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**Migration and Regional Factors Affecting the Wages of Asian American Men**

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**Migration and Regional Factors Affecting the Wages of Asian American Men**

by

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# **Migration and Regional Factors Affecting the Wages of Asian American Men**

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Prior research shows that race remains a significant factor of inequality in the U.S. The extent to which Asian Americans face discrimination in the labor market is also a subject of considerable debate. Thus, studying labor market inequality of Asian Americans is important for our better understanding of current/future race relations in the U.S. In doing so, the role of region and migration remain key factors that have not been much taken into account in the prior research, although they play an important role in assessing whether Asian Americans have reached labor market parity with non-Hispanic whites.

This research therefore investigates migration and regional aspects affecting the wages of Asian American men. More specifically, this study investigates whether wage determination and regional migration are indeed interrelated among Asian Americans, and the extent to which important migration and regional characteristics of Asian Americans differ from those of whites. Because prior research has limited scope examining these important factors, this study investigates various hypotheses together, to broadly understand the complicated processes across migration patterns, regional aspects, and labor market outcomes among Asian American men.

Using the 5-Percent Public Use Microdata Sample (PUMS) from the 2000 U.S. Census and the 2003 National Survey of College Graduates (NSCG), the results indicate the significance of region of residence and migration processes for understanding the wages of Asian American men, as well as the extent to which they differ from whites. For example, this research finds that region and regional distribution matter in the wages of Asian Americans, because cost of living expense is significantly higher for Asian Americans. Indeed, this study finds that Asian American men do not face a substantial disadvantage in the U.S. labor market, net of cost of living, demographic, and class factors.

Prior research shows that Asian Americans had faced significant direct and overt racial discrimination in the labor market before World War II. Then this achievement of parity represents a historic change for Asian Americans. Namely, racial and ethnic discrimination in the post-Civil Rights era has been ameliorated at least for Asian Americans. Findings of this research show that taking regional migration into account does not alter this fundamental and significant conclusion. Furthermore, the regional aspect (i.e., higher cost of living for Asian Americans) does not explain why Asian Americans have socioeconomic parity with whites. Although what this conclusion implies about race relations for other minority groups remains debatable, the post-Civil Rights era appears to be characterized with the greater acceptance of Asian Americans, rather than the extensive and persuasive occupational disadvantages and other forms of discrimination that were commonly found in the pre-World War II era.

## Table of Contents

Acknowledgments .....	iv	
Abstract .....	v	
Table of Contents .....	vii	
List of Tables.....	ix	
Chapter I		
INTRODUCTION AND PRIOR RESEARCH .....	1	
Introduction and Prior Research on Racial Inequality in America .....	1	
Race and Inequality in the United States .....	1	
Asians in American Socioeconomic History .....	4	
The Continuing Debate on the Disadvantage of Asians as a Minority in the Labor Market .....	6	
Summary of the Prior Research on Socioeconomic Attainments of Asian Americans .....	14	
REGIONAL ASPECTS OF SOCIOECONOMIC DIFFERENTIALS BETWEEN ASIAN AMERICANS AND NON-HISPANIC WHITES .....		15
The Role of Region in Asian American Labor Market Outcomes .....	20	
Theoretical Perspectives on Regional Migration .....	24	
Neoclassical Theory of Migration .....	24	
Theoretical Perspectives on Asian American Migration .....	26	
Substantive Research Issues to be Investigated .....	32	
Chapter II		
DATA, HYPOTHESES, AND METHODS .....	35	
Data and Target Population.....	35	
Variables.....	43	
Hypotheses to be Investigated.....	46	
Switching Regression Models.....	58	

Chapter III

EMPIRICAL FINDINGS..... 62

Descriptive Statistics ..... 62

Findings for Hypothesis 1 ..... 63

Findings for Hypothesis 2 ..... 72

Findings for Hypothesis 3 ..... 75

Findings for Hypothesis 4 ..... 75

Findings for Hypothesis 5 ..... 76

Findings for Hypothesis 6 ..... 77

Findings for Hypothesis 7 ..... 79

Summary of the Empirical Findings ..... 86

    1. Region and regional distribution matter in the wages of Asian  
    American men ..... 86

    2. Migration among Asian Americans is most characterized with  
    short-term mobility, and the theoretical link between wage  
    determination and migration do not significantly differ between  
    Asian Americans and whites ..... 87

    3. Net of relevant factors, Asian American men do not appear to be  
    racially disadvantaged in terms of wages/earnings in the U.S.  
    labor market ..... 91

    4. Migration and regional characteristics of 1.5-generation Asian  
    Americans are similar to those of native-born Asian Americans,  
    but the 1.5-generation are advantaged in terms of wages/earnings ..... 92

Chapter IV

CONCLUSIONS..... 95

References ..... 128

Vita..... 146



## List of Tables

### Tables

1. Regional Distribution of Population by Racial Group.....	16
2. Cost of Living Index for 51 States, by Region.....	18
3. Asian Population for the United States and by Region: 1990 and 2000.....	19
4. Distribution of Schooling Levels Completed in the 2000 5% PUMS.....	41
5. Descriptive Statistics for 2000 5% PUMS .....	105
6. Descriptive Statistics for 2003 NSCG.....	106
7. Testing Hypothesis 1: Logistic Regression Models of Migration Using 2000 5% PUMS (in Terms of Region of Residence Five Years Ago).....	107
8. Testing Hypothesis 1: Logistic Regression Models of Migration Using 2000 5% PUMS (in Terms of Region of Birth) .....	108
9. Testing Hypothesis 1: Logistic Regression Models of Migration Using 2000 5% PUMS (in Terms of Five Years Ago among Individuals with at Least College-Education).....	109
10. Testing Hypothesis 1: Logistic Regression Models of Migration Using 2000 5% PUMS (in Terms of Region of Birth among Individuals with at Least College-Education).....	110
11. Testing Hypothesis 1: Logistic Regression Models of Migration Using 2003 NSCG (in Terms of the Region Where High School Diploma was Obtained).....	111
12. Testing Hypothesis 1: Logistic Regression Models of Migration Using 2003 NSCG (in Terms of Region of Birth).....	112
13. Testing Hypothesis 2: OLS Regression Models of Log-Wage Using 2000 5% PUMS.....	113
14. Testing Hypothesis 2: OLS regression Models of Log-Wage Using 2000 5% PUMS (among Individuals with at Least College-Education) .....	114

15. Testing Hypothesis 2: OLS Regression Models of Log-Earnings Using 2003 NSCG .....	115
16. Testing Hypothesis 3: OLS Regression Models of COLA Using 2000 5% PUMS.....	116
17. Testing Hypothesis 4: OLS Regression Models of Log-Wage Using 2000 5% PUMS.....	117
18. Testing Hypothesis 5: Ordered Logistic Regression Models of Location Using 2003 NSCG.....	118
19. Testing Hypothesis 6: OLS Regression Models of Log-Wage Using 2000 5% PUMS (in Terms of region of Residence Five Years Ago).....	119
20. Testing Hypothesis 6: OLS Regression Models of Log-Wage Using 2000 5% PUMS (in Terms of Five Years Ago among Individuals with at Least College-Education).....	120
21. Testing Hypothesis 6: OLS Regression Models of Log-Wage Using 2003 NSCG .....	121
22. Testing Hypothesis 7: Probit Model of Currently Residing in the West .....	122
23. Sample Sizes of Asian Americans and Whites by Age Category .....	123
24. Testing Hypothesis 7: OLS and Switching Regression Models of Log-Salary.....	124
25. Probit Model of Currently Residing in the West, Age 25-35.....	125
26. Switching Regression Model of Log-Salary for West, Age 25-35 .....	126
27. Switching Regression Model of Log-Salary for Non-West, Age 25-35 .....	127

## **Chapter I**

### **INTRODUCTION AND PRIOR RESEARCH**

#### **Introduction and Prior Research on Racial Inequality in America**

The major purpose of this research is to investigate migration and regional factors affecting the wages of Asian American men. Before going into details on these issues, however, it is necessary to start my dissertation with broad discussions on race and inequality in the U.S. I will first introduce prior literature and show that race remains a significant factor of inequality in the U.S. Second, I will introduce literature on Asian Americans and inequality, and suggest that further research is needed to investigate whether Asian Americans are disadvantaged in the labor market. Finally, I will discuss that to adequately address this issue, migration and regional aspects have to be taken into account due to particular geographic distribution of Asian Americans. Two central points in this chapter are: (1) racial inequality remains a major topic, and studying labor market inequality of Asian Americans is important for our better understanding of current/future race relations in the U.S.; (2) In doing so, the role of region and migration remain key factors that have not been much taken into account in the prior research although they play an important role in assessing whether Asian Americans have reached labor market parity with whites.

#### **Race and Inequality in the United States**

An important and enduring issue regarding the characterization of American society is its degree of openness or social mobility. The significance of this concern was discussed as far back as the early 19<sup>th</sup> century in Alexis de Tocqueville's *Democracy in*

*America*. Intrinsically related to this concern, especially in light of American history, is the racial/ethnic aspect—to what extent do minorities share in the opportunities for social mobility that are afforded by American society, and to what extent have they achieved life conditions that are equal to those of whites? These questions have motivated a broad array of studies investigating the socioeconomic circumstances of racial/ethnic minorities.

Indeed, empirical findings vary in regard to the presence of racial discrimination and inequality. The extent to which racial minorities endure discrimination and inequality is a complex area of research. Some previous studies have found that racial and ethnic minorities in the United States have been historically disadvantaged and continue to be disadvantaged in the “racialized stratification system,” due to their “non-whiteness” (Bonilla-Silva 1997, 2001, 2003a, 2003b; Feagin 2001; Frankenberg 1993; Omi and Winant 1994). Empirical findings in this strand of research indicate lower levels of socioeconomic status (e.g., wages, incomes, education, poverty, and unemployment) for African Americans (e.g., Cancio, Evans, and Maume 1996; Farkas and Vicknair 1996; Farley 1984; Grodsky and Pager 2001; Harrison and Bennett 1995; McCall 2001; Morgan and McKerrow 2004; Sakamoto, Wu, and Tzeng 2000; Sandefur and Scott 1983; Western and Pettit 2005), Native Americans (e.g., Farley 1996; Huyser, Sakamoto, and Takei 2009; Sandefur and Sakamoto 1988; Sandefur and Scott 1983; Snipp 1989, 1992), and Hispanics (e.g., Borjas 1999, 2000; Borjas and Freeman 1992; Melendez, Rodriguez, and Figueroa 1991; Saenz 2004) as compared to non-Hispanic whites.

Since earnings are one of the major determinants of one’s overall well-being (Sakamoto and Xie 2006), the degree of discrimination/inequality in the labor market is a

crucial subject in the field of race and ethnic relations. Racial/ethnic inequality in the labor market is measured in the form of the net effect of minority status—whether one’s race or ethnicity affects one’s labor market rewards after controlling for productivity-related individual characteristics. Previous research using this status attainment model shows different findings in regard to the presence and extent of racial inequality.

For example, previous research finds that African Americans (see above references) and Native Americans (Farley 1996; Sakamoto, Wu, and Tzeng 2000) receive significantly lower wages than non-Hispanic whites even after controlling for education, age, disability status, military experience, region of residence, and metropolitan residence. In regard to Hispanics, Trejo (1997) argues that the wage of native-born Mexican American men does not appear to be significantly different from non-Hispanic white men after taking into account the highest level of education completed and other basic demographic characteristics. Trejo (2003) also finds that the sizable earnings advantage U.S.-born Mexican Americans enjoy over Mexican immigrants arises not just from intergenerational improvements in years of schooling and English proficiency, but also from increased returns to human capital for Mexican-origin workers who were born and educated in the United States. As Reimers (1985) notes, lower labor market returns for Hispanics may be largely attributed to the foreign-born proportion who have lower levels of education, and foreign education generally pays off less in the U.S. labor market. As such, prior research indicates persistent net racial disadvantages for different groups of racial/ethnic minorities in the U.S. labor market. However, the presence and the extent of racial inequality differs across studies and remains highly debated.

## **Asians in American Socioeconomic History**

Asian Americans have not been an exception of disadvantaged minorities in this “racialized stratification system.” During their early immigration history, Asian Americans had faced severe discrimination, due to their distinct cultures as well as anti-Asian sentiments that these hard-working, unskilled laborers would take jobs away from the working-class mainstream population in the U.S. West, especially in California which is their largest concentration state in the United States (Kitano and Daniels 2001). For example, Chinese were initially welcomed to work at gold mining, in agriculture, at various urban occupations, and as the builders of the first transcontinental railroad (Kitano and Daniels 2001). However, the Chinese soon became the targets of both legal and extralegal harassment and, beyond that, for all kinds of violence, ranging from casual abuse on city streets to mass murder (Boswell 1986; Kitano and Daniels 2001). Asian Americans were excluded from union membership, prohibited from becoming American citizens, and prevented from owning any land (Ichioka 1988; Kitano and Daniels 2001; McLemore 1994). It was against Chinese Americans that the first significant, restrictive immigration law was issued, as early as in 1882 (Kitano and Daniels 2001). Similar legal restrictions were issued against other ethnic groups of Asian Americans, eventually terminating immigration streams from Asia in 1924 (McLemore 1994).

Historical and qualitative studies suggest that, even after 1924, labor market discrimination against the Issei (first generation who were born in Japan and who immigrated to the United States) and Nisei (second generation or U.S.-born Japanese) remained overt regardless of their educational level. As described by Kitano (1976:91):

Japanese were commonly rejected with the line ‘I don’t mind hiring you myself, but my employees would object.’ So the nisei took jobs within the ethnic community. Japanese college graduates manned the fruit stands in the Los Angeles produce markets, and Japanese employers demanded a college education from their \$60 a month salesman.

This quote refers to the excess supply of Nisei workers during this time period due to extensive discrimination against them by many white employers who did not wish to employ Nisei. Because of a lack of alternative employers, more Nisei sought work in the Japanese enclave than was needed which allowed Issei employers to be highly selective due to the over-supply of Nisei.

Ichihashi (1932:356-363) reaches the same basic conclusion of severely restricted opportunities when summarizing his interviews with many Nisei regarding their employment experiences. Other evidence for racist sentiment against Japanese Americans is cited by Kitano (1976:31):

In 1927 a Stanford University professor surveyed the files of a California newspaper and found that the Japanese rated 20,453 inches of newspaper space during a short period. The general attitude reflected in these items was ‘irritation verging on hostility.’ He also found a correlation between newspaper attacks on the Japanese and periods of election years and economic depression.

As such, Japanese Americans in the pre-World War II era faced extensive and persuasive occupational discrimination by companies that were run by whites, despite their high rate of college completion (Bonacich and Modell 1980; Chin 2005).

One of the most discriminatory events against Asian Americans was interment camps for Japanese Americans during World War II (Kitano and Daniels 2001). In 1942, the U.S. government evacuated all persons of Japanese descent from the West Coast and

incarcerated them in War Relocation Authority (WRA) relocation centers. The internees constituted 76 percent of the Japanese population in the continental United States and 97 percent of the Japanese population on the West Coast enumerated in the 1940 census (Chin 2005). Approximately 110,000 Japanese internees lost both property and income (Chin 2005). Property losses resulted from fire sales prior to internment, the inability to manage property or service mortgages while incarcerated, and damage and theft of stored property due to neglect or poor storage facilities (Chin 2005). Chin (2005) finds that the labor market withdrawal induced by the internment reduced the annual earnings of Japanese males by as much as 9 percent-13 percent 25 years afterwards. However, mass evacuation was not carried out anywhere outside the West Coast or for any ethnic/racial group other than the Japanese (Chin 2005). For example, persons of Japanese descent living outside the West Coast, persons of German descent, and persons of Italian descent were not evacuated wholesale, but only a selective evacuation process applied to these groups (Chin 2005).

### **The Continuing Debate on the Disadvantage of Asians as a Minority in the Labor Market**

As historical and qualitative studies mentioned above show, there seems to be widespread agreement that Asian Americans faced direct and overt racial discrimination in the labor market before World War II (Bonacich 1972, 1973; Bonacich and Modell 1980; Boswell 1986; Butler 1991; Cain 1991; Ichihashi 1932; Ichioka 1988; Jiobu 1988; Kitano 1976; Kitano and Daniels 2001; Levine and Montero 1973; Lieberman 1980; Lyman 1974; Makabe 1981; McLemore 1994; Mears 1928; Ngai 2005; Okihiro 1994;



Portes and Manning 1986; Takaki 1998; Thomas 1952; Wilson 1987; Zhou 1992). Due to the lack of survey data, few statistical studies have investigated the socioeconomic attainment of Asian Americans before World War II. However, using data from the Public Use Microdata Sample (PUMS) from the 1940 Census, Sakamoto, Liu, and Tzeng (1998) find that Chinese and Japanese American men are clearly disadvantaged in obtaining higher status occupations after controlling for schooling, experience, and region of residence.

Using the same data (i.e., the 1940 PUMS), Sakamoto and Kim (2003) find that the wages of Asian American men are considerably lower than are those of comparable white men in 1940—even lower than those for African American men. Furthermore, using the same data, Sakamoto, Liu, and Tzeng’s (1998:236) findings show that “relative to white men, Chinese and Japanese American men in 1940 were less likely to be employed in the corporate sector and were more likely to be employed in the low-wage sector.” Furthermore, the authors find that “most of the disadvantage of minority status cannot be attributed to racial differences in schooling, experience, and region in 1940. Indeed, in the case of corporate-sector employment among Japanese Americans, the net disadvantage is actually larger than the over gross association in 1940 (in part because Japanese Americans had higher educational attainment than whites, but a smaller percentage of the former were employed in the corporate sector)” (Sakamoto, Liu, and Tzeng 1998:236-238). Finally, using data from the 1950 PUMS, Sakamoto, Wu, and Tzeng (2000) find substantial wage disadvantages for Japanese Americans (-36.9 percent) and Chinese Americans (-43.7 percent) compared to non-Hispanic whites, net of

age, schooling, military service, region, and metropolitan status. As such, prior studies collectively indicate that Asian Americans were disadvantaged in the labor market before World War II.

Some research argues that labor market discrimination against Asian Americans persists during the period after World War II, and that their socioeconomic attainments are greatly exaggerated. The seminal citation in this literature is Hirschman and Wong (1984:584) who conclude that “Asian Americans approach socioeconomic parity with whites because of their overachievement in educational attainment.” Hirschman and Wong (1984) note that the average earnings and occupational attainments of Asian Americans did not differ very much from those of whites at least in the data that they studied. However, because Asian Americans tend to have higher educational attainments, the labor market can be construed to be discriminating against them in that they must make a higher investment in human capital in order to obtain the same socioeconomic rewards as whites. As stated by Hirschman and Wong (1984:602), “[t]he apparent equality between Asians and white is largely a function of educational overachievement by Asians. If Asians experienced the same process of stratification as whites, their educational credentials would shift their (Asians) occupational and earnings levels substantially above those of the majority population.”

The over-education view is supported by other studies (Barringer, Gardner, and Levin 1993; Barringer, Takeuchi, and Xenos. 1990; Cabezas and Kawaguchi 1988; Chin et al. 1996; Feagin and Feagin 1993; Fong 1998; Hurh and Kim 1989; Kao 1995; Martinelli and Nagasawa 1987; McCall 2001; Min 1995; Snipp and Hirschman 2004;

Takaki 1998; Waters and Eschbach 1995; Wong 1982; Wong et al. 1998; Zhou and Kamo 1994), collectively suggesting continuing labor market discrimination against Asian Americans in the post-World War II era, given this group's high level of education. For example, using the 1980 PUMS data for San Francisco Bay Area, Cabezas and Kawaguchi (1988) find continuing income inequality for most Asian American men and women, particularly foreign-born Chinese, Filipino, and Korean Americans, both younger and older. Cabezas and Kawaguchi (1988) find that low returns on their human capital investments rather than deficiencies in their investments account for about two-thirds of the income gap relative to U.S.-born white men. The authors further find that foreign-born white men are at parity with U.S.-born white men, not suffering from the low returns for foreign-born Asian American men, suggesting that race is more important than nativity (Cabezas and Kawaguchi 1988).

Several more recent studies also support the over-education view. Using data from the 1970, 1980, and 1990 PUMS, Hirschman and Snipp (2001) find that Asian American men (i.e., Chinese and Japanese) are equal to or above white men in their occupational positions measured in terms of the Duncan Socioeconomic Index, but that Filipino men hold slightly lower jobs than whites. Hirschman and Snipp (2001) note that the reason for the higher occupational attainment of Asian American men is simply their educational level—if the Asian American men had the same education as white men, there would be only modest racial occupational differences. Furthermore, the authors find that Chinese and Filipino men earn less than whites, although this gap is somewhat less than blacks, American Indians, and Hispanics. Hirschman and Snipp (2001) conclude that

these results—the persistence of race and ethnic differentials in late twentieth-century America—challenge conventional theories about the declining significance of race in the U.S. stratification system.

Similarly, using the same data (i.e., 1970, 1980, and 1990 PUMS), Snipp and Hirschman (2004) find that Japanese and Chinese men enjoy a modestly higher gross level of occupational status (measured in terms of the Duncan Socioeconomic Index) than white men, and this lead has increased slightly since 1970. In contrast, Filipino men have a slightly lower level of occupational status (Snipp and Hirschman 2004). Snipp and Hirschman (2004) also find that Japanese men are the only workers to have earnings higher than white men—in contrast, Chinese and Filipino men have lower earnings than white men, though the gap is smaller than for Black, Hispanic, and American Indian men. Furthermore, Snipp and Hirschman (2004) find few signs of progress in the period under study; the earnings gap is about as large in 1990 as it was in 1970. Based on the findings, Snipp and Hirschman (2004:114) conclude that “racial and ethnic minority groups which have a long history of economic hardships in this nation continue to experience significant disadvantages in the labor market.”

However, empirical findings about Asian American labor market disadvantage seem to be affected by types of data employed for the analysis. For example, much of the previous research supporting the over-education view (e.g., Hirschman and Snipp 2001; Snipp and Hirschman 2004) includes the first-generation (i.e., foreign-born) Asian Americans in the analysis, who may face reduced labor market opportunities for various reasons other than discrimination in the labor market. For example, prior research argues

that higher education attained abroad may be undervalued by American employers who are generally unfamiliar with foreign universities (Bratsberg and Ragan 2002; Zeng and Xie 2004). In addition, immigrants may have limited English-language skills, and be less familiar with American labor market practices and institutions (Espenshade and Fu 1997; Sakamoto, Goyette, and Kim 2009). The inequality deriving from immigrant-status related resources, which generally affect one's labor market competitiveness, should not be confused with racial discrimination.

Indeed, most studies of native-born Asian Americans using recent data (i.e., after 1990) do not find that they face any substantial and systematic disadvantage in terms of wages and earnings in the contemporary labor market, when controlling for highest educational level completed and other basic demographic variables (Chiswick 1983; Iceland 1999; Kim and Mar 2007; Ko and Clogg 1989; Sakamoto and Furuichi 1997, 2002; Sakamoto and Kim 2003; Sakamoto, Liu, and Tzeng 1998; Sakamoto, Wu, and Tzeng 2000; Takei, Sakamoto, and Woo 2006; Xie and Goyette 2004; Zeng and Xie 2004). This general conclusion seems to apply not only to Asian Americans as a racial category but also to particular ethnic groups such as Asian Indians (Sakamoto, Takei, and Woo 2007) as well as Cambodians, Hmong, Laotians, and Vietnamese (Sakamoto and Woo 2007).

Furthermore, prior research (e.g., Barringer, Gardner, and Levin 1993; Sakamoto and Xie 2006; Xie and Goyette 2004) demonstrates that Asian Americans as a whole (especially among the native-born) tend to have higher mean values on most indicators of socioeconomic status (e.g., education, incomes, hourly wages, and employment in

professional and technical occupations), and that they are not disadvantaged in labor market stratification processes (Fang 1996; Farley and Alba 2002; Iceland 1999; Ko and Clogg 1989; Montero 1980; Sakamoto and Xie 2006; Xie and Goyette 2004; Zeng and Xie 2004). This general pattern in part derives from having parents who tend to have higher levels of educational attainment themselves (Sakamoto and Xie 2006). Such research collectively suggests that Asian Americans are becoming economically successful by preserving and overcoming disadvantages through strong family ties and emphasizing children's education (Kitano and Sue 1973).

