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Economic Assimilation of African Immigrants in the United States

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Abstract

From 1980 to 2009, the African-born population in United States grew from just under 200,000 to almost 1.5 million (McCabe, 2011). According to the New York Times, the number of black African immigrants alone doubled in the 2000's (2014). Clearly, there has been a significant increase in the population of Africans in the U.S. A logical question to ask is what has been attracting Africans? If we agree with Barry Chiswick that "economic migrants tend on average to be more able, ambitious, aggressive, entrepreneurial, or otherwise more favorably selected than similar individuals who choose to remain in their place of origin" (1999), we may conclude that the economic returns to all these qualities must be increasing. Therefore, another question to ask, and the focus of this research, is what is the labor market experience of the workers among African immigrants, and how does it change over time in comparison to U.S. natives? If the population of Africans in the U.S is increasing significantly, it is important to conduct an empirical study of their labor market performance.

The purpose of this research, therefore, is to determine the wage differential between African immigrants and U.S. natives, and study how this differential varies with time as a way of testing if African immigrants assimilate with natives. I hypothesize that *ceteris paribus*, African immigrants will earn lower wages than natives, but this wage differential will decrease over time.

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I. Introduction

From 1980 to 2009, the African-born population in United States grew from just under 200,000 to almost 1.5 million (McCabe, 2011). According to the New York Times, the number of black African immigrants alone doubled in the 2000's (2014). Clearly, there has been a significant increase in the population of Africans in the U.S. A logical question to ask is what has been attracting Africans? If we agree with Barry Chiswick that "economic migrants tend on average to be more able, ambitious, aggressive, entrepreneurial, or otherwise more favorably selected than similar individuals who choose to remain in their place of origin" (1999), we may conclude that the economic returns to all these qualities must be increasing. Therefore, another question to ask, and the focus of this research, is what is the labor market experience of the workers among African immigrants, and how does it change over time in comparison to U.S. natives? If the population of Africans in the U.S is increasing significantly, it is important to conduct an empirical study of their labor market performance.

The purpose of this research, therefore, is to determine the wage differential between African immigrants and U.S. natives, and study how this differential varies with time as a way of testing if African immigrants assimilate with natives. I hypothesize that *ceteris paribus*, African immigrants will earn lower wages than natives, but this wage differential will decrease over time.

The rest of this research proceeds as follows: section II covers the theory and literature review, section III covers data and methods, section IV contains the empirical model, section V is the results section, and section VI explains conclusions and discussion.

II. Theory and Literature Review

Human capital theory is popular in discussions about immigrant earnings. This is because it captures both the inherent and dynamic money-making abilities of individuals. Human capital is the productive ability of individuals based on their education either formal or informal. It is the stock of knowledge, skills, aptitudes, education, and training that an individual or a group of individuals possesses (Hyclak et al, 2005). This productivity is rewarded with wages in the labor market, and it follows logically that more productive individuals earn greater wages.

Jacob Mincer, one of the earliest writers on human capital, noticed that the distribution of earnings was skewed positively while abilities were considered normally distributed (Haveman et al, 2003). He developed an economic model that attempted to explain the skewed distribution of income. Basically, individuals have initial abilities that are normally distributed, but people supplement these by getting involved in training programs, school, and activities to further develop their skills, and people with greater ability tend to receive more of these human capital investments. Mincer also discussed the variation of the returns to human capital investments with the amount of these secondary investments. If African immigrants are favorably selected, we might expect them to occupy the right tail of the income distribution compared with natives.

Gary Becker was another economist who did extensive research on human capital. He argued that education, on-the-job training, and health are the major methods of human capital investment (1962). This again implies that as people acquire education and training, their productivity increases, and so should their wages.

George Borjas re-examined the already established 'facts' of immigration economics. In his 1985 paper, he recognized that many economists employ cross-sectional data, and most of these cross-section studies of immigrant earnings show that immigrant earnings exceed natives after 10-15 years (Borjas, 1985). However, Borjas posited that these studies possessed biases. In determining the assimilation experience of different groups of immigrants, it is difficult to isolate the progression of wages because many of the immigrants move back to their home countries after a few years. Consequently, many cross-sectional data would be biased upward as the sample would include only the most successful people and the best economic agents; those most likely to remain in the United States. Borjas suggested that we could lessen this bias by following a cohort of immigrants. He recognized that the ideal situation would be to follow a panel of immigrants to see how their income varies over the years, but in the absence of that information, a census-based cohort is the best option.

