Claremont Colleges

working papers in economics

Claremont Graduate University • Claremont Institute for Economic
Policy Studies • Claremont McKenna College • Drucker Graduate
School of Management • Harvey Mudd College • Lowe Institute •
Pitzer College • Pomona College • Scripps College

DRAFT

The
Labor Market Status
of Native Born Filipino/a Americans

Linus Yamane[☺]
Intercollegiate Department of Asian American Studies
Pitzer College

August 2001

Abstract: This paper finds that Filipino Americans face significant discrimination in the labor market. Filipino Americans face both wage discrimination and occupational discrimination. But the amount of discrimination faced by Filipino Americans depends on combinations of gender, region of residence, and level of education.

1. Introduction

Though Filipinos have been in North America since deserting Spanish galleons in the 1700s, the first major wave of Filipino immigration occurred after the Spanish-American War when the Philippines became a U.S. territory. Predominantly male Filipino immigrants worked on sugar plantations in Hawaii, worked in the fisheries of the Northwest and Alaska, and were migrant farm laborers and domestic servants in California. After World War II there was a second wave of Filipino immigration consisting primarily of men who came through the military, and women who largely married Filipino immigrant men and U.S military men. After 1965 there was a third wave of immigration from the Philippines. This third wave was predominantly female, middle class and professional and technical workers.

Today Filipino Americans are the second largest Asian American ethnic group behind the Chinese Americans. In 2000, Filipino Americans represented 18.1% of all Asian Americans with a population of 1.85 million. Almost half, 49.6%, lived in California. The next largest numbers were in Hawaii with 9.2%, New York/New Jersey with 9.0%, and Illinois with 4.7%. The states of Washington, Texas, Florida, Virginia and Nevada also had sizeable populations. Filipino Americans live disproportionately in the states of Hawaii, California, Nevada, Alaska, Washington, and New Jersey.

Most Filipino Americans were born abroad. In 1990[1], 64.4% were foreign born, with almost half of the foreign born having immigrated in the 1980s. Consequently, English is not the primary language spoken in 66% of their homes. Filipino Americans make Tagalog the second most common Asian language spoken at home behind Chinese. Their families are also larger than the average American family. The average Filipino family had 4 persons in 1990 versus 3.2 persons for all U.S. families.

Filipino Americans are younger and better educated than the average American. In 1990 they had a median age of 31.1, younger than the national median of 33 years. Filipino Americans were more likely to have graduated from high school, and more likely to have a bachelor's degree than the average American. The figures were 82.8% versus 75.3% for high school, and 38.8% versus 20.5% for college.

Filipino Americans had relatively high family incomes in 1990, though their incomes were not high in per capita terms. The median family income of $46,698 is higher than the average median family income of $35,225. This is because they are strongly attached to the labor force. Their labor force participation rate of 75.4% is significantly higher than the figure of 65% for all Americans. Furthermore, 29.6% of Filipino American families have 3 or more workers in the labor force. This is also much higher than the national average of 13%. The poverty rate for Filipinos is much lower than for all Americans. They have a poverty rate of 6.4%, much lower than the 13% national average. But since Filipino American families are larger than average, they have a per capita income of $13,616 which is lower than the national average of $14,143.

This study examines the labor market status of native-born Filipino Americans. We are particularly interested in the issue of labor market discrimination. Though Filipino Americans have relatively high family incomes, they are low in per capita terms. We examine whether or not Filipino Americans have earnings comparable to non-Hispanic white Americans with similar productivity characteristics. We also examine whether Filipino Americans have the same access to managerial positions, or whether they face a glass ceiling climbing the corporate ladder. We test to see if there are differences in the degree of discrimination faced by Filipino Americans with different levels of education, and who live in different parts of the country. Since recent

---

[1] Detailed data on Filipino Americans from the 2000 Census are not yet available.

immigrants may face language and cultural barriers in the mainstream economy, we compare native-born Filipino Americans with native-born non-Hispanic white Americans.

2. Data

We examine the 1990 Census of Population and Housing Public Use Microdata Samples (PUMS) prepared by the Bureau of the Census. It covers all persons and housing units in the United States. The PUMS contain records representing 5% samples of the housing units in the U.S. and the persons in them. Selected group quarters persons are also included. Our focus is on native-born Filipino Americans and non-Hispanic white Americans between the ages of 25 and 64 who worked full time, at least 35 hours per week, for at least half of 1989, are not self-employed, and earned at least $3000[2]. We will compare native-born Filipina American women to both native-born non-Hispanic American men and women to measure the extent of gender and racial discrimination faced by Filipina women. We will compare native-born Filipino American men to native-born non-Hispanic white men to measure the extent of racial discrimination faced by Filipino men.