In regard to the socioeconomic attainments of Asian Americans, therefore, Sakamoto and Yap (2004) and Sakamoto, Goyette, and Kim (2009) claim that the model minority myth (i.e., a reaction and critique of the "model minority" image of Asian Americans) is no longer a useful theoretical view for understanding the socioeconomic attainments of native-born Asian Americans (for critiques of the hypothesis, also see Crystal 1989; Fong 1998; Suzuki 1977; cited in Barringer, Gardner, and Levin 1993; Kim and Hurh 1983; cited in Barringer, Gardner, and Levin 1993). For example, using data from the 1994-2002 Current Population Surveys (CPS), Sakamoto and Yap (2004) find that native-born non-Hispanic white males are not advantaged on any of the different indicators of socioeconomic attainment (e.g., education, family income, poverty rate, hourly wage, and occupational attainments) when compared to native-born Asian American men and women, and that most of these differences can be largely explained by educational and demographic variables that represent critical class and market resources.

The majority-minority paradigm and the over-education view discussed above contend that minorities have lower socioeconomic characteristics than whites because the latter group has the power to exploit minorities by maintaining racial and ethnic discrimination in society. On the other hand, findings in the research by Sakamoto and his colleagues (Sakamoto and Furuichi 1997, 2002; Sakamoto and Kim 2003, 2008; Sakamoto and Woo 2007; Sakamoto, Liu, and Tzeng 1998; Sakamoto, Wu, and Tzeng 2000; Takei, Sakamoto, and Woo 2006) indicate that the bivariate association between socioeconomic status and racial minority status as an Asian American in the contemporary U.S. labor market is mostly explained by and depend upon class characteristics and market resources. Namely, the authors suggest that the much emphasized ethnic diversity among Asian Americans and its associated socioeconomic heterogeneity may to a large extent derive from class factors associated with different immigration streams from Asia. Thus, Sakamoto and his colleagues argue that the racial aspect emphasized by the majority-minority paradigm is actually less important than other demographic and class factors per se.

Asian immigrants to the United States after the 1965 Immigration Act are more likely to be highly-skilled workers, with more education and more exposure to the English language and Western culture, than those who immigrated during the nineteenth century (Sakamoto and Xie 2006; Xie and Goyette 2004). On the other hand, Southeast Asians—Vietnamese, Laotians, Cambodians, and Hmong—have come largely as political refugees rather than traditional immigrants, and are the most often noted groups of Asian Americans who are said to have low socioeconomic statuses (Blair and Qian

1998; Fong 1998; Kao 1995; Kao and Thompson 2003; Kitano and Daniels 2001; Min 1995; Rumbaut 1995). An awareness of the importance of class (e.g., education) also calls attention to socioeconomic heterogeneity within Asian American ethnic groups.

### **Summary of the Prior Research on Socioeconomic Attainments of Asian Americans**

The literature review introduced above shows that the extent to which Asian Americans face discrimination in the labor market is a subject of considerable debate. Prior research shows that Asian Americans had faced severe discrimination prior to World War II. During the period after the war, there are two opposing views regarding the presence of labor market discrimination against persons of Asian origin. The over-education view claims that Asian Americans appear to have attained socioeconomic parity with non-Hispanic whites simply due to their educational overachievement—net of education, this strand of research argues that Asian Americans have lower levels of earnings than non-Hispanic whites. The other strand of research claims that net of education and basic demographic characteristics, there is no significant differential in the socioeconomic attainments between Asian Americans and non-Hispanic whites. Namely, it is argued that the racial differentials are mostly explained by and depend upon class characteristics and market resources.

This research suggests the substantive importance of investigating the socioeconomic experiences of Asian Americans. If they do not face a significant net racial disadvantage in the labor market, as suggested by some research, then this achievement of parity would represent an historic change for U.S. race relations. The importance of this issue is further enhanced by the need to understand of why Asian



Americans differ from other minorities such as Native Americans, African Americans, and Hispanics who continue to be disadvantaged compared to non-Hispanic whites. In sum, inquiries into the socioeconomic experiences of Asian Americans are important for our better understanding of the race relations in the U.S.

I discussed above that there are two different views and accordingly different empirical findings regarding the presence of labor market discrimination against persons of Asian origin in the post-World War II era. The literature review suggests, however, that the observed Asian American disadvantage at least partly derives from the inclusion of foreign-born Asian Americans who tend to lack adequate labor market resources. Therefore, it is suggested that native-born Asian Americans are not disadvantaged in the contemporary U.S. labor market, net of highest educational level completed and other basic demographic variables. Nevertheless, considering that Asian Americans have different regional distribution from non-Hispanic whites, it is crucial to investigate regional factors to obtain more accurate empirical findings on the labor market attainments of Asian Americans. The following section introduces and discusses these regional aspects, which have largely been missing in the prior research.

### **REGIONAL ASPECTS OF SOCIOECONOMIC DIFFERENTIALS BETWEEN ASIAN AMERICANS AND NON-HISPANIC WHITES**

In considering whether Asian Americans have indeed reached socioeconomic parity with non-Hispanic whites in terms of labor market rewards, prior research indicates that region of residence and migration play important roles. Compared to non-Hispanic whites, Asian Americans tend to have a different regional distribution and their

traditional residential states (i.e., California, Washington, Hawaii, New York and New Jersey) tend to have a high cost of living. As argued some time ago by Hurh and Kim (1989), the wages of Asian Americans may not have reached parity with whites after taking into account the higher cost of living that Asian Americans tend to encounter due to their regional distribution.

**Table 1. Regional Distribution of Population by Racial Group**

Area	Non-Hispanic Whites		Asian Americans	
	Number	Percent	Number	Percent
United States	198,482,500		11,898,828	
Region				
Northeast	41,117,100	20.3	2,368,297	19.9
Midwest	54,236,600	27.0	1,392,938	11.7
South	66,455,600	33.8	2,267,094	19.1
West	36,673,200	18.9	5,870,499	49.3
Total	198,482,500	100.0	11,898,828	100.0

Source: 2000 1% PUMS for non-Hispanic whites and U.S. Census Bureau (2002:5) for Asian Americans.

Note: Refers to entire populations of non-Hispanic whites and Asian Americans.

The index of dissimilarity between the two distributions is 30.4.

Table 1 shows regional distribution of non-Hispanic white and Asian American populations. In 2000, about 20 percent of both non-Hispanic whites and Asian Americans resided in the Northeast. While larger percentages of non-Hispanic whites resided in the Midwest (27.0 percent) and in the South (33.8 percent), nearly half of Asian Americans (49.3 percent) resided in the West. As such, there is an obvious difference in regional distribution of these two racial groups. Non-Hispanic whites are much more likely to live in the Midwest and South, but almost half of Asian Americans live in the West. The index of dissimilarity for Table 1 is 30.4 demonstrating that the regional distribution of

these two racial groups differs substantially. Furthermore, the second largest state population of Asian Americans is in New York (Sakamoto, Kim, and Takei Forthcoming) indicating that Asian Americans who do not reside in the West often face a high cost of living in the areas near the east coast of the U.S.

Table 2 shows the cost of living differentials across the states and regions (Berry, Fording, and Hanson 2000). In addition to general consumer goods and cost of housing, the estimates take into account fuel and energy cost which varies by climate. The indices below 1.00 indicate that the cost of living is below the national average. In turn, the indices above 1.00 indicate that the cost of living is above the national average. The table shows that some traditional residential states of Asian Americans, such as California (1.086) and Hawaii (1.219), are relatively high in living expenses. Moreover, the Northeastern states, where about 20 percent of both Asian Americans and non-Hispanic whites reside, have consumer price indices above the national level. The table also shows that the Southern states, where a large number of non-Hispanic whites tend to reside, overall have lower cost of living. Finally, the Midwestern states have consumer price indices above the national level. However, these indices are based on 1995 data and the indices for the Midwest might actually be lower today. As such, we can tell from Table 1 and 2 that non-Hispanic whites tend to reside in the Midwest and South where cost of living is relatively low, whereas Asian Americans tend to reside in the high-cost West region.

Today, however, an increasing share of Asian Americans resides in non-traditional states/regions, due to regional migration and natural growth. For example,

**Table 2. Cost of Living Index for 51 States, by Region**

Region	State	Index
Northeast	Connecticut	1.219
	New Jersey	1.178
	Massachusetts	1.172
	New Hampshire	1.126
	Rhode Island	1.120
	New York	1.109
	Vermont	1.063
	Maine	1.043
	Pennsylvania	1.022
Midwest	Illinois	1.075
	Minnesota	1.070
	Wisconsin	1.040
	Michigan	1.037
	Missouri	1.033
	Ohio	1.031
	Kansas	1.025
	Nebraska	1.022
	Indiana	1.021
	Iowa	1.009
	North Dakota	1.008
	South Dakota	1.002
	South	District of Columbia
Maryland		1.052
Delaware		1.035
Virginia		0.997
Florida		0.958
Georgia		0.956
North Carolina		0.944
Tennessee		0.938
South Carolina		0.932
Alabama		0.920
Kentucky		0.915
Texas		0.914
Oklahoma		0.912
Arkansas		0.908
West Virginia		0.908
Louisiana		0.904
Mississippi	0.898	
West	Alaska	1.219
	Hawaii	1.219
	California	1.086
	Nevada	0.994
	Washington	0.978
	Colorado	0.969
	Arizona	0.940
	Oregon	0.934
	Wyoming	0.927
	New Mexico	0.920
	Utah	0.919
	Idaho	0.910
Montana	0.905	

Note: These estimated state differentials are based on the results provided by Berry et al. (2000:558).

Table 3 indicates that the total population of the United States increased from 248.7 million in 1990 to 281.4 million in 2000. Across this time period, the total population of Asian Americans increased from 6.9 million to 11.9 million. This increase represents a percentage growth of the Asian alone population from 2.8 percent in 1990 to 4.2 percent of the total American population in 2000. Table 3 also shows the growing rates of the Asian American population in non-West regions. While Asian Americans were greatly underrepresented in the Northeast, Midwest, and South in 1990, just in a decade, more Asian Americans live in these regions. Although they continue to be proportionately small in the non-West regions, these regions will continue to have high rates of Asian American population growth due to regional migration and natural increase.

**Table 3. Asian Population for the United States and by Region: 1990 and 2000**

Area	1990			2000		
	Total Population	Asian Population		Total Population	Asian Population	
		Number	Percent of Total U.S. Population That Is Asian		Number	Percent of Total U.S. Population That Is Asian
United States	248,709,873	6,908,638	2.8	281,421,906	11,898,828	4.2
Region						
Northeast	50,809,229	1,324,865	2.6	53,594,378	2,368,297	4.4
Midwest	59,668,632	755,403	1.3	64,392,776	1,392,938	2.2
South	85,445,930	1,094,179	1.3	100,236,820	2,267,094	2.3
West	52,786,082	3,734,191	7.1	63,197,932	5,870,499	9.3

Source: U.S. Census Bureau (2002:5)

Note: For 1990, Asian population includes Pacific Islanders and is based on a single-race classification system.

For 2000, Asian population includes both single-race and multi-race, but excludes Pacific Islanders.

The following section first introduces previous studies on the role of region in Asian American labor market outcomes. This section then discusses theoretical

perspectives on regional migration. Finally, this section introduces some substantive research issues that have to be investigated.

### **The Role of Region in Asian American Labor Market Outcomes**

In examining the debate on socioeconomic attainments of Asian Americans, the role of regional differences is a key factor for their labor market progress in the United States (Mar 1999), because region affects labor market attainments of Asian Americans and non-Hispanic whites differently. Cabezas and Kawaguchi (1988) argue that the seeming parity between Asian Americans and non-Hispanic whites is merely an artifact of regional location. Regional distribution of Asian Americans is most characterized by their concentration in certain states and regions, such as Hawaii, California, and the West Coast, primarily due to the fact that these were the places of residence after arrival from abroad of the earlier immigrants (Allen and Turner 1988; Barringer, Gardner, and Levin 1993; Hurh and Kim 1989; Lyman 1977). Since Asian Americans are primarily concentrated in the high wage/high cost of living western United States (Hurh and Kim 1989; Takaki 1998; US Commission on Civil Rights 1988), especially in cities rather than rural areas (Takaki 1998), it is argued that the unadjusted average U.S. earnings comparisons between Asian Americans and non-Hispanic whites are inappropriate comparisons of economic progress (Mar 1999).

Indeed, prior research shows that Asian Americans are adversely affected by their place of residence. Using data from the 1970, 1980, and 1990 PUMS, Snipp and Hirschman (2004:110) note that, “[i]nterestingly, unlike other minorities, Asian men residing in areas with large populations of co-ethnics, namely California and Hawaii,

have occupational statuses which are slightly lower than Asian men living elsewhere. In the absence of this liability, the occupational statuses of Japanese and Chinese men in California and Hawaii would be an average of 1 to 6 points higher.” Therefore, Snipp and Hirschman (2004:115) conclude that “at least Asian American men are disadvantaged by their geographic concentrations.” Using 1990 PUMS, Mar (1999) examines the role of location in the earnings discrimination of three groups of Asian Americans: Japanese, Chinese, and Filipinos. Mar’s (1999) findings from the regional comparisons of earnings differentials by race suggest that Asian American (i.e., Chinese and Japanese) men encounter less labor market discrimination in Hawaii than in California. In particular, Mar (1999) finds that earnings for Filipino men are significantly lower than non-Hispanic whites in California once differences in human capital are taken into account. Fuji and Mak (1985) find that Filipino men have lower returns to education in Hawaii than the rest of the United States. Furthermore, when controlling for field of study and college type among college graduates, Kim and Sakamoto (2008b) find that also controlling for region of residence results in a net disadvantage of about 8 percent for native born Asian American men. Kim and Sakamoto (2008b) note that, to the extent that region of residence should be considered to be a necessary control variable, then college-educated native born Asian American men have yet to reach full wage parity with whites.

Although Asian Americans tend to live in high wage/high cost of living regions and states, this may not derive from a lack of labor market opportunities nationally. Rather, this may be due to personal proclivities and family ties that are associated with being more likely to have previously lived in those areas. In keeping with traditional

Asian cultural norms, Asian Americans may be more concerned than are whites with residing near or with aging parents (Kamo 2000; Xie and Goyette 2004). Asian Americans as a group have been characterized as being more family oriented in the sense of being more likely to marry after completing schooling, less likely to become divorced, more likely to focus on the schooling achievements and related childrearing activities of their children, and more likely to form three-generational families (Kamo 2000; Min 1995; Sun 1998; Xie and Goyette 2004). Some evidence accordingly suggests that, despite being younger on average, Asian Americans have higher levels of home equity than non-Hispanic whites (Krivo and Kaufman 2004) in part due to the preference for larger homes. Because of this Asian American sub-cultural context that places a premium on family functioning, Asian Americans may not maximize their cost-adjusted earnings to the same extent that non-Hispanic whites do, but their residence may not derive from a lack of labor market opportunities nationally but rather may reflect the tendency of Asian Americans to prefer to live in places such as California despite the higher costs (Sakamoto, Kim, and Takei Forthcoming). In sum, region of residence probably entails a higher cost of living for Asian Americans than non-Hispanic whites, but the extent to which this pattern may be interpreted as deriving from racial and ethnic discrimination in the labor market requires further investigation.

Indeed, while the nearly majority Asian Americans still prefers to live in California and some other traditional residential states, an increasing size of Asian American population, especially recent immigrants, do not live in their traditional residential region of the West and reside in all geographic areas of the nation, especially



to the South (Barringer, Gardner, and Levin 1993; Sakamoto, Kim, and Takei Forthcoming). Although the vast majority of Asian Americans were concentrated in the West prior to the twenty-first century, most Asian Americans now live outside of the West (i.e., in the South, Midwest or Northeast) (Sakamoto, Kim, and Takei Forthcoming). The South has recently overtaken the Northeast as the region with the second largest population of Asian Americans (Sakamoto, Kim, and Takei Forthcoming).

Although Asian Americans may have greater preferences for living in high-cost areas such as California, contemporary American society is characterized by a high degree of geographic mobility particularly among the college educated (Farley 1996) who are disproportionately Asian American. Even among low skilled workers whose supply has increased in recent years due to immigration from Latin America, Borjas, Freeman, and Katz (1996) and Borjas (2003) find that native born workers and immigrant workers relocate fairly quick to places where their labor market returns are greater. Workers may be increasingly locating to places where the combination of labor market opportunities, regional characteristics, and cost of living most suit their preferences. Region of residence in the contemporary labor market may thus no longer resemble a pre-labor market factor. Indeed, larger proportion of native-born (i.e., a smaller proportion of foreign born) Asian Americans reside in the West (Sakamoto, Kim, and Takei Forthcoming). As suggested by Sakamoto, Kim, and Takei (Forthcoming), Asian Americans are entering into the social and geographic mainstreams of American society by successfully competing for its better jobs in all areas of the nation.

## **Theoretical Perspectives on Regional Migration**

As discussed above, major patterns of regional variation and regional migration of Asian Americans are characterized by their historical concentration in the West, especially in California, and increasing geographic diversity of recent immigrants. It is also discussed earlier that their geographic concentration in California may not derive from racial and ethnic discrimination in the labor market, but rather be attributed to the Asian American sub-cultural context that places a premium on family functioning. Namely, it is assumed from the theoretical perspectives of regional migration that those who migrate to and reside in non-traditional states/regions have increased their earnings through their mobility. In the following section, I will briefly introduce theoretical perspectives and some prior literature on regional mobility among Asian Americans.

### ***Neoclassical Theory of Migration***

The neoclassical theory of migration suggests that migrants, including internal migrants within an interregional system, improve their situations (e.g., monetary and employment returns) by moving (Borts and Stein 1964; Clark 1983; Sjaastad 1962; for a review, see Lee and Roseman 1999). The theory suggests that labor moves in response to interregional wage differentials, with the volume of movement increasing as the wage differential increases (Greenwood 1975; cited in Lee and Roseman 1999). It is predicted that an individual will move from one location to the other if the present value of additional earnings (via better employment probability) associated with the location change exceed the cost of the move (Molho 1986; cited in Lee and Roseman 1999). The theory proposes that this movement will lead to an optimal spatial allocation of the

demand and supply of labor and that ultimately wage rates will be equalized across regional labor markets (Greenwood 1985; cited in Lee and Roseman 1999).

The human capital theory of migration emphasizes a diverse set of utility differential between origin and destination (Clark 1982), including employment opportunities, potential earnings (Evans 1990; Greenwood and Hunt 1989; cited in Lee and Roseman 1999), quality of life, place-specific amenities (Graves 1979, 1980; Graves and Mueser 1993; cited in Lee and Roseman 1999), and particular local public services (Tiebout 1956; cited in Lee and Roseman 1999). Prior empirical studies generally indicate that migrants are motivated by these utility differentials between origin and destination (Lee and Roseman 1999).

Yet, studies concerned with family migration (e.g., Bonney and Love 1991; Cooke and Bailey 1996; Mincer 1978; Sandell 1977) indicate that families with two or more wage earners (usually husband and wife) focus on net family benefits that motivate the migration of a family unit, rather than net personal benefits, unlike the traditional one-person household considers (Lee and Roseman 1999). Prior research on household migration theorizes that a household migrates if the total increase in household income exceeds the total costs of migration. As such, it is possible for a move to reduce one partner's earnings if the increase in the other partner's earnings is greater (Mincer 1978; Sandell 1977; cited in McKinnish 2008). Indeed, a number of empirical papers have studied the differential effect of migration on labor market outcomes of wives and husbands (for a review, see McKinnish 2008), and most have found that migrating wives experience more negative labor market effects than migrating husbands.

In this context, whereas migration increases earnings or employment opportunities of husbands, those of wives may suffer (Greenwood 1975; Long 1974; Mincer 1978; Shihadeh 1991), although some studies oppose this view (Bonney and Love 1991; Cooke and Bailey 1996; DeVanzo 1976; cited in Lee and Roseman 1999). Spouses' (typically wives in the literature) individual net benefit to migration is secondary to the net family benefit to migration.

Few studies have investigated family migration for ethnic and racial groups, although many studies have shown differences in migration patterns and behavior between blacks and non-Hispanic whites at the individual level (for a review, see Lee and Roseman 1999). For example, using data from the 1990 PUMS, Lee and Roseman (1999) examine the determinants and employment consequences of non-Hispanic white and black family interstate migration within the United States during the period 1985-1990. Lee and Roseman (1999) find that various socioenvironmental and fiscal factors are significantly and disproportionately associated with the location choices of family migrants for both whites and blacks. Expected economic benefits are more important to destination choices by black families than they are for white families (Lee and Roseman 1999). Consistent with traditional family migration theory, the employment prospects of migrant wives seem to play a lesser role than the husbands' employment in family migration decisions for both blacks and whites (Lee and Roseman 1999).

### ***Theoretical Perspectives on Asian American Migration***

According to the assimilation theory (Gordon 1964), decreasing distributional dissimilarity would indicate that Asian Americans are becoming more assimilated

(Sandefur and Jeon 1991; cited in Barringer, Gardner, and Levin 1993). Bartel (1989:384; cited in Barringer, Gardner, and Levin 1993:115) indeed finds that “[t]he more educated Asians ... were more geographically dispersed and less likely to choose cities based on the location of fellow ethnics.” Based on the literature on ethnic migration, Saenz, Zhai, and Hwang (1994) examine the selectivity of the six major ethnic groups of Asian Americans (Chinese, Filipinos, Indians, Japanese, Koreans, and Vietnamese) outmigrants from states designated as the “core” (e.g., California, Hawaii, and New York for Chinese), where members of the ethnic group are disproportionately represented. Saenz, Zhai, and Hwang (1994) theorize that migrants leaving the core region are selective along various dimensions (e.g., demographic, linguistic, socioeconomic), with those moving to the frontier being the most highly selective.

Saenz, Zhai, and Hwang (1994:2) note that “the selectivity associated with migration outside of the enclave (core) areas where Asian Americans have been historically concentrated can be best understood by viewing migration and geographic settlement as processual in nature (Bohning 1972; Massey 1987). According to this perspective, the distribution of ethnic groups takes place over a series of stages, each stage consisting of movers with certain attributes.” According to this perspective, outmigrants from the “core” states (where members of the ethnic group are disproportionately represented) are selective along demographic, linguistic, and socioeconomic dimensions, with those moving to areas with relatively few co-ethnics being the most highly selective (Shaw 1975). Saenz (1991) indicates that Mexicans

migrating out of the Southwest during the late 1970s to other areas with relatively few Mexicans were predominantly people with high socioeconomic statuses.

Saenz, Zhai, and Hwang (1994) note that the selective nature of frontier migration is also part of the Asian-American experience in the United States. For example, the initial waves of Asian immigrants coming to the United States from China, Japan, Korea, and Philippines up to the early part of the twentieth century were disproportionately male, laborers, and students (Barringer, Gardner, and Levin 1993; Kitano 1976; Petersen 1971; Yun 1977; cited in Saenz, Zhai, and Hwang 1994:3). Furthermore, the earliest groups of Japanese Americans leaving the internment camps during World War II were most characterized with the highest levels of education and assimilation among this population (Uhlenberg 1973; cited in Saenz, Zhai, and Hwang 1994:3). Nevertheless, research focusing on the internal migration patterns of different Asian American groups and the selectivity of people leaving ethnic enclave regions has been scarce to date (Saenz, Zhai, and Hwang 1994:3). One of the few earlier studies was conducted by Barringer, Gardner, and Levin's (1993), whose analysis of the internal migration patterns of Asian Americans during the 1975-1980 period found an absence of large-scale mobility toward areas with small Asian American populations (cited in Saenz, Zhai, and Hwang 1994:3).

