Trend of Gender Wage Gap among Asian Americans

Jingyo Suh
Tuskegee University
jinsuh@tuskegee.edu

Abstract

Despite dramatic reductions in the male-female wage gap in the 1980's and 1990's in the U.S., the gender wage gap persists across all race and industry. Asian Americans are generally well-educated and employed in high-tech industries and professional occupations. This paper investigates the determinants and characteristics of changes in the gender wage gap for Asian-Pacific Islanders between 1989 and 2005. The results of this study highlight the development of the gender wage gap in the U.S. since this racial group contributed to skill-based technological industries and professional occupations as well as the globalization of the U.S. economy.

Keywords: wage gap, decomposition, gender, Asian American, labor market

Introduction

The Asian-American population in the United States has been on a steady rise over the past decade. According to the 2000 Census, the total U.S. Asian population rose from 6,908,638 in 1990 to 10,242,998 in 2000, a near 68 % increase. Asians now make up 4.2% of the population of the U.S., compared to 2.8 % in 1990. Census 2000 also reports that 64% of the Asian American population is concentrated in two states - California and New York. Asian Americans also tend to take residence in metropolitan areas over less densely populated cities, and rural areas. While 19% of the total American population lives in non-metropolitan areas, only 4.3% of Asian Americans and Pacific Islanders live in non-metropolitan areas. Within the metropolitan areas, 47.5% of Asian Americans and Pacific Islanders live inside the central city and 48.2% live outside the central city, in the greater surrounding area. This compared to 21.2% and 56.2% respectively for White non-Hispanics. Asian Americans also tend to have more family-households than non-family households when compared to the national average. About 75.1% of Asian Americans have family-households compared to the national average of 68.8% (US Census Bureau, 2000).

When considering full-time workers, Asian and Pacific Islander workers show a similar pattern as the general population. Asian Americans are generally well-educated and employed in high-tech industries and professional occupations. For this reason, they earn 7.7 percent more than other races even though they work fewer hours, have fewer years of job experience, and lower rates of union membership. This effect becomes even greater when only Asians are considered. Asian only workers earn 11.2 percent more than other races. Asian only workers have one more year of education than other races and report 70.6 percent professional employment (US Census Bureau, 2000).

Though they earn the most, the gender wage gap between males and females among Asian and Pacific Islanders is relatively small. Female Asian-Pacific Islanders made 78.4 percent of what men made in 1989. The ratio of women wage to men's became 79.1 percent in 2005 (US Census Bureau, 2000). This research investigates the determinants and characteristics of changes in the gender wage gap between men and women among Asian and Pacific Islander workers between 1989 and 2005. The results of this study highlight the development of the gender wage gap in U.S. since this racial group contributed to skill-based technological industries and professional occupations as well as the globalization of the U.S. economy.

Data

Data used in this study are two years of the March Current Population Survey (CPS), 1989 and 2005. The samples used in this study include only full-time employees who worked more than 35 hours per week and made above the minimum wage. The wage is measured as average earnings per week. The natural logarithm of the weekly wages is used as the dependent variable. The term "Asian" refers to people having origins in the Far East, Southeast Asia, or

the Indian subcontinent. Asian, however, does not include the combination of Asian and other race categories in this report. Pacific Islanders include Native Hawaiians and Other Pacific Islanders. In the 1989 CPS survey, there were five separate response categories for race, and Asian and Pacific Islanders are grouped in the same category. However, since the Census 2000 survey, data on race are extended to 15 separate response categories and are not directly comparable with the data from earlier surveys. In order to maintain consistency on race the 1989 classification on race is applied to the 2005 CPS data. The number of Asian and Pacific Islanders included in the analysis is 251 for the 1989 data and 435 for the 2005 data.