3. General Characteristics of Native Born Filipinos

This study examines native-born Filipino Americans as opposed to foreign-born Filipino Americans. There are significant differences between native-born and foreign-born Filipino Americans who work full time. The native born are the children of earlier Filipino immigrants who worked on sugar plantations in Hawaii, in the fisheries of the Northwest and Alaska, and were migrant farm laborers and domestic servants in California. Thus they are more likely to live in Hawaii, and on the West coast. They are younger, more single, and more rural. The foreign

born Filipino Americans mostly arrived after 1965. They are predominantly female, middle class and professional and technical workers. The foreign born are more educated than the native born, though they earn about the same amount.

We begin by comparing the labor market experience of native-born Filipina women who work full-time with the labor market experience of native-born non-Hispanic white women and men who work full-time. Compared to non-Hispanic white women, Filipina women are more likely to live in California and Hawaii. They are more educated on average than white women, and earn more. They are younger, more likely to be single, and significantly more urban. See Tables 1 and 2.

Native-born Filipina women are disproportionately in occupations like administrative support (clerks)[3], services (maids), sales (cashiers) and management (food serving and lodging establishments) relative to non-Hispanic white women. They are under-represented in professional specialty occupations (elementary school teachers), and machine operators, assemblers and inspectors (assemblers). See Table 3.

Filipina women are disproportionately in industries like personal services (hotels and motels), public administration (national security & international affairs), and retail trade (drug stores). They are under-represented in the professional and related services (elementary and secondary schools), non-durables manufacturing (textiles), and durables manufacturing (machinery, motor vehicles). See Table 4.

When we compare native-born Filipina women to native-born non-Hispanic white men, we find that Filipina women are more likely to live in California and Hawaii. They are more educated on average than white men, though they are less likely to have a graduate degree and

---

[2] The minimum wage in 1989 was $3.35 an hour.
[3] Specific 3-digit categories are in parentheses.

earn significantly less. They are younger, more likely to be single, and significantly more urban. See Tables 1 and 2.

Native-born Filipina women are disproportionately in occupations like administrative support (general office clerks) and service (nursing aides, orderlies and attendants) relative to non-Hispanic white men. They are under-represented in precision production, craft, and repair (supervisors, precision occupations) and transportation (truck drivers). See Table 3.

Filipina women are disproportionately in industries like professional and related services (hospitals), finance, insurance and real estate (banking, insurance), and retail trade (eating and drinking places). They are under-represented in durables manufacturing (motor vehicles and motor vehicle equipment) and construction. See Table 4.

We then compare the labor market experience of native born Filipino American men who work full time to the labor market experience of native born non-Hispanic white men who work full time. The native born Filipino American men are much more likely to live in California and Hawaii. Though they are more likely to have a high school degree, they are less likely to have a bachelor's degree or a graduate degree. They are younger, more single, more urban, and earn less than non-Hispanic white men. See Tables 1 and 2.

Native-born Filipino men are disproportionately in occupations like service (cooks), administrative support (clerks), protective service (guards, firemen), and technical support (health technicians, electronic technicians) relative to non-Hispanic white men. They are under-represented in sales (supervisors and proprietors), professional specialty occupations (elementary and secondary school teachers), machine operators, assemblers and inspectors (assemblers), and management (managers and administrators). See Table 3.

Across industries, native-born Filipino men are disproportionately in industries like public administration (national security, general government, justice, public order & safety), personal services (hotels and motels), transportation (air transportation), retail trade (eating and drinking places), and the military. Filipino men are under-represented in durables manufacturing (machinery, motor vehicles), non-durables manufacturing (petroleum, plastics, paper), and professional services (elementary and secondary schools). See Table 4.

4. Current Labor Market Discrimination

We proceed to explore the issue of current labor market discrimination and native-born Filipino/a Americans. Current labor market discrimination exists when workers who have identical productive characteristics are treated differently because of their race or gender. The two prominent forms of current labor market discrimination are wage discrimination and occupational discrimination. Wage discrimination occurs when two equally skilled groups of workers doing exactly the same job under the same working conditions are paid different wages. Occupational discrimination occurs when two equally skilled groups of workers are given different access to certain higher-paying occupations.

Using census data, we can estimate the degree to which Filipino Americans suffer from current labor market discrimination as narrowly defined above. We are not attempting to estimate the effect of all the labor market discrimination faced by Filipino Americans. More specifically, by taking their productive characteristics as given, we are ignoring the effect of pre-market discrimination and past labor market discrimination. Pre-market discrimination refers to different treatment of young Filipino Americans before they enter the labor force. For example, they may have had unequal access to quality education. Past labor market discrimination might

refer to earlier wage discrimination faced by the parents of these Filipino Americans currently in the labor force. Thus both pre-market discrimination and past labor market discrimination are likely to have affected the nature, quality and amount of education obtained by Filipino Americans currently in the labor force and consequently affect their current earnings. We are not trying to measure the differences in earnings due to discrimination from these and other sources.

Wage Discrimination

We first explore the issue of wage discrimination. You can see from Table 5 that Filipina women earn slightly more on average than white women. Nevertheless, it is still possible that they are earning less than comparable white women because Filipina women are, on average, more educated. Both white women and Filipina women earn significantly less than white men. We will estimate the extent to which Filipina women experience gender discrimination and racial discrimination. Table 5 also shows that Filipino American men earn less than non-Hispanic white men, both annually and by the hour. Filipino American men may have lower average earnings than non-Hispanic white American men because of discrimination and/or because of differences in average levels of productive characteristics.

