The Impact of English Language Proficiency on the Earnings of Male Immigrants:

The Case of Latin American and Asian Immigrants

by

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Abstract

This paper uses the 2010 American Community Survey to explore the relationship between the English language proficiency of male immigrants and their earnings in the main major immigrant receiving U.S. states: California, New York and Texas. We restrict the analysis to immigrants from the two main source regions: Asia and Latin America. The analysis suggests that English language proficiency is the predominant factor in determining the earnings of these immigrants and that educational attainment is also crucial. Quantile Regression estimates demonstrate the importance of English language skills across the earnings distribution.

Keywords: English language proficiency, earnings, immigration, United States

List of Abbreviations Used

ACS	American Community Survey
OLS	Ordinary Least Squares
RIF	Recentered Influence Function

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Chapter 1 Introduction

In the United States, immigrants are a major source of population growth and cultural change. According to the Census Bureau's American Community Survey, although the share of the population that new immigrants accounted for declined during the 1930s and 1970s, the percentage has dramatically increased since then. After the 1970s, the public diverted their attention from issue of racial segregation to focusing more on the economic integration of immigrants (Chiswick, 1978). Research examining cohort outcomes suggest that there has been a decline in the skill endowment of more recent immigrants (Borjas, 1985), especially in the terms of language ability. One major reason based on Borjas' research (1985) has been the shift in the immigrants' source countries, which has resulted in a decline in English language proficiency. Most of the research focuses on the relationship between language and earnings, and attributes much of the declining outcomes to the shifts of immigration towards developing source countries, with the majority of these immigrants coming from Asia and Latin America.

We build upon this research by examining the importance of language ability on earnings using the 2010 American community Survey. Given that most immigrants go to California, New York and Texas, my analysis focuses on these three states. As well, we focus on the two main developing source regions, Latin America and Asia.

The following section briefly describes the related studies. Section 3 identifies the dataset, the core question of English language proficiency and estimation methodology. Section 4 presents estimates from OLS regression, as well as quantile regressions, which are estimated using the recentered influence function. The last section concludes.

Chapter 2 Literature Review

According to Chiswick (1978), literature on immigrants' economic assimilation drew no attention until the 1970s. After immigrants arrive in the U.S., they may have difficulty transferring their pre-immigration human capital (Chiswick & Miller, 2009), resulting in low income or unemployment (Chiswick, 1978). There may be several underlying causes for this mismatch in terms of the immigrant's human capital obtained in the source country and the employment outcomes in the host country. For example, incomplete information may lead to a mismatch of jobs during the immigrants' first years in a new country. Other influential factors on human capital include technical change, and also a very crucial point is the human capital skill associated productivity, which is largely related to earnings (Chiswick, 1978).

There has been a large amount of literature that assesses the influence of human capital on earnings. For example, as the main explanation of earnings, human capital links to the set of skills that an employee acquires on the job, through many ways, which can enhance the employee's value in the market place (Becker, 1964). This human capital includes language skills, educational attainments, and job experience among other factors. Language proficiency is argued to be the most important aspect of social assimilation into U.S. culture from the viewpoints of Akresh, Massey and Frank (2014). The rate at which immigrants are socially assimilated depends upon language skill, which includes not only "the degree of English proficiency and the extent of English usage" (Kristin & Douglas, 1997), but can also relate to the income and poverty level of immigrants (Gonzalez, 2010). Becker's (1964) point of view about expected benefits to immigrants is associated with the human capital model (Kristin & Douglas, 1997), in which the strong and positive relationship between English proficiency and earnings implies that becoming fluent in English can be seen as a kind of investment. Thus, when immigrants have higher expectations of earnings, they will improve English language skills to maximize their "return" (Zhen, 2012). Chiswick and Miller's (1995) empirical analysis suggests that the immigrants in the U.S. who are proficient in English have earnings that are about 17 percent higher than those who are not. This finding is consistent with the standard human capital model of Dustmann (1999).

Other factors of human capital that relate to the effect of language skills upon earnings include age and education (Kristin & Douglas, 1997). Chiswick and Miller (2002) suggest that the motivation for English language investment partly depends on the expectation of international transferability of their education. The results of their study indicate that an additional year of education dramatically increases immigrants' earnings by 6.6% among those who are fluent in English, but only increase earnings by 1.0% for non-proficient immigrants. This result suggests that as immigrants become more proficient in English, they can more easily transfer their human capital. Some studies also find that immigrants receive low returns for years of foreign work experience. For example, Schaafsma and Sweetman (2001) point out that the immigrants who obtained their education prior to immigrating received low returns for their foreign work experience, resulting in low income.