Borjas also conducted various studies using the human capital theory to answer questions about immigration. He found that after controlling for skills, the U.S. earnings of immigrants from 41 countries including African countries were highly dependent on the political and economic condition of their home countries (1994). Given the varying levels and paces of economic growth and development in African countries, the major wars in places like Liberia, Sudan, and South Africa, Borjas' results prompt an expectation that African immigrants will be at a disadvantage in comparison to U.S. natives.

However, Chiswick's research on immigrants reveals that African immigrants are likely to do well because they engage in more human capital investments than the typical U.S. native (1999). As earlier mentioned, he wrote that immigrants tend to be favorably selected especially when the cost of initial and return migration are high. Given the distance of the U.S. from Africa, and the cultural differences, we can assume that these costs are high. As such, we expect favorable selection to apply to African immigrants, and we expect their earnings to reflect this.

Still, Friedberg (2000) found that human capital acquired abroad is significantly less valuable than skills acquired domestically. This is because some skills are country specific, and African immigrants do not have access to these skills until they have been resident in the U.S. for several years.

Even though there is a great deal of economic research on overall immigration and on immigration from Latin America, there has been very little economic research on African immigrants, and what information we have does not allow us to confidently predict the labor market experience of African immigrants. The number of countries on the African continent, and the heterogeneity of the people in terms of language and economic development present a challenge when we attempt any kind of analysis on her people.

From the literature, it is evident that there are various forces that drive economic assimilation; immigrant status is often a disadvantage, but high capital investments in human capital, especially after arrival in the U.S., is an advantage. There is also the logic that because of positive selection from African host countries, the most productive workers are the ones that move to the U.S. Given that these different ways of thinking about African immigrants can be contradictory, there is a need for empirical research.

However, the human capital literature on immigration does provide a framework for expecting assimilation after a period of struggle in American labor markets. First, immigrants arrive with skills that are not completely transferrable to the American labor market, including language skills. But, over time, immigrants have incentives to invest in U.S. specific human capital, and this should result in earnings convergence with natives. Therefore, I hypothesize that *ceteris paribus*, African immigrants will earn lower wages than natives, but this wage differential will decrease over time.

III. Data

The data for this research were obtained from the Integrated Public Use Microdata Series (IPUMS) American Community Survey (ACS) (Ruggles, et al, 2010). All the data pertinent to my research are available in the ACS. Furthermore, the ACS has a large number of African immigrants, which increases the feasibility of my research and credibility of the results from this analysis. For this research, I extracted full-time workers earning positive real wages who were at least 25 years old and at most 54 years old. To test the assimilation hypothesis, I collected data from seven survey years: 2001, 2003, 2005, 2007, 2009, 2011, and 2012. Table 1 below presents some details about my sample. Note that the sample ages with time in order to follow the same cohort. Also, sample selection for all seven years required that the immigrants arrived in 2000 or earlier. Therefore, we can follow the same cohort of

immigrants from 2001 through 2012. This makes it possible to address assimilation of a specific cohort.

Dependent variable

The dependent variable in the first part of the analysis is the natural log of real wages. The natural log is more convenient than the actual income because the coefficients of the regression are an estimate of the percentage change in real income that results from a one unit change in any given independent variable.

For both parts of my analysis, I extracted the variable INCWAGE which reports each respondent's total pre-tax wage and salary income - that is, money received as an employee - for the previous year. To account for inflation, I have expressed all wages in terms of the 1999 price level.

Independent Variables

The following independent variables, and the dummy variables derived thereof, are proxies for educational attainment, English-speaking abilities, basic human capital, and a set of immigrant specific variables.

• YRSUSA1 measures how long a person who was born in a foreign country or U.S. outlying area had been living in the United States.

• CITIZEN reports the citizenship status of respondents, distinguishing between naturalized citizens and non-citizens.

• AGE reports how old the person was in years on their last birthday

• SEX reports whether the respondent is male or female

• UHRSWORK reports usual hours worked per week

• OCC1990 offers researchers a consistent long-term classification of occupations.

• EDUC indicates respondents' educational attainment, as measured by the highest year of school or degree completed

• BPL indicates the U.S. state, the outlying U.S. area or territory, or the foreign country where the person was born.

• SPEAKENG indicates whether the respondent speaks only English at home, and also reports how well the respondent, who speaks a language other than English at home, speaks English.