The methodology we use, the Oaxaca decomposition, is the standard tool of economists investigating race and gender discrimination. We begin by examining data on human capital and other characteristics that are theoretically relevant to the determination of wages. These include age, education, experience, hours worked, weeks worked, region of residence, industry, occupation, and marital status for both Filipino Americans and non-Hispanic white Americans. We then empirically estimate how each of these characteristics contribute to the earnings of non-Hispanic white Americans. Having measured the levels of the productive characteristics typically

possessed by Filipino Americans, and having estimated how these characteristics contribute to the earnings of non-Hispanic white Americans, we can estimate how much Filipino Americans would be earning if they were treated in the labor market like non-Hispanic white Americans. The difference between their predicted earnings if treated like white Americans and their actual earnings as Filipino Americans is our measure of current labor market discrimination[4].

More specifically, we estimate ordinary least squares regressions that relate the earnings of Filipino Americans and white Americans to a wide array of socioeconomic and skill characteristics. In its simplest form, the earnings functions for each of the two groups could be written as a function of a variable X which might represent the years of education. See Jacob Mincer (1974). We would have a Filipino earnings equation,

$$w_F = \alpha_F + \beta_F X_F$$

and a non-Hispanic white earnings equation,

$$w_W = \alpha_W + \beta_W X_W$$

One of the properties of least squares regression is that the regression line goes through the mean of all the variables so that

$$\overline{w}_F = \alpha_F + \beta_F \overline{X}_F$$

and

$$\overline{w}_W = \alpha_W + \beta_W \overline{X}_W$$

where the bar above the variable indicates the average value of the variable.

The difference between the average wage of white Americans and the average wage of Filipino Americans can be written as:

---

[4] We are assuming that the wage offer function in a non-discriminatory world would be the same as the non-Hispanic white wage offer function. This seems reasonable because the number of native-born non-Hispanic whites in the labor force outnumber native-born Filipinos by 200 to 1.

$$\Delta \overline{w} = \overline{w}_W - \overline{w}_F = (\alpha_W + \beta_W \overline{X}_W) - (\alpha_F + \beta_F \overline{X}_F)$$
$$= \alpha_W - \alpha_F + \beta_W \overline{X}_W - \beta_F \overline{X}_F$$
$$= \alpha_W - \alpha_F + \beta_W \overline{X}_W - \beta_F \overline{X}_F + \beta_W \overline{X}_F - \beta_W \overline{X}_F$$
$$= (\alpha_W - \alpha_F) - \beta_F \overline{X}_F + \beta_W \overline{X}_F + \beta_W \overline{X}_W - \beta_W \overline{X}_F$$
$$= (\alpha_W - \alpha_F) + (\beta_W - \beta_F)\overline{X}_F + \beta_W (\overline{X}_W - \overline{X}_F)$$

The last term, $\beta_W (\overline{X}_W - \overline{X}_F)$, represents the portion of the wage differential which is due to differences in skills. The first two terms represent the portion of the wage differential due to discrimination. Lets call this *d*:

$$d = (\alpha_W - \alpha_F) + (\beta_W - \beta_F)\overline{X}_F$$

This measure tells us the difference between how much Filipino Americans are actually paid and how much Filipino Americans would be paid if they were treated like white Americans. Both of these terms can be positive or negative. The actual wage regressions included multiple variables to capture the effect of all the factors which might affect productivity. See Ronald Oaxaca (1973) for details.

For estimating the wage functions, the sample was restricted to people working full-time (35 hours or more) for more than half of the year. These samples contain about 70% of the men, but only 46% of the women, in the dataset. If the decision to work full-time is not random with respect to the stochastic error in the wage equation, ordinary least squares regression will give us biased estimates of the wage function coefficients. Since this is likely to be a problem with the female wage equations, the James Heckman (1979) selectivity bias correction is used on the female wage equations. A probit equation is estimated to model whether or not the individual is in the sample, and the inverse Mills ratio is included in the wage equation. When we control for selectivity bias, the average wage differential can be decomposed into a portion due to differences in average selectivity bias, a portion due to differences in average skills, and a

portion due to discrimination. The differences in average selectivity bias may be decomposed further, a part of which may be interpreted as due to discrimination. See Shoshana Neuman and Ronald Oaxaca (1998) for a discussion of various interpretations of the differences in average selectivity bias. Since the appropriate interpretation is unclear, we will not try to interpret the selectivity bias in this paper.

One set of estimated earnings regressions appears on Table 6. The dependent variable in these regressions was the log of annual wages and salaries. All the coefficient estimates are of the expected sign. People who work more weeks and longer hours earn more. There are positive returns to education and experience. There are positive returns to being married, though the effect is much larger for men than for women. There is a wage penalty for being disabled, having language difficulty, and living in a rural area. While men earn more when they have children at home, women earn less. These regressions were run with controls for region of residence. These regressions were also run with, and without, controls for industry and occupation. All the coefficient estimates were of the expected sign, and most were statistically significant at the 5% level. Similar regressions were run with the log of hourly wages as the dependent variable.

