An Analysis of Earnings Differentials between College-Educated Chinese Immigrants and US Natives: Who Has the Advantage?

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ABSTRACT. This paper uses 2012 American Community Survey (ACS) data to examine the relative earnings performance of full-time employed college-educated Chinese immigrants compared to full-time employed college-educated natives. The college-educated Chinese immigrant population has nearly a $7,000 unadjusted earnings advantage over natives. We show that this advantage is primarily due to differences in human capital endowments between the two groups. For example, college-educated Chinese immigrants are more likely to have PhD degrees and to choose majors that lead to higher paying occupations than college-educated natives. When we control for human capital and demographic differences, the Chinese immigrant earnings advantage becomes a small disadvantage. We also find that Chinese that came as youth, and have been in the U.S. for many years, have a significant earnings advantage over other Chinese immigrants. (J11, J31, J61)

I. Introduction

Chinese immigration is an important source of U.S. high skilled labor and the flow of Chinese immigrants is increasing rapidly, with Chinese immigration surging from about 366 thousand in 1980 to about 1.881 million in 2010 (McCabe, 2012). Given the recent surge of Chinese students in American universities, it is reasonable to expect high skill Chinese immigration to continue.

Chinese immigrants differ in important ways from the native population. For example, they are much more likely than natives to have advanced degrees and to cluster into niche occupations. American Community Survey (ACS) data for 2011 show that college-educated Chinese immigrants are overrepresented in finance, computer science and mathematics, architecture, engineering, life sciences and physical

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sciences (Seeborg and Maynard, 2014). These occupations tend to pay well and require quantitative and analytical skills.

Offsetting the advantages that Chinese immigrants have in educational attainment and career choice are a set of disadvantages. First, many Chinese immigrants have some degree of English language deficiency (McCabe, 2012). Second, the skills acquired in China are often not completely transferrable to the U.S. job market. Finally, it takes time for immigrants to develop effective networks and fully assimilate into the U.S. labor market. Because of these offsetting advantages and disadvantages, it is not clear whether Chinese immigrants would have earnings above or below native earnings.

The purpose of this paper is to use recent data from the 2012 American Community Survey (ACS) to examine the relative earnings performance of full-time employed college-educated Chinese immigrants compared to full-time employed college-educated natives. The paper's focus on the relative earnings performance of Chinese immigrants is relevant because of their increasing presence in the U.S. labor force, especially in important high skill professional occupations. It is important for both Chinese immigrants and the economy that compensation is fair and reflective of human capital.

A. RELATED LITERATURE

A number of empirical studies find that proficiency in English is a major determinant of immigrant economic assimilation and that deficiencies in English often cause significant earnings disadvantage (Chiswick, 1991; Chiswick and Miller, 1998; Sandford and Seeborg, 2003). McCabe (2012) finds that Chinese immigrants are less likely than the total immigrant population to speak English at home and that 62 percent of Chinese immigrants report limited English proficiency.

Friedberg (2000) and Haley and Taengnio (2011) find that because human capital acquired in countries of origin is only partially transferrable to the destination country, economic assimilation is hindered. Kaushal (2011) and Tong (2010) show that immigrants who receive most of their formal education in their countries of origin have significant earnings disadvantages compared to immigrants who receive more of their education in the destination countries. Kaushal (2011) focuses on professional job markets and shows that immigrant scientists and engineers who receive more education in the United States earn

significantly more income than immigrant scientists and engineers who do not. Finally, Zeng and Xie (2004) focus exclusively on Asian immigrants and find that those who receive more education in their country of origin are at a disadvantage to those who received more of their education in the United States.

It takes time for immigrants to develop connections and adapt to new institutions in their host countries. Given the significant institutional and cultural differences between the United States and China, Chinese immigrants should have more difficulty adjusting to the U.S. labor market than immigrants, say, from an English speaking country with market based institutions (Haley and Taengnoi, 2011). However, assimilation challenges may be lower for recent cohorts of Chinese immigrants because China is embracing market based institutions and encouraging English language training in Chinese schools and Universities. Because of changes like these in China, more recent Chinese immigrants may have human capital endowments that are more transferrable to the U.S. labor market than earlier arrivals that were raised with non-market institutions and often did not have access to English language instruction in school.