• WKSWORK2 reports the number of weeks that the respondent worked for profit, pay, or as an unpaid family worker during the previous year.

IV. Empirical Model

To address both parts of the research hypothesis, the empirical model is divided into two parts:

• cross-section Ordinary Least Squares (OLS) regression analysis

• simulation analysis following a cohort

For the cross-section OLS regression analysis, the regression is run according to equation 1.

I also created dummy variables for each category in equation 1. The details of the variables are presented in Table 2. The final equation for part 1 can be found in the Appendix.

The second portion of my analysis is to test the assimilation African immigrants over time. I create a simulation of the real wages of African immigrants using equation 3 in the Appendix. The simulation analysis examines whether wage convergence takes place between African immigrants and natives with the following steps:

1. Run the regression for equation 3 for the native population for 2001.

2. Compute the mean values for each of the Equation 1 variables for the African respondents in our sample for 2001.

3. Plug the African mean values into the native equation estimated in Step 1 to estimate what African earnings would have been in 2001 if the Africans were paid according to the native earnings function.

4. Compare the estimated 2001 wage of African Immigrants to the actual 2001 wage of African immigrants. If the actual African earnings are equal to or greater than the estimated African earnings, we can conclude that assimilation has occurred.
5. Repeat the above steps for each of the remaining six selected survey years from 2003 to 2012.

V. Results
OLS Regression Analysis
    The first set of regression results are presented in Appendix Table 1. The final equation for the first part of my analysis is in the Appendix. Because we are predicting natural log of real wages, the coefficients of the independent variables represent percent changes in real wages that results from unit changes in the independent variable. For example, according to the results, being NATURALIZED as opposed to a citizen leads to a 20% decrease in real wages, and being a NOTCITIZEN leads to approximately 29% decrease in real wages, compared with citizens. Similarly, ONEYEARCOLLEGE, TWO-YEARCOLLEGE, and BACHELORS leads to 18%, 26%, and 55% increases, respectively, in real wages compared to HIGHSCHOOLDIPLOMA. Furthermore, the effect of NOENGLISH is a 36% decrease in real wages compared to ONLYENGLISH; being FEMALE leads to a 28% decrease in real wages compared to MALE, and so on. The R-squared for this regression was 28.6. That is, the independent variables in the equation were able to explain 28.6% of the variation in real wages in my sample.

    The above analysis shows that as expected, citizenship status is absolutely crucial in determining the labor market experience of African immigrants in comparison to natives. Education and English-speaking abilities are also important as discussed.

Simulation Analysis
    As earlier discussed, this project involves following a cohort to study the assimilation of African immigrants with U.S. natives. By way of providing some detail of the simulation, I will explain the process for the year 2001.
    First, I ran a regression for equation 4 for natives who were between 25-54, working at least 35 hours a week, had worked at least 48 weeks the previous year, and were earning positive real wages. The results of that regression are presented along with the identical regression for other survey years in Table

3. The resulting equation for 2001 is located in the Appendix.

Step 2: African mean values for each equation 4 independent variables for the employed Africans included in the regression analysis are presented in the Appendix Table 2
Step 3: African mean values were put in equation 5 to determine what African immigrants would earn if they had the natives' earnings structure, or what natives would earn if they had African immigrants' characteristics. Table 4 shows the products and the resulting estimated real wages.
Step 4: The actual REALWAGE is compared to the estimated wage of natives if they had immigrant characteristics. The actual wage for African immigrants for 2001 is $42,382.82. In comparison to $49,009.87, there is a negative difference between actual African immigrant earnings and estimated African earnings in 2001.
Step 5: The steps above are repeated for all the other six years. The results are presented in Table 5.

    Table 5 shows that, in 2001 African immigrants and similar natives were almost 16% apart in terms of real wages, but that gap lessened considerably over the course of twelve years. Figure 1 in the Appendix shows the changes in estimated immigrant real wages and actual immigrant real wages. According to this graph, there has been an upward trend in the annual earnings of both African immigrants and natives with similar characteristics. It is not unreasonable to expect a complete convergence if more years are included in the analysis.

VI. Conclusions and Discussion
    The purpose of this research was to explore the experience of African immigrants in the U.S. labor market compared to natives. My hypothesis was that ceteris paribus, African immigrants have lower wages than natives in the U.S. but this wage differential decreases over time.