Using our wage regression estimates, we calculated estimates of the amount of current labor market wage discrimination faced by Filipino Americans. The estimates appear on Table 7. We find that Filipina women earn a significantly higher hourly wage than white women when you do not control for industry and occupation. But in all the other specifications, there was no statistically significant difference with respect to white women[5]. However, Filipina women earn significantly less than comparable white men. They earn 9-26% less without controls for industry and occupation, and 20-24% less with controls for industry and occupation. All these estimates

---

[5] The female regression estimates are much less precise than the male regression estimates because of the sample selection issue.

were statistically significant at the 5% level. We find that Filipino American men earn 1-5% less than comparable non-Hispanic white men when you do not control for industry and occupation. We find that they earn 1-4% less when you include control for industry and occupation. Only the estimated gap for annual wage and salary were significant at the 5% level.

One partial explanation for the gap between Filipina women and white men may lie in our measure of labor market experience. We define experience as age minus years of education minus 6. We assume that the people in our sample enter the labor force when they finish their education and stay there. But since women have labor force participation rates around 60%, and men have labor force participation rates around 76%, we may be overestimating the amount of labor market experience women have relative to the men. Alternatively, we could assume that all men are in the labor force 76% of the time, and that all women are in the labor force 60% of the time. Then in an average year, the typical working man would get 21%[6] more labor market experience than the typical working woman. Thus we reduced all the experience measures for the women by 21%, and re-estimated the wage gaps. Doing so reduces all the wage gap estimates by approximately five percentage points. Thus rather than earning 20-24% less with industry and occupation controls, Filipina women earn 15-19% less than comparable white men with the experience adjustments. These differences are still statistically significant at the 5% level.

Unfortunately, using this methodology, we are unable to distinguish between racial discrimination and gender discrimination. As an illustration, suppose that after controlling for productivity, white men earn $100, Filipino men earn $95, white women earn $75, and Filipina women earn $75. One possibility is that there is a uniform race effect of $10 for being Filipino, a gender effect of $25 for white women, and a gender effect of $20 for Filipina women. Another possibility is that there is a uniform gender effect of $25 for being a woman, a race effect of $5

for Filipino men, and a race effect of $0 for Filipina women. A third possibility is that there is a uniform race effect of $10 for being Filipino, a uniform gender effect of $25 for being a woman, and an interaction effect of -$10 for being a Filipina woman. We are unable to distinguish between these, and an infinite number of other possible scenarios, with our methodology. See Barbara Reskin and Camille Charles (1999).

Furthermore, the validity of our measure of discrimination depends largely on whether or not we have controlled for all the dimensions in which the skills of the two groups differ. If there are some skill characteristics that affect earnings but were left out of the regression model, we would have an incorrect measure of current labor market discrimination. The actual amount of current labor market discrimination could be higher or lower.

Wage Discrimination by Region

We next examined relative earnings by region of residence. We wanted to find out if Filipino Americans faced more discrimination in certain parts of the country than in others. The relative size of the Filipino American population varies significantly as you go east from Hawaii to New England. One might expect the amount of discrimination they face to be related to the size of the local population of Filipinos. Thus we estimated separate wage regressions for non-Hispanic white Americans in each of six different regions. We then estimated how much the average Filipino in each region should be expected to earn given their average characteristics if they were treated like white Americans. The difference between these predicted earnings and their actual earnings is our measure of wage discrimination.

The results of this analysis are presented on Table 8. From the point estimates, Filipina women do the best in the West (not CA or HI) where they enjoy a wage premium, but appear to

---

[6] 21% = 1 – (60/76).

do the worst in the South where they suffer a significant wage penalty. Filipino men also seem to do the best in the West but do the worst in the Northeast, California, and Hawaii. Thus there does not appear to be a strong relationship between the amount of discrimination faced by Filipina women in a region and the amount of discrimination faced by Filipino men in the same region. Furthermore, since the native born Filipino American population is most significant in Hawaii, then California, then the West, then the South, then the Northeast, and then the Midwest, there does not appear to be any clear relationship between discrimination and population size.

Wage Discrimination by Educational Level

The effect of labor market discrimination on the earnings of Filipinos may vary according to the level of education. If Filipinos are denied advancement into high-level positions, educated Filipinos may suffer more, in terms of earnings not commensurate with their education and experience, than persons with less schooling. On the other hand, if anti-Filipino discrimination is present in unions and in blue-collar settings, then the earnings of less educated Filipinos may be more adversely affected by labor market discrimination than is true for more highly educated Filipinos. Or Filipinos might face labor market discrimination across the board.