A number of studies explore immigrants' labor market behavior in English-speaking countries based on their ethnic origin. For example, Dustmann and Fabbri (2003) use the 2000 Labour Force Survey of UK to examine the relationship between language acquisition and both earnings and the employment probabilities of non-white immigrants according to ethnic origin. They find that English language fluency positively affects both employment probabilities and earnings and that limited English language proficiency leads to a considerable loss in earnings.

Immigrants of Mexican origin constitute the largest immigrant group in the United States. As such, Kristin and Douglas (1997) provide a typical process of the linguistic assimilation of an ethnic minority using Mexican immigrants as a case study. Mexican immigrants have drawn researchers' attention due to the low level of education attainment and lack of documentation and increasing worries about English language assimilation of Mexican immigrants. Using the 1990 Census PUMS data, Kim (2003) also investigates the effect of language on the earnings of Mexican immigrants. His finding sheds new light on the comparison of labor market behavior between Mexican and Chinese immigrants in terms of their English language proficiency. He specifically explains English language proficiency as a dominant determinant of earnings, and notes that the patterns of the earnings gap differ between Chinese and Mexican immigrants. Furthermore, English language proficiency contributes to narrowing the earnings loss for Chinese immigrants. Therefore, the ability to speak English well appears to be an important stepping-stone for the economic integration of immigrants.

Chapter 3 Data and Methodology

3.1 Data

The data used in this paper are taken from the American Community Survey (ACS). This survey is conducted annually and therefore provides up to date information on labor market outcomes and the demographic structure of the United States. The analysis is restricted to California, New York and Texas because these are the major immigrant receiving states. The study focuses on the link between language ability of immigrants and their labor market outcomes. Given the more complicated labor market decisions of females, the analysis is restricted to males. The sample is further restricted to those who are between 25 and 65 years old, whose official language is not English, work full time, and who work between 20 and 70 hours a week (Santiago & Pablo, 2012). Also, we exclude workers who are working without pay in family businesses or farms and self-employed individuals, including the self-employed in own (not) incorporated business, professional practice, or farm. Moreover, we focus on the immigrants who are foreign-born. Therefore, the target sample captures people without U.S. citizenship at birth. After the sample restrictions mentioned above and removal of people with missing information, the estimation sample is 8267 observations.

3.2 Methodology

In this paper, we investigate the relationships between the English proficiency of Asian and Latin American immigrants and their earnings in the U.S. labor market, restricting the sample to the states of California, New York and Texas. We first estimate the key factors which affect the acquisition of English language proficiency, and measure the probability that an immigrant is proficient in speaking English. In order to do this, we use a probit model, which includes age at arrival, work experience, years since migration and educational attainment (Kim, 2003). Then, we use an OLS regression to analyze the effects of English language proficiency on earnings. We estimate the following logarithmic annual earnings regression:

$$\begin{aligned}\ln(Wage_i) &= \beta_0 + \beta_1 Edu + \beta_2 Exp_i + \beta_3 Exp_i^2 + \beta_4 Mar_i + \beta_5 Md_i \\ &+ \beta_6 Waob_i + \beta_7 Ysm_i + \beta_8 EP1_i + \beta_9 EP2_i + \varepsilon_i\end{aligned}$$

Where the dependent variable $\ln(Wage_i)$ is the log annual earnings of individual *i*. Edu_i represents years of schooling. $Waob_i$ is an indicator equal to one if the individual's region of birth is Asia and zero if the individual is from Latin America. Ysm_i is the years since migration, and Exp_i indicates the individual's potential years of work experience and it is calculated by age minus the schooling years and six. The quadratic of years of potential work experience is also included. Mar_i is a dummy variable of marital status equal to one if an individual is married. Md_i equals to one if the individual is divorced, and zero otherwise. Sample weights are used throughout the estimation.

Self-reported English language ability has four categories which represent how well the person speaks English: “very well”, “well”, “not well” and “not at all”. The dummy variable $EP1_i$ equals to one if the immigrant is proficient (“very well”) in English and zero otherwise. In addition, the intermediate level ($EP2_i$) equals to one when the immigrant who reported his or her speaking English ability as “well” (Posel & Casale, 2011), zero otherwise, and ε_i is the error term.

Based on empirical studies, there are several concerns worth mentioning. One is about the measurement error, which comes from the individuals’ self-assessed language ability. Dustmann and Van Soest (2001), who use panel data in Germany to examine the effect caused by the self-reported language proficiency measurement error, find that most people overestimate the level of their proficiency in speaking English, while very few underestimate it. Also, based on a large amount of literature, “proficiency in English” is usually defined in terms of ability in speaking English, and does not contain information about the individuals’ English language skills in reading and writing (Posel & Casale, 2011). We do not have a panel data such as the one that Dustman and Van Soest (2001) used, but only have self-reported speaking English ability, so concerns about data validity come up.