There are twelve independent variables considered for predictors of the gender wage gap, of which four variables are quantitative and eight are categorical variables. Four quantitative variables include the years of Education (Education), hours worked per week (Hours), potential work experience (Experience), and quadratic terms in the experience variable (EXP2). Education and hours worked are the original values from the survey and potential experience is computed as age minus six minus the years of education because the actual experience was not included in the survey. For example, an employee at age 30 with a college degree is considered to have 8 years of potential experience if the individual was not unemployed after college graduation. The quadratic term in the experience variable is to reflect the decreasing wage rate beyond the peak of the career. Qualitative variables are binary with 0 for no and 1 for yes to the question. GENDER denotes men if 0 and 1 if women. MSA indicates whether or not the individual lives in a metropolitan area. MARRIED indicates marital status with the value 1 if married and 0 if not married. REGION denotes Northeast or West if 1 and South or Midwest if 0. IND indicates whether or not the individual involved in the service or technology-related industries. OOC is 1 if the individual has a professional-related occupation and 0 if not. UNION is 1 if the employee is a union member and 0 if not a union member. PUBLIC denotes 1 if the employer is a public sector and 0 if not.

Characteristics Of Asian American Workers

Data show that Asian American workers earn the most among all race groups. Average Asians earn $899.5 per week in 2005, which is about 11.2 percent more than other races. This average wage per week is compared to $828.3 for White and $670.2 for Black. The relative wage for different race groups compared to Asians. An average White employee makes 92.1 percent of what the average Asian makes. The rate for other races of color, Black and American Indian, is far worse – 74.5 percent for blacks and only a 72.6 percent for American Indians. The wage gap among different races is mainly due to education attainment and job characteristics.

Asian Americans and Pacific Islanders are unique in many aspects. They earn 7.6 percent more than other races even though they work fewer hours, have fewer years of job experience, and lower rate of union membership. Table 1 shows the difference in labor characteristics between Asian and Pacific Islanders

and Non-Asian Pacific Islanders. The most notable difference occurred in OCC, MSA, REGION, EDU, and EXPERIENCE. Asian Americans and Pacific Islanders lead the rest of the population in educational qualification. On average, Asian and Pacific Islanders have nearly one more year of education. 48.5% of Asians in the U.S. have a Bachelors Degree or more, compared to 31.8% for the national average, 32.3% for White non-Hispanics and just 23.6% for others. And over 94.3% of Asian Americans have a high school level degree compared to 91.9% for other race. Longer years of education seem to have reflected in better jobs for Asian Americans and Pacific Islanders. 70.1% of them are employed in managerial and professional occupations while it is 58.9% for other race.

Table 1.Comparison Asian-Pacific Islanders with Non-Asian Pacific Islanders

	Non-Asian Pacific Islanders	Asian & Pacific Islanders	Asian only
Wage	$809.0	$870.3	$899.5
IND (%)	62.4	66.0	64.6
OCC (%)	58.9	70.1	70.6
MSA (%)	78.9	94.9	95.8
REGION (%)	42.2	68.3	65.9
EDU	13.6	14.4	14.6
MARRIED (%)	59.6	62.1	63.3
HOURS	42.3	41.7	41.8
UNION (%)	14.5	13.8	14.3
EXPERIENCE	21.9	20.5	20.9
PUBLIC (%)	7.1	7.8	7.8

Compared with other races, higher percentages of Asian-Pacific Islanders live in metropolitan areas (MSA). Nearly 95 % of Asian Americans and Pacific Islanders live in metropolitan areas compared to 78.9% of other races. A majority of Asian-Pacific Islanders lives in either the Northeast or West region (REGION). Asian-Pacific Islanders tend to be married and working in the public sector, compared with other races. Unique characteristics of Asian become clearer when considering Asians only. Asian only race earns 11.2 percent more than non-Asian Pacific Islanders and attained 1 more year of education. The 1989 CPS data, however, were collected Asian American and Pacific Islanders in the same category; the rest of the analysis follows this classification. 88.3 % of Asian-Pacific Islanders were Asian in 2005.

Gender wage differentials vary across races. American Indians report the highest gender gap with women making only about two-thirds of what their male counterparts make. Black women have the highest wages compared with their male counterparts at nearly 92%. Asian and Pacific Islanders have comparable earnings with Whites with a little higher women/men ratio (Table 2).