To explore the possibility of a discrimination effect that varies according to educational level, the earnings of Filipinos and non-Hispanic white Americans were evaluated at different levels of education. We ran wage regressions for non-Hispanic white Americans with less than a high school degree, non-Hispanic white Americans with a high school degree or an associate's degree, and non-Hispanic white Americans with a bachelor's degree or more. We then compared what Filipino Americans with different levels of education were actually earnings with what we

would expect them to be earning if they were treated like non-Hispanic white Americans with similar levels of education. The results are presented on Table 9.

Filipina women appear to face less discrimination with increasing amounts of education. If Filipina women are being perceived as being more passive than white women, they may do better when they have credentials which work to establish their skill and initiative level. However, only the discrimination for Filipina women relative to white men with either a high school degree or an associate's degree was statistically significant. For Filipino men, it appears that they face the most discrimination at the top, some at the bottom, and the least in the middle. The differences at the top and the bottom were statistically significant. If "masculinity" counts the most at the bottom and the top of the male labor market, and Filipino men are perceived as being less masculine than white men, it might explain this pattern of discrimination. The highly educated Filipino men live disproportionately in California, and the poorly educated Filipino men live disproportionately in Hawaii.

Occupational Discrimination – Glass Ceiling

In addition to being paid less for doing the same work, Filipino Americans may be less likely to be promoted on the job. Filipino Americans may be denied equal access to the higher rungs of the corporate ladder. To the extent that such discrimination exists, Filipino Americans may be excluded from spheres of power and influence along with the associated money earnings.

We first estimated probit models[7] to explain the factors which affect the probability of someone becoming a manager. We included variables for the level of education, for years of experience, disability status, marital status, rural area, number of kids, and whether or not the person was Filipino. For the Filipina women and white women, we estimated a probit model

with sample selection[8]. The probit results are presented on Table 10. All the coefficients were generally of the expected sign and statistically significant. You are more likely to be a manager if you are more educated, have more experience, are not disabled, are married, and live in an urban area. Having more kids decreases the probability that a woman will be a manager. Being Filipino also decreases the probability of being a manager. Being a Filipina woman decreases the probability of being a manager from 14.5% to 12.1%[9] relative to a white woman with the same characteristics. Being a Filipino man decreases the probability of being a manager by 2.6% percentage points, decreasing the overall probability of being a manager by about 23%, relative to white men.

We also estimated probit models to measure the effect of being Filipino on the probability of being a supervisor. You are most likely to be a supervisor if you have an associate's degree, and very educated individuals are less likely to be a supervisor. See Table 10 for the coefficient estimates. People with more experience, without a disability, who are married, and live in urban areas are more likely to be supervisors. Being a Filipina woman decreases the probability of being a supervisor from 7.2% to 3.9% relative to white man with the same characteristics. Being a Filipino man decreases the probability of being a supervisor by 1.7% percentage points making him about 20% less likely to be a supervisor relative to white men.

Thus we find evidence that Filipino Americans are less likely to be promoted to manager and supervisor then non-Hispanic whites. Filipina women are less likely to be promoted to manager than white women, and are less likely to be promoted to supervisor than white men. Filipino men are less likely to be promoted to both manager and supervisor than white men.

---

[7] Logit models were also estimated. The results were almost identical, so only the probit results are presented.
[8] See Wynand Van de Ven and Bernard Van Pragg (1981).
[9] These percentages are evaluated from the probit coefficient estimates and the mean values of all the variables for Filipinos using a table for the cumulative normal distribution.

Unfortunately the census data are flawed in three respects in dealing with the issue of being a manager. One problem is that the category "manager" includes a diverse range of occupational positions from high corporate positions to managers of small retail stores. The census data do not permit distinguishing high-status management positions from other types of management positions. Second, it is possible that individuals are in non-managerial or non-supervisory jobs because they prefer non-managerial and non-supervisory jobs. It is impossible to tell if this is the result of personal choice or discrimination. And third, the census does not distinguish between a person's job responsibilities and the nature of the work.

5. Conclusion

Overall we find that Filipino Americans face significant discrimination in the labor market. But the amount of discrimination faced by Filipino Americans depends on combinations of gender, region of residence, and level of education. Filipino men suffer the most wage discrimination in California and Hawaii. Filipina women face the most wage discrimination in the South and Midwest. At the same time, Filipina women seem to enjoy a wage premium in the West relative to white Americans, and in California relative to white women. The best educated and the least educated Filipino men face wage discrimination, while the amount of discrimination seems to decrease with education for Filipina women. And Filipino Americans face a glass ceiling. Both Filipino men and Filipina women are less likely to be promoted to manager or supervisor than comparable white Americans.