The paper proceeds with a description of the 2012 ACS database and then describes the two empirical models used to predict the earnings of a large sample of native and Chinese college graduates. The first model estimates separate earnings functions for natives and Chinese immigrants using a set of standard human capital and demographic variables. The second model is an expanded earnings function for Chinese immigrants only that adds immigrant specific variables to the estimation. These variables include citizenship status, English language ability, number of years in the United States, and age at the time of immigration.

II. Data and Empirical Model

We use the 2012 American Community Survey (Ruggles, et. al., 2010) to examine the experience of 5,232 full-time employed college-educated Chinese immigrants relative to 268,320 full-time employed college-educated natives. The sample includes Chinese immigrants and native born Americans who:

- are between 21 and 65 years old
- work at least 36 hours per week
- record at least 48 weeks of work during the previous year, and

- have at least a bachelor's degree.

The empirical analysis proceeds in four steps. First, we define key variables and present descriptive statistics. Second, we run separate OLS earnings functions for natives and Chinese immigrants that include both human capital and demographic variables.

LnWAGE = f (Degree Level, Field of Study, Demographic) (1)

Third, we use the native earnings function to estimate what Chinese immigrants would earn if they had their own characteristics but were paid according to the native reward structure. This is done by applying the mean Chinese immigrant characteristics to the native earnings function (i.e., regression coefficients) and estimating what Chinese earnings would be if they were rewarded according to the native earnings function. Then, the Chinese earnings estimate is compared to their actual earnings. Parity between Chinese immigrants and natives is reached if Chinese actual earnings are equal to Chinese earnings estimated from the native earnings function. On the other hand, if actual Chinese earnings are less than estimated earnings, Chinese immigrants have not reached earnings parity with natives.

Fourth, we run a regression for Chinese immigrants that add immigrant specific variables to Equation (1).

LnWAGE = f (Degree Level, Field of Study, Demographic, Immigrant Specific) (2)

Immigrant specific variables only apply to the immigrant population and include such things as citizenship status, years in the United States, and age of immigration. The results could suggest reasons why some Chinese immigrants have earnings advantages over other Chinese immigrants.

III. Results

A. DESCRIPTIVE STATISTICS AND VARIABLE DEFINITIONS

Table 1 presents descriptive statistics for the native and Chinese immigrant sample and Table 2 defines the variables that are to be used in the regression analysis. Of primary interest are the 2012 annual wages

and salaries. This is the total annual wage and salary income reported by the respondent for the 12 months prior to the survey date. Since the ACS survey was conducted in 2012, the annual income would be partly from 2011 and partly from 2012. It consists of wages, salaries, commissions, cash bonuses, tips, and other money income received from an employer, but does not include payments-in-kind or reimbursements for business expenses (Ruggles, et. al., 2010).

TABLE 1–Descriptive Statistics

	Natives	**Chinese**
Sample Size	277,862	5,381
Average 2012 Wages	$81,211	$88,155
Fields of Bachelor degree (percent)		
Mathematics & Statistics	1.3%	3.3%
Computer Science	2.9%	9.4%
Engineering	8.7%	25.1%
Physical Science	2.9%	8.7%
Biology & Life Sciences	4.8%	8.6%
Medical Science	6.5%	4.3%
Psychology	4.6%	1.5%
Agriculture	2.3%	1.2%
Social Science	9.7%	5.5%
Business	23.2%	19.8%
Education	11.4%	2.1%
Communication	4.5%	1.1%
Fine Arts	3.6%	2.6%
Liberal Arts and Humanities	7.8%	5.2%
Other	5.8%	1.6%
Total	100%	100%
Degree Level (percent)		
Bachelor	63.4%	37.2%
Master	25.8%	36.9%

