

An analysis of wages in 2006

This online version of the article contains revisions that were made May 9, 2008.

Alaska men, on average, continued to earn significantly more than women in 2006, and the wage difference between the two has not changed much since 1999. Female workers, as in previous years, earned less than male workers across all industry and age groups, almost all geographic areas, and most occupations in Alaska.

Across the U.S., many factors can account for the differences in average annual wages, including career choices, level of education or training, hours worked, length on the job, the likelihood of seeking part-time or full-time work or discrimination.

This article examines how workers' wages in Alaska in 2006 were influenced by the industry or occupation they chose, their age and education, among other things. It also looks at new hires' wages and how wages in general varied in different parts of Alaska.

Overall, women earned 66.6 percent on average of what men earned in 2006, which was up from 2000 (65.9 percent) and 1990 (62.2 per-

cent). (See Exhibit 1.) The percentage difference in income between women and men is often called the gender gap.

Women earned an average of \$25,486¹ while men earned an average of \$38,287, a \$12,800 difference. That was up from \$11,000 in 2001 and \$10,000 in 1988. Looking at a trimmed mean, which eliminates the most extreme wages, men earned \$34,662 and women earned \$23,618, which was 68.1 percent of what men earned.

In Alaska's public sector (state and local government combined), women earned 79.8 percent as much as men, and in the private sector, they earned less – 62.4 percent. The public sector's percentage was up from 76 percent in 2001; the private sector's was nearly the same at 62 percent.

The state's work force of 397,000 in 2006 was 48.1 percent female and 51.9 percent male, which is moving toward the general distribution of Alaska's population – 48.7 percent female and 51.3 percent male.

1 Workers and Their Wages Alaska, 1990 to 2006

		1990	1992	1994	1996	1998	2000	2002	2004	2006
Percentage employed	Male	53.9%	53.7%	53.8%	53.3%	52.9%	52.6%	52.4%	52.2%	51.9%
	Female	46.1%	46.3%	46.2%	46.7%	47.1%	47.4%	47.6%	47.8%	48.1%
Percentage of total wages	Male	65.3%	64.1%	63.9%	63.6%	63.3%	62.7%	62.2%	61.8%	61.8%
	Female	34.7%	35.9%	36.1%	36.4%	36.7%	37.3%	37.8%	38.2%	38.2%
Average annual wage	Male	\$26,867	\$28,064	\$28,707	\$28,477	\$29,909	\$31,243	\$33,090	\$35,062	\$38,287
	Female	\$16,710	\$18,256	\$18,838	\$18,578	\$19,498	\$20,582	\$22,172	\$23,657	\$25,486
Women's average wage as a percentage of men's		62.2%	65.0%	65.6%	65.2%	65.2%	65.9%	67.0%	67.5%	66.6%

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

On the national scene

Gender wage data for Alaska and the nation as a whole are not directly comparable because Alaska measures the average wages for all workers and the

¹ All wages published in this article are average annual wages.

U.S. Census Bureau measures the median wages for only full-time workers. Despite that difference, it is useful to look at the median: All female workers in Alaska earned 70.1 percent of what men earned in 2006 and, on the national level, full-time female workers earned 77.4 percent of what men earned that year – a figure that has risen significantly in the last three decades.

If Alaska data could be adjusted to measure only full-time workers, the ratio of women's wages to men's wages would likely be much closer to the national figure.

Comparison by industry group

Women in Alaska continued to earn less than men in all industry groups in 2006 and their wages varied substantially across those groups.

Of all Alaska's industry groups, women earned the most in natural resources and mining, which includes the oil industry. In fact, that group paid the highest wages to both sexes in 2006, as it did in 2001.

Women in natural resources and mining earned \$51,808 in wages in 2006, an amount 41.9 percent higher than the industry group with the next highest average wages – information.² (See Exhibits 2 and 4.) Yet, women made up 13.4 percent of natural resources and mining's workforce, the second-smallest percentage of any industry group. Construction was the smallest (13.0 percent). (See Exhibit 3.)

The industry group with the highest percentage of women in 2006 was educational³ and health services, with 76.9 percent. Five others also had a majority of women: financial activities (61.2 percent), local government⁴ (58.6 percent), other services (54.7 percent), leisure and hospitality (54.3 percent) and state government⁵ (50.9 percent).

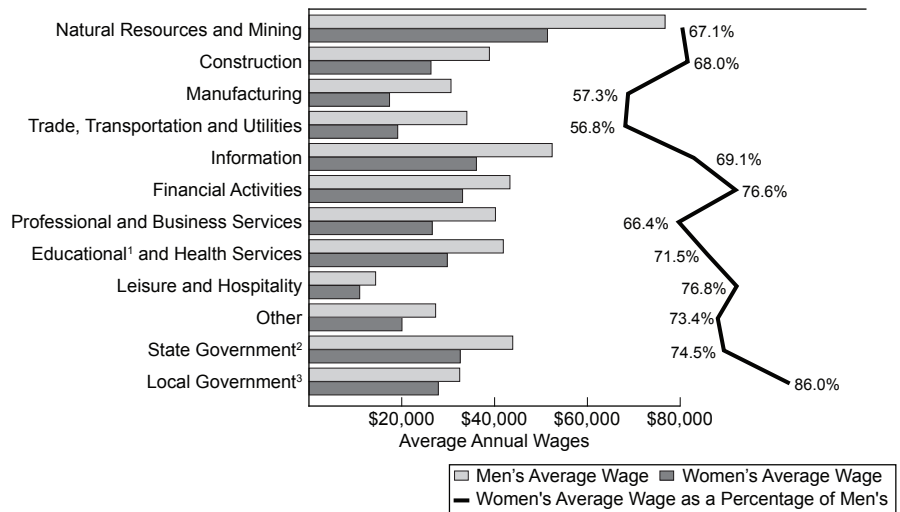
² That does not include public administration, which had only 20 female workers.