Table 1
Summary Statistics by Group
Native Born

1989	Filipino Men	White Men	Filipina Women	White Women
Income	$29,364	$33,814	$22,298	$21,475
	(16,234)	(24,547)	(11,486)	(13,631)
Education	13.63	13.61	13.73	13.67
	(2.20)	(2.63)	(2.23)	(2.37)
High School%	91.1	87.8	91.7	90.9
Bachelor's Degree%	22.3	27.9	26.4	26.2
Graduate Degree%	5.1	9.9	5.4	9.2
Age	36.8	40.4	37.5	40.2
	(9.88)	(10.32)	(10.29)	(10.26)
Experience	17.2	20.8	17.8	20.5
	(10.39)	(10.81)	(11.15)	(10.85)
Married%	60.0	74.3	59.8	62.4
Manager%	13.70	15.72	17.2	15.6
Professional%	10.46	12.92	13.8	19.4
Hours	43.5	45.2	41.6	41.8
	(8.34)	(8.71)	(6.91)	(6.69)
Weeks	50.1	50.09	49.8	49.2
	(4.75)	(5.02)	(5.05)	(5.89)
Rural%	17.6	41.7	18.6	39.9
NOB	1,635	334,259	1,307	227,918

Standard deviation is in parentheses.
NOB is number of observations.

Table 2
Regional Distribution
Percent of Native Born Population

1989	Filipino Men	White Men	Filipina Women	White Women
Northeast	3.43	22.25	5.51	21.90
Midwest	3.55	27.21	3.90	26.16
South	8.01	32.46	7.19	34.52
West (except CA & HI)	7.52	9.21	6.73	8.68
California	42.45	8.67	42.69	8.58
Hawaii	35.05	0.20	33.97	0.16

Table 3
Occupational Distribution
Percent of Native Born Population

1989	Filipino Men	White Men	Filipina Women	White Women
Management	13.70	15.72	17.21	15.64
Professional	10.46	12.92	13.77	19.43
Technical Support	5.57	4.33	4.59	4.21
Sales	6.97	10.19	10.94	8.93
Administrative Support	11.19	6.42	34.20	30.20
Private Service	0.06	0.01	0.23	0.24
Protective Service	4.65	3.15	0.38	0.57
Service	8.20	3.71	9.79	8.39
Farm	2.08	1.64	0.77	0.40
Precision	20.55	21.29	3.06	2.65
Machine Operator	5.14	8.19	3.21	6.94
Transportation	10.83	11.96	1.68	2.36
Military	0.61	0.46	0.15	0.04

Table 4
Industry Distribution
Percent of Native Born Population

1989	Filipino Men	White Men	Filipina Women	White Women
Agriculture	2.51	1.83	1.22	0.82
Mining	0.43	1.54	0.00	0.32
Construction	8.62	9.96	1.38	1.48
Nondurables Man	5.57	8.84	4.36	7.99
Durables Man	10.52	18.29	6.58	9.25
Transport	9.05	6.54	3.98	2.64
Communication	2.32	1.80	2.30	1.82
Utilities	2.32	2.64	1.45	0.87
Wholesale	5.75	6.12	4.82	3.38
Retail	11.87	10.13	14.92	12.71
Finance, Insurance, Real Estate	4.53	4.93	11.25	10.69
Business Services	5.08	4.17	3.60	3.01
Personal Services	4.95	1.04	5.51	2.32
Entertainment	1.22	1.01	1.61	0.89
Professional	10.34	12.79	27.08	35.87
Public Administration	11.25	6.57	9.33	5.70
Military	3.67	1.80	0.61	0.24

Table 5
Annual and Hourly Wage and Salary of Native Born

1989	Filipino Men	White Men	Filipina Women	White Women
Annual Wage & Salary	$29,364	$33,814	$22,298	$21,475
Relative to White men	0.87	1.00	0.66	0.64
Relative to White women	1.37	1.57	1.04	1.00
Hourly Wage	$13.63	$15.04	$10.88	$10.52
Relative to White men	0.91	1.00	0.72	0.70
Relative to White women	1.30	1.43	1.03	1.00

Table 6
Determinants of Annual Wage and Salary

1989	Filipino Men	White Men	Filipina Women	White Women
Constant	7.917*	7.892*	8.323*	7.991*
	(0.226)	(0.018)	(0.691)	(0.062)
Weeks	0.023*	0.026*	0.025*	0.025*
	(0.002)	(0.0002)	(0.009)	(0.0007)
Hours	0.009*	0.008*	0.0038	0.008*
	(0.001)	(0.0001)	(0.0039)	(0.0005)
Education	-0.024	-0.028*	-0.068	-0.039*
	(0.022)	(0.004)	(0.046)	(0.004)
Education2	0.003*	0.004*	0.005*	0.004*
	(0.001)	(0.0001)	(0.002)	(0.0001)
Experience	0.037*	0.034*	0.026*	0.018*
	(0.004)	(0.0003)	(0.005)	(0.0005)
Experience2	-0.001*	-0.0005*	-0.0004*	-0.0002*
	(0.0001)	(0.00001)	(0.0001)	(0.00001)
Disability	-0.127*	-0.143*	-0.115	-0.076*
	(0.077)	(0.004)	(0.133)	(0.010)
Marital	0.119*	0.154*	0.030	0.021*
	(0.025)	(0.002)	(0.029)	(0.003)
Rural	-0.0046	-0.123*	-0.055	-0.137*
	(0.030)	(0.002)	(0.041)	(0.002)
Kids	0.004	0.013*	-0.029*	-0.030*
	(0.010)	(0.008)	(0.010)	(0.001)
Public	0.044	-0.061*	0.012	0.056*
	(0.036)	(0.003)	(0.042)	(0.004)
Mills			-0.051	-0.048*
			(0.204)	(0.011)
$\overline{R}^2$	0.37	0.41	0.34	0.42
NOB	1,635	334,259	1,307	227,918
			(1,803)	(372,542)

Standard errors are in parentheses.
* indicates significance at the 5% level.
There were also controls for class of worker and region of residence. Kids is the number of children at home for the male regressions, the number of children ever born for female regressions. Mills is the inverse of the Mills ratio. NOB is the number of uncensored observations. Total observations appear in parentheses.