TABLE 1–Descriptive Statistics

	Natives	**Chinese**
Degree Level (percent) - continued		
Professional	7.2%	5.7%
PhD	3.7%	20.3%
Total	100%	100%
Demographic Variables		
Age	43.7 years	43.1 years
Uhrswork	45.6 hours	43.8 hours
Female	46.1%	46.1%
Married	66.0%	72.0%
Nchild	0.84	0.86
Immigrant Specific Variables		
Not Citizen		33%
Bad English		4.2%
YEAR OF IMMIGRATION		
Arrived after 2007		8.8%
Arrived between 2002-2007		10.4%
Arrived before 2002		80.8%
Total		100%
AGE OF ARRIVAL IN U.S.		
Immigrated before Age 15		20.8%
Immigrated Age 15 - 17		5.6%
Immigrated Age 18 - 30		53.7%
Immigrated after Age 30		19.9%
Total		100%

The mean wage and salary earnings of Chinese immigrants exceed the mean earnings of their native counterparts by nearly $7,000 ($88,155 vs. $81,211). However, this unadjusted earnings advantage could be the result of Chinese immigrant human capital advantages. Indeed, Table 1

shows that Chinese immigrants are much more likely to have advanced degrees. For example, 20.3% of Chinese college-graduate immigrants have PhDs compared to 3.7% of college-graduate natives, and Chinese immigrants are more likely to hold masters' degrees (36.9 % vs. 25.8 %). Also, Chinese immigrants in our sample have very different distributions across bachelor degree fields with overrepresentation in mathematics and statistics, computer science, engineering, physical science, biology and other life sciences. These differences in degree level and area of study could explain much of the gross earnings advantage that Chinese have over natives.

Table 1 shows that Chinese immigrants and natives have similar demographic characteristics. For example, both groups have similar average age, number of children and percent female. However, Chinese immigrants in our sample were slightly more likely to be married than natives (72% vs. 66%).

Several variables apply only to immigrants, such as citizenship status, English language skills, year of immigration, and age at immigration. Table 1 shows that about 33 percent of the immigrants in our sample were not citizens, 4.2 percent indicated poor English language skills, 19 percent arrived in the United States after 2002, and 20.8 percent arrived before they were 18 years old.

Given the significant changes underway in China, such as rapid movement toward market institutions and English language instruction in schools, the year of immigration is an especially important immigrant specific variable. It is likely that more recent immigrants from China have better English language skills and greater familiarity with market-based institutions than earlier immigrants had when they immigrated. Our sample consists of both recent arrivals and immigrants who have been in the United States for many years (Table 1).

Immigrant age of arrival in the United States is also important since those that came as children likely received most of their formal education in the United States, and immigrants that arrived as adults likely received most of their formal education in China. While the ACS data set does not allow us to determine precisely where the immigrant received education, a good proxy is the variable "age at immigration." Table 1 shows that while the majority of immigrants in our sample arrived between the ages of 18 and 30, there are significant numbers who arrived under age 18 and over age 30.

TABLE 2–Variables and Descriptions

Variable	Description
Dependent	
Ln Wage	Natural log of real wage and salary income
Independent	
Master	1 if master's degree
Professional	1 if professional school degree
PhD	1 if doctor of philosophy degree
Agriculture	1 if bachelor degree of agriculture
Communication	1 if bachelor degree of communication
Computer Science	1 if bachelor degree of computer science
Education	1 if bachelor degree of education
Engineering	1 if bachelor degree of engineering
Biology & Life Sciences	1 if bachelor degree of biology & life sciences
Mathematics & Statistics	1 if bachelor degree of mathematics & statistics
Physical Science	1 if bachelor degree of physical science
Psychology	1 if bachelor degree of psychology
Social Science	1 if bachelor degree of social science
Fine Arts	1 if bachelor degree of fine arts
Medical Science	1 if bachelor degree of medical science
Business	1 if bachelor degree of business
Other	1 if bachelor degree of other fields
Age	Age in years at last birthday
Age Square	Age squared
Uhrswork	Usual hours worked per week
Female	1 if female
Married	1 if married
Married Female	Married * Female interaction
Nchild	Number of own children in household
Not Citizen	1 if without US citizenship
Bad English	1 if does not speak English well
Arrived after 2007	1 if immigrated after 2007
Arrived 2002-2007	1 if immigrated between 2002-2007
Immigrate<15	1 if less than 14 years old when arrived in U.S.
Immigrate 15-17	1 if 15-17 years old when arrived in U.S.
Immigrate 18-30	1 if 18-30 years old when arrived in U.S.