    Also part of the project was a study of the progression of the wage differential over time. To accomplish this, I followed a cohort of immigrants and natives. From the results, we conclude that although there has been an assimilation of earnings of Africans and natives, there is no evidence of complete convergence. In other words, the difference in wages is decreasing, but the gap has not closed. The most impor-

tant finding, therefore, is that African immigrants are advancing in the U.S. labor market albeit they are still earning less than natives with the same human capital endowments.

The results are consistent with a lot of the literature on immigrant labor market performance. As discussed earlier, immigrants have to acquire country-specific human capital to accelerate their economic assimilation. Furthermore, transferability of human capital poses as an obstacle in that not all the skills acquired in the country of origin are readily applicable in the host country.

As wages are a measure of productivity, we can conclude that African immigrants are regarded as almost as productive as natives in the U.S. labor market. A policy implication, therefore, is to encourage the hiring of African immigrants in American firms by providing opportunities for long-term residency. Long-term residency will avail African immigrants the opportunity to reach wage par with natives.

Possible extensions to this research could include an exploration of the differences among different occupations. If there is a particular occupation in which African immigrants are more successful, it would be helpful to see if that group assimilates faster than others. This could inform decisions to migrate, and what occupations to choose.

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$LNREALWAGE$

$$= \alpha + \beta_1 \ (Immigrant\ Status) + \beta_2(English\ Speaking\ Abilities)$$

$$+ \beta_3(Educational\ attainment) + \beta_4\ (Other\ Human\ capital\ variables) + error\ term$$

<div align="right">Equation 1</div>

$LNREALWAGE =$

$$\alpha + \beta_1(NATURALIZED) + \beta_2(NOTCITIZEN) + \beta_3(ONEYEARCOLLEGE) +$$

$$\beta_4(TWOYEARSCOLLEGE) + \beta_5(BACHELORS) + \beta_6(MASTERS) + \beta_7(PROFESSIONAL) +$$

$$\beta_8(DOCTORATE) + \beta_9(NOENGLISH) + \beta_{10}(SOMEENGLISH) + \beta_{11}(GOODENGLISH) +$$

$$\beta_{12}(EXCELLENTENGLISH) + \beta_{13}(AGE) + \beta_{14}(AGESQUARED) + \beta_{15}(FEMALE) + \beta_{16}(UHRSWORK)$$

<div align="right">Equation 2</div>

$REALWAGE =$

$$\alpha + \beta_1(ONEYEARCOLLEGE) + \beta_2(TWOYEARSCOLLEGE) + \beta_3(BACHELORS) + \beta_4(MASTERS) +$$

$$\beta_5(PROFESSIONAL) + \beta_6(DOCTORATE) + \beta_7(NOENGLISH) + \beta_8(SOMEENGLISH) +$$

$$\beta_9(GOODENGLISH) + \beta_{10}(EXCELLENTENGLISH) + \beta_{11}(AGE) + \beta_{12}(AGESQUARED) +$$

$$\beta_{13}(FEMALE) + \beta_{14}(UHRSWORK) + error$$

<div align="right">Equation 3</div>

$$LNREALWAGE$$

$$= 8.17 - 0.2(NATURALIZED) - 0.291(NOTCITIZEN) + 0.182(ONEYEARCOLLEGE)$$

$$+ 0.257(TWOYEARSCOLLEGE) + 0.545(BACHELORS) + 0.690(MASTERS)$$

$$+ 1.022(PROFESSIONAL) + 0.830(DOCTORATE) - 0.358(NOENGLISH)$$

$$- 0.133(SOMEENGLISH - 0.138(GOODENGLISH) - 0.044(EXCELLENTENG)$$

$$+ 0.067(AGE) - 0.001(AGESQUARED) - 0.276(FEMALE) + 0.12(UHRSWORK)$$

Equation 4

$$REALWAGE = -70663.759 + 6486.058(ONEYEARCOLLEGE)$$

$$+7604.659(TWOYEARSCOLLEGE) + 24043.906(BACHELORS)$$

$$+32048.557(MASTERS) + 66141.009(PROFESSIONAL)$$

$$+39760.161(DOCTORATE) - 8184.122(NOENGLISH)$$

$$-3045.121(SOMEENGLISH) - 4466.218(GOODENGLISH)$$

$$-1235.304(EXCELLENTENGLISH) + 3271.952(AGE)$$

$$-33.524(AGESQUARED) - 13009.381(FEMALE) + 736.587(UHRSWORK)$$

Equation 5

Table 1: Summary of Sample Sizes

Survey Year	Age	Number of Observations	
		Natives	African immigrants
2001	25-54	265,781	1182
2003	27-56	251,279	1121
2005	29-58	583,068	2760
2007	31-60	582,495	2837
2009	33-62	575,350	2907
2011	35-64	534,187	2692
2012	36-65	532,091	2791