³ Private education only

⁴ Includes public school systems

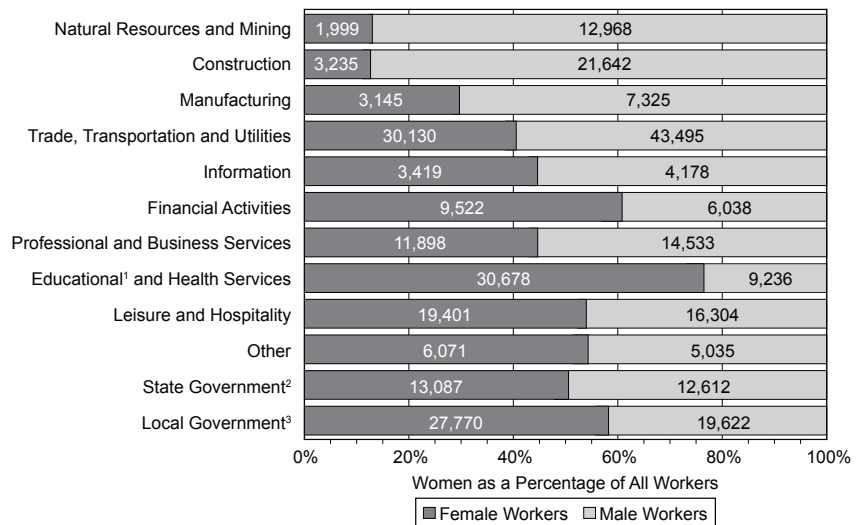
⁵ Includes the University of Alaska

Wage Ratio Varies Widely Wages by industry, Alaska 2006 **2**



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Gender and Industries Workers by industry, Alaska 2006 **3**



Note: The numbers of female and male workers are listed in each bar.

¹ Private education only

² Includes the University of Alaska

³ Includes public school systems

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Educational and health services had the fifth-highest wage for women out of all the industry groups, at \$30,244. The wages for the other industry groups that had more women than men ranged from \$33,491 in financial activities down to \$11,344 in leisure and hospitality. (See Exhibit 4.)

4 Workers and Wages by Industry Group Alaska, 2006

	Men					Women				
	Total Workers	Number of Workers	Total Wages	Average Wage	Number of Workers	Percentage of Total Workers	Total Wages	Percentage of Total Wages	Average Wage	Women's Average Wage as a Percentage of Men's
Natural Resources and Mining	14,967	12,968	\$1,000,544,044	\$77,155	1,999	13.4%	\$103,563,684	9.4%	\$51,808	67.1%
Construction	24,877	21,642	\$850,557,029	\$39,301	3,235	13.0%	\$86,399,551	9.2%	\$26,708	68.0%
Manufacturing	10,470	7,325	\$227,290,856	\$31,029	3,145	30.0%	\$55,899,683	19.7%	\$17,774	57.3%
Trade, Transportation and Utilities	73,625	43,495	\$1,496,870,721	\$34,415	30,130	40.9%	\$588,778,741	28.2%	\$19,541	56.8%
Information	7,597	4,178	\$220,666,237	\$52,816	3,419	45.0%	\$124,823,906	36.1%	\$36,509	69.1%
Financial Activities	15,560	6,038	\$263,857,983	\$43,700	9,522	61.2%	\$318,899,132	54.7%	\$33,491	76.6%
Professional and Business Services	26,431	14,533	\$589,992,959	\$40,597	11,898	45.0%	\$320,833,650	35.2%	\$26,965	66.4%
Educational ¹ and Health Services	39,914	9,236	\$390,632,394	\$42,295	30,678	76.9%	\$927,811,443	70.4%	\$30,244	71.5%
Leisure and Hospitality	35,705	16,304	\$240,860,091	\$14,773	19,401	54.3%	\$220,080,374	47.7%	\$11,344	76.8%
Other Services	11,106	5,035	\$137,594,208	\$27,328	6,071	54.7%	\$121,855,667	47.0%	\$20,072	73.4%
State Government ²	25,699	12,612	\$558,970,131	\$44,320	13,087	50.9%	\$431,989,317	43.6%	\$33,009	74.5%
Local Government ³	47,392	19,622	\$645,386,962	\$32,891	27,770	58.6%	\$785,948,125	54.9%	\$28,302	86.0%

¹ Private education only

² Includes the University of Alaska

³ Includes public school systems

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

5 Top 25 Occupations for Women Occupations with the most women, Alaska 2006

	Number of Women	Number of Men	Percentage of Women	Percentage of Men	Women's Average Wage	Men's Average Wage	Women's Average Wage as a Percentage of Men's	Wage Difference
Retail salespersons	7,845	5,347	59.5%	40.5%	\$13,404	\$20,836	64.3%	\$7,432
Office clerks, general	5,780	1,602	78.3%	21.7%	\$21,617	\$31,386	68.9%	\$9,769
Cashiers	5,000	2,282	68.7%	31.3%	\$11,985	\$15,357	78.0%	\$3,373
Bookkeeping, accounting and auditing clerks	4,297	579	88.1%	11.9%	\$28,590	\$31,749	90.0%	\$3,160
Registered nurses	3,752	413	90.1%	9.9%	\$50,744	\$60,865	83.4%	\$10,121
Office and administrative support workers, all other	3,750	1,144	76.6%	23.4%	\$26,241	\$30,767	85.3%	\$4,526
Combined food preparation and serving workers, including fast food	3,730	2,868	56.5%	43.5%	\$7,616	\$7,693	99.0%	\$76
Executive secretaries and administrative assistants	3,667	493	88.1%	11.9%	\$29,813	\$32,925	90.6%	\$3,111
Waiters and waitresses	3,376	935	78.3%	21.7%	\$11,776	\$13,679	86.1%	\$1,903
Teacher assistants	3,166	652	82.9%	17.1%	\$13,164	\$13,631	96.6%	\$466
Elementary school teachers, except special education	3,012	841	78.2%	21.8%	\$43,403	\$47,775	90.8%	\$4,372
Receptionists and information clerks	2,944	291	91.0%	9.0%	\$18,914	\$19,005	99.5%	\$92
Maids and housekeeping cleaners	2,817	771	78.5%	21.5%	\$13,176	\$16,239	81.1%	\$3,063
Customer service representatives	2,326	882	72.5%	27.5%	\$24,915	\$25,375	98.2%	\$460
Secretaries, except legal, medical and executive	2,195	218	91.0%	9.0%	\$24,738	\$19,964	123.9%	-\$4,774
Janitors and cleaners, except maids and housekeeping cleaners	2,015	3,601	35.9%	64.1%	\$15,546	\$18,270	85.1%	\$2,724
Personal and home care aides	1,963	428	82.1%	17.9%	\$16,442	\$20,570	79.9%	\$4,128
Child care workers	1,893	242	88.7%	11.3%	\$11,231	\$9,808	114.5%	-\$1,423
Nursing aides, orderlies and attendants	1,733	262	86.9%	13.1%	\$24,885	\$27,972	89.0%	\$3,087
First-line supervisors/managers of office and administrative support workers	1,628	440	78.7%	21.3%	\$37,683	\$50,785	74.2%	\$13,102
Food preparation workers	1,607	1,449	52.6%	47.4%	\$11,788	\$13,993	84.2%	\$2,205
Home health aides	1,538	454	77.2%	22.8%	\$18,716	\$23,345	80.2%	\$4,629
Healthcare support workers, all other	1,525	371	80.4%	19.6%	\$22,592	\$24,036	94.0%	\$1,444
Secondary school teachers, except special and vocational education	1,452	942	60.7%	39.3%	\$40,087	\$47,337	84.7%	\$7,249
Teachers and instructors, all other	1,431	574	71.4%	28.6%	\$24,802	\$29,831	83.1%	\$5,029