The other shortcoming is the endogeneity of English language skills. This kind of problem occurs when the independent variable with unobserved characteristics is correlated with the error term in the regression model, and it is sensitive to the response variable. It is possible that language ability is simply correlated with the “the ability to learn quickly and effectively" (Pendakur & Pendakur, 2002), and the higher innate ability may simply be what is causing the increase in earnings. There is a possibility that the higher earnings are indirectly correlated with unobserved second-language acquisition (Casale & Posel, 2011). In the study of Dustmann and Van Soest (2001), "father's education" is used as an instrumental variable which could affect immigrants' English language proficiency but does not have direct effect on their earnings. Likewise, in their study on Spanish language acquisition, Santiago and Pablo (2012) use an instrument of whether the immigrant arrived before age 10 and whether the child is proficient in Spanish and plans to stay in Spain to deal with the endogeneity problem. Unfortunately, we could not find any good instruments in our data that could be correlated with English proficiency in the Ordinary Least Squares regression. Therefore, the impact of language ability upon earnings may be overstated in our regression.

Chapter 4 Empirical Results

4.1 Summary Statistics

As of 2010, the foreign-born population of the U.S. was 39,956,000, which accounted for 12.9% of the total population. Figure 1 illustrates the percent distribution of foreign-born population by state based on the Census data in 2010. The top 3 States were California, New York and Texas. The estimated shares of the foreign-born population were 25.4%, 10.8% and 10.4%, respectively.

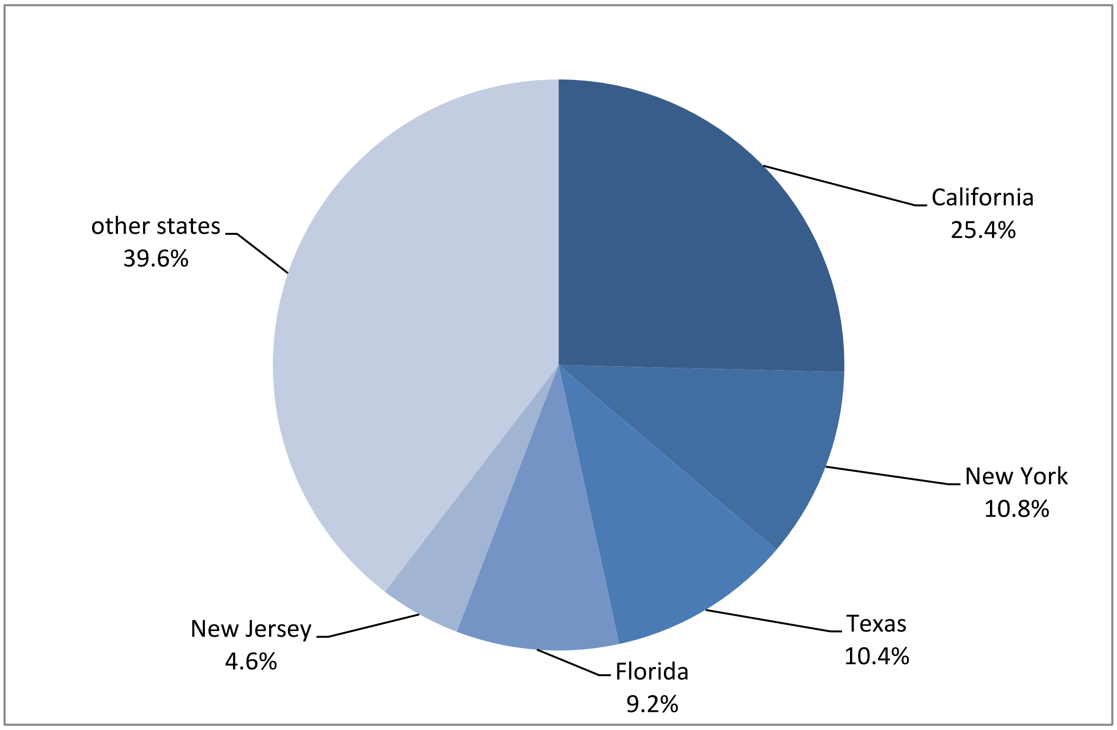

Figure 1: Foreign-Born Population by State: 2010. Adapted from “The foreign-born population in the United States: 2010”. (ACS Publication No. 19). Retrieved from www.census.gov/prod/2012pubs/acs-19.pdf

In this study, we examine these three states, which have the largest share of immigrants in the U.S. Making use of the 2010 Census data of the American Community Survey, we pay attention to the immigrants' English-language proficiency, which is associated with their earnings and, hence, directly affects their standard of living. The data suggest that 20.5 million immigrants, or nearly 51% of the foreign born population age 5 years or older, have limited English proficiency.