Table 2: Regression Variables

Variable	Description	Expected Sign
Dependent		
REALWAGE	Wages adjusted for inflation	
LNREALWAGE=	Natural log of real wages	
Independent		
IMMIGRANT	0=born in the U.S.	Negative
	1=born in Africa	
YRSUSA1	Years in the U.S.	Positive
HIGHSCHOOLDIPLOMA	0= No high school diploma	
	1=High school diploma	
ONEYEARCOLLEGE	0=No one year of college	Positive
	1=One year of college	
TWOYEARSCOLLEGE	0=No two years of college	Positive
	1=Two years of college	
BACHELORS	0=No bachelors degree	Positive
	1=Bachelors degree	
MASTERS	0=No masters degree	Positive
	1=masters degree	
DOCTORATE	0=no Doctorate degree	Positive
	1=Doctorate degree	
NOENG	0=otherwise	Negative
	1=No English	
ONLYENG	0=Otherwise	Positive
	1=Only English	
SOMEENG	0=Otherwise	
	1=Some English	
GOODENG	0=Otherwise	Positive
	1=Speaks English well	
EXCELLENTENG	0=Otherwise	
	1=Speaks English excellent	
NATURALIZED	0=Not naturalized	unknown
	1=African Citizen who has obtained U.S.	
NOTCITIZEN	citizenship status	
	0=-Otherwise	Negative
AGE	1=Not a citizen	
AGESQUARED	A person's age at last birthday	Positive
FEMALE	AGE*AGE	Negative
	0= Male	Negative
UHRSWORK	1= Female	
	Usual hours worked per week	Positive

Table 3: Regression Results for Natives (t-statistics are reported in hypotheses) Dependent variable: REALWAGE

Natives	2001	2003	2005	2007	2009	2011	2012
(Constant)	-70663.759	-77580.066	-89593.982	-91448.976	-92243.637	-73494.343	-74657.508
	(-41.748)	(42.764)	(-61.896)	(-54.267)	(-49.956)	(-37.233)	(-35.788)
ONEYEARCOLLEGE	6486.058	6587.756	7260.785	7553.264	7346.125	7336.215	7203.493
	(32.172)	(33.183)	(49.957)	(48.175)	(47.130)	(48.046)	(45.898)
TWOYEARSCOLLEGE	7604.659	8467.392	8914.469	9324.582	9770.751	9674.050	9564.407
	(30.511)	(35.373)	(51.707)	(51.019)	(52.831)	(54.095)	(52.348)
BACHELORS	24043.906	24185.391	27224.308	28563.511	28538.678	28443.738	28630.932
	(131.859)	(135.496)	(208.459)	(205.372)	28538.678	(206.704)	(204.272)
MASTERS	32048.557	33087.859	35739.002	37992.629	36844.420	36503.771	37023.843
	(116.231)	(127.483)	(193.082)	(196.440)	(197.316)	(202.188)	(202.197)
PROFESSIONAL	66141.009	66531.309	75778.897	80295.978	84789.632	81073.018	82867.463
	(141.091)	(148.974)	(237.099)	(236.796)	(255.741)	(252.694)	(254.044)
DOCTORATE	39760.161	42597.011	45004.206	47084.835	47994.247	49831.322	49797.792
	(57.419)	(68.827)	(99.754)	(98.574)	(107.428)	(119.203)	(116.780)
NOENGLISH	-8184.122	377.886	-10460.40	-10093.296	-9822.056	-10959.099	-8099.610
	(-1.306)	(0.087)	(-3.014)	(-2.517)	(-2.421)	(-2.880)	(1.986)
SOMEENGLISH	-3045.121	-2076.947	-3630.929	-5164.323	-5224.656	-3800.585	-3444.372
	(-2.171)	(-1.601)	(-3.886)	(-4.704)	(4.440)	(-3.144)	(-2.851)
GOODENGLISH	-4466.218	-3929.963	-4684.415	-5299.611	-5255.507	-4448.691	-4615.756
	(-4.628)	(-4.116)	(-7.136)	(-7.342)	(-7.131)	(-6.226)	(-6.468)
EXCELLENTENG	-1235.304	-1160.889	-2176.789	-2107.058	-2067.917	-1751.210	-1924.181
	(-3.599)	(-3.421)	(-9.219)	(-8.289)	(-8.187)	(-7.169)	(-7.759)
AGE	3271.952	3578.163	3906.188	3825.504	3631.288	2904.001	2886.887
	(38.424)	(40.990)	(58.592)	(51.341)	(46.275)	(35.870)	(33.788)
AGESQUARED	-33.524	-36.863	-39.971	-38.417	-35.669	-27.651	-27.155
	(-31.491)	(-35.379)	(-52.527)	(-38.417)	(-43.167)	(-35.870)	(-31.806)
FEMALE	-13009.381	-12882.226	-13490.660	-14249.409	-14.715.118	-13962.806	-14318.470
	(-91.326)	(-92.823)	(-133.508)	(-132.333)	(-137.135)	(-133.632)	(-134.155)
UHRSWORK	736.587	737.122	814.252	865.936	960.729	841.965	865.212
	(85.863)	(87.381)	(134.878)	(137.134)	(142.231)	(130.568)	(131.319)
Adjusted R-Squared	.221	.241	.237	.234	.248	.255	.255
Sample Size	265,767	251,279	583,067	582,495	575,350	534,187	532,091