Although frontier migration is characterized with its selectivity, the frontier region is gradually tamed with the settlement of larger numbers of co-ethnics and especially with the arrival of families (Breton 1964; Hurh and Kim 1984; Kim 1977a, 1977b, 1977c; cited in Saenz, Zhai, and Hwang 1994:4-5). In the case of Asian Americans, their settlements in several states in the West and Northeast provided Asian

American newcomers with a network system which facilitated their adjustment to the new area (Saenz, Zhai, and Hwang 1994). For example, Kim (1978; cited in Saenz, Zhai, and Hwang 1994:5) observed the process in which Chinese, Filipino, Japanese, and Korean immigrants moving to Chicago made use of network systems composed of relatives and friends for various types of assistance to ease their settlement and adjustment. Similarly, Lee (1977; cited in Saenz, Zhai, and Hwang 1994:5) observed the development of network systems among Korean students in two Georgia communities, as the Korean student population increased.

The lack of ethnic communities and well-established cultural and ethnic resources in frontier areas suggest that Asian Americans moving to the frontier (i.e., certain parts of the Midwest, Northeast, and South) tend to be highly selective (Saenz, Zhai, and Hwang 1994). Indeed, using data from the 1990 PUMS, Saenz, Zhai, and Hwang (1994) find that Asian American migrants leaving the ethnic-specific core regions between 1985 and 1990 were highly selective along demographic, linguistic, and socioeconomic lines, with those moving to areas with relatively few co-ethnics being the most highly selective.

The selectivity of contemporary Asian Americans in non-traditional region is documented in Sakamoto, Kim, and Takei (Forthcoming) who investigate current demographic characteristics of Asian Americans in the South. The authors find that Asian Americans, especially recent immigrants, are more likely than non-Hispanic whites to migrate to the region. In contrast to the racial differentials in other regions, Asian Americans in the South have notably higher levels of education and hourly wages than non-Hispanic whites in the South. When compared to Asian Americans in other regions,

Asian Americans in the South have higher levels of education, hourly wages, and employment in professional and technical occupations. After adjusting for regional differentials in the cost of living, Asian Americans in the South have higher levels of earnings, household income, and per-capita household income than Asian Americans in other regions. Overall, Sakamoto, Kim, and Takei (Forthcoming) interpret these results as suggesting the beginning of a new stage of Asian American history which is characterized by improved socioeconomic opportunities that are facilitating a movement away from the geographic margins of the nation such as Hawaii and California.

The selectivity of migrants and the positive effects of mobility on socioeconomic outcomes are also suggested for other minority groups. In regard to Native Americans, Huyser, Sakamoto, and Takei (2007) find that regional migration increase wages and earnings among single-race Native American men, although the effects are relatively modest and do not contribute much to explaining the gap between the wages and earnings of non-Hispanic whites versus Native Americans. In sum, prior research suggests the theoretical and empirical links between regional mobility and positive socioeconomic outcomes, in addition to the selectivity of migrants.

In addition to the selective nature of migrants, high rates of Asian American demographic growth in non-traditional regions are characterized by natural growth. Most of Asian American population is associated with post-1965 immigration streams, and an increasing number of their U.S.-born children are entering the labor market. An increasing number of them might be born outside of the West Coast, reflecting increasing socioeconomic opportunities in the non-traditional states/regions. Namely, the increasing



population of Asian Americans in non-traditional areas comprises not only of migrants from the West Coast, but also of children of post-1965 Asian American immigrants who reside in such places by birth.

Despite the high rates of demographic growth of Asian Americans in the non-Western regions, research focusing on regional variations and regional migration of Asian Americans is scarce, making this research critical. Although there are several studies concerned with this research topic (Barringer, Gardner, and Levin 1993; Saenz, Zhai, and Hwang 1994), their findings are based on 1980 and 1990 Censuses and therefore do not include recent Asian American immigrants and an increasing number of native-born Asian Americans, most of whom are associated with post-1965 immigration streams. Especially, previous research is limited in the following ways. First, prior research has not investigated broad demographic and socioeconomic characteristics of Asian Americans across the regions. Second, although the selectivity of migrant Asian American is documented, previous studies have not examined whether wage determination and regional migration are indeed interrelated among Asian Americans. In examining this empirical link, differentials in earnings between those who migrate and those who do not migrate (especially those who stay in the West and those who migrate out of that region) would be crucial, considering the geographic concentration of Asian Americans.

As discussed in Kim and Sakamoto (2008b), Asian Americans in California may not maximize their cost-adjusted earnings to the same extent that non-Hispanic whites do due to the Asian American sub-cultural context that places a premium on family

functioning, but their residence may not derive from a lack of labor market opportunities nationally. On the other hand, after adjusting the income figures for regional differentials in the cost of living, Asian Americans in the South have by far the highest mean hourly wage compared to Asian Americans in other regions as well as to non-Hispanic whites in any region (Sakamoto, Kim, and Takei Forthcoming). After factoring in the lower cost of living, Southern Asian Americans have higher average levels of earnings, household incomes, and per-capita household income than Asian Americans elsewhere (Sakamoto, Kim, and Takei Forthcoming). In this Asian American sub-cultural context that places a premium on family functioning, the lower housing costs of the South (as compared to the West and Northeast) are noteworthy attraction (Sakamoto, Kim, and Takei Forthcoming).

In sum, the theoretical link between wage determination and regional migration for Asian Americans might largely entail an immigrant effect, considering that recent immigrants, rather than native-born Asian Americans, tend to reside in nontraditional regions.

### **Substantive Research Issues to be Investigated**

To examine whether Asian Americans have attained socioeconomic parity with non-Hispanic whites, the prior literature suggests the significance of residential region and regional migration, because Asian Americans and non-Hispanic whites have different regional distributions and migration patterns. More specifically, broad demographic and socioeconomic characteristics of Asian Americans across the regions, and whether wage determination and regional migration are indeed interrelated among Asian Americans,

ought to be investigated. Moreover, the extent to which these important characteristics of Asian Americans differ from non-Hispanic whites needs to be investigated.

A particularly important research question is whether this theoretical link between wage determination and regional migration significantly differs between Asian Americans who continue to reside in areas with large populations of co-ethnics, and those who migrate to and reside in other regions. As discussed, probably due to the Asian American sub-cultural context that places a premium on family functioning, they may not maximize their cost-adjusted earnings to the same extent that non-Hispanic whites do, but their residence may not derive from a lack of labor market opportunities nationally but rather may reflect the tendency of Asian Americans to prefer to live in places such as California despite the higher costs (Sakamoto, Kim, and Takei Forthcoming). On the other hand, lower housing costs and increasing socioeconomic opportunities in the non-traditional regions might be a noteworthy attraction at least for some Asian Americans. Indeed, among Asian Americans who had moved to the South during the past year, nearly 11 percent were coming from California (Sakamoto, Kim, and Takei Forthcoming).

Although some research (Saenz, Zhai, and Hwang 1994; Sakamoto, Kim, and Takei Forthcoming) finds selectivity of Asian American migrants, our current knowledge has been limited due to a lack of broad regional comparisons of demographic and socioeconomic differentials between Asian Americans and non-Hispanic whites, and of those who remain in their residential regions and those who move. Due to their traditional tendency to reside in the West (especially in California), it is particularly important to investigate whether some Asian Americans live in the region because of their preference,

or this preference holds for non-Hispanic whites as well. Accordingly, among multiple patterns of regional mobility, this proposed research particularly focuses on those who remain in the West and those who migrate to other regions, by examining the important linkage between wage determination and decision to migrate. In the following chapter, I will discuss how these research questions are more specifically investigated and operationalized in the context of my analysis of particular data sets.

## **Chapter II**

### **DATA, HYPOTHESES, AND METHODS**

In the context of the issues discussed in the prior chapter, this research investigates various demographic characteristics of Asian American men in regard to their socioeconomic attainments (focusing specifically on their labor market outcomes). In particular, the key concerns include illuminating how patterns of migration, region of residence, and generational status affect the hourly wages of Asian American men. Using linear multiple regression models estimated by ordinary least squares (OLS) and logistic regression models estimated by maximum likelihood, the effect of regional migration on wages for Asian Americans, in reference to native-born non-Hispanic whites, is investigated. In the last part of the analysis, the significance region is further examined using a switching regression model in order to account the possibility of sample selectivity between wages and region among men who are observed to reside in the West.

#### **Data and Target Population**

I use two different data sources for the analysis. First, I use the 5% Public Use Microdata Sample (PUMS) from the 2000 U.S. Census. The 5% PUMS is a random sample from the records of the 2000 U.S. Census and is provided by which the U.S. Census Bureau for the use of researchers. This data set is one of the most recently available that provides an adequate sample size for Asian Americans as well as reliable information on demographic and socioeconomic variables.

Of particular relevance to my research concerns, the 2000 5% PUMS includes respondents' information on region of birth, region of residence five years ago, and

current residential region. Using this data set, I define migration as a dichotomous outcome that refers to any difference between region of residence five years ago and region of current residence at the time of the survey using the four standard areas of the U.S. Census Bureau (including the West, Midwest, Northeast, and South). Because my substantive focus is on the migration, residential and employment decisions of Asian American men as adults in the labor force, migration relative to place of birth is less relevant to my concerns because it is often affected by the motivations and decisions of one's parents when one was a child. My interest is not in the sources of parental migration but in the migration processes of adult men themselves because the latter more directly relates to the issue of whether Asian American men have parity with whites in terms of labor market outcomes. I use the four-region classification because it is more theoretically relevant to the study of Asian Americans to define migration as a geographically distant move (indicating a clearer break from relations with the parental household) than migration based on the nine-region classification or between the U.S. states.

In this regard, Barringer, Gardner, and Levin (1993:120) note some advantages and disadvantages in using residence five years ago to investigate migration. For example, answers to the question on residence exactly five years prior to the Census enable us to look at migration patterns over a well-defined and recent period of time. However, by the fact that such retrospective migration questions do not capture all the movement during the previous five years—only the residence in 1995 and the 2000 residence are known, and any intermediate residences are ignored as if they never

existed. We also miss any migration by those under five years of age at the census, migration by those who died in the interval, and emigration out of the country since 1995. Nevertheless, except for detailed longitudinal data on life histories (which do not provide an adequate sample size for Asian Americans) such considerations are typically endemic to the study of migration when using larger sample surveys. I therefore argue that much can still be learned by examining the 5% PUMS especially in regard to my research interest in understanding the relationships between labor market outcomes, migration, and region of residence for Asian American men.

The second data set that I use is the 2003 National Survey of College Graduates (NSCG). The sampling frame for this survey is nationally representative of all persons who responded in the 2000 U.S. Census that they had a college degree. The NSCG is a probability sample from that sampling frame and is representative of the college-educated population in 2000. The NSCG includes information on the field of study of the highest degree obtained as well as earnings and basic demographic characteristics. The NSCG also includes information on mother's educational attainment and father's educational attainment. All of these latter variables are known to be predictive of college selectivity (Bennett and Xie 2003; Hearn 1984) although they are not available in the 5% PUMS.

Using this data set, I define migration as a dichotomous outcome that refers to any difference between the region attended high school and the region of current residence. Regional changes are again considered in terms of the standard classification of four areas (including the West, Midwest, Northeast, and South) of the U.S. Census Bureau. The rationale for this definition is again to consider migration as a decision that is made

by the respondent as an adult given his geographic preferences and his competitiveness in the labor market. Note, however, that place of birth is nonetheless also utilized to some extent as a control variable in analysis as is further discussed below.

As discussed in Chapter I, compared to non-Hispanic whites, Asian Americans tend to have a different regional distribution and their traditional residential states tend to have a high cost of living. The prior literature also suggests the significance of regional migration, because Asian Americans and non-Hispanic whites have different migration patterns. Therefore, this research examines whether Asian Americans have indeed reached socioeconomic parity with non-Hispanic whites in terms of labor market rewards, after taking into account the regional distributions and migration patterns.

In sum, migration as studied in this research is a dichotomous outcome that refers to: (1) any difference between region of residence five years ago and region of current residence at the time of the survey; or (2) any difference between the region attended high school and the region of current residence. The first definition is used in the case of the 2000 5% PUMS while the second is used for the 2003 NSCG (note that the region attended high school is not available in the 5% PUMS while region of residence five years ago is not available in the NSCG.). For my purpose of studying migration, I define a change in region for both data sets in terms of the four standard regions as classified by the U.S. Census Bureau including the West, Midwest, Northeast, and South.

Regarding educational attainment, some highly informative data are provided by the 2003 NSCG. Investigating and controlling for the effects of educational attainment is important because recent studies suggest that the level of one's completed schooling is



increasingly significant in explaining wage inequality (Becker and Murphy 2007; Kim and Sakamoto 2008a). In particular, the economic returns to college attainment are increasing (Becker and Murphy 2007; Card and DiNardo 2002). However, detailed analysis has revealed that this increasing return to college completion is really evident only for degrees awarded in the U.S. (Zeng and Xie 2004). The NSCG provides information on the place of one's educational attainment so that by using this data set my study can clearly ascertain whether the degree was awarded by a U.S. college or university.

In addition, field of study has become another important dimension of educational attainment that affects wages (Card and DiNardo 2002; Kim and Sakamoto 2008b). Scientific, technical, engineering and math degrees (i.e., STEM) are well known to yield higher labor market rewards than degrees in the social sciences, humanities, and fine arts (Card and DiNardo 2002; Kim and Sakamoto 2008b; Song and Glick 2004). Because Asian Americans are well known to be much more likely to complete college (Sakamoto and Xie 2006; Sakamoto, Goyette, and Kim 2009; Xie and Goyette 2004) as well as to be much more likely specialize in STEM fields (Goyette and Xie 1999; Kim and Sakamoto 2008b; Sakamoto, Goyette, and Kim 2009; Simpson 2001; Xie and Goyette 2003;), investigating the various effects of educational attainment is particularly apropos for evaluating the earnings of Asian Americans and the issue of whether they have achieved parity relative to whites. In contrast to the PUMS, the information on the respondent's field of study is available in the 2003 NSCG.

Another dimension of educational attainment is the prestige of the college or university that one attended. There is some evidence that Asian Americans are more likely to obtain their college degrees from higher status institutions (Sakamoto, Goyette, and Kim 2009). Although highly imprecise, information regarding college prestige can be inferred from the Carnegie classification of the institution that awarded the degree. Although absent in the PUMS, this latter piece of information is provided by the 2003 NSCG. Using the 2003 NSCG therefore enables my analysis to obtain more informative results about the extent to which Asian Americans are obtaining equivalent labor market rewards (in comparison with whites) on their various dimensions of educational attainment including college prestige.

Finally, variables about family background are not provided by the PUMS but they are to some extent available in the 2003 NSCG including level of mother's educational attainment and level of father's educational attainment. These variables are useful for my study because they are probably correlated with various dimensions of educational attainment (Bennett and Xie 2003; Hearn 1984). Family background variables may also prove to be important in predicting migration in the context of my switching regression analysis.

Nevertheless, the 2000 5% PUMS is still very important for my proposed research because it includes those without college education, which the 2003 NSCG excludes. In order to empirically consider how much of the Asian American labor force is omitted by the NSCG, Table 4 shows the distribution of schooling levels completed by 1.5-generation (i.e., those who were born overseas but who came to the U.S. before the age of

**Table 4. Distribution of Schooling Levels Completed in the 2000 5% PUMS**

	1.5-Gen. and Native-Born Asian American	Native-Born Non-Hispanic White
Less Than HS	5%	9%
HS Graduate	16%	31%
Some College, Including Associate Degree	30%	30%
College Graduate	32%	19%
Master's Degree	9%	7%
Ph.D. and Professional Degree	8%	4%
Total	100%	100%
Sample Size	26,600	1,975,215

Note: The sample refers to men between the ages of 25 to 64 with positive earnings who worked at least 1,000 hours during the year prior to the survey.

13) Asian Americans combined with native-born Asian Americans, and native-born non-Hispanic whites (i.e., the reference group) in the 2000 5% PUMS. The sample is limited to the target population that I consider in my analysis of wages, namely, respondents with positive earnings who were between the ages of 25 to 64 and who were working at least 1,000 hours during the year prior to the survey. Table 4 shows that 51 percent of 1.5- and native-born Asian Americans and 60 percent of native-born non-Hispanic whites do not have a college degree. As such, the PUMS data are important for my proposed analysis in order to include workers without college degrees who remain a significant proportion of each of these population groups.

My study uses the official racial/ethnic classification system stipulated by the 2000 U.S. Census Bureau, and in those terms this dissertation considers a target population that includes Asian Americans and non-Hispanic whites with positive earnings who were between the ages of 25 to 64, and who were working at least 1,000 hours during the year prior to the surveys. This restriction ensures that only workers with some definite attachment to the labor force are included in the analysis. Note that persons

who worked 1,000 hours during the year prior to the survey include full-time workers who were employed half the year as well as part-time workers who were employed year-round. The target population is also restricted to those with positive earnings because negative values tend to be associated with problems in the measurement of earnings for self-employed persons.

The analysis differentiates Asian Americans in terms of those who were born overseas but who came to the U.S. before the age of 13 in the U.S. (whom I have referred to as the 1.5 generation as is commonly done in the literature on Asian Americans) and native-born generations among Asian Americans. This distinction is made because the 1.5 generation may perhaps be regionally more mobile as well as somewhat distinctive in the wage determination patterns as they are the children of immigrants who tend to be more motivated (Sakamoto, Goyette, and Kim 2009). Nevertheless, the difference between the 1.5 and the native born is not really very clear from prior research, because the former are perfectly fluent in English and familiar with American culture. Furthermore, most native born Asian Americans are second generation and are thus also the children of immigrants. Accordingly, the following analysis will give us better information about any differences (if there are any) between 1.5- and native born Asian Americans in terms of their migration and earnings.

As discussed in Chapter I, generational status (i.e., foreign-born or native-born) is a significant but sometimes ignored factor in investigating the labor market attainment of Asian Americans (e.g., Hirschman and Snipp 2001; Snipp and Hirschman 2004). Foreign-born Asian Americans may face reduced labor market opportunities for various

reasons other than discrimination in the labor market, such as foreign education that is generally undervalued by American employers, limited English skills, and less familiarity with American labor market practices and institutions. To more accurately examine the effect of race per se, or whether Asian Americans have reached parity with non-Hispanic whites in terms of labor market rewards, this research necessarily differentiates Asian Americans by nativity status.

For simplicity and to avoid excessive length, I focus on men only. The migration decisions of Asian American women should be studied in future research. Their migratory processes may be further complicated due to the even greater influences of spousal and family relations. For example, McKinnish (2008) finds that the earnings returns to migration are typically much larger for married men than for married women. For married women, the earnings returns to migration are actually often negative in that this group is much more likely (though not always) to be the “trailing spouse” in households where the maximization of the career development of the husband is given priority (Cooke et al. 2009).

### **Variables**

The dependent variable that I analyze is the hourly wage derived from total labor force earnings and hours worked in the year prior to survey (Petersen 1989). In order to adjust for the highly positive skew in the distribution of this variable, the log transformation is applied so that the actual dependent variable that is used in the regression models is log-wage (Sakamoto and Furuichi 1997). The dependent variable for the 2003 NSCG, however, is log-earnings since information on respondents’ hourly

wages is not available. The multiple regression functions that I estimate include dichotomous variables to indicate the racial minority group (i.e., 1.5-generation Asian Americans and native-born Asian Americans) with native-born non-Hispanic whites serving as the reference category. Another dichotomous variable indicates being a migrant (based on region five years ago using the 2000 5% PUMS and based on region attended high school using the 2003 NSCG). An additional dichotomous variable that I use is birth in California because persons from California may have a greater proclivity to reside in California and because native-born Asian Americans are much more likely to be born in the state (Sakamoto, Kim and Takei Forthcoming).

Other demographic variables include years of age (i.e., age 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, and 60-64) and a dichotomous variable to indicate metropolitan residence. When using the 2003 NSCG, my analysis sometimes investigates an ordinal variable to indicate the importance of the geographic location of a job (i.e., based on a Likert scale that refers to location as being “very important,” “somewhat important,” “somewhat unimportant,” and “not important at all”). The analysis also controls for marital status and the number of children which are associated with migration preferences. A dichotomous variable indicates whether the respondent is married. The following discrete count variables indicate the number of children that reside in the respondent’s household—under age 6 and between ages 6-17 for the 2000 PUMS, and between ages 0-5; between ages 6-11; and between ages 12-18 for the 2003 NSCG.

The variables referring to educational attainment differ between the two data sets due to their varying information. Furthermore, the 2003 NSCG includes only those with a

college degree while the 2000 5% PUMS includes persons regardless of educational levels. For the 2000 5% PUMS, the analysis includes five dichotomous variables on education—high school graduate, some college (including associate degrees), college degree, Master’s Degree, and Ph.D. or professional degree. The reference category is represented by those who have less than high school education. For the 2003 NSCG, the analysis includes two dichotomous variables to indicate the highest level of education completed (i.e., master’s degree and doctoral degree including professional degree versus bachelor’s degree as the reference category).

The regression functions using the 2003 NSCG further control for the major field of study of the highest degree obtained (i.e., mathematics, life sciences, physical sciences, engineering, social sciences, business, business finance, education, humanities, medical sciences, medicine and pharmacy, communications, and legal studies or law) with the reference category being visual or performing arts and majors reported as “other.” Furthermore, the Carnegie classification for the college awarding the highest degree is indicated by dichotomous variables for Research University I, Research University II, Doctorate Granting I, Doctorate Granting II, Comprehensive I, Comprehensive II, Liberal Arts I, Liberal Arts II, Theological Seminars and Bible Colleges, Medical Schools and Medical Centers, Schools of Engineering and Technology, Schools of Art, Music, and Design, Schools of Law, and classifications reported as “missing.”<sup>1</sup> The reference category is two-year institutions and a few other highly specialized institutions.

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<sup>1</sup> A detailed description of the data is available at <http://sestat.nsf.gov/docs/carnegie.html>.

Finally, in analyses based on the 2003 NSCG, a series of dichotomous variables is used to measure the highest level of education completed by the respondent's father and mother. This series includes separate variables to indicate whether the highest level of education completed by the respondents' mother (or father) is unknown. Rather than deleting these cases of missing data, they are retained because they may be correlated with having been raised in a single-parent family which is known to reduce academic achievement (McLanahan and Sandefur 1994).

### **Hypotheses to be Investigated**

In specifying the following hypotheses to be investigated by my dissertation research, the purpose is to advance our understanding of the complex interrelationships between migration processes, region of residence, labor market outcomes, and generational differences among Asian American men. All of these issues may be critical for understanding the wages of Asian Americans and the extent to which they differ from whites. Because these processes have not been adequately studied in prior research, I examine a group of different hypotheses together, to obtain broader, complete understanding of these issues. While I do not expect all of these hypotheses to be borne out in the actual data analysis, my objective is not to prove them all to be true but rather simply to use them to investigate and illuminate the significance of these important issues that have been largely ignored in prior studies.

In the following, I discuss the specific hypotheses to be investigated by my dissertation research. These hypotheses are implied to be applicable to my target population, namely, working-age men in the labor force as defined earlier. In the



following, the term “whites” is understood to refer to specifically native-born, non-Hispanic whites. Furthermore, “native-born Asian Americans” is the phrase that I use for convenience to refer to both 1.5-generation Asian Americans and Asian Americans combined together into one group. In my study, being native born refers to being born in any of the 51 states (i.e., the 50 U.S. states and the District of Columbia). “Wages” refers to hourly earnings while “cola-wages” refers to hourly earnings that are adjusted by estimates of state differentials in the cost of living (as presented by a proportionality factor that varies by state as shown in Table 2) which is imputed to individuals on the basis of their state of residence at the time of the survey using the estimates provided by Berry, Fording, and Hanson (2000).