B. REGRESSION COMPARISONS OF CHINESE IMMIGRANTS AND NATIVES

We start by running separate but identical regressions: one for the sample of full-time employed college-graduate natives and the second for the sample of full-time employed college-graduate Chinese immigrants. Variable definitions are given in Table 2. The dependent variable, wage and salary income (LnWAGE), is determined by the level of education, undergraduate major, and a set of personal demographic variables. Three dummy variables are included for level of education (Master, Professional, and PhD). The omitted category consists of bachelor's degree holders who did not complete advanced degrees. Since having a bachelor's degree is the reference group (omitted category), the coefficients to the dummy variables for more advanced degree levels (Master, Professional and PhD) should be interpreted as the advantages that respondents with these advanced degrees have relative to those whose terminal degree is a bachelor's degree. The model also includes dummy variables for fourteen undergraduate areas of study, with the reference group being liberal arts and humanities majors.

Personal demographic dummy variables include whether the respondent is female (Female), being married (Married) and the interaction between these two variables (Female*Married). The interaction term is included to test the hypothesis that being female and married has a negative effect on earnings because of the possibility of increased childcare responsibilities that are often assumed by married women. Finally, age (Age, Age Square) and number of children (NChild) are included to control for the effects of experience and family responsibilities on earnings. Age and age squared are included to capture the nonlinear relationship between earnings and experience (Borjas, 2016, p. 271). Since earnings are expected to increase, but at a decreasing rate with age over the life cycle, we expect a positive sign to the "Age" coefficient and a negative sign to the "Age Square" coefficient.

The results are presented in Table 3. The column labeled "Natives" is for the natives only sample and the column labeled "Chinese: Model 1" is for the Chinese sample. The results are consistent with expectations. Nearly all of the coefficients are statistically significant with the expected sign, except for a few of the "field of study" coefficients. Like natives, Chinese immigrants seem to benefit from having an advanced degree relative to the bachelor's degree.

TABLE 3–Regression Results
(Robust Standard Errors in Parentheses)

Variable	Natives	Chinese (Model 1)	Chinese (Model 2)
Constant	8.350***	8.011***	8.218***
	(0.020)	(0.184)	(0.193)
Degree Level			
Master	0.165***	0.184***	0.216***
	(0.003)	(0.021)	(0.021)
Professional	0.500***	0.453***	0.437***
	(0.006)	(0.052)	(0.050)
PhD	0.309***	0.216***	0.287***
	(0.007)	(0.027)	(0.028)
Field of Study			
Agriculture	-0.092***	-0.036	-0.028
	(0.010)	(0.075)	(0.069)
Communication	0.061***	0.114	0.050
	(0.007)	(0.102)	(0.097)
Computer Science	0.253***	0.427***	0.359***
	(0.008)	(0.050)	(0.049)
Education	-0.153***	-0.140**	-0.113*
	(.005)	(0.069)	(0.064)
Engineering	0.296***	0.345***	0.293***
	(0.006)	(0.047)	(0.046)
Biology & Life Sciences	0.122***	0.110**	0.077
	(0.007)	(0.056)	(0.053)
Mathematics & Statistics	0.206***	0.317***	0.266***
	(0.012)	(0.060)	(0.058)
Physical Science	0.160***	0.208***	0.178***
	(0.008)	(0.054)	(0.051)
Psychology	-0.027***	0.220***	0.096
	(0.007)	(0.070)	(0.066)
Social Science	0.093***	0.227***	0.169***
	(0.006)	(0.062)	(0.060)
Fine Arts	-0.093***	0.071	0.081
	(0.008)	(0.072)	(0.067)
Medical Science	0.200***	0.246***	0.193***
	(0.006)	(0.062)	(0.060)
Business	0.158***	0.172***	0.099**
	(0.005)	(0.048)	(0.049)