Table 7
Expected Earnings of Filipino Americans

1989	Filipino Men/ White Men		Filipina Women/ White Women		Filipina Women/ White Men	
	A	B	A	B	A	B
Actual Annual Wage	$25,794	$25,794	$19,933	$19,674	$19,933	$19,674
Predicted Annual Wage	$27,006	$26,737	$20,369	$20,269	$26,855	$25,801
Relative Wage	0.95*	0.96*	0.98	0.97	0.74*	0.76*
Actual Hourly Wage	$12.14	$12.14	$11.29	$9.77	$11.29	$9.77
Predicted Hourly Wage	$12.26	$12.23	$9.82	$9.78	$12.45	$12.15
Relative Wage	0.99	0.99	1.15*	1.00	0.91*	0.80*

A: without industry and occupation controls
B: with industry and occupation controls
* indicates statistical significance at the 5% level
region controls were included in the regressions
the dollar figures are anti-logs of the predicted values

Table 8
Expected Earnings by Region of Residence

		Northeast	South	Midwest	West	California	Hawaii
Filipino Men/	Annual Wage	0.93	0.99	0.98	1.01	0.93*	0.93*
White men	Hourly Wage	0.93	0.98	1.00	1.02	0.95*	0.96
	NOB	56	58	131	123	694	573
Filipina Women/	Annual Wage	1.17	0.87*	0.87	1.33*	1.14*	1.25*
White Women	Hourly Wage	1.12	0.88*	0.85	1.31*	1.10*	1.20
	NOB	72	51	94	88	558	444
		(101)	(76)	(133)	(130)	(750)	(613)
Filipina Women/	Annual Wage	0.94	0.67*	0.66*	1.01	0.89*	0.76*
White Men	Hourly Wage	1.01	0.68*	0.69*	1.16*	0.95*	0.82*
	NOB	72	51	94	88	558	444
		(101)	(76)	(133)	(130)	(750)	(613)

* indicates statistical significance at the 5% level
Industry and occupation controls were included.
NOB is the number of censored observations. The total number of observations appears in parentheses.

Table 9
Expected Earnings by Educational Attainment

		<HS	HS+	BA+
Filipino Men/	Hourly Wage	0.97	0.99	0.92*
White Men	Annual Wage	0.94*	0.97	0.92*
	NOB	145	1125	365
Filipina Women/	Hourly Wage	0.95	0.99	1.09
White Women	Annual Wage	0.91	0.97	1.08
	NOB	108	854	345
		(187)	(1175)	(441)
Filipina Women/	Hourly Wage	0.72	0.78*	0.95
White Men	Annual Wage	0.68	0.74*	0.92
	NOB	108	854	345
		(187)	(1175)	(441)

* indicates statistical significance at the 5% level.
<HS: individuals without a high school diploma
HS+: individuals with a high school diploma or an associate's degree
BA+: individuals with a bachelor's degree or graduate degree
Industry, occupation and region controls were included in the regressions