**Hypothesis 1.0: Native-born Asian Americans are less likely to migrate than whites.**

This hypothesis is investigated using both the 2000 5% PUMS and the 2003 NSCG. The following logistic regression model is specified and estimated separately for each data set:

$$\text{logit}(\Pr(Y = 1)) = \beta_0 + \beta_1 AA + \varepsilon \quad (1)$$

where  $Y = 1$  refers to migrants while  $Y = 0$  refers to stayers.  $AA = 1$  refers to native-born Asian Americans while  $AA = 0$  refers to whites. Hypothesis 1 is supported if the computed test statistic from equation 1 results in the rejection of  $H_0: \beta_1 \geq 0$  in favor of  $H_A: \beta_1 < 0$ . Since native-born Asian Americans tend to be younger and more highly educated than whites, the results may quite possibly lead to the failure to reject Hypothesis 1.0 because younger and more educated persons are, in general, more likely

to migrate. I therefore assess Hypothesis 1.1 which tests whether native-born Asian Americans are less likely to move net of other relevant demographic characteristics.

**Hypothesis 1.1: Net of age, education, marital status, and number of children, native-born Asian Americans are less likely to migrate than whites.**

To investigate Hypothesis 1.1, equation 1 is augmented to include the aforementioned control variables. Using the PUMS, the logistic regression to be estimated is:

$$\begin{aligned} \text{logit}(\Pr(Y = 1)) = & \beta_0 + \beta_1 \text{AA} + \beta_2 \text{Age30-34} + \beta_3 \text{Age35-39} + \beta_4 \text{Age40-44} + \beta_5 \text{Age45-49} \\ & + \beta_6 \text{Age50-54} + \beta_7 \text{Age55-59} + \beta_8 \text{Age60-64} + \beta_9 \text{Marital Status} + \beta_{10} \text{Children0-5} + \\ & \beta_{11} \text{Children6-17} + \beta_{12} \text{High School Graduate} + \beta_{13} \text{Some College} + \beta_{14} \text{College Degree} + \\ & \beta_{15} \text{Master's Degree} + \beta_{16} \text{Doctoral Degree} + \varepsilon \end{aligned} \quad (2)$$

Hypothesis 1.1 is supported using the PUMS if the computed test statistic from equation 2 results in the rejection of  $H_0: \beta_1 \geq 0$  in favor of  $H_A: \beta_1 < 0$ . The logistic regression to be estimated using the NSCG is:

$$\begin{aligned} \text{logit}(\Pr(Y = 1)) = & \beta_0 + \beta_1 \text{AA} + \beta_2 \text{Age30-34} + \beta_3 \text{Age35-39} + \beta_4 \text{Age40-44} + \beta_5 \text{Age45-49} \\ & + \beta_6 \text{Age50-54} + \beta_7 \text{Age55-59} + \beta_8 \text{Age60-64} + \beta_9 \text{Marital Status} + \beta_{10} \text{Children0-5} + \\ & \beta_{11} \text{Children6-11} + \beta_{12} \text{Children12-18} + \beta_{13} \text{Master's Degree} + \beta_{14} \text{Doctoral Degree} + \varepsilon \end{aligned} \quad (3)$$

Hypothesis 1.1 is supported using the NSCG if the computed test statistic from equation 3 results in the rejection of  $H_0: \beta_1 \geq 0$  in favor of  $H_A: \beta_1 < 0$ .

Due to historical reasons which were briefly discussed in an earlier chapter, Asian Americans are concentrated in California and this concentration is especially evident

among native-born Asian Americans. Native-born Asian Americans may be less likely than whites to migrate net of age, marital status, number of children, and education, but another relevant variable is birth in California. Because persons from California may have a greater proclivity to reside in California (due to the formation of preferences for the lifestyle and amenities of California), and because native-born Asian Americans are much more likely to be born in California, the lower net propensity to migrate among native-born Asian Americans may in part represent a Californian characteristic rather than an Asian characteristic of preferring to reside nearer one's place of origin. This issue leads to Hypothesis 1.2.

**Hypothesis 1.2: Net of age, education, marital status, number of children, and Californian birth, native-born Asian Americans are less likely to migrate than whites.**

Using the PUMS, the logistic regression to be estimated is:

$$\begin{aligned} \text{logit}(\Pr(Y = 1)) = & \beta_0 + \beta_1 \text{AA} + \beta_2 \text{Age30-34} + \beta_3 \text{Age35-39} + \beta_4 \text{Age40-44} + \beta_5 \text{Age45-49} \\ & + \beta_6 \text{Age50-54} + \beta_7 \text{Age55-59} + \beta_8 \text{Age60-64} + \beta_9 \text{Marital Status} + \beta_{10} \text{Children0-5} + \\ & \beta_{11} \text{Children6-17} + \beta_{12} \text{High School Graduate} + \beta_{13} \text{Some College} + \beta_{14} \text{College Degree} + \\ & \beta_{15} \text{Master's Degree} + \beta_{16} \text{Doctoral Degree} + \beta_{17} \text{Californian Birth} + \varepsilon \end{aligned} \quad (4)$$

Hypothesis 1.2 is supported using the PUMS if the computed test statistic from equation 4 results in the rejection of  $H_0: \beta_1 \geq 0$  in favor of  $H_A: \beta_1 < 0$ . The logistic regression to be estimated using the NSCG is:

$$\begin{aligned} \text{logit}(\Pr(Y = 1)) = & \beta_0 + \beta_1 \text{AA} + \beta_2 \text{Age30-34} + \beta_3 \text{Age35-39} + \beta_4 \text{Age40-44} + \beta_5 \text{Age45-49} \\ & + \beta_6 \text{Age50-54} + \beta_7 \text{Age55-59} + \beta_8 \text{Age60-64} + \beta_9 \text{Marital Status} + \beta_{10} \text{Children0-5} + \end{aligned}$$

$$\beta_{11}\text{Children6-11} + \beta_{12}\text{Children12-18} + \beta_{13}\text{Master's Degree} + \beta_{14}\text{Doctoral Degree} + \beta_{15}\text{Californian Birth} + \varepsilon \quad (5)$$

Hypothesis 1.2 is supported using the NSCG if the computed test statistic from equation 5 results in the rejection of  $H_0: \beta_1 \geq 0$  in favor of  $H_A: \beta_1 < 0$ .

**Hypothesis 2.0: Migrants have a higher mean wage than do non-migrants.**

This hypothesis is investigated using both the 2000 5% PUMS and the 2003 NSCG. The following OLS regression model is specified and estimated separately for each data set:

$$\ln(\text{wage}) = \beta_0 + \beta_1\text{Migrant} + \varepsilon \quad (6)$$

where  $\ln(\text{wage})$  refers to the log-wage, and  $\text{Migrant} = 1$  refers to migrants while  $\text{Migrant} = 0$  refers to stayers. As mentioned above, migration is measured in terms of region of residence five years ago versus current region of residence in the 2000 5% PUMS. For the 2003 NSCG, migration is measured in terms of the region attended high school and current region of residence. The dependent variable for the NSCG is, however, log-earnings since information on respondents' hourly wages is not available. Hypothesis 2.0 is supported if the computed test statistic from equation 6 results in the rejection of  $H_0: \beta_1 \geq 0$  in favor of  $H_A: \beta_1 < 0$ .

**Hypothesis 2.1: Net of age, education, marital status, and number of children, migrants have a higher mean wage than do non-migrants.**

Using the 2000 5% PUMS, the OLS regression to be estimated is:

$$\begin{aligned} \ln(\text{wage}) = & \beta_0 + \beta_1 \text{Age30-34} + \beta_2 \text{Age35-39} + \beta_3 \text{Age40-44} + \beta_4 \text{Age45-49} + \beta_5 \text{Age50-54} + \\ & \beta_6 \text{Age55-59} + \beta_7 \text{Age60-64} + \beta_8 \text{Marital Status} + \beta_9 \text{Children0-5} + \beta_{10} \text{Children6-17} + \\ & \beta_{11} \text{High School Graduate} + \beta_{12} \text{Some College} + \beta_{13} \text{College Degree} + \beta_{14} \text{Master's Degree} \\ & + \beta_{15} \text{Doctoral Degree} + \beta_{16} \text{Migrant} + \varepsilon \end{aligned} \quad (7)$$

Hypothesis 2.1 is supported using the PUMS if the computed test statistic from equation 7 results in the rejection of  $H_0: \beta_{16} \geq 0$  in favor of  $H_A: \beta_{16} < 0$ . The OLS regression to be estimated using the NSCG is:

$$\begin{aligned} \ln(\text{earnings}) = & \beta_0 + \beta_1 \text{Age30-34} + \beta_2 \text{Age35-39} + \beta_3 \text{Age40-44} + \beta_4 \text{Age45-49} + \beta_5 \text{Age50-} \\ & 54 + \beta_6 \text{Age55-59} + \beta_7 \text{Age60-64} + \beta_8 \text{Marital Status} + \beta_9 \text{Children0-5} + \beta_{10} \text{Children6-11} + \\ & \beta_{11} \text{Children12-18} + \beta_{12} \text{Master's Degree} + \beta_{13} \text{Doctoral Degree} + \beta_{14} \text{Migrant} + \varepsilon \end{aligned} \quad (8)$$

Hypothesis 2.1 is supported using the 2003 NSCG if the computed test statistic from equation 8 results in the rejection of  $H_0: \beta_{14} \geq 0$  in favor of  $H_A: \beta_{14} < 0$ .

**Hypothesis 3.0: Native-born Asian Americans are more likely than whites to reside in states that have a higher cost of living.**

To test this hypothesis, the following regression is estimated using the PUMS:

$$\text{COLA} = \beta_0 + \beta_1 \text{AA} + \varepsilon \quad (9)$$

where COLA refers to the cost of living factor that varies by each of the 51 states and is imputed to the  $i$ th individual based on his/her current state of residence. Hypothesis 3.0 is supported if the computed test statistic from equation 9 results in the rejection of  $H_0: \beta_1 \leq 0$  in favor of  $H_A: \beta_1 > 0$ . As noted above, the measurement of COLA is based on the

estimates given by Berry, Fording, and Hanson (2000). These estimates are shown in Table 2.

**Hypothesis 3.1: Net of age, education, and marital status, and number of children, native-born Asian Americans are more likely than whites to reside in states that have a higher cost of living.**

Hypothesis 3.0 may be extended to be considered net of other relevant demographic and labor force variables. To test Hypothesis 3.1, the following regression estimated using the PUMS:

$$\begin{aligned} \text{COLA} = & \beta_0 + \beta_1 \text{AA} + \beta_2 \text{Age30-34} + \beta_3 \text{Age35-39} + \beta_4 \text{Age40-44} + \beta_5 \text{Age45-49} + \\ & \beta_6 \text{Age50-54} + \beta_7 \text{Age55-59} + \beta_8 \text{Age60-64} + \beta_9 \text{Marital Status} + \beta_{10} \text{Children0-5} + \\ & \beta_{11} \text{Children6-17} + \beta_{12} \text{High School Graduate} + \beta_{13} \text{Some College} + \beta_{14} \text{College Degree} + \\ & \beta_{15} \text{Master's Degree} + \beta_{16} \text{Doctoral Degree} + \varepsilon \end{aligned} \quad (10)$$

Hypothesis 3.1 is supported if the computed test statistic from equation 10 results in the rejection of  $H_0: \beta_1 \leq 0$  in favor of  $H_A: \beta_1 > 0$ .

**Hypothesis 4.0: The white versus native-born Asian wage differential is smaller after controlling for COLA.**

This hypothesis is investigated using the PUMS. The following two OLS regression models are specified and estimated:

$$\ln(\text{wage}) = \beta_0 + \beta_1^* \text{AA} + \varepsilon \quad (11)$$

$$\ln(\text{wage}) = \beta_0 + \beta_1 \text{AA} + \beta_2 \text{COLA} + \varepsilon \quad (12)$$

Hypothesis 4.0 is supported if the computed slope coefficients (i.e.,  $\beta_1^*$  and  $\beta_1$  in (11) and (12)) are statistically different (i.e., if  $H_0: \beta_1^* - \beta_1 \leq 0$  is rejected in favor of  $H_A: \beta_1^* - \beta_1 > 0$ ).

**Hypothesis 4.1: Net of age, education and marital status, the white versus native-born Asian wage differential is smaller in terms of cola-wages than in terms of wages.**

Using the PUMS, the OLS regression to be estimated is:

$$\begin{aligned} \ln(\text{wage}) = & \beta_0 + \beta_1^* \text{AA} + \beta_2 \text{Age30-34} + \beta_3 \text{Age35-39} + \beta_4 \text{Age40-44} + \beta_5 \text{Age45-49} + \\ & \beta_6 \text{Age50-54} + \beta_7 \text{Age55-59} + \beta_8 \text{Age60-64} + \beta_9 \text{Marital Status} + \beta_{10} \text{Children0-5} + \\ & \beta_{11} \text{Children6-17} + \beta_{12} \text{High School Graduate} + \beta_{13} \text{Some College} + \beta_{14} \text{College Degree} + \\ & \beta_{15} \text{Master's Degree} + \beta_{16} \text{Doctoral Degree} + \varepsilon \end{aligned} \quad (13)$$

$$\begin{aligned} \ln(\text{wage}) = & \beta_0 + \beta_1 \text{AA} + \beta_2 \text{COLA} + \beta_3 \text{Age30-34} + \beta_4 \text{Age35-39} + \beta_5 \text{Age40-44} + \\ & \beta_6 \text{Age45-49} + \beta_7 \text{Age50-54} + \beta_8 \text{Age55-59} + \beta_9 \text{Age60-64} + \beta_{10} \text{Marital Status} + \\ & \beta_{11} \text{Children0-5} + \beta_{12} \text{Children6-11} + \beta_{13} \text{Children12-18} + \beta_{14} \text{High School Graduate} + \\ & \beta_{15} \text{Some College} + \beta_{16} \text{College Degree} + \beta_{17} \text{Master's Degree} + \beta_{18} \text{Doctoral Degree} \\ & + \varepsilon \end{aligned} \quad (14)$$

If the computed test statistic leads to the rejection of  $H_0: \beta_1^* - \beta_1 \geq 0$  in favor of  $H_A: \beta_1^* - \beta_1 < 0$  then Hypothesis 4.1 is supported.

**Hypothesis 5.0: Geographic location as a relative factor to consider in the desirability of a job is more important for native-born Asian Americans than for whites.**

This hypothesis is investigated using only the NSCG because the PUMS unfortunately does not include any information about preferences. The following ordered logistic regression model is specified and estimated using the NSCG to consider

Hypothesis 5:

$$LOCATION = \beta_0 + \beta_1 AA + \varepsilon \quad (15)$$

where  $LOCATION = 4$  refers to the importance of the job's location as "very important;" 3 refers to "somewhat important;" 2 refers to "somewhat unimportant;" and 1 refers to "not important at all." Hypothesis 5 is supported if the computed test statistic from equation 15 results in the rejection of  $H_0: \beta_1 \geq 0$  in favor of  $H_A: \beta_1 < 0$ .

**Hypothesis 5.1: Net of age, education, marital status, and number of children, geographic location as a relative factor to consider in the desirability of a job is more important for native-born Asian Americans than for whites.**

Using the NSCG, the ordered logistic regression to be estimated to consider Hypothesis 5.1 is:

$$LOCATION = \beta_0 + \beta_1 AA + \beta_2 \text{Age30-34} + \beta_3 \text{Age35-39} + \beta_4 \text{Age40-44} + \beta_5 \text{Age45-49} + \beta_6 \text{Age50-54} + \beta_7 \text{Age55-59} + \beta_8 \text{Age60-64} + \beta_9 \text{Marital Status} + \beta_{10} \text{Children0-5} + \beta_{11} \text{Children6-17+} + \beta_{12} \text{Master's Degree} + \beta_{13} \text{Doctoral Degree} + \varepsilon \quad (16)$$

Hypothesis 5.1 is supported if the computed test statistic from equation 16 results in the rejection of  $H_0: \beta_1 \geq 0$  in favor of  $H_A: \beta_1 < 0$ .

**Hypothesis 5.2: Net of age, education, marital status, number of children, and birth in California, geographic location as a relative factor to consider in the**



**desirability of a job is more important for native-born Asian Americans than for whites.**

To investigate Hypothesis 5.2, the following ordered logistic regression model is estimated using the NSCG:

$$\begin{aligned}
 LOCATION = & \beta_0 + \beta_1 AA + \beta_2 \text{Age30-34} + \beta_3 \text{Age35-39} + \beta_4 \text{Age40-44} + \beta_5 \text{Age45-49} + \\
 & \beta_6 \text{Age50-54} + \beta_7 \text{Age55-59} + \beta_8 \text{Age60-64} + \beta_9 \text{Marital Status} + \beta_{10} \text{Children0-5} + \\
 & \beta_{11} \text{Children6-11} + \beta_{12} \text{Children12-18} + \beta_{13} \text{High School Graduate} + \beta_{14} \text{Some College} + \\
 & \beta_{15} \text{College Degree} + \beta_{16} \text{Master's Degree} + \beta_{17} \text{Doctoral Degree} + \beta_{18} \text{Californian Birth} \\
 & + \varepsilon
 \end{aligned} \tag{17}$$

Hypothesis 5.2 is supported using if the computed test statistic from equation 17 results in the rejection of  $H_0: \beta_1 \geq 0$  in favor of  $H_A: \beta_1 < 0$ .

**Hypothesis 6.0: The rate of return to migration among native-born Asian Americans is greater than the rate of return to migration among whites.**

This hypothesis is investigated using both the 2000 5% PUMS and the 2003 NSCG. The following OLS regression model is specified and estimated separately for each data set:

$$\ln(\text{wage}) = \beta_0 + \beta_1 AA + \beta_2 \text{Migrant} + \beta_3 AA * \text{Migrant} + \varepsilon \tag{18}$$

The working hypothesis proposed is that the coefficient for the interaction term in equation 18 is greater than 0 indicating a higher rate of return to migration among native-born Asian Americans who are observed to migrate. In other words, Hypothesis 6.0 is supported if the computed test statistic from equation 18 results in the rejection of  $H_0: \beta_3$

$\leq 0$  in favor of  $H_A: \beta_3 > 0$ . The rationale for this hypothesis is that due to their greater preference to be located nearer one's place of origin, native-born Asian Americans are observed to move only when the financial gains are larger in comparison to whites.

**Hypothesis 6.1: Net of age, education, marital status, and number of children, the rate of return to migration among native-born Asian Americans is greater than the rate of return to migration among whites.**

Because younger and more educated men are generally more likely to migrate, Hypothesis 6.0 should also be investigated net of other relevant variables, which then results in Hypothesis 6.1. Using the 2000 5% PUMS, the OLS regression to be estimated is:

$$\ln(\text{wage}) = \beta_0 + \beta_1 \text{AA} + \beta_2 \text{Migrant} + \beta_3 \text{AA} * \text{Migrant} + \beta_4 \text{Age30-34} + \beta_5 \text{Age35-39} + \beta_6 \text{Age40-44} + \beta_7 \text{Age45-49} + \beta_8 \text{Age50-54} + \beta_9 \text{Age55-59} + \beta_{10} \text{Age60-64} + \beta_{11} \text{Marital Status} + \beta_{12} \text{Children0-5} + \beta_{13} \text{Children6-11} + \beta_{14} \text{Children12-18} + \beta_{15} \text{High School Graduate} + \beta_{16} \text{Some College} + \beta_{17} \text{College Degree} + \beta_{18} \text{Master's Degree} + \beta_{19} \text{Doctoral Degree} + \varepsilon \quad (19)$$

Hypothesis 6.0 is supported if the coefficient for AA\*Migrant is statistically significant and greater than 0. The OLS regression to be estimated using the NSCG is:

$$\ln(\text{earnings}) = \beta_0 + \beta_1 \text{AA} + \beta_2 \text{Migrant} + \beta_3 \text{AA} * \text{Migrant} + \beta_4 \text{Age30-34} + \beta_5 \text{Age35-39} + \beta_6 \text{Age40-44} + \beta_7 \text{Age45-49} + \beta_8 \text{Age50-54} + \beta_9 \text{Age55-59} + \beta_{10} \text{Age60-64} + \beta_{11} \text{Marital Status} + \beta_{12} \text{Children0-5} + \beta_{13} \text{Children6-11} + \beta_{14} \text{Children12-18} + \beta_{15} \text{Master's Degree} + \beta_{16} \text{Doctoral Degree} + \beta_{17} \text{Mathematics} + \beta_{18} \text{Life Sciences} + \beta_{19} \text{Physical Sciences} + \beta_{20} \text{Engineering} + \beta_{21} \text{Social Sciences} + \beta_{22} \text{Business} + \beta_{23} \text{Business Finance} + \beta_{24} \text{Education}$$

$$\begin{aligned}
& + \beta_{25}\text{Humanities} + \beta_{26}\text{Medical Sciences} + \beta_{27}\text{Medicine and Pharmacy} + \\
& \beta_{28}\text{Communication} + \beta_{29}\text{Legal Studies} + \beta_{30}\text{Research University I} + \beta_{31}\text{Research} \\
& \text{University II} + \beta_{32}\text{Doctorate Granting I} + \beta_{33}\text{Doctorate Granting II} + \beta_{34}\text{Comprehensive I} \\
& + \beta_{35}\text{Comprehensive II} + \beta_{36}\text{Liberal Arts I} + \beta_{37}\text{Liberal Arts II} + \beta_{38}\text{Theological Seminars} \\
& \text{and Bible Colleges} + \beta_{39}\text{Medical Schools and Medical Centers} + \beta_{40}\text{Schools of} \\
& \text{Engineering and Technology} + \beta_{41}\text{Schools of Art, Music, and Design} + \beta_{42}\text{Schools of} \\
& \text{Law} + \beta_{43}\text{Other Schools} + \varepsilon \tag{20}
\end{aligned}$$

Hypothesis 6.1 is supported if the coefficient for AA\*Migrant is statistically significant and greater than 0.

**Hypothesis 7: Net of age, education, marital status, disability status, and selectivity, there is no differential in earnings between Asian Americans (including both the native born and the 1.5 generation) and whites in the West, as well as in the non-West.**

The switching regression model consists of three equations that are estimated simultaneously using maximum likelihood assuming trivariate normality between the error terms of these equations. In this approach, selectivity is empirically evident to the extent that the error term from the probit equation is correlated with the error for either of the two log-earnings regressions. In this case, men who are observed to currently reside in the West (or are observed not to currently reside in the West) have systematically different earnings than would a random sample of working-age men with the same values on the independent variables that were used as covariates in the log-earnings regression. The absence of any statistically significant correlation between the error terms indicates a

lack of empirical evidence for selectivity between current residence in the West and earnings. In this latter case, OLS estimates are adequate to obtain unbiased estimates of these population-level relationships. Due to the complexity of estimating these models which are not based on closed-form solutions (as in OLS), proper specification of the regression model (e.g., including all of the relevant independent variables) is very useful to obtaining appropriate results. For this reason, I do not formally consider shorter model specifications such as a bivariate model.

### **Switching Regression Models**

In this section I discuss how I analyze Hypothesis 7 using a switching regression framework. The particular approach that I propose to investigate is an endogenous switching regression model with two behavioral regimes (i.e., one log-earnings regression for residence in the West and another log-earnings regression for residence in the non-West). Since the technical details of this model have been discussed elsewhere (Gamoran and Mare 1989; Maddala 1983; Mare and Winship 1988), I only summarize its basic points here.

The model consists of three equations: an earnings regression for each of the two regional outcomes (i.e., whether or not currently reside in the West), and a probit equation predicting the individual's regional residence outcome (i.e., the  $i$ th person's probability of residing in the West). The three equations are estimated simultaneously by maximum likelihood assuming that the error terms for the three equations may be correlated and follow a trivariate normal distribution. I used the Stata software package to estimate these models.

Let  $Z^*$  denote the propensity to reside in the West, and assume that this variable is latent with the following index function:

$$Z^* = X\gamma + v \quad (21)$$

such that  $Z = 1$  if  $Z^* > 0$ ,  $Z = 0$  otherwise. If  $Z = 1$  then the person is observed to reside in the West while if  $Z = 0$  then the person is observed to be residing outside of the West.