Table 2. Mean Wage by Race and Gender

Race	Women	Men	Women/Men
White	729.8	962.0	0.759
Black	661.6	715.9	0.924
American Indian & Eskimo	530.8	833.7	0.637
Asian-Pacific Islanders	772.6	969.1	0.797
Other	570.7	812.6	0.702

Trend Of Gender Wage Gap Among Asian Americans

Estimation of labor market discrimination by gender, age, and race began with the decomposition of the wage gap developed by Blinder (1973) and Oaxaca (1973). A more recent approach to wage decomposition is found in Neumark (1988), Cotton (1988), Blau and Kahn (1994), Jenkins (1994), and Appletone, Hoddinott, and Krishnan (1999). In this research the methods of decomposition applied include those of Blinder (1973), Oaxaca (1973), and Neumark (1988).

Two methods are used in this analysis. The first method is the equivalent of Blinder (1973) and Oaxaca (1973) and the decomposition of change in the wage gap for the 16-year period is expressed as:

$$d(\ln w^m) - d(\ln w^f) = (dX^m - dX^f)\,\beta^m_{05} + (d\beta^m - d\beta^f)X^f_{89} + gX_{89} * d\beta^m + dX^f * g\beta_{05} + du \quad (1)$$

for male as the reference group and

$$d(\ln w^m) - d(\ln w^f) = (dX^m - dX^f)\,\beta^f_{05} + (d\beta^m - d\beta^f)X^m_{89} + gX_{89} * d\beta^f + dX^m * g\beta_{05} + du \quad (2)$$

for female as the reference group, where d indicates changes during the period while g denotes the gender differences. For example, $dX^m = X^m_{05} - X^m_{89}$ and $gX_{05} = X^m_{05} - X^f_{05}$. The first term on the right-hand side of the decomposition denotes the change in the gender wage gap due to changes in the characteristics between male and female. The second term on the right-hand side of the equation expresses the difference in the wage gap due to changes in the coefficient, which is considered as discrimination. The final two terms represent the interaction effect which is the mixture of the gender gap and changes over time. The first of the interaction terms represents changes in the coefficients over time weighted by the gender gap in 1989. When male is used as the reference group, the positive term indicates an increase in the coefficient where males have an advantage. When females are used as the reference group, the negative term indicates a decrease in coefficient where females have a disadvantage. The second interaction term denotes changes in characteristics over time weighted by the gender gap in the coefficient in 2005. A positive value of the term indicates growth in characteristics over time where they were disadvantaged in terms of the payoff.

The second method is the one proposed by Neumark such that

$$d(\ln w^m) - d(\ln w^f) = (dX^m - dX^f)\,\beta_{05} + (d\beta^m - d\beta)X^m_{89} + (d\beta^f - d\beta)X^f_{89} + \text{interaction terms} + du. \quad (3)$$

The interaction terms include six interactions of the gender gap and changes over time and are omitted here because they are not our main concern. The first term records changes in the characteristics weighted by the coefficient from the general wage estimation in 2005. The second and the third terms capture changes over time for the differences between the actual and pooled returns for men and women in 1989, respectively.

Table 3. Gender Wage Gap among Asians and Pacific Islanders in 1989 and 2005

	1989			2005		
	Men	Women	Gender Gap	Men	Women	Gender Gap
ln_WERN	6.210	5.956	0.254	6.667	6.478	0.188
IND	0.436	0.610	-0.174	0.597	0.724	-0.127
OCC	0.489	0.576	-0.088	0.679	0.724	-0.046
MSA	0.759	0.771	-0.012	0.973	0.925	0.048
REGION	0.797	0.780	0.017	0.629	0.738	-0.109
EDU	13.579	13.593	-0.014	14.570	14.262	0.308
MARRIED	0.617	0.669	-0.053	0.643	0.598	0.044
HOURS	42.075	40.907	1.168	42.538	40.850	1.688
EXPERIENCE	18.887	18.271	0.616	19.145	21.860	-2.715
EXP2	5.239	4.661	0.576	5.113	6.240	-1.129

The summary statistics of the independent variables are presented in Table 3. In 1989, the mean log wages for Asian and Pacific Islanders are 5.956 for women and 6.210 for men. The log gender wage gap between women and men is 0.254 or $121.9 per week in 1989. This implies that Asian and Pacific Islander women make 78.7% of the men's average wage. The portion of married people among full-time employees is 66.9% for women and 61.7% for men. The difference in working hours is –1.168 hours, implying that women work one hour less than men. The difference in the potential experience and experience squared is 0.616 year and 57.599 years, respectively. Women, however, reported 0.014 year more in education and are in a better position in the job characteristics, IND and OCC, than men. About 60% of Asian-Pacific Islander women are employed in the highly paid service industry and professional occupations compared to 43.6% and 48.9% for men. Asian-Pacific Islander female workers tend to be married more than Asian-Pacific Islander male workers.