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Top 25 Occupations for Men

Occupations with the most men, Alaska 2006

6

	Number of Men	Number of Women	Percentage Men	Percentage Women	Men's Average Wage	Women's Average Wage	Women's Average Wage as a Percentage of Men's	Wage Difference
Construction laborers	6,498	750	89.7%	10.3%	\$24,439	\$18,564	76.0%	\$5,875
Retail salespersons	5,347	7,845	40.5%	59.5%	\$20,836	\$13,404	64.3%	\$7,432
Laborers and freight, stock and material movers, hand	5,019	689	87.9%	12.1%	\$17,598	\$12,530	71.2%	\$5,068
Carpenters	4,412	123	97.3%	2.7%	\$32,114	\$23,850	74.3%	\$8,264
Janitors and cleaners, except maids and housekeeping cleaners	3,601	2,015	64.1%	35.9%	\$18,270	\$15,546	85.1%	\$2,724
Operating engineers and other construction equipment operators	3,485	163	95.5%	4.5%	\$52,312	\$35,192	67.3%	\$17,120
Maintenance and repair workers, general	3,123	320	90.7%	9.3%	\$35,040	\$18,667	53.3%	\$16,373
Combined food preparation and serving workers, including fast food	2,868	3,730	43.5%	56.5%	\$7,693	\$7,616	99.0%	\$76
Truck drivers, heavy and tractor-trailer	2,684	131	95.3%	4.7%	\$45,702	\$33,547	73.4%	\$12,155
General and operations managers	2,395	1,254	65.6%	34.4%	\$76,850	\$48,755	63.4%	\$28,095
Cashiers	2,282	5,000	31.3%	68.7%	\$15,357	\$11,985	78.0%	\$3,373
Seafood processing workers, except surimi and fish roe	2,268	1,209	65.2%	34.8%	\$15,201	\$12,047	79.3%	\$3,154
Electricians	2,194	67	97.0%	3.0%	\$54,557	\$33,647	61.7%	\$20,910
Security guards	1,907	474	80.1%	19.9%	\$30,321	\$22,087	72.8%	\$8,234
Stock clerks and order fillers	1,869	748	71.4%	28.6%	\$18,812	\$13,896	73.9%	\$4,916
Automotive service technicians and mechanics	1,740	48	97.3%	2.7%	\$36,363	\$16,177	44.5%	\$20,186
Plumbers, pipefitters and steamfitters	1,703	53	97.0%	3.0%	\$50,311	\$30,448	60.5%	\$19,863
Office clerks, general	1,602	5,780	21.7%	78.3%	\$31,386	\$21,617	68.9%	\$9,769
Cooks, restaurant	1,564	452	77.6%	22.4%	\$17,070	\$12,137	71.1%	\$4,933
Food preparation workers	1,449	1,607	47.4%	52.6%	\$13,993	\$11,788	84.2%	\$2,205
Managers, all other	1,387	1,406	49.7%	50.3%	\$70,473	\$45,897	65.1%	\$24,575
Roustabouts, oil and gas	1,376	61	95.8%	4.2%	\$48,818	\$24,291	49.8%	\$24,527
Truck drivers, light or delivery services	1,320	186	87.6%	12.4%	\$30,984	\$18,949	61.2%	\$12,036
Dishwashers	1,315	310	80.9%	19.1%	\$8,268	\$7,328	88.6%	\$940
First-line supervisors/managers of construction trades and extraction workers	1,233	40	96.9%	3.1%	\$82,261	\$57,946	70.4%	\$24,315

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

The gap in wages was smallest in local government, where women earned 86 percent as much as men in 2006. Other industry groups with relatively high ratios of women's to men's wages – more than 70 percent – were leisure and hospitality (76.8 percent), financial activities (76.6 percent), state government (74.5 percent), other services (73.4 percent), and educational and health services (71.5 percent).

In contrast to natural resources and mining's high pay, construction paid much less. Women earned \$26,708 in 2006, men earned \$39,301 and women represented 13 percent of construction's work force.

Two industry groups, manufacturing, plus trade, transportation and utilities – the latter includes high-paying oil pipeline and air transportation jobs – had relatively low percentages of women, coupled with low average wages. Women made up 30 percent of manufacturing and they

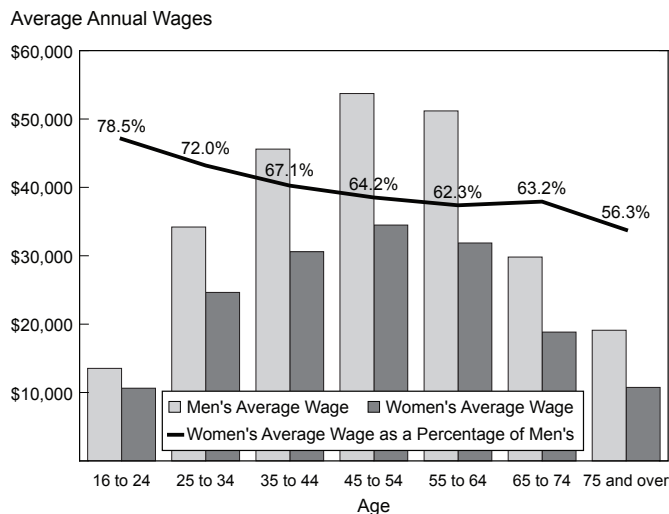
earned \$17,774 in wages; women made up 40.9 percent of trade, transportation and utilities and they earned \$19,541.