The source countries of immigration have changed drastically over the past several decades, with a much larger share of immigrants coming from Asia, Latin America and the Caribbean. In 2010, the total number of Latin-American born immigrants was 20 million, which accounts for more than 50% of the foreign-born population according to the United States Census Bureau (2012). Additionally, Asian immigrants make up the second largest source region, with a population of 11 million in the United States.

As shown in Figure 2, Latin Americans made up the largest immigrant group in all three states. They made up 25.8% of the population in California, 10.2% in New York and 14.2% in Texas. Although the share of the Asian population was far less than that of Latin American immigrants, the fastest growth of the Asian immigrant population occurred in California and Texas (U.S. Census Bureau, 2012).

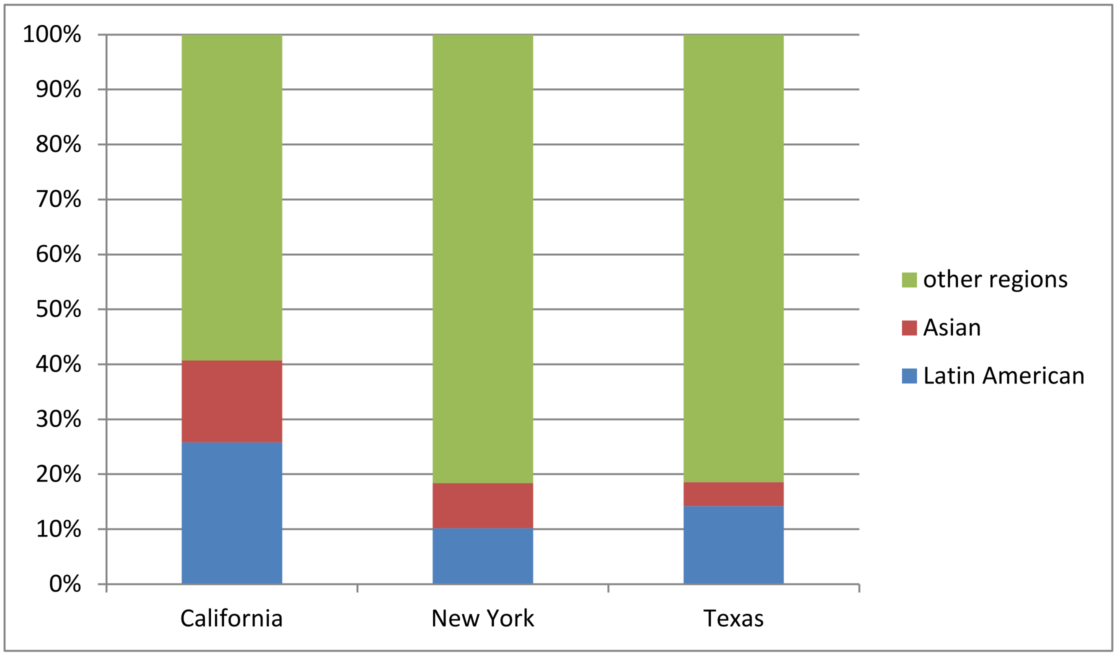

Figure 2: Percent Immigrants by State: 2010. Adapted from "The foreign born from Asia: 2011". (ACSBR Publication No. 11-06).Retrieved from www.census.gov/prod/2012pubs/acsbr11-06.pdf;
The foreign-born population from Latin America and the Caribbean: 2010. (ACSBR Publication No. 10-15). Retrieved from www.census.gov/prod/2011pubs/acsbr10-15.pdf

The descriptive statistics conditional upon English-language proficiency are shown in Table 1 with the columns presenting the two levels: "Proficient" and "Non-Proficient", respectively. Recall that "Proficient" is defined as the self-reported ability to speak English as "very well", whereas "Non-Proficient" corresponds to the categories including "well", "not well" and "not at all".