In 2005, women reported a slight improvement in the relative wage and characteristics of human capital. The log wage is 6.478 for women and 6.667 for men. In terms of the nominal wage, it is $767.2 for women and $996.5 for men, thus women made 79.1% of men's average wage. Women continue to hold a better position in pay by holding in the service related industries and professional occupations compared with men. Men, on the other hand, worked longer hours and tend to live in the metropolitan areas. Unlike 1989, gender gap has been

reversed in the categories of education attainment and potential experience. Asian women had fewer years of education and longer years of potential experience in 2005.

Decomposition of the Gender Wage Gap

Table 4 reports changes of the characteristics of job and human capital for men and women during the 16-year period. The weekly log wage for women increased by 0.522 compared to 0.457 for men during the period. This results in narrowing the gender gap between men and women for Asians and Pacific Islanders. A notable improvement for women is made in categories such as the proportion living in the northeast or West, potential experience, and experience squared.

Table 4. Gender Specific Wage Models, 1989 & 2005

	1989				2005			
Independent	Men		Women		Men		Women	
Variables	β	t-value	β	t-value	β	t-value	β	t-value
IND	0.050	0.64	0.180	2.36	-0.107	-1.39	-0.053	-0.76
OCC	0.026	0.32	-0.025	-0.33	0.209	2.30	0.111	1.50
MSA	-0.126	-1.43	0.023	0.27	0.086	0.38	0.058	0.49
REGION	0.319	3.37	0.057	0.67	0.060	0.80	0.119	1.68
EDU	0.083	5.96	0.107	8.85	0.095	6.69	0.091	7.64
MARRIED	0.246	2.54	-0.098	-1.25	0.191	2.28	0.122	1.86
HOURS	0.002	0.32	0.033	3.40	0.001	0.15	0.037	4.56
EXPERIENCE	0.016	2.08	0.045	3.98	0.026	2.38	0.019	1.98
EXP2	-0.024	-1.82	-0.080	-3.12	-0.048	-2.13	-0.044	-2.10
N	133		118		221		214	
Adjusted R^2	0.395		0.531		0.325		0.349	

The proportion living in the Northeast and West decreased by 16.8% for men compared to only a 4.2% decrease for women. Asian and Pacific Islander women improved potential experience by 3.589 years and reversed the gender gap from negative to positive in 2005. The EXP2 term follows the same pattern as the EXPERIENCE term. Women were worse off in 2005 than 1989 in the categories of education, hours worked, industry, and occupation. In 1989, women's longer years of education contributed narrowing the gender wage gap but this effect disappeared in 2005 when men increased education attainment significantly. Men also improved the relative proportion involved in service related industry and in the professional occupations. The combination of better off and worse off for women results in a mild improvement in the gender wage gap for Asian and Pacific Islanders. Changes in the gender wage gap vary greatly across industries, occupations, regions, and cities. Table 4 reports the results of estimated coefficients and standard errors from the general human capital model using the pooled sample of males and females for 1989 and 2005. As expected, most of the human capital and job characteristic variables are significant factors

of wage in both years. Gender is one of the two most significant factors of wage determination in 1989. The negative sign of the coefficient in gender indicates that women receive severely low wages compared with men, implying the possible gender "discrimination" in the labor market.

The notable difference in the wage structure between female and male is industry, region, marital status, and hours worked in 1989. Occupation and MSA were insignificant for both men and women. For men, region, marital status, and education were dominant factors of wage. Asian and Pacific men lived in either Northeast or West were expected to make about 32% more than men lived in either South or Midwest. Similar analogy is possible for marital status with about 25% more for married men than single men. However, Asian and Pacific women had different wage structures making IND a leading factor of wage determination followed by EDU and EXPERIENCE. For both men and women, one more year of education results in about 10% increase in wage. The explained portion of the total wage difference measured by the adjusted R^2 is about 0.40 for men and 0.53 for women.