Those two industry groups also had the largest differences between men's and women's earnings. Women made 57.3 percent as much as men in manufacturing and 56.8 percent as much as men in trade, transportation and utilities. In general, the industry groups with the lowest percentage of women tend to also have the lowest ratio of women's to men's average wages.

Natural resources and mining, with a 67.1 percent ratio of women's wages to men's, construction (with 68 percent), professional and business services (with 66.4 percent) and information (with 69.1 percent) all had female participation under 50 percent.

It appears that in the case of several of those industry groups, differences were due in part to

7 Wage Ratio Higher Early Wages by age, Alaska 2006



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

high-end incomes that made the overall differences seem larger than would otherwise be the case. Those data are in contrast to some research outside Alaska that has indicated that male/female pay differences tend to be smaller in industries with a higher male percentage of employment.

Comparison by occupation

In Alaska in 2006, men worked in 766 occupations and women worked in 715 occupations.

The five occupations with the highest number of women in 2006 were retail salespeople, office clerks, cashiers, bookkeeping, accounting and auditing clerks, and registered nurses. (See Exhibit 5.) Registered nurses replaced teachers' assistants in the top five from 2001; that change probably reflects the growing need for registered nurses nationwide. There could also be an effect from occupation coding changes.

The five occupations with the highest number of men in 2006 were construction laborers, retail salespeople, laborers and freight movers,⁶ carpenters, and janitors and cleaners.⁷ (See Exhibit 6.) The five were the same in previous years; the order just shifted.

⁶ The full occupation title is laborers and freight, stock and material movers (hand).

⁷ The full occupation title is janitors and cleaners, except maids and housekeeping cleaners.

Gender-dominated occupations

The eight occupations with 95 percent or more men that are on a list of the 25 occupations with the most men in 2006 include carpenters; operating engineers and equipment operators; heavy truck and tractor-trailer drivers; electricians; automotive service technicians and mechanics; plumbers, pipefitters and steamfitters; oil and gas roustabouts; and first-line supervisors/managers of construction trades and extraction workers.

Adding in the maintenance and repair workers occupation, which was 90.7 percent men in 2006, nine occupations in 2006 had 90 percent or more men.

The top 25 occupations with the most women, on the other hand, show only three occupations with 90 percent or more women – registered nurses, receptionists and information clerks, and secretaries (except legal, medical or executive). (See Exhibit 5.) While men have made inroads into traditionally female occupations, women have entered traditionally male occupations to a far lesser degree.

The occupations on the top 25 list where women earned the lowest pay in 2006 were combined food preparation and serving workers, including fast food (\$7,616), child care workers (\$11,231) and waiters and waitresses (\$11,776).

The occupations on the top 25 list where men earned the lowest pay were, again, combined food preparation and serving workers, including fast food (\$7,693), dishwashers (\$8,268) and seafood processing workers, except surimi and fish roe (\$15,201).

All the female top 25 occupations had ratios of women's wages to men's above the average for all women, 66.6 percent, except retail salespersons – the occupation with the most women – which was at 64.3 percent.

There were two occupations on both genders' top 25 lists where women on average earned more than men. Female secretaries (except legal, medical or executive) earned 23.9 percent more than their male counterparts (\$24,738 versus \$19,964) and female child care workers

earned 14.5 percent more than male child care workers (\$11,231 versus \$9,808).

There were 10 occupations on the female top 25 list where the women earned at least 90 percent of what men earned, including two where women earned more on average than men: secretaries, except legal, medical and executive (\$24,738 versus \$19,964) and child care workers (\$11,231 versus \$9,808). The remaining eight were bookkeeping, accounting and auditing clerks (90 percent); executive secretaries and administrative assistants (90.6 percent); elementary school teachers, except special education (90.8 percent); healthcare support workers, all other (94 percent); teacher assistants (96.6 percent); customer service representatives (98.2 percent); combined food preparation and serving workers, including fast food (99 percent); and receptionists and information clerks (99.5 percent).

Well-paid occupations for women

Women on the female top 25 list earned the most in 2006 as registered nurses (\$50,744), elementary school teachers, except special education (\$43,403) and secondary school teachers, except special and vocational education (\$40,087).

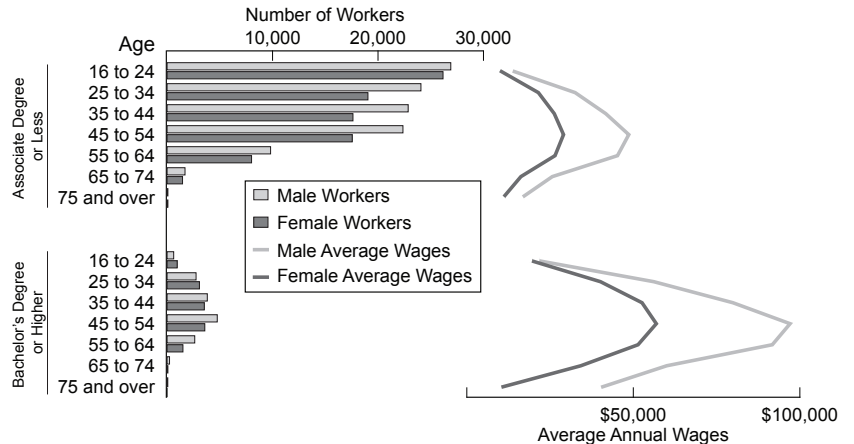
The list has several different occupations from 2001, which is to be expected in a dynamic economy. Women's wages for some occupations showed solid growth. For example, from 2001 to 2006, the pay for registered nurses increased 20.1 percent (\$8,500), retail salespersons increased 19.9 percent (\$2,221) and executive secretaries and administrative assistants increased 12.8 percent (\$3,377).

Most well-paid occupations for women are not on the female top 25 list. Some occupations not on the list were high-paying but had few women. There were 10 occupations in 2006 where women earned more than \$100,000. Eight were medical professionals and engineers and two were in oil and gas.