Table 1: Descriptive Statistics by English Language Proficiency

Variable	Proficient		Non-Proficient	
	Mean	Std. Dev	mean	Std. Dev
Wage	69754.2	60549.17	47502.83	37945.7
Experience	23.10	10.38	31.23	10.92
$Experience^2/100$	6.41	5.12	10.94	6.92
Ysm	22.72	12.11	21.60	12.11
Married	0.79	0.41	0.85	0.35
Divorced	0.05	0.22	0.05	0.22
Asian	0.55	0.50	0.43	0.50
Years of Schooling	7.23	2.60	7.00	4.02
Observations	4,046		4,221	

Source: U.S. Census Bureau, American Community Survey, 2010

The proportion of people reporting as having excellent spoken English is 48.9%. By comparing the two sub-samples, the immigrants who are fluent in speaking English earn around 32% ($69,754 against $47,503) more than people who are not fully fluent. In terms of education, individuals who only have limited English language ability are more likely to have lower educational attainment (7.00 versus 7.23 years of schooling). Also, the longer the duration in the United States, the better is an immigrants' reported English proficiency.

Table 2 provides a breakdown of the descriptive statistics by the region of birth. The circumstance is similar to Table 1 analyzed above. The two groups are similar in terms of marital status. The Asian immigrants on average have more years of schooling (7.26 versus 6.97), but have less potential work experience than the Latin-American immigrants. A higher proportion of Asian immigrants are proficient in speaking English in comparison with the Latin American immigrants (0.55 versus 0.43).

Table 2: Descriptive Statistics by Area of Birth

Variable	Asia		Latin -America	
	Mean	Std. Dev	Mean	Std. Dev
Wage	6857.53	61363.13	43481.16	34651.58
Experience	25.66	10.85	28.78	11.72
$\text{Experience}^2/100$	7.76	5.79	9.65	7.02
Ysm	20.30	12.37	23.92	11.62
Married	0.82	0.38	0.82	0.39
Divorced	0.04	0.21	0.06	0.23
Years of Schooling	7.26	2.59	6.97	4.02
Proficient	0.55	0.50	0.43	0.50
Intermediate	0.32	0.47	0.34	0.47
Observations	4,047		4,220	

Source: U.S. Census Bureau, American Community Survey, 2010

4.2 Regression Analysis

From Table 3, we can see that potential working experience has a negative impact on language proficiency for both Latin-American and Asian immigrants. Based on the theoretical expectations, the remaining positive covariates imply that the higher the estimated coefficients, the more likely the respondent is to be proficient in English. Educational attainment is especially important for language proficiency. The probability of being proficient is 19.9% higher for the Latin-American immigrants with a College degree than at most high school degree, and 29.6% higher than at most a high school degree for those with a Postgraduate degree. The impact of education is larger for Asian immigrants with an increase in language proficiency of 28.3% and 46.5% for Asian College and Postgraduate degree holders, respectively.

Table 3: Marginal Effect Results for the Influencing Factors of English Language Proficiency

	Latin-American	Asian
Age at arrival Before 10	0.0534***	0.0529***
	(0.0152)	(0.0196)
Experience	-0.0146***	-0.0095***
	(0.0006)	(0.0007)
Year since migration	0.0075***	0.0032***
	(0.0006)	(0.0006)
College degree	0.199***	0.283***
	(0.0173)	(0.0186)
Postgraduate degree	0.296***	0.465***
	(0.0350)	(0.0207)
Observations	4,220	4,047

Note[1]: Standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Note[2]: The default group for education is high school degree or less.

Source: U.S. Census Bureau, American Community Survey, 2010

The OLS estimates are presented in Table 4, with the two specifications reporting each subsequent model controlling for additional covariates. The first column controls for the basic variables, and includes years of potential work experience and its square, years since immigration, marital status, region of birth and years of schooling. However, the level of English language proficiency is not controlled for. This specification suggests that an additional year of schooling increases earnings by 3.3%. People who are married have higher earnings. However, earnings increase with years since migration, with each additional year increasing earnings by around 0.4 percent. Also, Asian immigrants earn around 35.5% (exp(.304)–1) more than Latin-American immigrants. [1]

In the second column, we add the "English language proficiency" dummy variable, which is the key variable of interest for the analysis. Immigrants proficient in English earn around 73.7% more than those who are not proficient. Moreover, additional dummy variable, "intermediate" language ability is added. On one hand, adding this variable, clearly suggests a drastic change of language effect upon earnings for the immigrants at different English levels. On the other hand, the individuals' with English abilities at the lowest-level suffer a great pay penalty. The non-proficient earn almost half as much compared to those who can speak English very well, and earn 29.7% less than the immigrants with an intermediate English language proficiency level.

[1] Here, because we use the log transformation of the dependent variable, we can interpret the coefficients of continuous variables as usual, but cannot define the dummy variable in this way because of discreteness. Based on the theory of Halvorsen and Palmquist (1980), the coefficient of a dummy variable in a semilogarithmic regression can be defined as [exp(β)-1]. From this point onwards, we will use the formula to derive the actual coefficients directly.

