diploma or GED, Bachelor’s degree, and post-graduate degree, respectively. Figure 3 illustrates the educational effects on wages relative to an individual with no high school diploma, who earns \$10 per hour.

¹¹ Locational estimates are inadequate to justify the trends due to the uneven dispersion of Albanians across the US.

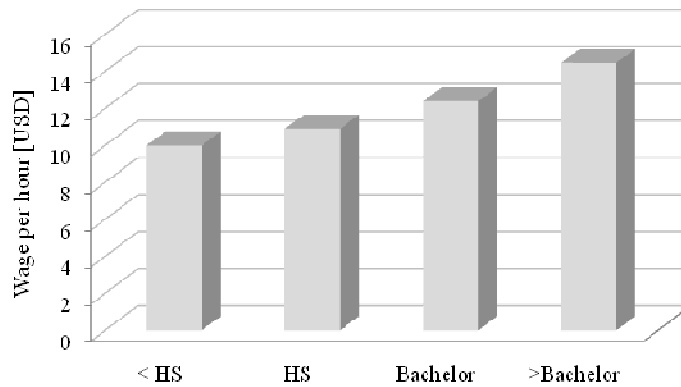


Figure 3. Effect on Wages of Human Capital Acquired in Country of Origin, Based on Model 1

Human capital acquired in the US, operationalized by the variable duration also increases immigrants' economic performance, but at a decreasing rate. Model 1 suggests that extending the length of stay in the US has a beneficial effect on wages up to 29 years. Thereafter, wages decline with each additional year spent in the US.

Model 2 differentiates the effects of human capital acquisition by country of origin. Turning first to the impact of human capital acquired at home, Table 6 summarizes the estimated pay-offs of the various educational attainment levels relative to not having a high school degree for Italian and Albanian immigrants.

Table 6. Estimated Wage Differences ^{a)} for Albanian and Italian Immigrants

	Albanian	Italian	Diff.
HS	1.4%	10.5%	-9.1 *
Bachelor	9.4%	32.3%	-23.0 *
>Bachelor	27.1%	50.9%	-23.7 *

a) Estimated differences relative to not having a high school diploma, based on Model 2

* significantly different from zero for $\alpha = 0.05$

The estimates suggest that higher educational attainment levels yield a bigger pay-off for Italian immigrants than for Albanian immigrants. The pay-off differences between Albanian and Italian immigrants are most pronounced for graduate and post graduate degrees, amounting to 23 and 23.7 percentage points respectively.

For high school graduates, the Albanian-Italian difference only amounts to 9.1 percentage points and is not significantly different from zero. Nevertheless, the implications for Albanians are quite drastic in that the resulting wage difference between Albanians with and without high school degree is only 1.4%, and this difference is also not significantly different from zero. Thus, in the U.S. labor market a high school degree from Albania is not associated with a monetary reward.

The disadvantaged position of Albanians in terms of transferability of human capital acquired at home is further manifested in the comparatively small absolute gains from having invested in

education. Table 7 shows the estimated wages of Albanian and Italian men who immigrated after 1990, at which time they were 30 years old. It is further assumed that the immigrants have been in the U.S. for ten years, speak English well, did not acquire U.S. citizenship, do not work in a blue-collar job, are unmarried and do not have children.

Table 7. Estimated Hourly Wages for Italian and Albanian Immigrants ^{a)}

	<HS	HS	Bachelor	>Bachelor
Albanian	\$14.68	\$14.88	\$16.12	\$19.25
Italian	\$18.74	\$20.81	\$25.89	\$31.16

a) Married=0, Female=0, Duration=10, Age entry=30, Blue-collar=0, child=0, citizen=0, English=1, lives in New England

While both Albanians and Italians belonging to this group earn, on average, higher wages with high educational attainment level, the gains from additional education are very small for Albanians. Albanians who completed high school only earn 20 cents more than those who dropped out of high school. For Italians, the difference is \$2.07. Comparing high school graduates to those with a bachelor's degree shows a wage difference of \$1.24 for Albanians and \$5.08 for Italians. At the upper end of the educational attainment level, the wage difference between a post grad and bachelor amounts to \$3.13 for Albanian immigrants and \$5.27 for Italians. Most remarkable is that an Albanian immigrant with a postgraduate degree earns less (\$19.25) than a comparable Italian immigrant with a high school degree (\$20.81).