TABLE 3–Regression Results
(Robust Standard Errors in Parentheses)

Variable	Natives	Chinese (Model 1)	Chinese (Model 2)
Field of Study (continued)			
Other	-0.092***	0.083	0.007
	(0.006)	(0.084)	(0.079)
Demographic			
Age	0.082***	0.105***	0.83***
	(0.001)	(0.008)	(0.008)
Age Square	-0.001***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)
Uhrswork	0.012***	0.008***	0.007***
	(0.000)	(0.001)	(0.001)
Female	-0.096***	-0.032	-0.037
	(0.004)	(0.035)	(0.033)
Married	0.195***	0.136***	0.152***
	(0.004)	(0.033)	(0.031)
Married Female	-0.144***	-0.123***	-0.120***
	(0.005)	(0.040)	(0.038)
Nchild	0.019***	0.021*	0.007
	(0.001)	(0.011)	(0.011)
Immigrant Specific			
Not Citizen			-0.077***
			(0.023)
Bad English			-0.417***
			(0.046)
Arrived after 2007			-0.296***
			(0.041)
Arrived 2002-2007			-0.063**
			(0.030)
Immigrate<15			0.273***
			(0.038)
Immigrate 15-17			0.182***
			(0.044)
Immigrate 18-30			0.133***
			(0.026)
Sample Size	268,320	5,232	5,232
Adjusted R Square	0.269	0.195	0.266

Note: ***significant at .01 level, **significant at .05 level, *significant at .10 level

Particularly notable, is that Chinese immigrants, like natives, receive very large returns from professional degrees (e.g., law degrees and MDs) with a 45% premium over the bachelor's degree. The return from PhD's, while significant, is lower for Chinese than for natives (21.6% vs. 30.9%).

Returns across areas of study show a similar pattern for Chinese immigrants and natives. For both groups the coefficients should be interpreted in reference to the omitted area of study, which is liberal arts and humanities. Of particular note are the relatively high returns for Chinese immigrants who have bachelors' degrees in computer science (42.7%), engineering (34.5%) and mathematics and statistics (31.7%). The high returns for these majors are important because they are disciplines that also attract a large number of Chinese immigrants as shown in Table 1.

The effect of the demographic control variables on earnings is very similar when comparing the native and Chinese immigrant equations. For both, earnings increase, but at a decreasing rate, with age; and marriage seems to increase earnings for men, but not for women. One notable difference between natives and Chinese immigrants is that being a woman is a statistically significant predictor for natives but not for Chinese immigrants. Therefore, Chinese immigrant women do not seem to be at a significant disadvantage relative to their male counterparts, ceteris paribus.[1]

C. SIMULATIONS

Next, we use the native earnings function to estimate what Chinese immigrants would earn if they had their own human capital and demographic characteristics but were rewarded according to the native earnings function. We do this by multiplying the coefficient estimates for natives in Table 3 by the average value of each Chinese characteristic from Table 1. For example, Table 1 shows that 36.9 percent of Chinese immigrants in our sample hold masters degrees. Therefore, we multiply 0.369 times the coefficient to MASTER in the native regression equation to determine the contribution of MASTER to LnWAGE. This process is repeated for all other variables and LnWAGE is estimated. When this is done, the estimated earnings for Chinese immigrants are 13.9 percent greater than their actual earnings. This means that, when demographics and human capital characteristics are taken into account, we cannot

conclude that the college-educated Chinese immigrants in our sample have reached parity with employed native college graduates. Indeed, what started out as a large unadjusted average wage advantage for Chinese immigrants over natives (Table 1), turns out to be an estimated 2.9 percent advantage for natives. Thus, after controlling for human capital and demographic differences, Chinese immigrants are at an earnings disadvantage to natives.

We next use the simulation results to partition the effect of native/Chinese differences in degree levels, field of study and demographic characteristics on earnings differentials. Table 4 shows that most of the gross unadjusted earnings advantage of Chinese over natives is attributable to degree level differences and differences in field of study. This is because Chinese immigrants are much more likely to have advanced degrees than natives and to pursue higher paying undergraduate fields of study.