Table 4: Estimated Results of the Earnings Equation

	(1) OLS	(2) OLS
Experience	0.0219***	0.0257***
	(0.0030)	(0.0029)
Experience^2 /100	-0.0623***	-0.0546***
	(0.0052)	(0.0050)
Ysm	0.0044***	0.0016*
	(0.0007)	(0.0007)
Married	0.255***	0.242***
	(0.0247)	(0.0241)
Divorced	0.192***	0.169***
	(0.0416)	(0.0398)
Asian	0.304***	0.261***
	(0.0155)	(0.0150)
Years of Schooling	0.0332***	0.0329***
	(0.0022)	(0.0021)
Proficient		0.552***
		(0.0215)
Intermediate		0.260***
		(0.0207)
Constant	9.897***	9.470***
	(0.0435)	(0.0455)
Observations	8267	8267

Note: Robust standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Source: U.S. Census Bureau, American Community Survey, 2010

Table 5 reports the estimates separately for the two immigrant source regions used in the study in order to examine if they have different returns with respect to their human capital. We first present the pooled sample in Column 1, and then in Column 2 and 3 show the effects of the control variables on Latin-American immigrants and Asian immigrants' earnings, separately. Asian immigrants tend to have a higher rate of return to their human capital. In terms of the years of schooling, Latin-American immigrants obtain only around a 0.9% increase in earnings for each additional year of schooling while Asian immigrants gain a much higher return of 8.3%. The two groups also display different benefits for years since migration. While "years since migration" is an important determinant of the earnings of Latin American immigrants, it does not have much impact for Asian immigrants. The reason for this difference could be complicated; it may suggest that Asian immigrants arrive with human capital that is more usable in the U.S. labor market while Latin American immigrants face a greater mismatching of jobs and have initial difficulties assimilating into the society (Santiago & Pablo, 2012).

Furthermore, Asian immigrants obtain much higher returns to language proficiency than Latin American immigrants. Earnings for Asian immigrants with proficient English ability is 0.757 percent higher and for people with intermediate English ability is 0.331 percent higher, which is much higher than for Latin Americans (0.533 against 0.198).

Table 5: Estimated Coefficients of the Earnings Equation by Area of Birth

	(1) Pooled	(2) Latin-American	(3) Asian
Experience	0.0257***	0.0226***	0.0353***
	(0.0029)	(0.0036)	(0.0051)
Experience^2/100	-0.0546***	-0.0462***	-0.0738***
	(0.0050)	(0.0058)	(0.0097)
Ysm	0.0016*	0.0032***	0.0005
	(0.0007)	(0.0009)	(0.0001)
Married	0.242***	0.226***	0.215***
	(0.0241)	(0.0296)	(0.0382)
Divorced	0.169***	0.222***	0.0651
	(0.0398)	(0.0489)	(0.0646)
Asian	0.261***		
	(0.0150)		
Years of School	0.0329***	0.0094***	0.0828***
	(0.0021)	(0.0022)	(0.0056)
Proficient	0.552***	0.427***	0.564***
	(0.0215)	(0.0256)	(0.0401)
Intermediate	0.260***	0.201***	0.286***
	(0.0207)	(0.0234)	(0.0387)
Constant	9.470***	9.686***	9.304***
	(0.0455)	(0.0566)	(0.0722)
Observations	8267	4220	4047

Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: U.S. Census Bureau, American Community Survey, 2010

4.3 Quantile regression estimates

The OLS regression model can only show average impact of the covariates on earnings (Chen, 2011). Therefore, we also estimate equation (1) using the recentered influence function (RIF) quantile regression approach, which provides detailed distributions at different quantiles. This method also solves the limitation of quantile regression proposed by Koenker and Bassett, (1978). The RIF quantile regression approach is based on the economic theory of unconditional quantile regression. This approach deals with some problems that cannot be solved by conditional quantiles, such as providing a method to interpret and estimating marginal effect of the outcome over the distributions (Borah and Basu, 2013).