Two more equations may now be defined as follows:

$$Y_1 = X_1\beta_1 + u_1 \quad \text{if } Z = 1 \quad (22)$$

and

$$Y_0 = X_0\beta_0 + u_0 \quad \text{if } Z = 0 \quad (23)$$

We observe  $Y_1$  when  $Z = 1$  because equation 33 refers to the wages of persons who reside in the West. For these men residing in the West,  $Y_0$  is unobserved, latent, or missing (i.e., we do not observe what the wages of men currently residing in the West would have been had they decided not to reside in the West). Similarly, we observe  $Y_0$  when  $Z = 0$  which refers to the wages of those who reside in the non-West. For these latter men  $Y_1$  is missing (i.e., we do not observe what the wages of non-West residents would have been had they decided to reside in the West). This model is known as an *endogenous* switching regression model.

As I mentioned above, I use this model to address issues of self selection and the estimation of effects when there is nonrandom allocation of men in regard to current residence in the West net of measured covariates. Because of the selection problem (the failure to observe  $Y_0$  when  $Z = 1$  and the failure to observe  $Y_1$  when  $Z = 0$ ), we need to consider these outcomes in terms of this switching regression approach. For the men who

are observed to currently reside in the West or who have, in other words, self-selected into current residence in the West, mean wages may be derived as being given by:

$$\begin{aligned}
E(Y_1|Z=1) &= E(Y_1|Z^* > 0) = E(Y_1|X\gamma + v > 0) \\
&= E(Y_1|v > -X\gamma) \\
&= X_1\beta_1 + E(v|v < X\gamma) \\
&= X_1\beta_1 + \sigma_{1v} \left[ \frac{\phi(X\gamma)}{\Phi(X\gamma)} \right] \tag{24}
\end{aligned}$$

which follows due to the truncation of the distribution of  $Y_1$  from below. Note that  $\sigma_{1v}$  refers to the covariance between the error term of the current region equation and the error term of the current residence in the West equation. Similarly, mean wages for non-West residence or in other words, those who have self-selected into not currently reside in the West is given by:

$$\begin{aligned}
E(Y_0|Z=0) &= E(Y_0|Z^* < 0) = E(Y_0|X\gamma + v < 0) \\
&= E(Y_0|v < -X\gamma) \\
&= X_0\beta_0 + E(v|v > X\gamma) \\
&= X_0\beta_0 - \sigma_{0v} \left[ \frac{\phi(X\gamma)}{1 - \Phi(X\gamma)} \right] \tag{25}
\end{aligned}$$

which follows from truncation of  $Y_0$ 's distribution from above. In this case,  $\sigma_{0v}$  refers to the covariance between the error term of the West residence equation and the error term of the non-West residence equation.

This switching regression model allows for the possibility that error terms are correlated which occurs to the extent that  $\sigma_{1v}$  and  $\sigma_{0v}$  are non-zero. In this case, OLS

estimates are biased due to sample selection (e.g., Falaris 1988). Falaris (1988:515) notes in that “[i]f unobserved characteristics of individuals affect both their choice of location and their wages, and if we use OLS to estimate location-specific wage equations to be used in obtaining predicted wages, these wages equations may suffer from sample selection bias.” The switching regression approach allows for the possibility of sample selection and thus provides more informative results than can be obtained by only using OLS.

This model does not, however, assume that sample selectivity is necessarily present. Instead, I can empirically test for sample selection bias by assessing whether the correlation between the error terms of the current residential region regression and either log-earnings regression is not zero. If the empirical results indicate that we cannot reject the hypotheses that  $\sigma_{1v} = 0$  and  $\sigma_{0v} = 0$ , then we can actually go back to using OLS to obtain unbiased estimates because in this particular case there is no evidence for sample selection. On the other hand, if the empirical results indicate that either  $\sigma_{1v}$  or  $\sigma_{0v}$  are not equal to zero, then the estimation procedure needs to take into account these non-zero correlations in order to correct for selectivity which would rule out the use of OLS.

## Chapter III

### EMPIRICAL FINDINGS

#### Descriptive Statistics

Descriptive statistics for the 2000 5% PUMS and 2003 NSCG are shown in Tables 5 and 6, respectively. For the PUMS, the sample size for Asian Americans (including both the 1.5-generation and native-born) is 26,600, while the sample size for whites is 1,975,215. On the other hand, for the NSCG, the sample size is much lower due to its restriction to the college-educated population (whereas the PUMS includes persons of all educational levels). For Asian Americans (including both the 1.5-generation and native-born), the NSCG sample size is 1,920 while for whites it is 29,205.

The descriptive statistics are mostly comparable across the two data sets, but there are some differentials. For example, the PUMS has higher proportions in younger age group (i.e., ages 25-34) both for Asian Americans and whites, presumably because the PUMS includes those without college education. In addition, the tables show that Asian Americans tend to be younger than whites across the data sets. In regard to marital status, the NSCG includes higher proportions in married Asian Americans and whites than the PUMS. As for wages and salary, Tables 5 and 6 both show that Asian Americans have higher mean wages than whites in the PUMS, but have lower average salary than whites in the NSCG. These descriptive findings may partly reflect changes in the economic conditions between the different survey years (i.e., 1999 for the PUMS and 2002 for the NSCG)—Asian Americans are more likely than whites to be employed in the technology



areas, which are more affected by the ongoing economic recession than other types of occupations.

In regard to the place of birth, both Tables 5 and 6 show that Asian Americans are more likely than whites to have been born in the West or in the Pacific Division of the West, while whites are more likely than Asian Americans to have been born in the Northeast, Midwest, South, or non-Pacific Division of the West. Table 6 shows that Asian Americans are much more likely than whites to currently reside in the West. In terms of migration, Table 5 shows that Asian Americans are more likely than whites to migrate in terms of both region five years ago and region of birth. On the other hand, Table 6 shows that Asian Americans are less likely than whites to migrate both in terms of region attended high school and region of birth. The different results for migration based on region of birth may reflect differentials by educational level (e.g., college-educated whites may be much more mobile than whites without a college degree). In regard to COLA, Table 5 shows that cost of living is slightly higher for Asian Americans than that for whites (COLA was not calculated using the NSCG because state of residence is not identified in that survey due to confidentiality restrictions).

### **Findings for Hypothesis 1**

Hypothesis 1.0, 1.1, and 1.2 were investigated using both the 2000 5% PUMS and the 2003 NSCG. Table 7, 8, 9, 10, 11, and 12 show the results for the logistic regressions of migration. The reference category of the age groups is individuals between the ages of 25 and 29. In Table 7, migration is defined as a dichotomous outcome that refers to any difference between region of residence five years ago and region of current residence at

the time of the survey using the four standard areas of the U.S. Census Bureau (including the West, Midwest, Northeast, and South). Since native-born Asian Americans tend to be younger and more highly educated than whites, as expected, the results for Model 1 (the bivariate model which does not take into account any control variables) leads to the failure to reject Hypothesis 1.0, because younger and more educated persons are, in general, more likely to migrate—native-born Asian Americans have 96 percent higher odds of migrating than whites, and that 1.5-generation Asian Americans have 160 percent higher odds of migrating than whites, respectively.

Since native-born Asian Americans tend to be younger and more highly educated than whites, Model 2 tests whether native-born Asian Americans are indeed less likely to move net of age, marital status, number of children, and education, which are associated with migration preferences. Note that marital status and number of children, especially elder children, are two important household factors that are associated with the lower odds of migrating throughout the results for Hypothesis 1. The results for Model 2 indicate that native-born Asian Americans have 36 percent higher odds of migrating than whites, and that 1.5-generation Asian Americans have 38 percent higher odds of migrating than whites, respectively. Even after controlling for birth in California in Model 3, native-born Asian Americans have 38 percent higher odds of migrating than whites, and 1.5-generation Asian Americans have 37 percent higher odds of migrating than whites, respectively.

Note that birth in California was taken into account because persons from California may have a greater proclivity to reside in California, and because native-born

Asian Americans are much more likely to be born in the state. Nevertheless, this special preference was not considered in the previous research. Even though the odds for California birth are 0.937, the odds of migration for native-born Asian Americans and 1.5-generation Asian Americans in Model 3 are significantly greater than those of whites. As such, Hypothesis 1.0, 1.1, and 1.2 were not supported when migration is defined in terms of residence five years ago, using the 2000 PUMS.

It is likely that how migration is defined has to do with empirical results. Therefore in Table 8, Hypothesis 1.0, 1.1, and 1.2 were tested using the same data set (i.e., the 2000 5% PUMS), but with another definition of migration—as a dichotomous outcome that refers to any difference between region of birth and region of current residence at the time of the survey. Since the analysis limits place of birth to the 51 states of the U.S., the analysis includes only native-born Asian Americans and whites. The result for Model 1 indicates that Asian Americans have 6 percent higher odds of migrating than whites. Net of age, marital status, number of children, education, on the other hand, Asian Americans have 8 percent lower odds of migrating than whites, respectively. As such, native-born Asian Americans appear to be less likely than whites to migrate net of other variables, when migration is defined in terms of birth region, rather than residence five years ago.

Model 3 shows the results for some Asian ethnic groups that have enough sample sizes for the analysis (i.e., more than 100 people). The ethnic-specific results appear to suggest the significance of the California effect. Namely, Chinese, Filipinos, and Japanese, who have a longer immigration history in California, have significantly lower

odds of migrating than whites, presumably because these groups have a stronger attachment to the state. On the other hand, Asian Indians and Koreans, relatively recent immigrant groups, have significantly higher odds of migrating than whites net of other variables.

As such, the results from Table 7 and 8 indicate that Asian Americans are less likely to migrate when migration is defined in terms of region of birth, rather than defined in terms of region of residence five years ago. It is suggested that five-year mobility represents one's labor market adjustment which may well characterize regional mobility of Asian Americans. The reason why Asian Americans are regionally more mobile in a relatively shorter period of time is unknown. Yet, one possible reason might be that there are more labor market opportunities for Asian Americans than for whites, and that Asian Americans are more eager to move to another region if higher labor market returns can be expected. On the other hand, native-born Asian Americans are less likely to migrate than whites when migration is defined in terms of region of birth, net of socioeconomic and demographic factors that are associated with migration preferences. Again, the data set does not enable us to tell the reasons. Nevertheless, one speculation would be that in a long run, native-born Asian Americans tend to go back to the region where they were born.

The regression analyses in Tables 9 and 10 limit the sample population to those who at least had college education, so that the sample characteristic becomes closer to that of NSCG. In Table 9, migration is a dichotomous outcome that refers to any difference between region of residence five years ago and region of current residence at

the time of the survey. In Table 10, migration is a dichotomous outcome that refers to any difference between the birth region and the region of current residence using the four standard regions. Even if the sample is limited to individuals with college-education, the results in Table 9 indicate that both native-born and 1.5-generation Asian Americans are more likely to migrate than their comparable college-educated, native-born white counterparts. As mentioned above, since five-year mobility may represent one's labor market adjustment, it is not surprising to have the consistent findings even when the samples of Asian Americans and whites are limited to the college-educated. On the other hand, when the sample is limited to U.S.-born college-educated, and when migration is measured in terms of birth region in Table 10, Asian Americans are less likely to migrate (i.e., native-born Asian Americans have 17 percent lower odds of migrating in Model 1 and 16 percent lower odds of migrating in Model 2).

As such, the results show different outcomes depending on the definition of migration. Namely, when migration is defined in terms of recent migration (i.e., residence five years ago), Hypothesis 1 is not supported (i.e., native-born and 1.5-generation Asian Americans are more likely than whites to migrate), even after controlling for age, marital status, number of children, education, and birth in California. On the other hand, results are in accordance with Hypothesis 1 when migration is defined in terms of birth region, especially after controlling for age, marital status, number of children, and education. In sum, the results from the PUMS indicate that Asian Americans are more mobile than whites in terms of five-year mobility, which may represent Asian Americans' preference for labor market adjustment. On the other hand,

Asian Americans are less mobile than whites in terms of birth region. As discussed above, because persons from California may have a greater proclivity to reside in California (due to the formation of preferences for the lifestyle and amenities of California), and because native-born Asian Americans are much more likely to be born in California, the lower net propensity to migrate among native-born Asian Americans may in part represent a Californian characteristic rather than an Asian characteristic of preferring to reside nearer one's place of origin.

Table 11 and 12 show estimates of logistic regression models for migration using the 2003 NSCG. Because individual states cannot be identified with NSCG, I examined a dummy variable indicating the Pacific Division (i.e., Washington, Oregon, California, Alaska, and Hawaii) as a substitute for the California variable in PUMS.

In Table 11, migration is defined as a dichotomous outcome that refers to any difference between the region where high school diploma was obtained and the region of current residence. As discussed in Chapter II, the rationale for this definition is to consider migration as a decision that is made by the respondent as an adult given his geographic preferences and his competitiveness in the labor market. Using this definition of migration in NSCG, the results in Model 1 indicate that native-born Asian Americans have 24 percent lower odds of migrating than whites, but that there is no statistically significant differential between 1.5-generation Asian Americans and whites. Net of age, marital status, number of children, and education, Model 2 indicates that native-born Asian Americans have 21 percent lower odds of migrating, but that there is no statistical differential between 1.5-generation Asian Americans and whites. These results appear to

suggest that higher percentage of the sampled native-born Asian Americans than whites reside in California and therefore less likely to move out of the state than whites, but that there is no significant differential between 1.5-generation Asian Americans and whites in terms of their rates of migration. After controlling for birth in the Pacific Division in Model 3, odds of migrating for native-born and 1.5-generation Asian Americans do not significantly differ from those of whites. Again, this finding seems to reflect the regional distribution of Asian Americans—if birth in the Pacific Division is taken into account, there is no statistically significant differential in the odds of migrating between Asian Americans and whites.

To better seek for the effect of regional migration among native-born Asian Americans, an interaction term of whether one is a native-born Asian American and whether one was born in the Pacific Division was included in Mode 4. The result for the native-born Asian American coefficient in Model 4 indicates that, native-born Asian Americans who were not born in the Pacific Division have 46 percent higher odds of migrating than whites, suggesting a positive effect of migration. On the other hand, native-born Asian Americans who were born in the Pacific Division, as indicated by the interaction term, have 50 percent lower odds of migrating (i.e.,  $0.376 - 1.071 = -0.695$ ;  $e^{-0.695} - 1 = 0.499$ ) than whites, suggesting a negative effect of migration. This interaction term would better clarify why the native-born Asian American coefficient in Model 3 is not statistically significant—this is because the negative effect of migration (i.e., lower odds of migrating than whites) for native-born Asian Americans who were born in the Pacific Division and the positive effect of migration (i.e., higher odds of migrating than

whites) for native-born Asian Americans who were not born in the Pacific Division cancel each other. As such, these results in Table 11 are in accordance with Hypothesis 1—native-born Asian Americans are less likely to migrate than whites, but birth in the Pacific Division matters for migration behavior among native-born Asian Americans. A lot of native-born Asian Americans were born and remain in the Pacific Division, therefore many of them do not move as much as whites. On the other hand, the coefficients for 1.5-generation Asian Americans in Table 11 indicate that their odds of migration do not significantly differ from those of whites.

Table 12 shows logistic regression estimates when migration is defined in terms of birth region in NSCG. The odds of migration are 22 percent lower for native-born Asian Americans in Model 1. The odds are 21 percent lower net of age, marital status, number of children, and education. Again, the results are in a hypothesized direction when migration is defined in terms of birth region, rather than residence five years ago which may largely represent one's labor market adjustment.

Overall, empirical results for Hypothesis 1 indicate two important points in regard to the migration patterns of Asian Americans. First, the results differ depending on definition of migration (i.e., region five years ago, region of birth, or region attended high school). Both native-born and 1.5-generation Asian Americans are *more likely* than whites to migrate in terms of five-year mobility. These results hold even when the sample is restricted to college-educated Asian Americans and whites. It is suggested that regional mobility of Asian Americans is characterized with a short-term, labor market adjustment. There may be more labor market opportunities for Asian Americans than for whites,



because Asian Americans, especially 1.5-generation Asian Americans, are willing to move into a new region in return for higher labor market outcomes.

On the other hand, findings show that native-born Asian Americans (especially Chinese, Filipino, and Japanese) are *less likely* to migrate than whites when migration is defined in terms of region of birth, net of factors associated with migration preferences. This finding holds even when the sample is restricted to college-educated Asian Americans and whites (both in the PUMS and NSCG). Although suggestive, many native-born Asian Americans may eventually go back to the regions where they were born, although they are regionally mobile in a shorter period of time.

Second, the findings show that nativity status has much to do with migration patterns of Asian Americans. As discussed, because native-born Asian Americans are much more likely to be born in California, the lower net propensity to migrate among native-born Asian Americans may in part represent a California characteristic, rather than an Asian characteristic of preferring to reside nearer one's place of origin. Asian Americans who have property in high-cost states such as California and Hawaii may find difficult to migrate even if there are better labor market opportunities in other regions. Indeed, findings from NSCG show that being born in the Pacific Division significantly decreases their odds of migrating (in terms of region attended high school) compared to whites, while native-born Asian Americans who were not born in the Pacific Division have significantly higher odds of migrating than whites.

## Findings for Hypothesis 2

Hypothesis 2.0 and 2.1 were investigated using both the 2000 5% PUMS and the 2003 NSCG. Tables 13, 14, and 15 show the results for the OLS regressions of log-wage (for the 2000 5% PUMS) and log-earnings (for the 2003 NSCG). As mentioned above, migration is measured in terms of region of residence five years ago versus current region of residence in PUMS. For NSCG, migration is measured in terms of the region attended high school and the region of current residence. Model 1 in Table 13 indicates that, as hypothesized, migrants have a higher mean wage (i.e., 4 percent more or  $e^{0.039} - 1$ ) than do non-migrants. After controlling for age, marital status, number of children, and education in Model 2, there is no substantial (although statistically significant) differential in wages between migrants and non-migrants (i.e., 0.005 percent less or  $e^{-0.005} - 1$ ). Such results suggest that those with higher socioeconomic backgrounds (e.g., higher educational levels) tend to get involved with migration. Models 3 and 4 further take into account nativity status, since regional migration is more common among 1.5-generation Asian Americans than native-born Asian Americans. Models 3 and 4 indicate that 1.5-generation people have a higher mean wage than native-born people, regardless of controlling for other variables. Furthermore, the models indicate similar results to those of Models 1 and 2—even after nativity status is taken into account, migrants have a slightly higher mean wage than do non-migrants. Moreover, the differential in wages between migrants and non-migrants disappear in a substantive sense, net of other variables which partly represent selectivity of migrants. Finally, even after controlling for migration status and basic demographic factors, the results from Models 3 and 4 show

that 1.5-generation people have significantly higher wages than U.S.-born people, suggesting the selectivity of 1.5-generation people in the U.S. labor market.

Table 14 limits the sample population to college-educated Asian Americans and whites, so that the sample characteristic becomes closer to that of the 2003 NSCG. Model 1 indicates that, unlike Model 1 in Table 13, migrants actually have a lower mean wage (i.e., 4 percent less or  $e^{-0.040} - 1$ ) than do non-migrants, although the differential is substantially not large. Why is this negative wage return among college-educated migrants observed in the bivariate model in Table 14? One speculation is that younger people with college-education are more likely to migrate although younger age and accordingly lower levels of human capital negatively affects one's labor market return. Therefore, after controlling for age, marital status, number of children, and education in Model 2, migrants have a slightly but significantly higher wage (i.e., 4 percent more or  $e^{0.035} - 1$ ) than do non-migrants. After further taking into account nativity status in Models 3 and 4, the regression results are similar to those of Models 1 and 2—even after nativity status is further considered, migrants have a lower mean wage than do non-migrants, and this negative effect of migration turns into positive net of other variables.

Table 15 shows estimates of OLS regression models of log-earnings using the 2003 NSCG. The results are in accordance with Hypothesis 2.0 and 2.1. Model 1 in Table 15 indicates that, as hypothesized, migrants have a higher mean wage (i.e., 9 percent more or  $e^{0.088} - 1$ ) than do non-migrants. After controlling for age, marital status, number of children, and education in Model 2, migrants still have a significant and positive wage (i.e., 9 percent more or  $e^{0.083} - 1$ ) than do non-migrants. Even after nativity status is

considered in Models 3 and 4, migrants have higher mean earnings than their non-migrant counterparts. Same as previous results, it should also be noted that 1.5-generation people have higher average earnings even after controlling for other variables including migration status, suggesting their labor market selectivity.

Overall, the results support Hypothesis 2—migrants are selective in that they have higher mean wages (or earnings) than do non-migrants (both in terms of residence five years ago and region attended high school). However, this positive return for migration is most pronounced among college-educated people; for those without college education, migration does not seem to significantly increase their labor market returns. Rather, many of them may regionally migrate simply to find any sorts of jobs available for them.

Another important finding is the selectivity of 1.5-generation people over native-born people in terms of wages and earnings. The results show that even after taking into account other factors including recent migration status (both in terms of region five years ago and region attended high school), 1.5-generation people still have higher mean wages (or earnings) than their native-born counterparts. I noted in the previous chapter that the 1.5-generation may perhaps be regionally more mobile as well as somewhat distinctive in the wage determination patterns as they are the children of immigrants who tend to be more motivated. Results for Hypothesis 2 indicate that the 1.5-generation (including whites and Asian Americans) have a higher mean wage than do the native-born, net of other variables and recent migration status. Some of the following hypotheses give us further information about differences between the 1.5- and native-born people.

### **Findings for Hypothesis 3**

Table 16 shows OLS regression results for Hypothesis 3.0 and 3.1. Model 1 indicates that without any control, cost of living expense is 7.5 percentage points higher for native-born Asian Americans than whites, and 4.3 percentage points higher for 1.5-generation Asian Americans than whites, respectively. Even after controlling for other variables, Model 2 indicates that the results are similar to the bivariate model. As such, both native-born and 1.5-generation Asian Americans appear to be more likely than whites to reside in states that have a higher cost of living, supporting Hypothesis 3.

Model 3 shows some group-specific results for the hypothesis, for the five ethnic groups with an enough sample size for OLS regression analysis (i.e., more than 100 people). The model shows that even if cost of living expense is examined by ethnic group, results hold same. Namely, cost of living expense is higher for all groups except other Asian Americans (i.e., Asian Indian, Chinese, Filipino, Japanese, and Korean) than whites. Among the native-born ethnic groups examined here, cost of living expense is especially high for Japanese Americans who have the largest proportion of U.S.-born generations, the majority of who tend to reside in California. Among the 1.5-generation ethnic groups, cost of living expense is the highest for Filipinos, followed by Chinese.

### **Findings for Hypothesis 4**

Table 17 shows OLS regression results for Hypothesis 4.0 and 4.1. Model 1 indicates that without any control, an average hourly wage is 10 percent (i.e.,  $e^{0.094} - 1$ ) higher for native-born Asian Americans than whites, and 4 percent (i.e.,  $e^{0.041} - 1$ ) higher for 1.5-generation Asian Americans than whites, respectively. After controlling for

COLA, Model 2 shows that there is no statistically significant differential for both the native-born and 1.5-generation Asian American coefficients, indicating that COLA plays a crucial role in accounting for the wage differential across these two racial groups. Further controlling for other variables, Model 4 indicates that the white versus Asian American wage gaps become smaller compared to Model 2, especially in the case of native-born Asian Americans. In sum, these results well illustrate that COLA, in addition to class and socioeconomic factors, play important role in accounting for the labor market outcome differentials between Asian Americans and whites, because the majority native-born Asian Americans tend to reside in high-cost places including California.

### **Findings for Hypothesis 5**

Table 18 shows the ordered logistic regression results for Hypothesis 5.0, 5.1, and 5.2, for which the dependent variable is *LOCATION* that refers to the degree of geographic preference in regard to employment. Model 1 indicates that there is no differential in geographic preference between native-born Asian Americans and whites, as well as 1.5-generation Asian Americans and whites. As found in Models 2 and 3, net of age, marital status, number of children, education, and birth in California, the odds for the two Asian American groups are again statistically not significant.

For subcultural reasons, I hypothesized that Asian Americans may differ from whites in their average propensity to respond more positively in regard to statements about preferences even when their actual underlying preferences structures are identical. For many Asian cultures, showing deference to the importance of the group and moderating individual desires is considering normative (particularly in terms of explicit,

public announcements). Therefore, I hypothesized that second generation and perhaps other native-born Asian Americans may be more likely to moderate statements of personal preferences (if only unconsciously as a habit), at least in comparison to whites. However, the personal preference for particular regions of residence is not significantly greater for native-born Asian Americans than for whites. On the other hand, it is suggested from the findings that 1.5-generation Asian Americans do not have strong location preference, and may be willing to actively move for better economic and career rewards and opportunities.