Of the 10, the occupations that are not restricted for publication due to confidentiality reasons are obstetricians and gynecologists (11 women averaged \$182,949), physicians and surgeons,

Wages Highest in Middle Age

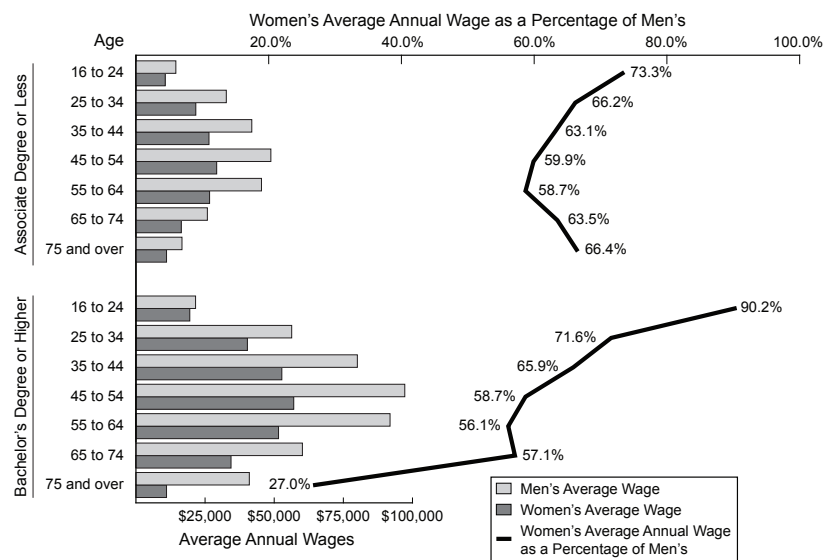
Wages by age and education, Alaska 2006



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Wages and Education

By age, Alaska 2006



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

all other (96 averaged \$135,181), industrial engineers (42 averaged \$121,155), petroleum engineers (30 averaged \$119,176) and family and general practitioners (127 averaged \$100,776).

Women earned more than \$70,000 in 29 occupations in 2006. Nineteen were in three occupational groups – engineers, health diagnosing and treating practitioners, and production. In the engineering group, 117 women in 2006 averaged \$106,922. In the second group, 464 women averaged \$100,732, and in the production group,

18 women, most in plant operation, averaged \$98,449. The rest of the occupations with more than \$70,000 in wages were scattered in management, life sciences and commercial pilots occupational groups, among others.

Comparison by age group

Since the age group data and percentages represented in this section were measured in the same year, 2006, they do not represent a time series and should not be read successively. It is possible that the experience for those in younger age groups during their lives could vary significantly from those in older age groups in 2006.

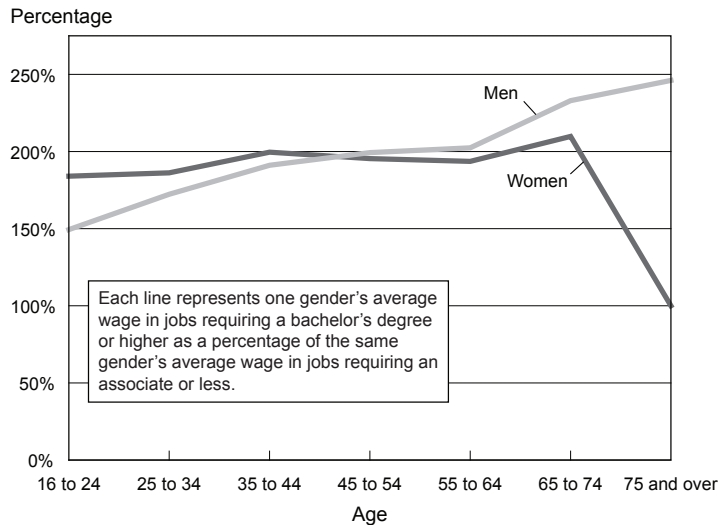
Women earned less than men in every age group in 2006 despite wage increases for both genders over the years. (See Exhibit 7.) The pattern of wages by age group, though, has not changed significantly.

Both men's and women's wages in 2006 peaked in the 45 to 54 age group, when women in that group earned 64.2 percent as much as men – women earned \$34,253 and men earned \$53,104, a \$18,851 difference.

The wage difference was smallest in the 16 to 24 age group (\$2,902), and 25 to 34 age group (\$9,570), where women earned 78.5 percent as much as men and 72 percent, respectively. The wage ratio declines in each successive age group, with the exception of a slight increase for the 65 to 74 group.

10 Wage Premium Differences

By age, Alaska 2006

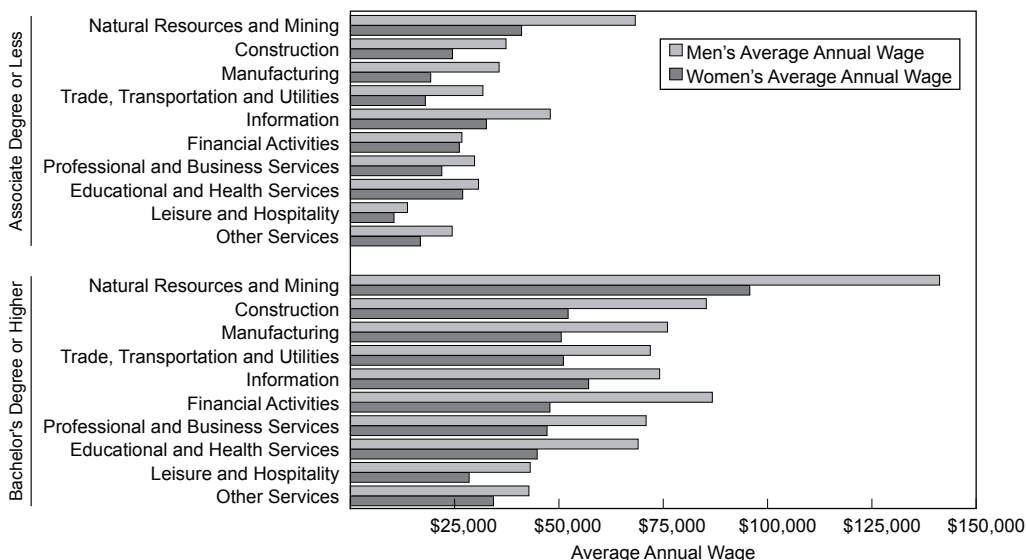


Note: For example, for women ages 16 to 24, the average wage for those in jobs requiring a bachelor's degree or higher was 184 percent of the average wage for those in jobs requiring an associate degree or less. In other words, the women in that age group in jobs requiring a bachelor's or higher earned 84 percent more than women in jobs requiring an associate degree.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

11 Education Shuffles the Wage Deck

Wages by education and industry, Alaska 2006



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Adding in education

When examining the age groups with the additional filter of education, there are more distinctions in the wage differences between the sexes.