In 2005, the largest gender gap occurred in occupation and marital status. Unlike 1989, occupation became a dominant factor for men in 2005. Though large in the coefficient, occupation is not significant for women. Marital status is significant both men and women and the rate of return is much larger for men (β= 0.191) than women (β= 0.122). Education continued to play an important role in wages. One more year of educational attainment results in about 10% increase in wage in both models. Experience and its squared term are significant for both men and women. One more year of experience results in 2.6% and 1.9% increase in wages for men and women, respectively. Hours worked is significant for women, but not significant for men.

Using the estimated wage function reported in Table 4, we decompose the gender wage gap according to the Blinder-Oaxaca decomposition method in Table 5 for the year 1989 and Table 10 for the year 2005. The human and job characteristic factors explain a relatively small portion of the entire change in both years. When male-weighted values are considered, factors attributed to increase the gender gap are experience, hours worked, and region. On the other hand, marital status, industry, and experience-squared terms are attributed to lowering the gender gap in 1989. When the female-weighted values are considered, the coefficients of factors are quite different even though the sign and order of significance remained the same as when the male-weighted value is considered. As mentioned earlier, this is due to the index problem. Relatively small number of observation for Asian and Pacific Islanders is another reason for unstable coefficients.

The decomposition of the wage gap in 2005 shows that the gender wage gap has declined both because the gender gap in human and job characteristics has narrowed and because gender discrimination measured by the unexplained portion of the decomposition has fallen.

Table 5. Blinder-Oaxaca Decomposition of the Gender Wage Gap in 1989 and 2005

Independent Variables	Male-weighted Value		Female-weighted Value		Male-weighted Value		Female-weighted Value	
	Explained ($\beta_m X_m - \beta_m X_f$)	% of explained	Explained ($\beta_f X_m - \beta_f X_f$)	% of explained	Explained ($\beta_m X_m - \beta_m X_f$)	% of explained	Explained ($\beta_f X_m - \beta_f X_f$)	% of explained
IND	-0.009	47.4	-0.031	620.0	0.014	56.0	0.007	8.1
OCC	-0.002	10.5	0.002	-40.0	-0.009	-0.4	-0.005	-5.8
MSA	0.002	-10.5	0.000	0.0	0.004	0.2	0.003	3.5
REGION	0.005	-26.3	0.001	-20.0	-0.007	-0.3	-0.013	-15.1
EDU	-0.001	5.3	-0.002	40.0	0.029	1.2	0.028	32.6
MARRIED	-0.013	68.4	0.005	-100.0	0.009	0.4	0.005	5.8
HOURS	0.003	-15.8	0.039	-780.0	0.002	0.1	0.063	73.3
EXPERIENCE	0.010	-52.6	0.028	-560.0	-0.070	-2.8	-0.051	-59.3
EXP2	-0.014	73.7	-0.046	920.0	0.054	2.2	0.050	58.1
Total Explained	-0.019	100.0 %	-0.005	100.0 %	0.025	100.0 %	0.086	100.0 %
Unexplained	-1.594		-1.608		-1.241		-1.302	

The unexplained portion of the decomposition has declined during the 16-year period. As with the 1989 decomposition, the outcome varies significantly. When used the male-weighted value, industry is a dominant factor of gender wage gap. The analysis is quite different when used the female-weighted value where experience and its squared term are major factors contributing the gender wage gap.