TABLE 4–Summary of Simulation Results

	Simulated Percent Change	Chinese - Native Earnings Differentials
Average Wage Difference (without controls)		11%
Effect of Chinese/Native Degree Level Differences	6.2%	
Effect of Chinese/Native Field of Study Differences	8.8%	
Effect of Chinese/Native Demographic Differences	-1.1%	
Average Wage Difference (with all controls)		-2.9%

The first part of the decomposition estimates earnings from the native earnings function by changing the degree level distribution from the native's distribution to the Chinese distribution and computing the change in earnings. Natives clearly would have significantly higher

earnings if they had the Chinese distribution. In fact, the difference in degree level distributions accounts for 6.2 percentage points of the 11 percent earnings advantage that the Chinese immigrants in our sample have over natives.

The second part of the decomposition estimates earnings from the native earnings function by changing the field of study distribution from the native distribution to the Chinese distribution and then observing the change in earnings. This change causes a significant increase in the estimated earnings. Again, natives would have much higher earnings if they had the Chinese distribution of field of study. The difference in area of study distribution accounts for 8.8 percentage points of the 11 percent unadjusted earnings advantage that Chinese immigrants have over natives. Considered together, the advantages that Chinese immigrants have in degree level and area of study alone explain more than the unadjusted Chinese earnings advantage. This means that after we control for level of study and field of study the earnings advantage of Chinese immigrants becomes an earnings disadvantage.

The third part of the decomposition controls for differences in demographic characteristics between natives and Chinese immigrants. Again we multiply the averages of the Chinese demographic characteristics to the appropriate native coefficients. When we do this we see that natives would have slightly lower earnings (-1.1 percentage points) if they had the Chinese demographic characteristics.

When the three components of the decomposition are combined in Table 4, the estimated earnings disadvantage of the Chinese immigrants is -2.9 percent. Thus, what initially appeared to be a strong Chinese earnings advantage over natives is actually a small Chinese disadvantage after controlling for human capital endowments and demographic characteristics.

D. CHINESE MODEL WITH IMMIGRANT SPECIFIC VARIABLES

Finally, we explore the effect that immigration specific variables have on the earnings of Chinese immigrants by running the model for the Chinese immigrant sample that adds immigrant specific characteristics, such as citizenship status, years in the United States, age at immigration and English language proficiency. This model is labeled "Chinese Model 2" in Table 3. Chinese Model 2 differs from Chinese Model 1 that was discussed in the previous section in that it includes immigrant specific

variables in addition to the variables included in Chinese Model 1. This model includes all four groups of variables: degree level, field of study, demographic, and immigrant specific. Chinese Model 2 results are presented in the last column of Table 3.

Including the immigration specific variables increases the overall explanatory power of the Chinese immigrant regression considerably, with the adjusted R squared increasing from 0.19 to 0.26. The coefficient to "Not Citizen," for example, shows that not having citizenship decreases earnings by about 7.7 percent. In addition, Chinese immigrants who arrive at an earlier age have an earnings advantage over those who arrive when they are older, and immigrants who have been in the country for more years have an earnings advantage over those who arrive more recently. This pattern is consistent with expectations that are derived from human capital theory and are also consistent with findings in the immigration literature (Borjas, 1994, Chiswick, 1978).

Some of the immigrant specific variable effects are quite large. For example, those who immigrate before they reach 15 years have a 27.3 percent earnings advantage relative to those who immigrate when they are over 30 years. This result is consistent with prior research by Friedberg (2000) and Sandford and Seeborg (2003) that find that age of immigration is inversely related to earnings. A plausible explanation for the inverse relationship between age at immigration and earnings is that young immigrants receive more formal education in the United States and consequently do not encounter difficulties in transferring skills from the country of origin.

Also, the number of years in the United States is a significant predictor of earnings. For example, Table 3 shows that immigrants who arrived in the United States after 2007 are at a 29.6 percent earnings disadvantage compared to immigrants who arrived before 2002, and that those who do not have citizenship have an earnings disadvantage of 7.7 percent compared to immigrants who have citizenship. Also, the results show that reporting poor English language skills reduce earnings by 41.7 percent, which is a consistent with findings in previous research (Chiswick 1990; Chiswick and Miller 1998).