Data in this section apply to the private sector only as comparable data for government workers were not available. Further, the broad education level data available are based on job requirements, not the actual education level of the person holding that job. In any particular case, it is possible that the person holding the job has more education than the job requires.

Wages by Region Alaska, 2006 **12**

About 109,000 male workers and 91,000 female workers were identified who had jobs requiring an associate degree or lower – “associate category jobs.” At the same time, about 15,800 male workers and 13,700 female workers had jobs requiring at least a bachelor’s degree – “bachelor’s category jobs.” (See Exhibit 8.) Of the total workers, 87.1 percent fit into the associate category.

By age group

The 16 to 24 age group had the most women (26,326) in the associate category jobs; the number of women declined in each age group beyond that. The 45 to 54 age group – middle-age workers – had the most women (3,742) in the bachelor’s category jobs. The latter age group’s high number of women was perhaps due to baby boomers, women returning to the work force after their children were grown and women having time to complete higher levels of education.

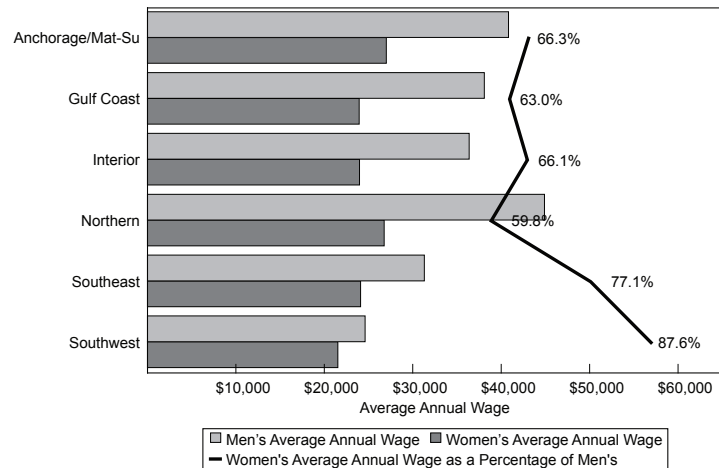
The biggest decrease in the number of women in the associate category jobs, which is between the 16 to 24 age group and the 25 to 34 age group, has a corresponding increase in those same age groups in the bachelor’s category jobs, perhaps indicating the achievement of a higher degree. Beyond those two age groups, decreases in the associate category jobs and increases in the bachelor’s category jobs are much more gradual until late in life.

For men, the pattern of the decrease in the associate category jobs is more gradual and the increase for the bachelor’s category jobs is more consistent for a longer time period.

The difference between women and men in the increase in bachelor’s category jobs may indicate different time horizons for education. Two possible reasons are because women might postpone a higher degree until after they have children or because women and men take different career paths based on the occupation or industry they choose.

Impact of education level

Looking at wages, the difference was substantial between the associate category jobs and bach-



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

elor’s category jobs for both sexes in 2006. (See Exhibit 9.) In the associate category, women in all age groups averaged \$20,883 in wages and men averaged \$34,059; in the bachelor’s category, women in all age groups averaged \$47,552 in wages and men averaged \$79,333.

The wages for bachelor’s category jobs were considerably higher in every group except for those 75 and over.

The ratio of women’s wages to men’s is much lower for women in associate category jobs in the 16 to 24 age group (73.3 percent) than for women in the same age group in bachelor’s category jobs (90.2 percent). Despite that, there is a drop in the ratio of women’s to men’s wages in the bachelor’s category that is much greater than the drop in the ratio in the associate category. In the middle-age group, ages 45 to 54, the ratios are virtually the same for both the associate and bachelor’s categories.

The fall-off of wage ratio in the bachelor’s category jobs occurs for all age groups, though there is a slight increase between the 55 to 64 age group and the 65 to 74 age group. In the 75 and over age group, the ratio of women’s wages to men’s dropped to 27 percent and women in that age group earned the same, whether they had associate or bachelor’s category jobs.

13 Workers and Wages By Place of Residence Alaska, 2006

	Number of Men	Number of Women	Percentage Women	Men's Average Wage	Women's Average Wage	Women's Average Wage as a Percentage of Men's
Aleutians East Borough	340	330	49.3%	\$28,412	\$21,146	74.4%
Aleutians West Census Area	1,153	799	40.9%	\$43,383	\$26,877	62.0%
Anchorage, Municipality	66,768	66,711	50.0%	\$42,545	\$29,175	68.6%
Bethel Census Area	4,119	3,673	47.1%	\$22,585	\$22,209	98.3%
Bristol Bay Borough	316	275	46.5%	\$38,285	\$24,916	65.1%
Denali Borough	500	395	44.1%	\$42,270	\$19,548	46.2%
Dillingham Census Area	1,129	1,121	49.8%	\$25,239	\$23,790	94.3%
Fairbanks North Star Borough	20,379	19,637	49.1%	\$39,359	\$24,758	62.9%
Haines Borough	547	572	51.1%	\$27,691	\$17,867	64.5%
Juneau Borough	8,474	8,582	50.3%	\$35,379	\$27,951	79.0%
Kenai Peninsula Borough	12,892	11,520	47.2%	\$41,572	\$21,679	52.1%
Ketchikan Gateway Borough	3,438	3,455	50.1%	\$34,160	\$24,300	71.1%
Kodiak Island Borough	2,987	3,014	50.2%	\$30,449	\$21,140	69.4%
Lake and Peninsula Borough	426	365	46.1%	\$21,105	\$17,326	82.1%
Matanuska-Susitna Borough	18,650	16,534	47.0%	\$41,658	\$23,434	56.3%
Nome Census Area	2,378	2,135	47.3%	\$25,300	\$24,412	96.5%
North Slope Borough	1,859	1,648	47.0%	\$33,938	\$27,617	81.4%
Northwest Arctic Borough	1,725	1,519	46.8%	\$27,960	\$25,783	92.2%
Prince of Wales-Outer Ketchikan Census Area	1,276	1,124	46.8%	\$25,906	\$19,019	73.4%
Sitka Borough	1,972	2,244	53.2%	\$31,860	\$25,009	78.5%
Skagway-Hoonah-Angoon Census Area	771	736	48.8%	\$24,093	\$17,477	72.5%
Southeast Fairbanks Census Area	1,500	1,228	45.0%	\$33,654	\$20,385	60.6%
Valdez-Cordova Census Area	2,694	2,280	45.8%	\$41,199	\$23,125	56.1%
Wade Hampton Census Area	1,844	1,539	45.5%	\$13,913	\$12,668	91.1%
Wrangell-Petersburg Census Area	1,285	1,389	51.9%	\$27,740	\$19,110	68.9%
Yakutat Borough	184	176	48.9%	\$24,748	\$15,863	64.1%
Yukon-Koyukuk Census Area	1,704	1,427	45.6%	\$20,434	\$16,981	83.1%

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

women is greatest in the youngest group (16 to 24).