Note: All coefficients are significant at the 99% level

Table 4: Simulation of African Wages using the Native Equation for 2001

	Native Coefficients	African mean	Product
(Constant)	-70663.759		-70663.8
ONEYEARCOLLEGE	6486.058	0.1218	790.0019
TWOYEARSCOLLEGE	7604.659	0.0778	591.6425
BACHELORS	24043.906	0.302	7261.26
MASTERS	32048.557	0.1404	4499.617
PROFESSIONAL	66141.009	0.0541	3578.229
DOCTORATE	39760.161	0.0415	1650.047
NOENGLISH	-8184.122	0.0059	-48.2863
SOMEENGLISH	-3045.121	0.0347	-105.666
GOODENGLISH	-4466.218	0.1658	-740.499
EXCELLENTENGLISH	-1235.304	0.5178	-639.64
AGE	3271.952	39.14	128064.2
AGESQUARED	-33.524	1591.415	-53350.6
FEMALE	-13009.381	0.3629	-4721.1
UHRSWORK	736.587	44.59	32844.41
REALWAGE			$49,009.87

Table 5: Simulation Results

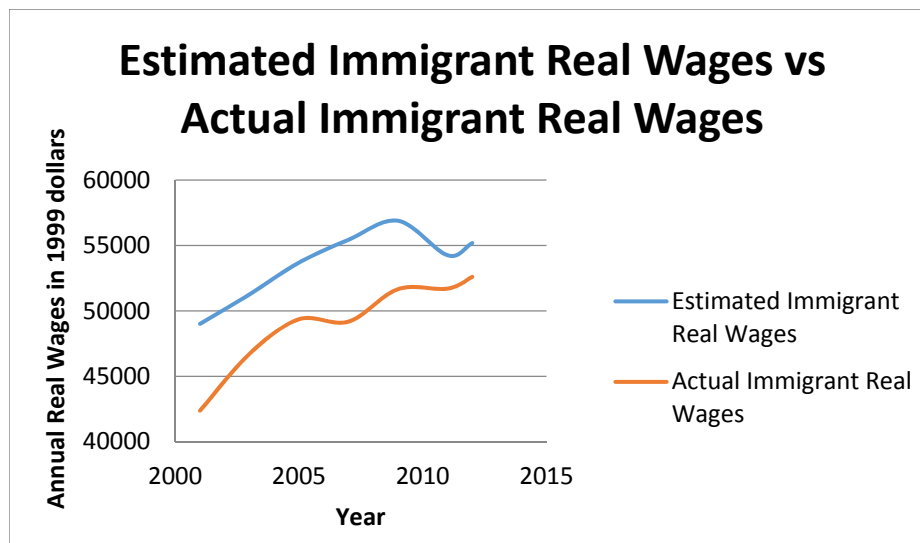| Survey Year	Estimated African Real Wage	Actual African Real Wage	Estimated Minus Actual	Percentage Difference
2001	$49,009.87	$42,382.82	$6,627.059	15.64%
2003	$51,262.09	$46,725.86	$4,536.233	9.71%
2005	$53,689.61	$49,361.05	$4,328.558	8.77%
2007	$55,435.06	$49,180.23	$6,254.83	12.72%
2009	$56,883.94	$51,663.87	$5,220.068	10.10%
2011	$54,244.61	$51,694.91	$2,549.703	4.93%
2012	$55,176.31	$52,597.56	$2,578.75	4.90%