Because the results do not support the hypothesis, I examined an interaction term between native-born Asian Americans and birth in the Pacific Division. By including such an interaction term, Model 4 shows whether geographic preference among Asian Americans differ by place of place (i.e., whether or not one was born in the Pacific Division). Namely, the interaction test in Model 4 can tell us whether native-born Asian Americans in the Pacific Division care more about geographic preference than those in the non-Pacific Division, net of other factors. Model 4 however does not indicate any statistical significance for the interaction, indicating that geographic preference among native-born Asian Americans does not depend on their place of birth (i.e., whether or not born in the Pacific Division).

### **Findings for Hypothesis 6**

Table 19 shows OLS regression results for Hypothesis 6.0 and 6.1. Using the 2000 5% PUMS, migration is defined in terms of residence five years ago. Model 1 indicates that without any control, the two coefficients for the interaction terms are

statistically significant and smaller than 0, indicating lower rates of return to migrate among native-born as well as 1.5-generation Asian Americans. Due to their greater preference to be located nearer one's place of origin, native-born Asian Americans were hypothesized to move only when the financial gains are larger in comparing to whites. Yet, the rate of return to migration among native-born and 1.5-generation Asian Americans is smaller than the rate of return to migrate among whites.

Because younger and more educated men are generally more likely to migrate, Hypothesis 6 was also investigated net of other relevant variables in Model 2. The results however do not support the hypothesis again. I also examined in Models 4 and 5 whether there is any differential in the rate of return to migration across some ethnic groups in reference to whites. However, Model 4 indicates that without any control, the coefficients for the interaction terms for the native-born ethnic groups are all statistically not significant, indicating that the rates of return to migrate among these native-born Asian ethnic groups do not significantly differ from the rate of return for whites. For 1.5-generation groups, Model 4 indicates similar results—Japanese are the only group whose rate of return to migration is larger than the rate of return to migrate among whites. Even after controlling for other variables, Model 5 indicates that the findings for native-born Asian Americans do not change. For 1.5-generation ethnic groups, Asian Indians and Japanese are the only ethnic groups who have greater rates of return to migration compared to whites.

Even when the sample population is restricted to college-educated Asian American and white men in Table 20, Hypothesis 6 was not supported. Furthermore,



when migration is defined in terms of region attended high school in the 2003 NSCG in Table 21, the interaction terms in both bivariate and longer models are not statistically significant, suggesting that the rate of return to migrate among Asian Americans is not significantly different from the rate of return to migrate among whites. Overall, the hypothesis was not supported. Namely, when migration is defined in terms of residence five years ago, the rate of return to migration among Asian Americans is not greater than the rate of return to migration among whites. When migration is defined in terms of region attended high school, there is no significant differential in the rate of return to migration between college-educated Asian Americans and whites. However, it has to be noted that Asian American non-migrants (both 1.5-generation and native-born) have a positive wage in terms of residence five years ago. When migration is defined in terms of region attended high school in NSCG, there is no wage differential between native-born Asian Americans and whites, while the 1.5-generation Asian Americans have a significantly higher mean wage than whites, even after controlling for other factors including college major.

### **Findings for Hypothesis 7**

Tables 22, 23, 24, 25, 26, and 27 present results for Hypothesis 7, which is analyzed using both OLS and switching regression models. Table 22 presents the estimates of probit model which comes from the selection equation, predicting whether or not a working-age man is observed to currently reside in the West. Results show that native-born Asian Americans are more likely than whites to currently reside in the West (i.e., the probability of current residence in the West increases by a Z score of 0.532, net

of other variables). On the other hand, 1.5-generation Asian Americans are less likely than whites to live in the West, probably because their parents are recent immigrants who are more likely to live in other regions with lower cost of living.

The probit model also includes four dummy variables indicating one's birth region (i.e., the Northeast, Midwest, South, and Western non-Pacific Division, with the Western Pacific Division serving as the reference category). The results show that men who were born in the Northeast, Midwest, and South are less likely than those who were born in the Pacific Division to currently reside in the Pacific Division. However, there is no statistically significant differential in the probability of currently residing in the Pacific Division, between men who were born in the Western non-Pacific Division and men who were born in the Western Pacific Division. As such, findings suggest that migration into the Pacific Division is not common among men who were born outside of this area.

Table 23 presents sample sizes of Asian Americans and whites by three age groups that are used for the following OLS and switching regression analysis. The analysis is separately conducted by three age categories, because age is usually a significant factor affecting wages especially in the case of men. Table 23 shows that the great majority of the sampled observations (i.e., 94 percent) is whites, and that whites are the majority across the three age groups (88 percent of the younger; 94 percent of the middle-aged; and 97 percent of the older). Therefore, the findings on selectivity which are discussed below are largely attributed to the characteristics of whites, rather than those of Asian Americans.

Table 24 presents estimates of OLS and switching regression models for log-salary. For simplicity, only the coefficients for native-born and 1.5-generation Asian Americans across the regions (i.e., the West or not) for each age category are presented. However the results were obtained net of age, marital status, disability status, education, college major, and college type. The full results will be added to appendix of my final dissertation draft.

It has to be noted first that the correlations ( $\rho$ ) on the last column of Table 24 indicate whether we can refer to the results from OLS or should refer to those from switching regression models. Since correlations for the middle-aged and older are not statistically significant, it is assumed that we can refer to the results from OLS for those two age groups. Namely, we can assume that there is no selectivity (e.g., men who reside in the West have more earnings) for these two groups. The results for all ages indicate that salaries for both native-born and 1.5-generation Asian Americans in the West do not significantly differ from those of whites in the West. In the non-West, native-born Asian Americans have 2 percent (i.e.,  $e^{-0.0196} - 1$ ) lower earnings while 1.5-generation Asian Americans have 6 percent (i.e.,  $e^{0.0626} - 1$ ) higher earnings than whites, net of other variables.

For the middle-aged and older groups, there is no significant differential in earnings compared to whites, except that middle-aged, native-born Asian Americans currently living in the West have 8 percent (i.e.,  $e^{-0.0865} - 1$ ) lower earnings than whites. As such, for all ages, middle-aged, and older groups, there is a lack of empirical evidence for selectivity between current residence in the West and earnings.

On the other hand, the statistically significant correlations ( $\rho$ ) for the younger group indicate that we should refer to the findings from switching regression models rather than those of OLS, because error terms are correlated in the selection equation. First, it has to be noted that all of the four coefficients for Asian Americans in this age group are statistically significant and positive. Namely, the results show that both in the West and non-West, both native-born and 1.5-generation Asian Americans aged 25-35 have significantly higher earnings (i.e.,  $e^{0.1171} - 1$  or 12 percent higher earnings for native-born Asian Americans in the West;  $e^{0.0971} - 1$  or 10 percent higher earnings for 1.5-generation Asian Americans in the West;  $e^{0.0560} - 1$  or 6 percent higher earnings for native-born Asian Americans in the non-West; and  $e^{0.3494} - 1$  or 42 percent higher earnings for 1.5-generation Asian Americans in the non-West;) than whites after taking into account other variables and selectivity. Namely, the results indicate a positive advantage in earnings for Asian Americans both in the West and non-West.

The correlation ( $\rho$ ) for the West ( $r = 0.8094$ ) indicates a positive selection into living in the West (i.e., Asian Americans and whites are more likely to earn if they currently reside in the West). On the other hand, the correlation for the non-West ( $r = 0.1094$ ) indicates a negative selection (see equation 36 in Chapter II; there is a negative sign in front of  $\sigma_{00}$ ) into living in the non-West (i.e., Asian Americans and whites are less likely to earn if they currently reside in the West). It should be noted that, since the great majority of the sampled population is whites, these two different types of selectivity largely derive from the sampled white population.

Selectivity is an additional effect that is contained in the error term. It may indicate motivation, personality, and competitiveness that are positively correlated with one's labor market outcomes. However, the switching regression model does not enable us to identify any specific components. Some speculations are that, Asian Americans and whites who currently reside in the West (especially California) are more advantaged because they have to stay productive in their work performance so that they can remain in California where many workers have a preference reside due to its desirable features including good weather and other regional amenities. Or California residents are more eager to take higher-paying jobs to manage high rents and property taxes to remain in the state. Again, however, this positive selection residing in the West largely derives from characteristics of the white population in NSCG. Unfortunately we cannot tell the extent to which this observed positive selection of living in the West holds for Asian Americans.

On the other hand, Asian Americans and whites in the non-West appear to be less competitive. Yet, again, this negative selection into living into the West largely derives from the white population. It might be possible, for example, to argue that Asian Americans in the non-West are actually more competitive in terms of labor market characteristics than their comparable whites in the non-West, considering the higher mean earnings for Asian Americans in the non-West, especially for the younger 1.5-generation as found in Table 24.

In sum, the findings show the following three important patterns. First, net of age, marital status, disability status, educational level, college major, and college type, native-born Asian Americans are more likely than whites to live in the West, while 1.5-

generation Asian Americans are more likely than whites to reside in the non-West. Second, net of the same variables, there is no significant differential in average earnings between whites and native-born Asian Americans in the West, as well as between whites and 1.5-generation Asian Americans in the West (except that the middle-aged, native-born Asian Americans have 8 percent lower earnings) than their comparable middle-aged whites. On the other hand, native-born Asian Americans in the non-West are very slightly disadvantaged (i.e., 2 percent lower or  $e^{-0.0196} - 1$ ) than whites in the non-West, while 1.5-generation Asian Americans have 6 percent higher average earnings than whites in the non-West, net of other variables. Nevertheless, if the earnings differentials are separately examined by three different age groups, Asian Americans in the non-West do not appear to have any earnings disadvantage in reference to whites in the non-West.

Finally, switching regression models demonstrate that both native-born and 1.5-generation Asian Americans across the regions indeed have significantly higher average earnings than whites, after further controlling for selectivity. This indicates that the estimated earnings differentials for younger Asian Americans and whites are obscured when using OLS, which does not account for selectivity. In regard to selectivity, there is a positive selection into living in the West, while the selection is negative living into the non-West. Since the great majority of the sampled population is whites, we cannot unfortunately tell the extent to which these positive and negative selectivity are attributed to Asian Americans.

Using the components of the error term that are indicated in equations (24) and (25) on page 60 and that are based on the normal probability curve, I also estimated the

effects of selectivity in the West and non-West, in terms of U.S. dollars. The estimated figures are based on the following hypothetical employee: native-born, with a Master's Degree in engineering, married, 34 years of age, and graduated from a Research I type of university. Note that the estimates are made only for the younger age group (25-34 years of age), because the correlations (i.e., the estimated rho) are statistically significant only for this age group. Moreover, the estimation was made only for the sampled white population, because the selectivity largely derives from them due to their much larger sample size. The regression coefficients used for the estimation are presented in Tables 25, 26, and 27.

Using equation (24) on page 60, the covariance (i.e.,  $\sigma_{10}$ ) for error term in the probit model and regression model for the West is 0.066, and the z-score (i.e.,  $X\gamma$  for the above hypothetical employee) is 0.708, respectively. Based on those estimates, white men in the West are expected to earn on average \$73,865 annually, without taking into account selectivity. On the other hand, white men in the West are expected to earn \$75,872 annually once selectivity is taken into account. Namely, selectivity works positively toward one's earnings, so that unmeasured factors in the analysis—such as motivation, personality, and competitiveness—leads to \$2,007 more earnings for those who hold such characteristics.

On the other hand, using equation (25) on page 60, the covariance (i.e.,  $\sigma_{00}$ ) for error term in the probit model and regression model for the non-West is -0.5387, and the z-score (i.e.,  $X\gamma$  for the same hypothetical employee) is 0.708, respectively. Based on those estimates, white men in the non-West are expected to earn on average \$92,134

annually, without taking into account selectivity. On the other hand, white men in the non-West are expected to earn \$45,752 annually once selectivity is taken into account. Namely, selectivity works negatively toward one's earnings, so that unmeasured factors in the analysis sum up to-\$46,382 less earnings for those who hold such characteristics. Such a large, negative effect of selectivity for white men living in the non-West does not appear to be fully plausible. In future research, a more refined model specification for this group is therefore needed. Nevertheless, the general pattern of these switching regression results indicate an important finding that region matters in considering labor market outcomes for different groups of race and ethnicity.

### **Summary of the Empirical Findings**

The purpose of my dissertation research is to advance our understanding of the complex interrelationships between migration processes, region of residence, and labor market outcomes among Asian American men. All of these issues are critical for understanding the wages of Asian Americans and the extent to which they differ from whites. Because these processes have not been adequately studied in prior research, I examined a group of different hypotheses together, to obtain broader, complete understanding of these issues.

Based on the findings from the seven different hypotheses tests, four important patterns in regard to migration, regional distribution, and labor market outcomes among Asian American men were found.

#### ***1. Region and regional distribution matter in the wages of Asian American men***



First, this study finds that cost of living expense is higher for both native-born (especially Japanese) and 1.5-generation Asian Americans, in reference to whites. As discussed by Mar (1999), the role of regional differences is a key factor for the labor market progress of Asian Americans in the U.S. Indeed, this study finds that the wage differentials between native-born Asian Americans and whites, as well as 1.5-generation Asian Americans and whites, are explained away net of COLA and class and socioeconomic factors. This finding shows that region and regional distribution play key roles in accounting for the labor market differential between Asian Americans and whites, because the nearly majority Asian Americans tend to reside in high-cost states including California. Hurh and Kim (1989) sometimes ago argued that the wages of Asian Americans may not have reached parity with whites after taking into account the higher cost of living that Asian Americans tend to encounter due to their regional distribution. However, this study rather finds no significant wage disadvantaged for Asian Americans, net of COLA and other variables that are associated with wages.

***2. Migration among Asian Americans is most characterized with short-term mobility, and the theoretical link between wage determination and migration do not significantly differ between Asian Americans and whites***

The second important question to be addressed is the interrelationships between migration processes and labor market outcomes among Asian Americans. Although Asian Americans tend to live in high wage/high cost of living regions and states, this may not derive from a lack of labor market opportunities nationally. Rather, this may be due

to personal proclivities and family ties that are associated with being more likely to have previously lived in those areas, especially in the case of the native-born.

This study examined whether geographic location as a relative factor to consider in the desirability of a job is more important for Asian Americans than for whites. The results however show that there is no differential in geographic preference (at least as is measured in these data) between native-born Asian Americans and whites, as well as 1.5-generation Asian Americans and whites. This study further finds that geographic preference among native-born Asian Americans does not depend on their place of birth (i.e., whether or not born in the Western Pacific Division). On the other hand, 1.5-generation Asian Americans do not have any stronger location preference, presumably because they are willing to actively move for better economic and career rewards and opportunities. Because of the Asian American subcultural context that places a premium on family functioning, I assumed that Asian Americans (and especially the native-born) may not be maximizing their cost-adjusted earnings to the same extent that non-Hispanic whites do. However, the results show that geographic location of a job is not more important for Asian Americans (at least as is measured in these data) than for whites.

Using several different definitions of migration, this study also investigated whether Asian Americans are indeed less likely than whites to migrate. The findings show that migration patterns of both 1.5-generation and native-born Asian Americans are most characterized with short-term mobility (i.e., residence five years ago), presumably due to their preference for labor market adjustment. On the other hand, both 1.5-generation and native-born Asian Americans appear to be less likely to migrate than

whites when migration is defined in terms of longer period of time (i.e., region of birth in the case of native-born and region attended high school in the case of the 1.5-generation). Place of birth appears to be especially important for native-born Asian Americans—the findings show that those who were born in the Pacific Division have lower odds of migrating than whites, while those who were born outside of the Pacific Division have higher odds of migrating than whites.

To further investigate the interrelationships between migration processes and labor market outcomes among Asian Americans, this study also examined whether the rate of return to migration among native-born Asian Americans is indeed greater than the rate of return to migration among whites. Before examining this specific question, I examined a more general question which is whether migrants have a higher mean wage than do non-migrants, net of other variables. The findings show that migrants are selective in that they have higher mean wages (or earnings) than do non-migrants, but this positive return for migration is most pronounced among college-educated people (including both Asian Americans and whites). Another important finding is that 1.5-generation people (including both Asian Americans and whites) have higher mean wages and earnings than non-migrants, even after controlling for other variables including regional migration. Two important points are noted here. First, since the majority Asian Americans has college education, and college-educated people have a high degree of geographic mobility (Farley 1996), migration seems to be an important means for better labor market outcomes for Asian Americans. Second, the 1.5-generation seem to be

selective in that they have higher mean wages than the native-born, even after controlling for class and socioeconomic factors as well as migration.

Because these findings on the selectivity of the migrants and 1.5-generation greatly reflect characteristics of the whites in the sample, this study examined whether the rate of return to migration among Asian Americans is greater than that of whites. The results however show that the rate of return to migration among native-born and 1.5-generation Asian Americans is significantly lower than the rate of return to migrate among whites. These findings do not change whether migration is defined in terms of residence five years ago or region attended high school, or the sample is restricted to college-educated Asian Americans and whites.

As such, the results do not give us a clear idea about the role of migration in the labor market outcome of Asian Americans. For example, findings show that there is no significant differential in geographic preference between Asian Americans and whites. Furthermore, Asian Americans are more likely than whites to migrate (in terms of five-year mobility), net of other variables. Nevertheless, Asian Americans are less likely to migrate in terms of a longer period of time (i.e., in terms of region of birth and region attended high school). Especially in the case of the native-born, those who were born in the Pacific Division have lower odds of migrating than whites. The rate of return to migration among Asian Americans is smaller than the rate of return to migration among whites. Although suggestive, short-term mobility among Asian Americans may represent their preference for labor market adjustment. Yet, for Asian Americans, migration may involve many non-economic reasons such as mobility associated with marriage and

school enrollment. Furthermore, some short-term mobility may also be associated with movements back to one's region of birth.

***3. Net of relevant factors, Asian American men do not appear to be racially disadvantaged in terms of wages/earnings in the U.S. labor market***

Overall, empirical findings indicate that Asian Americans, both the 1.5-generation and native-born, do not seem to be racially disadvantaged in terms of wages. Specifically, findings for Hypothesis 4 indicate that, without any control, both native-born and 1.5-generation Asian Americans have significantly higher wages than whites. Net of COLA and other variables, native-born Asian Americans are very slightly (i.e., about 2 percent) disadvantaged, but 1.5-generation Asian Americans have a very slightly (i.e., 2 percent) but significantly higher wages than whites.

The findings for Hypothesis 6, which are obtained net of migration but without current region of residence, show that both 1.5-generation and native-born Asian American non-migrants have significantly higher wages/earnings than whites, net of demographic and socioeconomic variables. Finally, the findings for Hypothesis 7, which are obtained using both OLS and switching regression models, also show that net of age, education, marital status, disability, college major, and college type, there is *no significant differential* in earnings between college-educated Asian Americans (both 1.5-generation and native-born) in the West and their comparable white counterparts. This finding holds even when separately examined by three age groups, except that the middle-aged, native-born Asian Americans in the West have about 8 percent lower earnings than their comparable white counterparts. In the non-West, on the other hand,

native-born Asian Americans are very slightly (about 2 percent) disadvantaged while 1.5-generation Asian Americans are about 6 percent advantaged. The results from the switching regression model show that selectivity entails in the findings for the younger age group—net of this selectivity, in addition to other variables including college major, both 1.5-generation and native-born Asian Americans have significantly higher earnings than whites, whether or not in the current residential region is the West.

***4. Migration and regional characteristics of 1.5-generation Asian Americans are similar to those of native-born Asian Americans, but the 1.5-generation are advantaged in terms of wages/earnings***

In this research, Asian Americans were separately examined between the 1.5-generation and native-born. I hypothesized that the 1.5 generation may perhaps be regionally more mobile as well as somewhat distinctive in the wage determination patterns as they are the children of immigrants who tend to be more motivated (Sakamoto, Goyette, and Kim 2009). Nevertheless, as discussed in the previous chapter, the difference between the 1.5 and the native born is not really very clear from prior research, because the former are perfectly fluent in English and familiar with American culture. Furthermore, most native-born Asian Americans are second generation and are thus also the children of immigrants.

The findings of this research give us better information about some important differences as well as similarities between 1.5- and native-born Asian Americans in terms of their migration and earnings. First, findings show that migration patterns are similar to those of native-born—they are more likely than whites to migrate in terms of a relatively

short period of time, although unfortunately we cannot tell the reasons. Second, findings show that same as native-born, cost of living expense for 1.5-generation Asian Americans is higher than that for whites. Third, again same as native-born, 1.5-generation Asian Americans do not have stronger location preference for a job than whites, presumably because they may be willing to actively move for better economic and career rewards and opportunities.

On the other hand, 1.5-generation Asian Americans appear to be more selective than native-born Asian Americans, in terms of wages and earnings. For example, net of COLA and other variables, 1.5-generation Asian Americans have a slight but significant wage advantage than whites, while native-born Asian Americans are slightly disadvantaged. When migration (in terms of region attended high school) and other factors are controlled, college-educated, 1.5-generation Asian Americans maintain earnings advantaged compared to whites, while there is no earnings differential between native-born Asian Americans and whites. Finally, the results for Hypothesis 7 indicate that 1.5-generation Asian Americans in the non-West have earnings advantage in reference to whites, while native-born Asian Americans have a slight earnings disadvantage. Results from switching regression models show that among the younger age group, 1.5-generation Asian Americans in the non-West have significantly and substantively higher (i.e., 42 percent) earnings than whites, while the earnings advantage of native-born Asian Americans over whites is about 6 percent. As such, findings suggest that 1.5-generation Asian Americans maintain high economic motivation which possibly derive from foreign-born parents.

The following section presents contribution of this study to labor market attainments of Asian Americans, strengths and limitations of this study, and provides a set of recommendations for future research.



## **Chapter IV**

### **CONCLUSIONS**

Prior research shows that race remains a significant factor of inequality in the U.S. The extent to which Asian Americans face discrimination in the labor market is also a subject of considerable debate. Thus, studying labor market inequality of Asian Americans is important for our better understanding of current/future race relations in the U.S. In doing so, the role of region and migration remain key factors that have not been much taken into account in the prior research, although they play an important role in assessing whether Asian Americans have reached labor market parity with non-Hispanic whites.

This research therefore investigated migration and regional aspects affecting the wages of Asian American men. More specifically, this study investigated whether wage determination and regional migration are indeed interrelated among Asian Americans, and the extent to which important migration and regional characteristics of Asian Americans differ from those of whites. Because prior research has limited scope examining these important factors, this study investigated various hypotheses together, to broadly understand the complicated processes across migration patterns, regional aspects, and labor market outcomes among Asian American men.

Using the 5% Public Use Microdata Sample (PUMS) from the 2000 U.S. Census and the 2003 National Survey of College Graduates (NSCG), two relatively recent, nationally representative samples, this research investigated three different definitions of regional migration [i.e., any difference between (1) region of residence five years ago and

region of current residence at the time of the survey; (2) region of birth and region of current residence; and (3) region attended high school and region of current residence, using the four standard areas of the U.S. Census Bureau. I also examined two different generations (i.e., 1.5-generation and native-born) of Asian Americans in reference to native-born non-Hispanic whites.

The results indicate the significance of region of residence and migration processes for understanding the wages of Asian American men, as well as the extent to which they differ from whites. For example, this research finds that region and regional distribution matter in the wages of Asian Americans, because cost of living expense is significantly higher for both native-born and 1.5-generation Asian Americans. Indeed, this study finds that there is no significant wage differential between native-born Asian Americans and whites, as well as 1.5-generation Asian Americans and whites, net of COLA and class and socioeconomic factors.