Table 6. Neumark decomposition results in 1989 and 2005

	Skill Difference ($\beta X_m - \beta X_f$)	% of total change in ($\beta X_m - \beta X_f$)	Male Advantage ($\beta_m X_m - \beta X_m$)	Female Disadvantage ($\beta X_f - \beta_f X_f$)	Skill Difference ($\beta X_m - \beta X_f$)	% of total change in ($\beta X_m - \beta X_f$)	Male Advantage ($\beta_m X_m - \beta X_m$)	Female Disadvantage ($\beta X_f - \beta_f X_f$)
IND	-0.022	-442.4%	-0.034	-0.032	0.010	-101.6%	-0.016	-0.019
OCC	0.002	34.8%	0.022	0.003	-0.008	78.3%	0.024	0.046
MSA	0.000	9.6%	-0.065	-0.049	0.003	-29.3%	0.024	0.003
REGION	0.003	67.0%	0.097	0.109	-0.010	102.5%	-0.021	-0.018
EDU	-0.001	-27.5%	-0.210	-0.126	0.029	-289.6%	0.009	0.050
MARRIED	-0.003	-60.4%	0.116	0.104	0.007	-72.0%	0.020	0.023
HOURS	0.011	210.5%	-0.287	-0.984	0.019	-185.7%	-0.430	-1.068
EXPERIENCE	0.015	308.3%	-0.166	-0.364	-0.060	597.4%	0.070	0.067
EXP2	0.000	0.0%	-0.123	0.372	0.000	0.0%	-0.243	0.274
TOTAL	0.005	100.0%	-0.650	0.085	-0.010	100.0%	-0.563	-0.643

To avoid the index number problem, Neumark decomposition is applied in Table 6. In 1989, the majority of the wage gap is due to hours worked and experience. Women's better position in service industry contributed to lower the wage gap. Marital status helped women to reduce the gap. Though women attained longer years of education, the effect of education on wage gap was

relatively smaller than industry or marital status. The wage structure is greatly different in 2005 when Asian women improved experience while men attained longer years of education than women. Experience and region helped reduce the wage gap for women while industry, education, and marital status contributed to increase the gap between men and women. The measure of the discrimination, which is measured by male advantage and female disadvantage of the decomposition, has declined significantly during the period. The portion of the female disadvantage became negative in 2005, implying decreases in the pay disadvantage for women. It appears clear that the level of the gender wage gap has narrowed since the early 1990s.

Trends of the Gender Wage Gap

In this section, we examine the trend of the gender wage gap over time and the sources of the changing rate using the decomposition analysis. Table 7 presents the results from the extension of the Blinder-Oaxaca decomposition over time that was outlined in the second section. When considering the male-weighted value, significant improvement for narrowing the wage gap is industry, region, and experience for women. Women's improvement in potential experience, increase in the proportion lived in either Northeast or West region, and shifts in employment across industries have benefited women relative to men. However, longer years of education attainment by men in 2005 are associated with widening the gender wage gap. Even though a large portion (about 60 percentage points) of the declining gap is due to the women's improvement in the human capital and job characteristics, the unexplained portion differential and interaction of the gender gap and time difference contributed to the decline of the gender wage gap. The unexplained portion of the gender gap, which is commonly viewed as discrimination, has contributed to reduce the gap by about 36 percentage points during the period. The effect of interaction term is small (about 4 percent).

Table 7. Trend of Neumark Decomposition Results between 1989 and 2005
(Male as the Reference Group)

	Explained $(dX^m - dX^f)^* \beta_{05}$	Male Advantage $(d\beta^m - d\beta)X^m_{89}$	Female Disadvantage $(d\beta^f - d\beta)X^f_{89}$
IND	-0.004	0.022	-0.016
OCC	0.007	-0.005	-0.034
MSA	0.004	0.084	-0.051
REGION	-0.012	-0.124	0.129
EDU	0.030	0.218	-0.174
MARRIED	0.016	-0.097	0.079
HOURS	0.006	-0.138	0.085
EXPERIENCE	-0.073	0.236	-0.420
EXP2	0.000	-0.126	0.167
TOTAL	-0.026	0.070	-0.235

When using the female-weighted value, we have a similar result concerning the human and job related characteristics. Table 8 indicates that the narrowing gender gap during the last sixteen years is attributed to women's improvement in potential experience, composition of industry and region. As with the male-weighted value, the rest of the independent variables contributed to widening the gender wage gap. Major differences between the male-weighted value and female-weighted value occur in the role of the unexplained portion of the gap and the interaction terms. Unlike the male-weighted value, declining discrimination (unexplained portion) contributed the major portion (about 73%) of the trend of the wage gap when we use the female-weighted value. Only 16 percentage points of the improvement in the gap for female is due to the increase in the human and job related characteristics for females. The remaining 4 percentage point of the change is due to the interaction terms.