Table 6 presents the estimated coefficients of the RIF quantile regression for the pooled sample. The first column reports the OLS estimates, while the other three columns present the RIF regression estimates at the 25th quantile, the median and the 75th quantile, respectively. As suggested by Firpo, Fortin and Lemieux (2011), we exclude the occupational covariates, due to the endogenous relationship between occupations and wage distribution. Firpo, Fortin and Lemieux (2011) examined the importance of occupations, contribution to changes in the wage distribution and found that even when the standard skill measures are being controlled, the changes of wages across occupations are also very crucial in the wage distribution. Conditional on the other covariates, education has a greater impact on immigrants' earnings at higher parts of the earnings distribution. An extra year of schooling increases the earnings of immigrants by

1.1% at the 25th quantile, 2.6% at the median quantile and 5.7% at the 75th quantile. In terms of English language proficiency, the benefit of being proficient in speaking English increases across the earnings distribution while the benefit of having an intermediate level of English skills decreases. At the 25th quantile, individuals who are very proficient at English earn 73.0% more than immigrants who have relatively low English ability. Then, at the median quantile, the English language proficiency premium goes up to 82.2% and is 103% at the 75th quantile. By contrast, the earnings premium associated with having at least intermediate proficiency decreases from 39.1% at the 25th quantile to 31.4% at the 75th quantile.

Table 6: The Impact of English Language Proficiency on Earnings—RIF Quantile Regression Results (Pooled Sample)

	(1) OLS	(2) RIF_25	(3) RIF_50	(4) RIF_75
Experience	0.0257***	0.0281***	0.0210***	0.0276***
	(8.99)	(6.83)	(6.64)	(6.78)
$Experience^2/100$	-0.0546***	-0.0594***	-0.0463***	-0.0583***
	(-11.15)	(-8.18)	(-8.70)	(-8.82)
Ysm	0.0016*	0.0018	0.0027***	0.0028**
	(2.55)	(1.57)	(3.67)	(2.93)
Married	0.242***	0.240***	0.214***	0.246***
	(10.22)	(6.93)	(7.96)	(7.09)
Divorced	0.169***	0.172**	0.202***	0.136*
	(4.30)	(3.11)	(4.50)	(2.35)
Asian	0.261***	0.123***	0.244***	0.538***
	(17.59)	(6.06)	(14.27)	(23.56)
Years of School	0.0329***	0.0116***	0.0262***	0.0572***
	(15.38)	(3.53)	(10.86)	(21.49)
Proficient	0.552***	0.548***	0.600***	0.710***
	(25.07)	(16.42)	(24.67)	(25.58)
Intermediate	0.260***	0.330***	0.314***	0.273***
	(11.89)	(9.65)	(12.91)	(10.88)
Constant	9.470***	9.204***	9.504***	9.536***
	(212.62)	(142.18)	(193.17)	(149.95)
Observations	8267	8267	8267	8267

Note: Robust standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Source: U.S. Census Bureau, American Community Survey, 2010

The quantile regression estimates for Latin-American and Asian immigrants are presented in Tables 7 and 8. The impact of years of schooling on earnings is not important for Latin-American immigrants at the 25th quantile, but has a small impact at the median and the 75th quantile. In contrast, the estimates of years of education for the Asian group are larger and statistically significant throughout the distribution. The impacts of years of education vary across the distribution for Asian immigrants from 5.6% at the 25th quantile to 11.3% at the 75th quantile. For Latin-American immigrants, the language proficiency premium for proficient language ability is 47.0% at the 25th quantile, 57.1% at the median quantile and increases to 64.0% at the 75th quantile, as reported in Table 7. Compared with the primary English skills level of Latin-Americans, their intermediate counterparts earn 30.3% at the median quantile. A similar pattern exists, but with a slight difference for Asian immigrants. As with Latin-American immigrants, the returns to proficient language ability for Asian immigrants increases between the first two quantiles studied, but decreases for intermediate language ability. Based on these figures, the pay penalty at the lower part of the distribution indicates that the poor English skills group earns 97.4% less than those who are proficient and 56.7% less than the intermediate group. The median and upper part of the distribution shows that the trend in earnings is very similar to that of the lower part of the distribution. As a result, our estimates of English language proficiency are statistically significant across the distribution, and the difference in spoken English ability aggravates income inequality, particularly at the median quantile. It is possible that the Asian immigrants are more likely to be working in occupations that require a higher quality of English skills (Zhen, 2010).