Table 10
Probability of Being a Manager/Supervisor

Probit	Filipino Men / White Men		Filipina Women / White Women		Filipina Women / White Men	
	Manager	Super	Manager	Super	Manager	Super
Constant	-2.657*	-1.333*	-1.776*	-1.305*	-2.654*	-1.333*
	(0.033)	(0.025)	(0.053)	(0.052)	(0.033)	(0.025)
Filipino/a	-0.117*	-0.115*	-0.112*	-0.062	-0.084	-0.291*
	(0.048)	(0.052)	(0.052)	(0.067)	(0.051)	(0.064)
High School	0.462*	0.217*	0.290*	0.091*	0.464*	0.216*
	(0.013)	(0.010)	(0.017)	(0.016)	(0.013)	(0.010)
Associate	0.674*	0.223*	0.317*	0.038*	0.675*	0.223*
	(0.016)	(0.015)	(0.021)	(0.024)	(0.016)	(0.015)
BA	1.097*	0.149*	0.506*	0.016	1.099*	0.149*
	(0.014)	(0.013)	(0.020)	(0.022)	(0.014)	(0.013)
MA	1.313*	-0.097*	0.568*	-0.184*	1.314*	-0.096*
	(0.016)	(0.019)	(0.023)	(0.033)	(0.016)	(0.019)
Professional	0.598*	-0.300*	0.051	-0.337*	0.598*	-0.301*
	(0.026)	(0.040)	(0.042)	(0.073)	(0.026)	(0.040)
PhD	1.031*	-0.398*	0.700*	-0.674*	1.033*	-0.399*
	(0.026)	(0.054)	(0.046)	(0.161)	(0.026)	(0.055)
Exp	0.037*	0.020*	0.022*	0.011*	0.037*	0.020*
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)
Exp2	-0.0006*	-0.0003*	-0.0004*	-0.0002*	-0.0006*	-0.0003*
	(0.00002)	(0.00003)	(0.00003)	(0.00004)	(0.00002)	(0.00003)
Disability	-0.109*	-0.101*	-0.056*	-0.082*	-0.109*	-0.100*
	(0.015)	(0.015)	(0.027)	(0.033)	(0.015)	(0.015)
Marital	0.187*	0.184*	0.087*	0.084*	0.187*	0.182*
	(0.008)	(0.008)	(0.010)	(0.013)	(0.008)	(0.008)
Rural	-0.161*	-0.019*	-0.144*	-0.053*	-0.161*	-0.019*
	(0.006)	(0.006)	(0.008)	(0.010)	(0.006)	(0.007)
Kids	-0.002	0.005	-0.018*	-0.009*	-0.002	0.006
	(0.003)	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)
Pseudo R^2	0.088	0.085	◙	◙	0.088	0.075
NOB	335,894	335,894	229,225	229,225	335,566	335,566
			(374,345)	(374,345)		

Standard errors are in parentheses

* indicates statistical significance at the 5% level.

Industry and regional controls were included, but are not reported.

manager: 3-digit occupations codes 003-022

supervisor: 3-digit occupation codes 243, 303-307, 413-415, 433, 448, 456, 475, 476, 477, 485, 494, 497, 503, 553-558, 613, 628, 803, and 843

Education variables are dummy variables representing the individual's highest educational degree.

◙ Stata does not report a pseudo R^2 in their maximum likelihood probit estimation with sample selection.

References

Bautista, Veltisezar. 1998. *The Filipino Americans From 1763 to the Present.* Warren: Bookhaus Publishers.

Cabezas, Amado, Larry Shinagawa and Gary Kawaguchi. 1987. "New Inquiries into the Socioeconomic Status of Pilipino Americans in California." *Amerasia Journal* 13(1): 1-21.

Espiritu, Yen Le. 1995. *Filipino American Lives.* Philadelphia: Temple University Press.

Fujii, Edwin and Mak, James. 1985. "On the Relative Economic Progress of U.S. Born Filipino Men." *Economic Development and Cultural Change* 33(3): 557-73.

Heckman, James. 1979. "Sample selection bias as a Specification Error." *Econometrica* 47(1): 153-61.

Kim, Hyung-Chan and Mejia, Cynthia (eds.). 1976. *The Filipinos in America, 1898-1974: A Chronology and Fact Book.* Dobbs Ferry: Oceana Publication.

Mar, Don. 2000. "Four Decades of Asian American Women's Earnings: Japanese, Chinese, and Filipino American Women's Earnings 1960-1990." *Contemporary Economic Policy* 18(2): 228-37.

Mar, Don. 1999. "Regional Differences in Asian American Earnings Discrimination." *Amerasia Journal* 25(2): 67-93.

Mincer, Jacob. 1974. *Schooling, Experience, and Earnings.* Cambridge: NBER.

Munoz, Alfredo. 1971. *The Filipinos in America.* Mountainview Publishers.

Neuman, Shoshana and Oaxaca, Ronald. 1998. "Estimating Labour Market Discrimination with Selectivity Corrected Wage Equations: Methodological Considerations and an Illustration from Israel." Centre for Economic Policy Research, Discussion Paper #1915.

Oaxaca, Ronald. 1973. "Male-Female Wage Differentials in Urban Labor Markets." *International Economic Review* 14(3): 693-709.

Oaxaca, Ronald, and Ransom, Michael. 1994. "On Discrimination and the Decomposition of Wage Differentials." *Journal of Econometrics* 61(1): 5-21.

Posadas, Barbara. 1999. *The Filipino Americans.* Westport: Greenwood Press.

Reimers, Cordelia. 1983. "Labor Market Discrimination Against Hispanic and Black Men." *The Review of Economics and Statistics* 65(4): 570-79.

Reskin, Barbara F. and Camille Z. Charles. 1999. "Now You See 'Em, Now You Don't: Race, Ethnicity, and Gender in Labor Market Research," in Irene Browne (ed.) *Race, Gender and Economic Inequality: African American and Latina Women in the Labor Market*. Russell Sage Foundation.

Root, Maria. 1997. *Filipino Americans.* Thousand Oaks: Sage Publications.

Van de Ven, Wynand, and Bernard Van Pragg. 1981. "The Demand for Deductibles in Private Health Insurance: A Probit Model with Sample Selection." *Journal of Econometrics* 17(2): 229-252.

U.S. Department of Commerce. 1993. *We, the American Asians.* Bureau of the Census.