The education premium for women is at its early peak in the 35 to 44 age group (99.6 percent more). Then it declines slightly until the 55 to 64 age group (93.6 percent).

The education premium for men increases in each age group though the increase slows in middle- to late-middle age. The men's premium crosses women's and continues in favor of men in the 45 to 54 age group (99.3 percent for men to 95.3 percent for women) and widens thereafter.

The premiums for both sexes jump in the 65 to 74 age group. One reason might be because some people were promoted to executive positions with higher wages.

Comparing education job premiums

The comparison of one gender's wage in bachelor's category jobs versus that same gender's associate category jobs (see Exhibit 10) shows that in the first three age groups, the wage premium in bachelor's category jobs is greater for women than men.

For instance, women in the three groups (16 to 24, 25 to 34 and 35 to 44), earned 84 percent, 86.2 percent and 99.6 percent,⁸ respectively, more in the bachelor's category jobs than women in the same age groups earned in the associate category jobs. Correspondingly, men in those same age groups earned 49.4 percent, 72.3 percent and 91.1 percent, respectively, more in the bachelor's category jobs than men in the same age groups earned in associate category jobs.

The difference in premiums between men and

⁸ Shown in Exhibit 10 as the premiums of 184 percent, 186.2 percent and 199.6 percent, respectively

Obstacles to wage growth for women appear to be more pronounced for those with greater earnings potential: the opportunity cost of fewer hours worked per week, time out of the work force and investment in further education and training, among others. The obstacles are more significant for bachelor's category jobs than for associate category jobs. People who earn less lose less from the obstacles.

All industry groups had higher wages for higher education. Yet in each of the industry groups with the highest numbers of women – such as trade, transportation and utilities, educational and health services, leisure and hospitality, and professional and business services – only trade, transportation and utilities had a ratio of women's wages to men's that was higher than the overall average of 66.6 percent.

Overall, the ratios were higher for associate category jobs than for bachelor's category jobs.

On the other hand, a national study using 2001 Bureau of Labor Statistics' data that compares women's and men's wages by education level from 1979 to 2000 shows a shift in favor of women. Whether it is a less negative decline in income or a greater positive change in income, at all education levels, women had a more favorable wage change than men.

Women's wages in the study declined only in one group out of four: the group that did not have a high school diploma. Men's wages, however, increased only in the college graduate category. The reasons for that shift could vary from current government policies or the manifestation of an evolving economy and work force, such as women entering the work force and job skill characteristics. Likely, it is a combination of factors.

Women earn more in some parts of Alaska

Alaska had six population areas in 2006 where women made up more than half of the workers. The Sitka Borough had the highest percentage with 53.2 percent women. The Wrangell-Petersburg Census Area was next with 51.9 percent, followed by the Haines (51.1 percent), Juneau (50.3 percent), Kodiak Island (50.2 percent) and Ketchikan Gateway (50.1 percent) boroughs.

Looking at economic regions, women's wages varied. (See Exhibit 12.) Women earned the most in the Anchorage/Mat-Su region (\$27,194), where they were 47.9 percent of the work force. Close behind was the Northern region (\$26,953, with women as 37.6 percent of the work force). The Southwest region was the lowest (\$21,713, with women as 87.6 percent), with the Gulf Coast region just ahead of that (\$24,116, with women as 63 percent).

The peak wages for women in the Anchorage/Mat-Su region were in the 45 to 54 age group (\$36,804) while the lowest were in the 75 and over age group (\$11,564). Two regions had women's highest wages in the 55 to 64 age group, Northern (\$37,170) and Southwest (\$30,145). The highest for the other three were

Looking at New Hires 14 Wages by industry group, Alaska 2006

	Number of Men	Number of Women	Men's Average Wage	Women's Average Wage	Women's Average Wage as a Percentage of Men's
Natural Resources and Mining	4,994	853	\$38,191	\$24,050	63.0%
Construction	19,706	2,435	\$22,350	\$15,397	68.9%
Manufacturing	4,476	1,946	\$10,437	\$7,199	69.0%
Trade, Transportation and Utilities	24,907	19,602	\$11,392	\$7,028	61.7%
Information	1,350	1,208	\$15,413	\$12,319	79.9%
Financial Activities	3,894	4,522	\$13,836	\$13,153	95.1%
Professional and Business Services	11,912	9,118	\$15,922	\$10,478	65.8%
Educational ¹ and Health Services	3,753	13,459	\$14,402	\$10,559	73.3%
Leisure and Hospitality	16,857	19,901	\$6,115	\$5,055	82.7%
Other Services	3,391	3,905	\$11,390	\$7,373	64.7%
Local Government ²	9,090	8,936	\$8,417	\$6,709	79.7%
State Government ³	2,423	3,115	\$14,321	\$10,774	75.2%

¹ Private education only

² Includes the University of Alaska

³ Includes public school systems

Source: Alaska Department of Labor and Development, Research and Analysis Section

in the 45 to 54 age group. With the exception of the Anchorage/Mat-Su region, the lowest wages were in the youngest age group.

As far as the state's boroughs and census areas, women had relatively high wages in the Anchorage Municipality (\$29,175) and Juneau Borough (\$27,951) in 2006. (See Exhibit 13.) Women made up 50 percent and 50.3 percent of the workers, respectively.

The lowest wages for women were in the Wade Hampton Census Area (\$12,668), Yakutat Borough (\$15,863) and Yukon-Koyukuk Census Area (\$16,981).

The highest ratios of women's wages to men's were in the Southwest region (81.4 percent) and Southeast region (75.9 percent). Unlike a few years before, there were no boroughs or census areas in 2006 where women's wages exceeded men's.