Once in the United States, immigrants learn new values, norms, and behaviors. This newly acquired human capital ultimately benefits immigrants in the labor market and, *ceteris paribus*, increases immigrants' wages as they extend their stay in the US. Model 2 suggests that Albanians and Italians experience returns to assimilation in the host country at a decreasing rate; returns to assimilation for Albanians increase and decrease at a slightly faster rate than for Italians. This could be the result of the relative newness of Albanians to the U.S. They are not able to benefit from large, if any, social networks here, and are therefore forced to assimilate as quickly as possible. In contrast, Italians have been migrating to the U.S. for many years and have the choice to settle in one of many of the ethnic enclaves, and may not even have to learn English.

Translating the estimated effects of human capital acquisition in the US into wages for the two hypothetical groups described above shows that the absolute difference between Albanians and Italians is substantial. As shown in Table 8, an Albanian immigrant can expect to earn \$11.74 upon arrival, a little over \$9 less than a comparable Italian immigrant. After 10 years, the Albanian immigrant earns \$16.12, close to \$10 less than the Italian. Extending the sojourn is beneficial, but for Albanians extended sojourn becomes a disadvantage after some time. As a result, Albanians having stayed for 25 years are estimated to earn slightly less than those who have stayed in the U.S. for only 20 years: \$16.80 versus \$17.56. For Italians, the duration effect continues to stay positive even after 25 years. These results may be slightly skewed by the data, as there are considerably fewer Albanians that have been in the US for more than 15 years.

Table 8. Estimated Wages by Duration

Duration [yrs]	Albanian ^{a)}	Italian ^{a)}
0	\$11.74	\$20.77
5	\$14.16	\$23.39
10	\$16.12	\$25.89
15	\$17.32	\$28.17
20	\$17.56	\$30.11
25	\$16.80	\$31.62

a) Married=0, Female=0, Bachelor=1, Age entry=30, Blue-collar=0, child=0, citizen=0, English=1, lives in New England

Model 3 builds upon Model 1 to describe in more detail the differences between the Albanians who arrived before 1990, most likely as refugees, and those who entered freely after 1990. As shown in Table 9, the model explains 17 percent of the variance in wages. We hypothesize that human capital acquired in the U.S. has a smaller pay-off for immigrants of the pre-1990 cohort than for those that left Albania freely after the fall of communism, based on the willingness to leave the home country and assimilate in the host country.

Table 9. Estimation Results^{a)}

Model 3			
n=1151	B		SE _b
Intercept	2.53154	***	0.30524
<i>Human Capital Variables</i>			
HS	-0.006		0.053
Bachelor	0.075		0.060
Postgraddeg	0.244	***	0.070
Duration	0.065	***	0.017
Duration2	-0.003	**	0.001
<i>Traditional wage predictors</i>			
Female	-0.130	***	0.033
<i>Two-way interaction variables</i>			
YrHS	0.151		0.298
YrBachelor	0.203		0.815
YrPostgraddeg	1.377	*	0.829
YrDuration	-0.115		0.114
YrDuration2	0.004		0.003
YrFemale	0.319		0.488
R-Square	0.1678		

Significant at the 1%***, 5%***, and 10%* level

^{a)} Full model results available in appendix

There are limited findings from Model 3 based upon the small portion of the sample that arrived in the US before 1990, but the results do suggest that human capital affects wages of these two groups differently. The estimates suggest that higher educational attainment levels yield much larger pay-offs for immigrants that entered the US before 1990 than for those immigrants entering in 1990 or after, such that the most pronounced premium for all educational levels is a post graduate degree, amounting to 137.7 percentage points. Additionally, upon arrival, an Albanian immigrant who migrated before 1990 can expect to earn \$37.93 per hour, approximately \$27 more than a comparable Albanian immigrant entering in 1990 or after.

Extending the sojourn is usually beneficial, but for Albanians who immigrated most likely against their wishes, extended time in the host country is a disadvantage.