In regard to migration, this study finds that migration patterns of both 1.5-generation and native-born Asian Americans are most characterized with short-term mobility—Asian Americans have higher odds of migrating than whites in terms of residence five years ago, presumably because due to their preference for labor market adjustment. However, region of birth appears to be especially important for understanding migration patterns of native-born Asian Americans—they have significantly lower odds of migrating than whites when migration is defined in terms of region of birth. Indeed, Asian Americans who were born in the Pacific Division have significantly lower odds of migrating than whites. Furthermore, when migration is

defined in terms of region attended high school, there is no significant differential in the odds of migrating between 1.5-generation Asian Americans and whites. Namely, some short-term mobility may also be associated with movements back to one's region of birth, both for native-born and 1.5-generation Asian Americans.

Because of the Asian American subcultural context that places a premium on family functioning, it is assumed that Asian Americans, especially the native-born, may not maximize their cost-adjusted earnings to the same extent that whites do. Namely, although Asian Americans tend to live in high wage/cost of living regions and states, this may not derive from a lack of labor market opportunities nationally. Rather, this may be due to personal proclivities and family ties that are associated with being more likely to have previously lived in those areas, especially in the case of the native-born. Although suggestive, Asian Americans seem to eventually go back to the region of birth, and their migration is rather limited to the one with a relatively short period of time.

Findings in regard to migration patterns of Asian Americans are not always clear. For example, this research finds that there is no differential in geographic preference between Asian Americans and whites (at least as is measured in these data). This study further finds that geographic preference among native-born Asian Americans does not depend on their place of birth (i.e., whether or not born in the Western Pacific Division). It is difficult to tell why Asian Americans do not think more of the location of job compared to whites, considering the findings that long-term migration is not a major characteristic of Asian Americans. Although suggestive, migration among Asian Americans may include a number of non-economic purposes, such as movement

associated with marriage and other family reasons, and school attendance. Indeed, this study finds that the rate of return to migration among native-born and 1.5-generation Asian Americans is significantly lower than the rate of return to migrate among whites. Unfortunately the data do not enable us to understand whether these migration behaviors and the following outcomes are due to possible inequality in the labor market or simply due to non-economic reasons. The role of migration in the wages of Asian Americans needs further research.

In regard to generational differentials, this study finds that migration and regional characteristics of 1.5-generation Asian Americans are similar to those of native-born Asian Americans, but the 1.5-generation are advantaged in terms of wages/earnings. For example, findings show that same as native-born, 1.5-generation Asian Americans are more likely than whites to migrate in terms of a relatively short period of time. Same as native-born, cost of living expense for 1.5-generation Asian Americans is higher than that for whites. Furthermore, 1.5-generation Asian Americans do not have stronger location preference for a job than whites (at least as is measured in these data). On the other hand, 1.5-generation Asian Americans appear to be more selective than native-born Asian Americans, in terms of wages and earnings, especially in the non-West.

Investigating some of the hypotheses by major ethnic groups does not alter the overall findings, but there are some important ethnic differentials. For example, probably due to their longer immigration history in California, Chinese, Filipino, and Japanese Americans have lower odds of migrating among native-born Asian Americans as a whole, while Asian Indian and Korean Americans, who are more recent ethnic groups,

have higher odds of migrating than whites. Furthermore, this study finds that cost of living expense is higher for all groups (i.e., Asian Indian, Chinese, Filipino, Japanese, Korean, and other Asian Americans) than whites. Among the native-born ethnic groups examined here, cost of living expense is especially high for Chinese, Filipino, and Japanese Americans who have larger proportion of U.S.-born generations, the majority of who tend to reside in California. In regard to wages, this study finds that Japanese and Chinese Americans have significantly higher wages than whites net of other variables, while there is no significant wage differential between other ethnic groups and whites. Finally, there is no differential in the rate of return to migration between these Asian ethnic groups and the rate of return to migrate among whites.

In regard to wages and earnings, the findings overall show that Asian American men (both 1.5-generation and native-born) do not face disadvantages in the U.S. labor market, net of relevant factors. Switching regression models demonstrate that both native-born and 1.5-generation Asian Americans across the regions indeed have significantly higher average earnings than whites, after further controlling for selectivity. This research suggests that Asian Americans do not face a significant net racial disadvantage in the labor market, as suggested by some research. As discussed in Chapter I, Asian Americans had faced direct and overt racial discrimination in the labor market before World War II. Then this achievement of parity represents a historic change for native-born and 1.5-generation Asian Americans. Namely, racial and ethnic discrimination in the post-Civil Rights era has been notably ameliorated (Alba and Nee 1997; Farley and Alba 2002), at least for Asian Americans. Findings of this study show

that taking regional migration into account does not alter this fundamental and significant conclusion. As discussed above, the regional aspect (i.e., higher cost of living for Asian Americans) does not explain why Asian Americans have socioeconomic parity with whites. Furthermore, adding migration variables does not alter the conclusion. Although what this conclusion means for the broader U.S. race relations—for example, the lower labor market returns for blacks and Hispanics—remains debatable, the post-Civil Rights era appears to be characterized with the greater acceptance of minorities and multiculturalism, rather than extensive and persuasive occupational discrimination as found in the pre-World War II era.

Several shortcomings of this study are noted. First, for short-term mobility, this study defined migration as a dichotomous outcome that refers to any difference between region of residence five years ago and region of current residence at the time of the survey. Nevertheless, as discussed by Barringer, Gardner, and Levin (1993), such retrospective migration questions do not capture all the movement during the previous five years—only the residence in 1995 and the 2000 residence are known, and any intermediate residences are ignored as if they never existed. We also miss any migration by those under five years of age at the census, migration by those who died in the interval, and emigration out of the country since 1995.

Second, although different patterns of migration were investigated, we cannot tell the reasons in the background of migration among Asian Americans. For example, the findings show that Asian Americans are more likely than whites to migrate in a relatively short-term, but less likely than whites to migrate in terms of region of birth. I discussed

above that Asian Americans might be active migrants in terms of a short-term period for their labor market adjustment, but that many of them might go back to their original region of birth. Namely, some short-term mobility may also be associated with movements back to one's region of birth. Nevertheless, the data do not allow us to identify any specific reasons in the background of these migration patterns.

Third, although this research identified selectivity among the younger age group (i.e., aged 25-35), we cannot identify what kinds of characteristics constitute this selectivity. For example, the findings show a positive selection into currently living in the West and negative selection into the non-West. Selectivity may indicate motivation, personality, and competitiveness that are positively correlated with one's labor market outcomes. However, switching regression models do not enable us to identify any specific components. Some speculations are that, Asian Americans and whites who currently reside in the West (especially in California) are more advantaged because they have to stay productive in their work performance, so that they can remain in California which has nice weather and amenities. Or California residents are more eager to take higher-paying jobs to manage high rents and property taxes to remain in the state. However, this positive selection residing in the West largely derives from characteristics of the sampled white population. Unfortunately we cannot tell the extent to which this observed positive selection of living in the West holds for Asian Americans.

On the other hand, Asian Americans and whites in the non-West appear to be less competitive, as indicated by negative selectivity. Yet, again, this negative selection into living into the West largely derives from the sampled white population. It might be

possible, for example, to argue that Asian Americans in the non-West are actually more competitive in terms of labor market characteristics than their comparable whites in the non-West, considering the higher mean earnings for Asian Americans in the non-West, as found in switching regression models. In sum, in addition to the issue of identifying what constitutes selectivity, the findings also do not enable us to see the extent to which the selectivity derives from characteristics of Asian Americans, because the great majority of the sampled population is whites.

Finally, future directions of this study are noted. First, this study examined two different generations of Asian Americans—1.5-generation and native-born. However, 1.25-generation (i.e., those who obtained their highest degree in the U.S. but complete high school overseas) Asian Americans were not included in the analysis, to avoid excessive length. 1.25-generation Asian Americans may have greater preferences for economic and career rewards because they typically do not have family in the U.S. Further, being very recent immigrants, 1.25-generation Asian Americans may be more selective in terms of career motivation because that is typically their main reason for coming to the U.S. The results of the wage determination patterns for 1.25-generation Asian Americans (as discussed by Kim and Sakamoto [2008b]) suggest that this demographic group significantly differs from 1.5-generation and native-born Asian Americans. Future research should examine residential distribution, migration patterns, and wages of this particular generation for better understanding of the socioeconomic status of Asian Americans.



Second, future analysis should examine processes associated with the determination of region of residence, migration, and wages of Asian American women. For simplicity and to avoid excessive length, I focused on men only. Their migratory processes may be further complicated due to the even greater influences of spousal and family relations. For example, McKinnish (2008) finds that the earnings returns to migration are typically much larger for married men than for married women. For married women, the earnings returns to migration are actually often negative in that this group is much more likely (though not always) to be the “trailing spouse” in households where the maximization of the career development of the husband is given priority (Cooke et al. 2009). The migration and wages of Asian American women should be studied in future research, for our better understanding of the socioeconomic status of Asian Americans.

Third, future research should address more ethnic-specific analysis of the interrelationships between migration processes, region of residence, and labor market outcomes. Because the 2003 NSCG does not enable us to identify any Asian ethnic groups, this study was able to examine some major ethnic groups (i.e., Asian Indian, Chinese, Filipino, Japanese, and Korean) in the 2000 PUMS, which have adequate sample sizes for statistical analyses. Because most of the contemporary Asian Americans are associated with post-1965 immigration streams, future research should examine regional aspects and wages of relatively new ethnic groups (i.e., Southeast and South Asian Americans).

Finally, future research should investigate broad demographic and socioeconomic characteristics of Asian Americans across the regions. While the nearly majority Asian Americans still prefer to live in California and some other traditional residential states, an increasing size of Asian American population, especially recent immigrants, do not live in their traditional residential region of the West and reside in all geographic areas of the nation, especially to the South (Barringer, Gardner, and Levin 1993; Sakamoto, Kim, and Takei Forthcoming). High rates of Asian American demographic growth in non-traditional regions are also characterized by natural growth. Most of Asian American population is associated with post-1965 immigration streams, and an increasing number of their U.S.-born children are entering the labor market. An increasing number of them might be born outside of the West Coast, reflecting increasing socioeconomic opportunities in the non-traditional states/regions. Namely, the increasing population of Asian Americans in non-traditional areas comprises not only of migrants from the West Coast, but also of children of post-1965 Asian American immigrants who reside in such places by birth. Therefore, future research should investigate Asian Americans in the non-traditional regions, including variations in their demographic and socioeconomic characteristics, migration patterns, and levels of labor market outcomes.

**Table 5. Descriptive Statistics for 2000 5% PUMS**

	Asian American				Non-Hispanic White			
	Mean	Std. Dev.	Minimum	Maximum	Mean	Std. Dev.	Minimum	Maximum
(Age 25-29)	0.247	0.431	0	1	0.106	0.307	0	1
Age 30-34	0.216	0.412	0	1	0.130	0.337	0	1
Age 35-39	0.163	0.369	0	1	0.158	0.364	0	1
Age 40-44	0.130	0.336	0	1	0.166	0.372	0	1
Age 45-49	0.101	0.301	0	1	0.154	0.361	0	1
Age 50-54	0.075	0.263	0	1	0.136	0.343	0	1
Age 55-59	0.044	0.204	0	1	0.095	0.294	0	1
Age 60-64	0.024	0.154	0	1	0.055	0.227	0	1
Married	0.573	0.495	0	1	0.723	0.448	0	1
Children Under Age 6	0.242	0.428	0	1	0.192	0.394	0	1
Children Aged 6-17	0.292	0.455	0	1	0.354	0.478	0	1
<u>Educational Attainment</u>								
(Less Than High School)	0.053	0.225	0	1	0.093	0.291	0	1
High School Graduate	0.162	0.368	0	1	0.310	0.463	0	1
Some College (Including Associate Degree)	0.301	0.459	0	1	0.296	0.457	0	1
College Degree	0.314	0.464	0	1	0.191	0.393	0	1
Master's Degree	0.086	0.280	0	1	0.066	0.249	0	1
Doctoral and Professional Degree	0.083	0.277	0	1	0.042	0.201	0	1
Born in California	0.205	0.403	0	1	0.065	0.246	0	1
Migration in terms of Region 5 Years Ago	0.100	0.300	0	1	0.048	0.214	0	1
Migration in terms of Region of Birth	0.224	0.417	0	1	0.215	0.411	0	1
COLA	1.080	0.089	0.898	1.219	1.017	0.079	0.898	1.219
Wage	23.641	21.648	0.001	336	22.328	22.127	0.001	593
Log-Wage	2.914	0.698	-6.620	5.817	2.839	0.720	-7.160	6.386
Sample Size	26,600				1,975,215			

Variables in parentheses are omitted categories used in regression models.  
Migration is defined in terms of region of residence five years ago.

**Table 6. Descriptive Statistics for 2003 NSCG**

	Asian American				Non-Hispanic White			
	Mean	Std.Dev.	Minimum	Maximum	Mean	Std. Dev.	Minimum	Maximum
(Age 25-29)	0.137	0.344	0	1	0.053	0.224	0	1
Age 30-34	0.223	0.417	0	1	0.120	0.325	0	1
Age 35-39	0.195	0.397	0	1	0.137	0.344	0	1
Age 40-44	0.151	0.358	0	1	0.159	0.365	0	1
Age 45-49	0.131	0.337	0	1	0.162	0.368	0	1
Age 50-54	0.094	0.292	0	1	0.167	0.373	0	1
Age 55-59	0.048	0.214	0	1	0.134	0.340	0	1
Age 60-64	0.020	0.141	0	1	0.070	0.254	0	1
Married	0.708	0.455	0	1	0.831	0.375	0	1
Children Under Age 6	0.270	0.444	0	1	0.209	0.406	0	1
Children Aged 6-11	0.210	0.408	0	1	0.224	0.417	0	1
Children Aged 12-18	0.143	0.350	0	1	0.243	0.429	0	1
Disability Status	0.043	0.203	0	1	0.064	0.245	0	1
<u>Educational Attainment</u>								
(College Degree)	0.560	0.497	0	1	0.581	0.493	0	1
Master's Degree	0.259	0.438	0	1	0.267	0.443	0	1
Doctoral and Professional Degree	0.113	0.317	0	1	0.078	0.268	0	1
<u>Major Degree Field</u>								
Mathematics	0.094	0.292	0	1	0.071	0.257	0	1
Life Sciences	0.061	0.240	0	1	0.055	0.228	0	1
Physical Sciences	0.027	0.161	0	1	0.042	0.200	0	1
Engineering	0.288	0.453	0	1	0.216	0.412	0	1
Social Sciences	0.077	0.267	0	1	0.098	0.298	0	1
Business	0.115	0.319	0	1	0.140	0.347	0	1
Business Finance	0.046	0.209	0	1	0.046	0.209	0	1
Education	0.024	0.153	0	1	0.068	0.251	0	1
Humanities	0.019	0.138	0	1	0.035	0.184	0	1
Medical Sciences	0.026	0.158	0	1	0.016	0.124	0	1
Medicine and Pharmacy	0.071	0.257	0	1	0.041	0.124	0	1
Communications	0.009	0.094	0	1	0.014	0.124	0	1
Legal Studies	0.030	0.170	0	1	0.035	0.124	0	1
(Visual or Performing Arts and Other Majors)	0.114	0.318	0	1	0.124	0.124	0	1
<u>Carnegie Classification</u>								
Research University I	0.468	0.499	0	1	0.343	0.475	0	1
Research University II	0.067	0.250	0	1	0.103	0.304	0	1
Doctorate Granting I	0.041	0.197	0	1	0.075	0.263	0	1
Doctorate Granting II	0.061	0.239	0	1	0.071	0.257	0	1
Comprehensive I	0.218	0.413	0	1	0.232	0.422	0	1
Comprehensive II	0.007	0.082	0	1	0.016	0.126	0	1
Liberal Arts I	0.009	0.094	0	1	0.023	0.151	0	1
Liberal Arts II	0.019	0.138	0	1	0.044	0.205	0	1
Theological Seminaries, Bible Colleges	0.005	0.072	0	1	0.008	0.089	0	1
Medical Schools and Medical Centers	0.023	0.151	0	1	0.017	0.131	0	1
Schools of Engineering and Technology	0.010	0.099	0	1	0.009	0.094	0	1
Schools of Art, Music, and Design	0.004	0.060	0	1	0.003	0.057	0	1
Schools of Law	0.005	0.068	0	1	0.003	0.059	0	1
Classification Don't Know	0.048	0.214	0	1	0.032	0.176	0	1
(Two-Year Institutions and Other Specialized Institutions)	0.016	0.126	0	1	0.019	0.136	0	1
Born in Northeast	0.093	0.291	0	1	0.285	0.451	0	1
Born in Midwest	0.075	0.263	0	1	0.337	0.473	0	1
Born in South	0.055	0.227	0	1	0.232	0.422	0	1
Born in Non-Pacific Division of the West	0.019	0.138	0	1	0.047	0.212	0	1
Born in Pacific Division of the West	0.272	0.445	0	1	0.100	0.300	0	1
Current Region in the West	0.524	0.500	0	1	0.214	0.410	0	1
Migration in terms of Region Attended High School	0.240	0.427	0	1	0.278	0.448	0	1
Migration in terms of Region of Birth	0.285	0.452	0	1	0.338	0.473	0	1
Location	3.436	0.602	1	4	3.429	0.619	1	4
Salary	81,551	53,970	1	565,172	82,382	63,009	1	565,172
Log-Salary	11.134	0.701	0	13.245	11.111	0.720	0	13.245
Sample Size	1,920				29,205			

Variables in parentheses are omitted categories used in regression models.  
Migration is defined in terms of region of residence five years ago.

**Table 7. Testing Hypothesis 1: Logistic Regression Models of Migration Using 2000 5% PUMS  
(in Terms of Region of Residence Five Years Ago)**

	Model 1		Model 2		Model 3	
	Odds Ratio		Odds Ratio		Odds Ratio	
Native-Born Asian American	1.955	***	1.355	***	1.378	***
1.5-Generation Asian American	2.631	***	1.376	***	1.370	***
Age 30-34			0.750	***	0.751	***
Age 35-39			0.575	***	0.576	***
Age 40-44			0.451	***	0.451	***
Age 45-49			0.332	***	0.332	***
Age 50-54			0.284	***	0.284	***
Age 55-59			0.261	***	0.261	***
Age 60-64			0.240	***	0.240	***
Married			0.804	***	0.803	***
Children Under Age 6			1.000		1.001	
Children Aged 6-17			0.821	***	0.821	***
<u>Educational Attainment</u>						
High School Graduate			1.014		1.014	
Some College (Including Associate Degree)			1.555	***	1.558	***
College Degree			2.363	***	2.365	***
Master's Degree			3.646	***	3.649	***
Doctoral and Professional Degree			3.609	***	3.614	***
Born in California					0.937	***
Pseudo-R <sup>2</sup>	0.002		0.051		0.051	

Note: Reported odds ratio refers to the anti-log of the estimated coefficient.

The sample population includes all educational levels.

\*Significant at the 0.05 level; \*\*Significant at the 0.01 level; \*\*\*Significant at the 0.001 level (two-tailed tests).

**Table 8. Testing Hypothesis 1: Logistic Regression Models of Migration Using 2000 5% PUMS  
(in Terms of Region of Birth)**

	Model 1	Model 2	Model 3
	Odds Ratio	Odds Ratio	Odds Ratio
Native-Born Asian American	1.055 **	0.920 ***	
Asian Indian			1.927 ***
Chinese			0.695 ***
Filipino			0.850 **
Japanese			0.340 ***
Korean			1.528 ***
Other Asian			1.035
Age 30-34		1.122 ***	1.127 ***
Age 35-39		1.222 ***	1.229 ***
Age 40-44		1.271 ***	1.281 ***
Age 45-49		1.266 ***	1.276 ***
Age 50-54		1.312 ***	1.322 ***
Age 55-59		1.464 ***	1.476 ***
Age 60-64		1.467 ***	1.480 ***
Married		0.890 ***	0.889 ***
Children Under Age 6		0.988 *	0.988 *
Children Aged 6-17		0.928 ***	0.928 ***
<u>Educational Attainment</u>			
High School Graduate		0.997	0.998
Some College (Including Associate Degree)		1.532 ***	1.536 ***
College Degree		2.082 ***	2.091 ***
Master's Degree		2.691 ***	2.699 ***
Doctoral and Professional Degree		3.109 ***	3.121 ***
Pseudo-R <sup>2</sup>	0.000	0.024	0.025

Note: Reported odds ratio refers to the anti-log of the estimated coefficient.

The sample population includes all educational levels.

\*Significant at the 0.05 level; \*\*Significant at the 0.01 level; \*\*\*Significant at the 0.001 level (two-tailed tests).

**Table 9. Testing Hypothesis 1: Logistic Regression Models of Migration Using 2000 5% PUMS  
(in Terms of Five Years Ago among Individuals with at Least College-Education)**

	Model 1	Model 2	Model 3
	Odds Ratio	Odds Ratio	Odds Ratio
Native-Born Asian American	1.580 ***	1.197 ***	1.251 ***
1.5-Generation Asian American	2.131 ***	1.234 ***	1.218 ***
Age 30-34		0.771 ***	0.773 ***
Age 35-39		0.568 ***	0.570 ***
Age 40-44		0.412 ***	0.413 ***
Age 45-49		0.283 ***	0.284 ***
Age 50-54		0.228 ***	0.228 ***
Age 55-59		0.200 ***	0.200 ***
Age 60-64		0.179 ***	0.179 ***
Married		0.893 ***	0.891 ***
Children Under Age 6		0.921 ***	0.921 ***
Children Aged 6-17		0.792 ***	0.791 ***
<u>Educational Attainment</u>			
Master's Degree		1.591 ***	1.590 ***
Doctoral and Professional Degree		1.585 ***	1.586 ***
Born in California			0.834 ***
Pseudo-R <sup>2</sup>	0.001	0.046	0.046

Note: Reported odds ratio refers to the anti-log of the estimated coefficient.  
 \*Significant at the 0.05 level; \*\*Significant at the 0.01 level; \*\*\*Significant at the 0.001 level (two-tailed tests).

**Table 10. Testing Hypothesis 1: Logistic Regression Models of Migration Using 2000 5% PUMS  
(in Terms of Region of Birth among Individuals with at Least College-Education)**

	Model 1		Model 2	
	Odds Ratio		Odds Ratio	
Native-Born Asian American	0.830	***	0.837	***
Age 30-34			1.123	***
Age 35-39			1.224	***
Age 40-44			1.281	***
Age 45-49			1.261	***
Age 50-54			1.255	***
Age 55-59			1.422	***
Age 60-64			1.394	***
Married			0.901	***
Children Under Age 6			0.955	***
Children Aged 6-17			0.893	***
<u>Educational Attainment</u>				
Master's Degree			1.298	***
Doctoral and Professional Degree			1.503	***
Pseudo-R <sup>2</sup>	0.000		0.007	

Note: Reported odds ratio refers to the anti-log of the estimated coefficient.

\*Significant at the 0.05 level; \*\*Significant at the 0.01 level; \*\*\*Significant at the 0.001 level (two-tailed tests).



**Table 11. Testing Hypothesis 1: Logistic Regression Models of Migration Using 2003 NSCG  
(in Terms of the Region Where High School Diploma was Obtained)**

	Model 1	Model 2	Model 3	Model 4
	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
Native-Born Asian American	0.759 ***	0.791 **	0.971	1.456 ***
1.5-Generation Asian American	0.886	0.953	0.914	0.924
Age 30-34		0.952	0.961	0.971
Age 35-39		1.060	1.076	1.094
Age 40-44		1.187 **	1.205 **	1.229 **
Age 45-49		1.225 **	1.249 ***	1.274 ***
Age 50-54		1.197 **	1.216 **	1.242 ***
Age 55-59		1.297 ***	1.318 ***	1.347 ***
Age 60-64		1.553 ***	1.574 ***	1.607 ***
Married		1.032	1.029	1.031
Children Under Age 6		0.917 *	0.916 *	0.916 *
Children Aged 6-11		0.957	0.959	0.959
Children Aged 12-18		0.841 ***	0.838 ***	0.838 ***
<u>Educational Attainment</u>				
Master's Degree		1.265 ***	1.260 ***	1.255 ***
Doctoral and Professional Degree		1.129 *	1.119 *	1.112 *
Born in Pacific Division			0.610 ***	0.667 ***
Native-Born Asian American*Born in Pacific Division				0.343 ***
Pseudo-R <sup>2</sup>	0.000	0.007	0.010	0.011

Note: Reported odds ratio refers to the anti-log of the estimated coefficient. Pacific division includes Washington, Oregon, California, Alaska, and Hawaii.