Figure 1: Estimated Immigrant Real Wages vs Actual Immigrant Real Wages

Appendix Table 1

Variable	Coefficient	t-statistic
Constant	8.170	1613.987
NATURALIZED	-.200	-20.759
NOTCITIZEN	-.291	-41.681
ONEYEARCOLLEGE	.182	213.463
TWOYEARSCOLLEGE	.257	253.139
BACHELORS	.545	719.492
MASTERS	.690	657.788
PROFESSIONAL	1.022	552.996
DOCTORATE	.830	331.556
NOENGLISH	-.358	-18.340
SOMEENGLISH	-.133	-23.593
GOODENGLISH	-.138	-38.796
EXCELLENTENGLISH	-.044	-33.746
AGE	.067	293.281
AGESQUARED	-.001	-257.242
FEMALE	-.276	-470.852
UHRSWORK	.012	347.373

Appendix Table 2

African	2001		2003		2005		2007	
	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev
REALWAGE	42551.86054	42551.86054	46187.73081	46187.73081	49361.0548	50105.54047	49180.2305	50864.03689
ONEYEARCOLLEGE	0.1218	.32722	0.1044	.30588	0.1181	.32280	0.1086	.31115
TWOYEARSCOLLEGE	0.0778	.26802	0.0839	.27729	0.0975	.29664	0.1068	.30892
BACHELORS	0.302	.45933	0.2953	.45637	0.2949	.45609	0.2908	.45421
MASTERS	0.1404	.34759	0.1624	.36894	0.1533	.36030	0.1569	.36373
PROFESSIONAL	0.0541	.22640	0.0517	.22160	0.054	.22603	0.0599	.23738
DOCTORATE	0.0415	.19942	0.0464	.21042	0.0551	.22816	0.0479	.21367
NOENGLISH	0.0059	.07676	0.0036	.05965	0.0018	.04253	0.0014	.03753
SOMEENGLISH	0.0347	.18306	0.041	.19846	0.033	.17859	0.0349	.18355
GOODENGLISH	0.1658	.37208	0.1677	.37377	0.1565	.36342	0.1607	.36735
EXCELLENTENGLISH	0.5178	.49990	0.5076	.50017	0.5558	.49697	0.5471	.49787
AGE	39.14	7.696	41.39	7.690	43	7.662	44.86	7.679
AGESQUARED	1591.415	607.92485	1771.972	638.43709	1907.752	662.03964	2071.081	696.51507
FEMALE	0.3629	.48105	0.3666	.48210	0.3565	.47906	0.3705	.48301
UHRSWORK	44.59	9.416	44.48	9.427	45.02	10.144	45.23	10.250

African	2009		2011		2012	
	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev
REALWAGE	51663.8713	50632.67531	51694.9071	51883.37955	52597.5581	52263.01411
ONEYEARCOLLEGE	0.1152	.31937	0.1226	.32802	0.1039	.30519
TWOYEARSCOLLEGE	0.1087	.31132	0.1007	.30095	0.1082	.31069
BACHELORS	0.2838	.45092	0.2786	.44840	0.2856	.45176
MASTERS	0.1675	.37351	0.1649	.37119	0.1655	.37173
PROFESSIONAL	0.0612	.23980	0.0591	.23579	0.067	.25007
DOCTORATE	0.0554	.22877	0.0513	.22057	0.0534	.22484
NOENGLISH	0.0017	.04144	0.0015	.03853	0.0014	.03784
SOMEENGLISH	0.02	.13986	0.026	.15917	0.0236	.15198
GOODENGLISH	0.1534	.36046	0.1389	.34594	0.143	.35009
EXCELLENTENGLISH	0.5855	.49272	0.5713	.49498	0.5908	.49177
AGE	46.56	7.653	48.28	7.611	49.29	7.576
AGESQUARED	2226.318	719.96978	2389.342	744.03862	2487.15	754.57010
FEMALE	0.3746	.48411	0.3782	.48502	0.3887	.48755
UHRSWORK	44.85	9.632	44.48	9.368	44.19	9.165