Table 7: The Impact of English Language Proficiency on Earnings—RIF Quantile Regression Results (Latin American Sample)

	(1) RIF_25	(2) RIF_50	(3) RIF_75
Experience	0.0230^{***}	0.0184^{***}	0.0236^{***}
	(4.68)	(4.64)	(5.87)
$Experience^2/100$	-0.0461^{***}	-0.0383^{***}	-0.0480^{***}
	(-5.63)	(-6.04)	(-7.71)
Ysm	0.0021	0.0031^{**}	0.0048^{***}
	(1.77)	(3.22)	(4.70)
Married	0.194^{***}	0.242^{***}	0.211^{***}
	(4.68)	(7.39)	(6.40)
Divorced	0.123	0.245^{***}	0.242^{***}
	(1.95)	(4.64)	(4.17)
Schooling year	-0.0011	0.0079^{**}	0.0091^{***}
	(-0.34)	(3.02)	(3.65)
Proficient	0.385^{***}	0.452^{***}	0.495^{***}
	(10.39)	(15.02)	(16.88)
Intermediate	0.206^{***}	0.265^{***}	0.206^{***}
	(5.57)	(9.20)	(8.15)
_cons	9.476^{***}	9.719^{***}	9.998^{***}
	(120.45)	(155.49)	(160.15)
Observations	4220	4220	4220

Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: U.S. Census Bureau, American Community Survey, 2010

Table 8: The Impact of English Language Proficiency on Earnings—RIF Quantile Regression Results (Asian Sample)

	(1) RIF_25	(2) RIF_50	(3) RIF_75
Experience	0.0406^{***}	0.0317^{***}	0.0285^{***}
	(5.51)	(4.98)	(5.13)
Experience^2/100	-0.0865^{***}	-0.0698^{***}	-0.0558^{***}
	(-6.19)	(-5.99)	(-5.54)
Ysm	0.0002	0.0015	0.0007
	(0.12)	(1.16)	(0.66)
Married	0.222^{***}	0.185^{***}	0.184^{***}
	(3.85)	(3.54)	(4.15)
Divorced	0.110	0.0210	0.0641
	(1.13)	(0.24)	(0.89)
Years of School	0.0559^{***}	0.100^{***}	0.113^{***}
	(7.20)	(15.26)	(20.22)
Proficient	0.680^{***}	0.694^{***}	0.455^{***}
	(10.50)	(13.67)	(12.44)
Intermediate	0.449^{***}	0.317^{***}	0.179^{***}
	(6.81)	(6.29)	(5.26)
Constant	8.891^{***}	9.211^{***}	9.836^{***}
	(81.00)	(100.58)	(126.02)
Observations	4047	4047	4047

Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05 and * p<0.1 level.

Source: U.S. Census Bureau, American Community Survey, 2010

Chapter 5 Conclusion

This paper explores the impact of English language proficiency on earnings among Asian and Latin American male immigrants in three states in the United States: California, New York and Texas. Using 2010 American Community Survey (ACS) data, we find that around half of the respondents reported they are proficient in speaking English and Asian immigrants are more likely to indicate being proficient. English language proficiency is found to be an important determinant of an immigrant's labor market performance, with earnings around 20% higher for immigrants who report being proficient in English. As expected, earnings also increase with educational achievement. Overall the findings here are consistent with the previous empirical studies, but we may be overstating the effect of English proficiency as it may be related to the self-reported measurement error problem, which could not be avoided by using cross-sectional data. Also, the independent variable with unobserved characteristics, such as "ability to learn quickly" and possibly cultural differences, may lead to an endogeneity problem, which would affect the accuracy of the results.

The analysis also examines the impact of English language proficiency across the earnings distribution by using the RIF quantile regression method. Generally, English proficiency premiums among the Asian group are greater than for their counterparts across the distribution, especially for immigrants who are very proficient. The results confirm that being proficient in English directly affects economic performance in the labor market. The estimates of “Proficient” language ability for Latin-American immigrants show an increasing return across the earnings distribution, but the returns are comparatively lower across most of the distribution than that found for the Asian immigrants. The return is around 98 percent at the 25th quantile and 57% at the median for Asian immigrants but it decreases at the 75th quantile at which point the return is more similar to that found for the Latin-American immigrants, but is not exactly the same. On the other hand, those who speak English very well have more opportunities to work in the higher paying industries (Zhen, 2010).

Since being proficient in English is associated with some degree of social assimilation, government intervention may be warranted. Most immigrants who have limited knowledge of English are not aware of the benefits of mastering the English language and fail to obtain English language training or improve their English skills through other methods, but instead seek immediate employment (DeVoretz & Werner, 2000). Our analysis provides statistical support that providing opportunities for immigrants to improve their English language fluency will help their occupational success. Therefore, the results suggest that the primary impetus behind improving immigrants’ quality of living is to devise policies, which encourage immigrants to improve their language skills.

Because of the limitations of our data, we could not track changes of earnings and language skills on the same sample over time (Santiago & Pablo, 2012). If we had panel data, it would allow us to check the data validity and explore the relationship between immigrants' English language proficiency and their earnings under certain years. For further exploration, if we could distinguish the immigrants' work experience between before and after migration, it would be more persuasive to demonstrate how earnings change when they change jobs or workplaces.

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