\*Significant at the 0.05 level; \*\*Significant at the 0.01 level; \*\*\*Significant at the 0.001 level (two-tailed tests).

**Table 12. Testing Hypothesis 1: Logistic Regression Models of Migration Using 2003 NSCG  
(in Terms of Region of Birth)**

	Model 1		Model 2	
	Odds Ratio		Odds Ratio	
Native-Born Asian American	0.779	***	0.791	**
Age 30-34			1.048	
Age 35-39			1.073	
Age 40-44			1.203	**
Age 45-49			1.196	**
Age 50-54			1.112	
Age 55-59			1.247	***
Age 60-64			1.407	***
Married			0.984	
Children Under Age 6			0.922	*
Children Aged 6-11			0.969	
Children Aged 12-18			0.847	***
<u>Educational Attainment</u>				
Master's Degree			1.202	***
Doctoral and Professional Degree			1.158	**
Pseudo-R <sup>2</sup>	0.000		0.004	

Note: Reported odds ratio refers to the anti-log of the estimated coefficient. Pacific division includes Washington, Oregon, California, Alaska, and Hawaii.

\*Significant at the 0.05 level; \*\*Significant at the 0.01 level; \*\*\*Significant at the 0.001 level (two-tailed tests).

**Table 13. Testing Hypothesis 2: OLS Regression Models of Log-Wage Using 2000 5% PUMS**

	Model 1		Model 2		Model 3		Model 4	
Recent Migrant	0.039	***	-0.005	*	0.039	***	-0.005	*
1.5-Generation					0.037	***	0.054	***
Age 30-34			0.106	***			0.106	***
Age 35-39			0.217	***			0.217	***
Age 40-44			0.262	***			0.262	***
Age 45-49			0.275	***			0.276	***
Age 50-54			0.297	***			0.297	***
Age 55-59			0.308	***			0.309	***
Age 60-64			0.243	***			0.244	***
Married			0.166	***			0.166	***
Children Under Age 6			0.035	***			0.035	***
Children Aged 6-17			0.033	***			0.033	***
<u>Educational Attainment</u>								
High School Graduate			0.162	***			0.162	***
Some College (Including Associate Degree)			0.314	***			0.314	***
College Degree			0.632	***			0.632	***
Master's Degree			0.752	***			0.752	***
Doctoral and Professional Degree			1.008	***			1.008	***
Intercept	2.838	***	2.128	***	2.838	***	2.127	***
R-Square	0.000		0.176		0.000		0.176	

The sample population includes all educational levels.

\*Significant at the 0.05 level; \*\*Significant at the 0.01 level; \*\*\*Significant at the 0.001 level (two-tailed tests).

**Table 14. Testing Hypothesis 2: OLS Regression Models of Log-Wage Using 2000 5% PUMS  
(among Individuals with at Least College-Education)**

	Model 1	Model 2	Model 3	Model 4
Recent Migrant	-0.040 ***	0.035 ***	-0.040 ***	0.034 ***
1.5-Generation			-0.066 ***	0.100 ***
Age 30-34		0.145 ***		0.146 ***
Age 35-39		0.312 ***		0.314 ***
Age 40-44		0.363 ***		0.366 ***
Age 45-49		0.352 ***		0.355 ***
Age 50-54		0.372 ***		0.374 ***
Age 55-59		0.394 ***		0.397 ***
Age 60-64		0.319 ***		0.322 ***
Married		0.188 ***		0.189 ***
Children Under Age 6		0.046 ***		0.047 ***
Children Aged 6-17		0.057 ***		0.057 ***
<u>Educational Attainment</u>				
Master's Degree		0.110 ***		0.110 ***
Doctoral and Professional Degree		0.364 ***		0.364 ***
Intercept	3.206 ***	2.661 ***	3.207 ***	2.658 ***
R-Square	0.000	0.089	0.000	0.0891

\*Significant at the 0.05 level; \*\*Significant at the 0.01 level; \*\*\*Significant at the 0.001 level (two-tailed tests).

**Table 15. Testing Hypothesis 2: OLS Regression Models of Log-Earnings Using 2003 NSCG**

	Model 1	Model 2	Model 3	Model 4
Migrant	0.088 ***	0.083 ***	0.088 ***	0.083 ***
1.5-Generation			0.071 **	0.126 ***
Age 30-34		0.164 ***		0.163 ***
Age 35-39		0.272 ***		0.273 ***
Age 40-44		0.343 ***		0.347 ***
Age 45-49		0.341 ***		0.345 ***
Age 50-54		0.331 ***		0.337 ***
Age 55-59		0.313 ***		0.319 ***
Age 60-64		0.216 ***		0.223 ***
Married		0.161 ***		0.162 ***
Children Under Age 6		0.042 ***		0.042 ***
Children Aged 6-11		0.038 ***		0.038 ***
Children Aged 12-18		0.076 ***		0.077 ***
<u>Educational Attainment</u>				
Master's Degree		0.032 ***		0.031 ***
Doctoral and Professional Degree		0.547 ***		0.546 ***
Intercept	11.089 ***	10.594 ***	11.086 ***	10.585 ***
R-Square	0.003	0.085	0.003	0.086

\*Significant at the 0.05 level; \*\*Significant at the 0.01 level; \*\*\*Significant at the 0.001 level (two-tailed tests).

**Table 16. Testing Hypothesis 3: OLS Regression Models of COLA Using 2000 5% PUMS**

	Model 1	Model 2	Model 3
Native-Born Asian American	0.075 ***	0.072 ***	
Native-Born Asian Indian			0.032 ***
Native-Born Chinese			0.061 ***
Native-Born Filipino			0.073 ***
Native-Born Japanese			0.098 ***
Native-Born Korean			0.054 ***
Native-Born Other Asian			0.012
1.5-Generation Asian American	0.043 ***	0.041 ***	
1.5-Generation Asian Indian			0.038 ***
1.5-Generation Chinese			0.054 ***
1.5-Generation Filipino			0.064 ***
1.5-Generation Japanese			0.047 ***
1.5-Generation Korean			0.046 ***
1.5-Generation Other Asian			0.018 ***
Age 30-34		0.006 ***	0.005 ***
Age 35-39		0.008 ***	0.008 ***
Age 40-44		0.009 ***	0.008 ***
Age 45-49		0.008 ***	0.008 ***
Age 50-54		0.007 ***	0.007 ***
Age 55-59		0.008 ***	0.008 ***
Age 60-64		0.007 ***	0.007 ***
Married		-0.008 ***	-0.008 ***
Children Under Age 6		0.003 ***	0.003 ***
Children Aged 6-17		-0.001 ***	-0.001 ***
<u>Educational Attainment</u>			
High School Graduate		0.014 ***	0.013 ***
Some College (Including Associate Degree)		0.016 ***	0.015 ***
College Degree		0.023 ***	0.022 ***
Master's Degree		0.031 ***	0.029 ***
Doctoral and Professional Degree		0.028 ***	0.026 ***
Intercept	1.017 ***	0.999 ***	1.000 ***
R-Square	0.009	0.020	0.028

The sample population includes all educational levels.

\*Significant at the 0.05 level; \*\*Significant at the 0.01 level; \*\*\*Significant at the 0.001 level (two-tailed tests).

**Table 17. Testing Hypothesis 4: OLS Regression Models of Log-Wage Using 2000 5% PUMS**

	Model 1	Model 2	Model 3	Model 4
Native-Born Asian American	0.094 ***	0.010	0.039 ***	-0.022 ***
1.5-Generation Asian American	0.041 ***	-0.006	0.054 ***	0.020 **
COLA		1.104 ***		0.854 ***
Age 30-34			0.107 ***	0.102 ***
Age 35-39			0.218 ***	0.211 ***
Age 40-44			0.263 ***	0.255 ***
Age 45-49			0.276 ***	0.269 ***
Age 50-54			0.298 ***	0.292 ***
Age 55-59			0.310 ***	0.303 ***
Age 60-64			0.244 ***	0.238 ***
Married			0.166 ***	0.173 ***
Children Under Age 6			0.035 ***	0.032 ***
Children Aged 6-17			0.033 ***	0.034 ***
<u>Educational Attainment</u>				
High School Graduate			0.162 ***	0.150 ***
Some College (Including Associate Degree)			0.314 ***	0.300 ***
College Degree			0.631 ***	0.612 ***
Master's Degree			0.751 ***	0.725 ***
Doctoral and Professional Degree			1.007 ***	0.983 ***
Intercept	2.839 ***	1.717 ***	2.126 ***	1.273 ***
R-Square	0.000	0.015	0.176	0.184

The sample population includes all educational levels.

\*Significant at the 0.05 level; \*\*Significant at the 0.01 level; \*\*\*Significant at the 0.001 level (two-tailed tests).

**Table 18. Testing Hypothesis 5: Ordered Logistic Regression Models of Location Using 2003 NSCG**

	Model 1	Model 2	Model 3	Model 4
	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
Native-Born Asian American	1.002	1.054	0.975	1.044
1.5-Generation Asian American	1.014	1.100	1.119	1.121
Age 30-34		1.015	1.011	1.013
Age 35-39		1.109	1.103	1.105
Age 40-44		1.318 ***	1.311 ***	1.314 ***
Age 45-49		1.216 ***	1.207 ***	1.211 ***
Age 50-54		1.318 ***	1.309 ***	1.313 ***
Age 55-59		1.351 ***	1.343 ***	1.347 ***
Age 60-64		1.411 ***	1.405 ***	1.409 ***
Married		1.077 *	1.079 *	1.079 *
Children Under Age 6		1.024	1.024	1.024
Children Aged 6-11		1.003	1.002	1.003
Children Aged 12-18		1.010	1.011	1.011
<u>Educational Attainment</u>				
Master's Degree		0.984	0.986	0.986
Doctoral and Professional Degree		1.202 ***	1.207 ***	1.206 ***
Born in Pacific Division			1.198 ***	1.213 ***
Native-Born Asian American*Born in Pacific Division				0.871
Pseudo-R <sup>2</sup>	0.000	0.003	0.003	0.003

\*Significant at the 0.05 level; \*\*Significant at the 0.01 level; \*\*\*Significant at the 0.001 level (two-tailed tests).



**Table 19. Testing Hypothesis 6: OLS Regression Models of Log-Wage Using 2000 5% PUMS  
(in Terms of Region of Residence Five Years Ago)**

	Model 1	Model 2	Model 3	Model 4	Model 5
Native-Born Asian American	0.099 ***	0.044 ***			
Native-Born Asian Indian			-0.009	0.07352 *	-0.011
Native-Born Chinese			0.104 ***	0.29762 ***	0.104 ***
Native-Born Filipino			0.009	-0.029	0.013
Native-Born Japanese			0.067 ***	0.205 ***	0.070 ***
Native-Born Korean			0.023	0.079 *	0.015
Native-Born Other Asian			-0.029	-0.141 *	-0.029
1.5-Generation Asian American	0.049 ***	0.068 ***			
1.5-Generation Asian Indian			-0.012 *	0.238 ***	-0.026 ***
1.5-Generation Chinese			-0.191 ***	-0.040 ***	-0.170 ***
1.5-Generation Filipino			-0.149 ***	-0.038 ***	-0.131 ***
1.5-Generation Japanese			0.172 ***	0.230 ***	0.074 ***
1.5-Generation Korean			-0.223 ***	-0.062 ***	-0.209 ***
1.5-Generatio Other Asian			-0.129 ***	-0.200 ***	-0.111 ***
Migrant	0.040 ***	-0.003		0.040 ***	-0.006 ***
Native-Born Asian American*Migrant	-0.076 ***	-0.051 **			
Native-Born Asian Indian*Migrant				-0.008	0.014
Native-Born Chinese*Migrant				0.004	-0.001
Native-Born Filipino*Migrant				-0.041	-0.071
Native-Born Japanese*Migrant				-0.018	-0.067
Native-Born Korean*Migrant				0.087	0.068
Native-Born Other Asian*Migrant				-0.196	0.006
1.5-Generation Asian American*Migrant	-0.091 ***	-0.112 ***			
1.5-Generation Asian Indian*Migrant				-0.046 ***	0.050 ***
1.5-Generation Chinese*Migrant				-0.051 ***	-0.110 ***
1.5-Generation Filipino*Migrant				-0.219 ***	-0.172 ***
1.5-Generation Japanese*Migrant				0.325 ***	0.249 ***
1.5-Generation Korean*Migrant				-0.078 ***	-0.081 ***
1.5-Generation Other Asian*Migrant				-0.259 ***	-0.153 ***
Age 30-34		0.107 ***	0.104 ***		0.104 ***
Age 35-39		0.217 ***	0.211 ***		0.211 ***
Age 40-44		0.263 ***	0.255 ***		0.254 ***
Age 45-49		0.276 ***	0.266 ***		0.266 ***
Age 50-54		0.298 ***	0.288 ***		0.287 ***
Age 55-59		0.310 ***	0.299 ***		0.298 ***
Age 60-64		0.244 ***	0.233 ***		0.232 ***
Married		0.166 ***	0.164 ***		0.164 ***
Children Under Age 6		0.034 ***	0.033 ***		0.033 ***
Children Aged 6-17		0.033 ***	0.032 ***		0.032 ***
<u>Educational Attainment</u>					
High School Graduate		0.162 ***	0.167 ***		0.167 ***
Some College (Including Associate Degree)		0.314 ***	0.320 ***		0.320 ***
College Degree		0.631 ***	0.637 ***		0.637 ***
Master's Degree		0.751 ***	0.771 ***		0.772 ***
Doctoral and Professional Degree		1.007 ***	1.015 ***		1.016 ***
Intercept	2.837 ***	2.126 ***	2.129 ***	2.83681 ***	2.130 ***
R-Square	0.000	0.176	0.178	0.003	0.178

The sample population includes all educational levels.

\*Significant at the 0.05 level; \*\*Significant at the 0.01 level; \*\*\*Significant at the 0.001 level (two-tailed tests).

**Table 20. Testing Hypothesis 6: OLS Regression Models of Log-Wage Using 2000 5% PUMS  
(in Terms of Five Years Ago among Individuals with at Least College-Education)**

	Model 1		Model 2	
Native-Born Asian American	-0.024	**	0.050	***
1.5-Generation Asian American	-0.054	***	0.126	***
Migrant	-0.037	***	0.038	***
Native-Born Asian American*Migrant	-0.057	*	-0.065	*
1.5-Generation Asian American*Migrant	-0.083	**	-0.170	***
Age 30-34			0.146	***
Age 35-39			0.314	***
Age 40-44			0.366	***
Age 45-49			0.355	***
Age 50-54			0.375	***
Age 55-59			0.398	***
Age 60-64			0.323	***
Married			0.189	***
Children Under Age 6			0.047	***
Children Aged 6-17			0.057	***
<u>Educational Attainment</u>				
Master's Degree			0.110	***
Doctoral and Professional Degree			0.364	***
Intercept	3.207	***	2.656	***
R-Square	0.000		0.089	

\*Significant at the 0.05 level; \*\*Significant at the 0.01 level; \*\*\*Significant at the 0.001 level (two-tailed tests).

**Table 21. Testing Hypothesis 6: OLS Regression Models of Log-Wage Using 2003 NSCG**

	Model 1	Model 2	Model 3
Native-Born Asian American	0.006	0.050	0.005
1.5-Generation Asian American Migrant	0.064 *	0.135 ***	0.082 **
Native-Born Asian American*Migrant	-0.094	-0.096	-0.070
1.5-Generation Asian American*Migrant	0.025	-0.030	-0.008
Age 30-34		0.164 ***	0.176 ***
Age 35-39		0.274 ***	0.282 ***
Age 40-44		0.347 ***	0.345 ***
Age 45-49		0.346 ***	0.364 ***
Age 50-54		0.338 ***	0.382 ***
Age 55-59		0.320 ***	0.367 ***
Age 60-64		0.224 ***	0.255 ***
Married		0.163 ***	0.150 ***
Children Under Age 6		0.042 ***	0.043 ***
Children Aged 6-11		0.038 ***	0.038 ***
Children Aged 12-18		0.077 ***	0.074 ***
<u>Educational Attainment</u>			
Master's Degree		0.032 ***	0.056 ***
Doctoral and Professional Degree		0.546 ***	0.496 ***
<u>Major Degree Field</u>			
Mathematics			0.217 ***
Life Sciences			-0.115 ***
Physical Sciences			0.114 ***
Engineering			0.202 ***
Social Sciences			-0.042 *
Business			0.140 ***
Business Finance			0.214 ***
Education			-0.231 ***
Humanities			-0.156 ***
Medical Sciences			0.054
Medicine and Pharmacy			0.261 ***
Communications			-0.077 *
Legal Studies			-0.016
<u>Carnegie Classification</u>			
Research University I			0.093 **
Research University II			0.017
Doctorate Granting I			-0.006
Doctorate Granting II			0.023
Comprehensive I			-0.054
Comprehensive II			-0.137 ***
Liberal Arts I			0.119 **
Liberal Arts II			-0.125 ***
Theological Seminaries, Bible Colleges			-0.318 ***
Medical Schools and Medical Centers			-0.017
Schools of Engineering and Technology			-0.039
Schools of Art, Music, and Design			-0.220 **
Schools of Law			-0.053
Classification Don't Know			-0.080 *
Intercept	11.086 ***	10.582 ***	10.493 ***
R-Square	0.003	0.086	0.140

\*Significant at the 0.05 level; \*\*Significant at the 0.01 level; \*\*\*Significant at the 0.001 level (two-tailed tests).

**Table 22. Testing Hypothesis 7: Probit Model of Currently Residing in the West**

Native-Born AA	0.532	***
1.5-Gen. AA	-0.773	***
Born in the Northeast	-1.895	***
Born in Midwest	-1.662	***
Born in South	-1.892	***
Born in Non-Pacific Division of the West	-0.021	
Age	0.431	***
Age Squared	-0.040	***
Master's Degree	0.032	
Doctoral and Professional Degree	0.053	
Married	0.234	***
Disability Status	-0.021	
Children Under Age 2	-0.007	
Children Aged 2-5	-0.062	**
Children Aged 6-11	-0.016	
Children Aged 12-18	-0.062	***
<u>Major Degree Field</u>		
Mathematics	0.040	
Life Sciences	0.162	***
Physical Sciences	0.149	***
Engineering	0.085	**
Social Sciences	0.065	
Business	-0.068	*
Business Finance	-0.009	
Education	-0.101	*
Medicine and Pharmacy	-0.102	
Legal Studies	0.065	
<i>Carnegie Classification</i>		
Research University I	0.121	***
Research University II	-0.009	
Doctorate Granting I	-0.263	***
Doctorate Granting II	0.087	*
Comprehensive I	0.047	
Comprehensive II	-0.044	
Liberal Arts I	0.025	
Liberal Arts II	-0.153	**
Intercept	-0.507	*

\*\*\*p&lt;.001; \*\*p&lt;0.01; \*p&lt;0.05

**Table 23. Sample Sizes of Asian Americans and Whites by Age Category**

	All ages (25-64)	Younger (25-35)	Middle-aged (36-49)	Older (50-64)
Native-Born AA	987	360	407	220
1.5-Gen. AA	933	415	426	92
Whites	29,205	5,824	12,573	10,808

**Table 24. Testing Hypothesis 7: OLS and Switching Regression Models of Log-Salary**

Age Group	Current Region	OLS		Switching Regression		rho
		Native-Born AA	1.5-Gen. AA	Native-Born AA	1.5-Gen. AA	
All Ages (25-64)	West	-0.022	0.048	-0.005	0.052	0.004
	Non-West	-0.020 **	0.063 *	-0.102 **	0.067 *	0.032
Younger (25-35)	West	0.092	0.086	<b>0.117 *</b>	<b>0.097 *</b>	0.809 ***
	Non-West	-0.101 *	0.125 **	0.056 *	0.349 ***	0.109 *
Middle-Aged (36-49)	West	-0.087 *	-0.011	<b>-0.057</b>	-0.006	0.058
	Non-West	-0.026	0.010	-0.016	0.020	0.031
Older (50-64)	West	0.013	0.105	0.009	0.106	-0.014
	Non-West	-0.118	0.048	-0.126	0.036	-0.026

Note: The models control for age, education, marital status, disability, college major, and college type.

\*p<.05; \*\*p<.01; \*\*\*p<.001

**Table 25. Probit Model of Currently Residing in the West, Age 25-35**

Native-Born AA	0.331	***
1.5-Gen. AA	-0.430	***
Born in the Northeast	-1.422	***
Born in Midwest	-1.248	***
Born in South	-1.429	***
Born in Non-Pacific Division of the West	-0.002	
Age	1.966	
Age Squared	-0.269	
Master's Degree	-0.001	
Doctoral and Professional Degree	-0.207	
Married	0.172	*
Disability Status	-0.107	
Children Under Age 2	-0.121	***
Children Aged 2-5	-0.119	***
Children Aged 6-11	-0.054	
Children Aged 12-18	0.084	
<u>Major Degree Field</u>		
Mathematics	0.104	
Life Sciences	0.263	**
Physical Sciences	0.064	
Engineering	0.154	**
Social Sciences	0.051	
Business	0.014	
Business Finance	-0.016	
Education	0.040	
Medicine and Pharmacy	0.115	
Legal Studies	0.130	
<i>Carnegie Classification</i>		
Research University I	0.213	**
Research University II	0.035	
Doctorate Granting I	-0.054	
Doctorate Granting II	0.252	**
Comprehensive I	0.112	
Comprehensive II	0.436	**
Liberal Arts I	0.263	*
Liberal Arts II	-0.100	
Intercept	-3.404	

\*\*\*p&lt;.001; \*\*p&lt;0.01; \*p&lt;0.05

**Table 26. Switching Regression Model of Log-Salary for West, Age 25-35**

Native-Born AA	0.117	*
1.5-Gen. AA	0.097	*
Age	4.636	**
Age Squared	-0.658	**
Master's Degree	-0.023	
Doctoral and Professional Degree	0.222	
Married	-0.080	
Disability Status	-0.064	
<u>Major Degree Field</u>		
Mathematics	0.235	***
Life Sciences	-0.285	***
Physical Sciences	-0.150	
Engineering	0.213	***
Social Sciences	-0.118	*
Business	0.122	
Business Finance	0.211	*
Education	-0.362	***
Medicine and Pharmacy	0.160	
Legal Studies	0.167	
<i>Carnegie Classification</i>		
Research University I	0.064	
Research University II	0.000	
Doctorate Granting I	-0.032	
Doctorate Granting II	0.022	
Comprehensive I	0.039	
Comprehensive II	-0.073	
Liberal Arts I	0.233	*
Liberal Arts II	-0.311	**
Intercept	2.763	

\*\*\*p&lt;.001; \*\*p&lt;0.01; \*p&lt;0.05



**Table 27. Switching Regression Model of Log-Salary for Non-West, Age 25-35**

Native-Born AA	0.056	
1.5-Gen. AA	0.349	***
Age	2.011	*
Age Squared	-0.250	
Master's Degree	0.005	
Doctoral and Professional Degree	0.326	***
Married	0.010	
Disability Status	-0.122	*
<u>Major Degree Field</u>		
Mathematics	0.247	***
Life Sciences	-0.094	*
Physical Sciences	0.050	
Engineering	0.219	***
Social Sciences	-0.014	
Business	0.198	***
Business Finance	0.258	***
Education	-0.199	***
Medicine and Pharmacy	0.225	***
Legal Studies	0.101	
<i>Carnegie Classification</i>		
Research University I	0.238	***
Research University II	0.091	*
Doctorate Granting I	0.138	**
Doctorate Granting II	0.159	***
Comprehensive I	0.034	
Comprehensive II	0.151	
Liberal Arts I	0.160	*
Liberal Arts II	-0.018	
Intercept	6.955	***

\*\*\*p&lt;.001; \*\*p&lt;0.01; \*p&lt;0.05

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