However, there were five boroughs and census areas where the ratios were more than 90 percent: the Bethel (98.3 percent), Nome (96.5 percent) and Dillingham (94.3 percent) census areas, Northwest Arctic Borough (92.2 percent) and Wade Hampton Census Area (91.1 percent).

15 Employers with the Most Women Alaska, 2006

Top 20 Employers with the Highest Number of Women¹

	Percentage Women
Private Sector	
Providence Health System	80.3%
Banner Health (mostly Fairbanks Memorial Hospital)	80.2%
Wells Fargo	77.7%
Southcentral Foundation ²	76.1%
Alaska USA Federal Credit Union	75.0%
Yukon-Kuskokwim Health Corporation	68.0%
Alaska Native Tribal Health Consortium ³	66.8%
Wal-Mart	59.7%
Fred Meyer	55.3%
Carrs/Safeway	52.1%
Alaska Airlines	49.1%
NANA Management Services	46.1%
Public Sector	
Matanuska-Susitna Borough School District	75.1%
Fairbanks North Star Borough School District	74.9%
Anchorage School District	72.2%
Kenai Peninsula Borough School District	70.7%
Lower Kuskokwim School District	64.6%
University of Alaska	56.3%
State of Alaska	51.2%
Anchorage, Municipality of	35.5%

¹Employment numbers, including for each gender, are not provided due to new confidentiality requirements.

²Southcentral Foundation's federal employees are excluded.

³ANTHC's federal employees are excluded

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

New hires

Women made up 45.5 percent of newly hired workers in 2006, compared to 48.1 percent for all workers. Neither percentage has changed much since 2000.

In three industry groups, women who were new hires fared better than all women in those industry groups as far as the ratios of women's wages to men's: financial activities (95.1 percent versus 76.6 percent), leisure and hospitality (82.7 percent versus 76.8 percent) and information (79.9 percent versus 69.1 percent). (See Exhibits 2 and 14.) Local government new hires, on the other hand, had a lower ratio than all women in local government (79.7 percent versus 86 percent).

New hire data are not age-specific so it is not possible to offer that breakdown. However, average ages for female new hires by industry group

were almost uniformly in the lower 30s – before the biggest pay differentials occur.

A lower ratio of women's wages to men's among new hires (58.3 percent) than overall (66.6 percent) may indicate that women and men differ in the specific industries where they work. The fact that the ratio is declining perhaps indicates an evolution in either the relative pay structures of those industries or that the industry mix that men and women choose is shifting. However, industry-specific data are not available to verify either of these possibilities.

Top employers of women and men

The private-sector employers that had the highest number of women in 2006 were Providence Health System, Carrs/Safeway, Fred Meyer, Wal-Mart and Banner Health. (See Exhibit 15.) The public-sector employers that had the most women were the State of Alaska, Anchorage School District, University of Alaska, Fairbanks North Star Borough School District and Matanuska-Susitna Borough School District.

The private-sector employers that had the highest number of men in 2006 were Carrs/Safeway, VECO, ASRC Energy Services, Fred Meyer and Wal-Mart. (See Exhibit 16.) The public-sector employers that had the most men were the State of Alaska, University of Alaska, Anchorage School District, Municipality of Anchorage and Fairbanks North Star Borough School District.

The list of top women employers shows more employers in education and health, while the list of top men employers shows more energy-sector employers.

Summary

In the 2001 to 2006 period, the gender gap decreased by 0.2 percent – the ratio of women's wages to men's shifted from 66.4 percent to 66.6 percent. The movement in the overall rate in recent years has been largely lateral; the 1998 ratio was 65.2 percent.

The ratio of women's wages to men's in the different age groups has been more nuanced,

Employers With the Most Men **16**

Alaska, 2006

Top 20 Employers with the Highest Number of Men¹

	Percentage Men
Private Sector	
ASRC Energy Services O&M	93.2%
VECO	89.7%
ASRC Energy Services Pipeline Power & Communications	86.9%
BP Exploration Alaska	84.3%
FedEx	78.6%
Spenard Builders Supply	76.0%
ConocoPhillips	75.0%
GCI Communications	57.4%
NANA Management Services	53.9%
Alaska Airlines	50.9%
Carrs/Safeway	47.9%
Fred Meyer	44.7%
Wal-Mart	40.3%
Providence Health System	19.7%
Public Sector	
Alaska Railroad	79.8%
Anchorage, Municipality of	64.5%
State of Alaska	48.8%
University of Alaska	43.7%
Anchorage School District	27.8%
Fairbanks North Star Borough School District	25.1%

¹Employment numbers, including for each gender, are not provided due to new confidentiality requirements.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

however. For child-bearing years, the ratio dropped between 1992 and 2006 – roughly 21 percentage points for the 25 to 34 age group and nine percentage points for the 35 to 44 age group. On the other hand, the mid- to later-life groups have either held steady or shown a growth (up to eight percentage points in the 65 to 74 age group).

In 2006 specifically, women earned 62.4 cents for every dollar earned by men in the private sector, and in state and local government, 80 cents. Men's wages were \$38,287 and women's were \$25,486, a \$12,800 difference. Local government showed the smallest gender gap at 14 percent, and the largest gaps were in trade, transportation and utilities (43.2 percent) and manufacturing (42.7 percent).

Regionally, women had the highest wages in the state in the Anchorage/Mat-Su region (\$27,194), followed by the Northern region (\$26,953) and the Gulf Coast region (\$24,116). In terms of the ratio between women's wages and men's, the Southwest region was the best for women (87.6 percent), followed by Southeast (77.1 percent).

Higher job education requirements always translated to higher wages for women (and men) than for those with a lower education level. While the ratio of women's wages to men's was also higher for higher education in early years, it fell below that for less educated women in late middle age. The ratio was lower in all successive age groups but one, the 65 to 74 age group, and the increase for that group was small.

New hire data show an evolution of some sort between the sexes, but whether it is related to pay structures or industry mix is unknown.

Methodology

All private sector, state and local government worker unemployment insurance wage records were aggregated to obtain total worker wage and salary earnings for 2006. The data show workers' total wages, not wage rates.

Occupation, industry and place of work data were obtained from the employer for whom the worker earned the most money in 2006. Age and gender information was obtained by matching with historical Permanent Fund Dividend applicant files. Gender information was available for a total of 333,343 workers in 2006.