Table 8. Decomposition Results between 1989 and 2005
(Male as the Reference Group)

	Explained $(\beta X_m - \beta X_f)$	Unexplained $(\beta X_m - \beta X_f)$	Interaction $(\beta_m X_m - \beta X_m)$	Interaction 2 $(dX^f * g\beta_{05})$
IND	-0.005	0.047	0.027	-0.006
OCC	0.009	0.028	-0.016	0.015
MSA	0.005	0.136	-0.003	0.004
REGION	-0.828	-0.250	-0.004	0.002
EDU	1.323	0.392	0.000	0.003
MARRIED	0.019	-0.184	0.003	-0.005
HOURS	0.000	-0.219	-0.001	0.002
EXPERIENCE	-0.086	0.648	0.006	0.024
EXP2	0.081	-0.279	-0.014	-0.006
TOTAL	0.519	0.319	-0.002	0.034

Table 8 records the trends of the gender wage gap using Neumark's decomposition. Neumark decomposition records the gender gap has declined because both gender differences and discrimination in pay have fallen. Among the measured human capital and job characteristics, increases in women's potential experience contributed most of the total decline in the gender gap. Women's improvement position in industry and region contributed to a decrease the gap. As with the Blinder-Oaxaca decomposition, the rest of the variables contributed to an increase the gap.

Neumark decomposition also shows that majority of decline in the gender gap is due to a decrease in female disadvantage in wage. At the same time, the wage premium for male was increased and contributed to widen the gap though this male advantage was offset by decrease in female disadvantage.

Conclusion

The rate of increase in mean wage of Asian and Pacific Islander women rose more than the mean wage of men from 1989 to 2005 and thus, the gender wage gap narrowed by 0.7 percentage. The relative gains in the gender gap are attributable to reduced discrimination against women in the labor market as well as improvement of women's human and job characteristics. Women benefited from improvement in the human capital and shifts from traditional low paying occupations and industries to high paying professional and technical jobs and industries. The results of decomposition show that women achieved closing the gap through the increase in the potential experience in the labor market, better composition in industries and regions. Lowering the level of the gender discrimination in the labor market has been an important factor of narrowing the gender gap for the last 16 years. According to Neumark decomposition, the majority of declining discrimination is due to a reduction female disadvantage.

Although the gender wage gap has narrowed, there remains a significant differential between female and male wage. On average, female employees earn about 80 percent of what their male counterparts earn. Trends of the gender gap differ significantly across race, industry, occupation, and location. Further research needs to broken down by other racial groups, industries, occupations, regions, and cities to estimate the direction and levels of the gender wage gap over time.

Reference

Appleton, Simon, John Hoddinott, and Pramila Krishnan (1999). "The gender wage gap in three African countries." *Economic Development and Cultural Change,* Volume 47, Number 2, 289–313.

Blinder, Alan S. (1973). "Wage discrimination: reduced form and structural estimations." *Journal of Human Resource,* Volume 8, 436-55.

Blau, Francine. D., and Lawrence M. Kahn (1994). "Rising Wage Inequality and the U.S. Gender Gap." *American Economic Review,* Volume 84, Number 2, 23-28.

Cotton, Jeremiah (1988). "On the decomposition of wage differentials." *Review of Economics and Statistics,* Volume 70, Number 2, 236-43.

Jenkins, Stephen P. (1994). "Earnings Discrimination Measurements." *Journal of Econometrics,* Volume 61, 81-102.

Mincer, Jacob, and Solomon Polachek (1974). "Family investment in human capital: Earnings of women." *Journal of Political Economy,* Volume 82, 76-108.

Mincer, Jacob (1974). *Schooling, Experience and Earnings.* New York: National Bureau of Economic Research..

Neumark, David (1988). "Employers' discriminatory behavior and the estimation of wage discrimination." *Journal of Human Resources,* Volume 23, Number 3 (Summer), 279–95.

Oaxaca, Ronald (1973). “Male-female wage deferential in urban labor markets.” *International Economic Review,* Volume 14, Number 3, 693-709.

Smith, James P., and Michael P. Ward (1984). *Women’s wages and work in the 20th century.* Rand Report Number R-3119-NICHD, Santa Monica: Rand Corporation..

US Census Bureau (2000). *We the People: Asians in the United States*. Census 2000 Special Reports CENSR-17. Retrieved from http://www.census.gov/prod/2004pubs/censr-17.pdf