IV. Conclusions and Discussion

While college-educated Chinese immigrants enjoy a substantial unadjusted earnings advantage over natives (Table 1), the regression

analysis and simulations show that differences in degree level and area of study distributions explain much of this unadjusted earnings advantage of Chinese immigrants. For example, we find that Chinese immigrant overrepresentation among advanced degree holders and their overrepresentation in the higher paying areas of study contribute to their higher earnings. Once degree level and area of study are controlled for in the regression-based simulation, the Chinese earnings advantage becomes a disadvantage that is only slightly decreased by taking into account demographic differences between Chinese immigrants and natives (Table 4).

The analysis of the college-graduate Chinese immigrant earnings relative to native college graduates finds that Chinese earnings trail native earnings by about 2.9 percent once degree level, area of study, and demographic characteristics are taken into account. Therefore, we can conclude that our sample of college-educated Chinese immigrants is reasonably close to parity with their native counterparts.

While we do find that college-graduate Chinese immigrants as a group have nearly achieved income parity with natives, there are still large differences in earnings performance within the Chinese immigrant group. These differences are in part the result of immigrant specific variables like language skills, citizenship status, year of immigration, and age at immigration. The results of the regression that includes these immigrant specific variables (Chinese Model 2 in Table 3) show an earnings advantage for Chinese immigrants who immigrate when they are young, have been in the United States for many years, are U.S. citizens, and speak English well. Future research could partition the sample of immigrants along these dimensions and conduct simulations to see how these subgroups fare relative to the native comparison group. It is likely that this research would find that respondents with immigrant specific advantages would have significant earnings advantages over their native counterparts while those with immigrant specific disadvantages would have significant disadvantages.[2]

Fortunately, recent arrivals have the opportunity to increase their earnings over time as they acquire more U.S. specific human capital and improve language skills. Also, immigrants often attain citizenship as they continue to reside in the United States. Thus, there is reason to be very optimistic about the prospects for Chinese immigrants as a group. The disadvantages that often afflict new immigrant arrivals tend to disappear over time as immigrants acquire U.S. specific human capital and

citizenship rights.

We acknowledge that some Chinese earnings advantage may be the result of positive selection from the potential immigrant pool (Borjas, 1987), and that there also is likely selective emigration back to China of some immigrants who do not have a favorable labor market experience in the United States. However, from a U.S. labor market policy perspective, what matters is whether high skilled Chinese immigrants are productive labor market participants and whether their skills are being rewarded at the same rates as natives' skills. Our results suggest that college-educated Chinese immigrants have nearly reached parity with their native counterparts.

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Endnotes

1. While not the focus of this research, future research could focus on the relative earnings advantage of Chinese women over native women. One possible explanation is that the favorable earnings performance of Chinese women is that college-graduate female Chinese immigrants are likely to marry college-educated spouses (Benham, 1977) and these "power couples" are more likely to locate in large metropolitan areas that offer good employment prospects to both husband and wife (Benham, 1977; and Compton and Pollak, 2007).
2. Another line of future research that further explores immigrant specific determinants of Chinese earnings could take advantage of the fact that Chinese immigrants come from places of origin that differ greatly in level of economic development, market institutions, and governance systems. This research could identify the place of origin of Chinese immigrants and run separate analysis of native/Chinese earnings differentials for each group. The results could yield interesting insights into how place of origin effects the transferability of human capital to the U.S. For example, Chinese immigrants who grew up in Hong Kong or Taiwan have likely acquired more U.S. specific human capital than Chinese immigrants who grew up in Mainland China. The level of economic development, legal institutions and economic institutions in Hong Kong and Taiwan are more similar to U.S. institutions than those in Mainland China. This suggests that immigrants from Hong Kong and Taiwan should have higher returns on their early human capital investments than immigrants from Mainland China who may find less transferability of their human capital (Friedberg, 2000).