Conclusions

The objective of this paper was to gain greater insight into the problem of human capital transferability by examining labor market performance of highly skilled Albanians in the United States. The analysis focused on three key issues: (1) the success of Albanian immigrants in the US relative to immigrants from other countries; (2) the role of human capital; and (3) performance differences between emigrants leaving as refugees during the communist era and those emigrating during the post-communist era. These issues are relevant given that the majority of Albania's highly skilled individuals are emigrating and Albanians are a relatively new group to immigrate to the United States. As Albania continues on the path of development, emigration changes from a politically motivated migration to an economically motivated migration, which will continue to attract the young and highly educated. Quantifying the performance of those who left and understanding the factors that influence their labor market outcomes will provide crucial information for potential emigrants and may provide a rationale for discouraging further migration from Albania and make retention efforts more feasible. The insights gained have policy implications for three stakeholders: (1) the United States, (2) Albania, and (3) the individual Albanian immigrant.

The results of the relatively large wage gaps between Albanian immigrants and Italian immigrants with the same educational attainment indicate that Albanians are not employed in positions that utilize their full potential. The identification of this brain waste may signal the US to the economic benefits that Albanian immigrants can provide, if placed in jobs that equal their skill set, and their performance with respect to other immigrant groups.

Albania may feel ambivalent toward the results. On one hand, Albania is interested in reducing its brain drain and utilizing these highly skilled individuals to contribute their knowledge and productive potential to the Albanian economy. However, because remittances finance such a large part of consumption and raise the large portion of the population above the poverty level, Albania may want to work with the US government on a policy to increase the transferability of human capital.

Potential Albanian emigrants may see early migration from the home country as beneficial. An Albanian considering migration to Italy or Greece may decide to take the larger financial and emotional risk to migrate further to the US, where wages are relatively high, independent of educational attainment. Traditionally, migration of the highly skilled increases levels of education in the home country as those in the home country view education as a doorway to migration. However, based on the negligible difference between wages for an Albanian immigrant with a high school diploma or GED and a bachelor's degree, potential emigrants may choose to forgo the time and investment of a tertiary degree and emigrate sooner.

Based on the implications for each of the stakeholders, Albania may want to try and work with the US to create a win-win situation, where Albanians are employed in jobs that match their

skills and abilities, and being paid accordingly, and where the US is able to exploit the intellectual capital for economic development.

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Appendix

Full Estimation Results of Model 3

Model 3			
n=1151	B		SE _b
Intercept	2.53154	***	0.30524
<i>Human Capital Variables</i>			
HS	-0.006		0.053
Bachelor	0.075		0.060
Postgraddeg	0.244	***	0.070
Duration	0.065	***	0.017
Duration2	-0.003	**	0.001
<i>Immigration-specific variables</i>			
Immigpre90	2.271		6.636
Ageentry	-0.007		0.016
Ageentry2	0.00003		0.000
Engproficient	-0.018		0.037
Citizn	0.057		0.042
<i>Traditional wage predictors</i>			
Female	-0.130	***	0.033
Marriage	-0.041		0.061
Child	0.067		0.047
Bluecollar	0.0001		0.035
<i>Locational controls</i>			
MidAtlantic	0.017		0.045
EMidwest	-0.045		0.045
WMidwest	0.335	***	0.098
AtlanticSouth	-0.067		0.055
ESouth	-0.073		0.280
WSouth	0.590	***	0.115
MountainWest	-0.005		0.158
PacificWest	0.292	***	0.171
<i>Two-way interaction variables</i>			
YrHS	0.151		0.298
YrBachelor	0.203		0.815
YrPostgraddeg	1.377	*	0.829
YrDuration	-0.115		0.114
YrDuration2	0.004		0.003
YrAgeentry	-0.100		0.384
YrAgeentry2	0.002		0.006
YrEngproficient	-0.148		0.472
YrCitizn	0.161		0.267
YrFemale	0.319		0.488
YrMarriage	-0.460		0.463
YrChild	0.167		0.331
YrBluecollar	0.028		0.248
YrMidAtlantic	0.066		0.477
YrEMidwest	-0.227		0.486
YrWMidwest	-2.138	**	0.992
YrAtlanticSouth	0.097		0.704
YrESouth	-		-
YrWSouth	-		-
YrMountainWest	-0.776		1.601
YrPacificWest	-		-
R-Square	0.1678		

Significant at the 1%***, 5%***, and 10%* level