

The Gender Gap in Earnings

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Gap has narrowed 5 percent over 11 years, to 67 percent in 1999

Women in Alaska continue to earn significantly less than men in all industries, age groups, geographic areas, and most occupations, but the earnings gap between the genders is slowly narrowing. In 1999, women earned 66.8% as much as men, while in 1988 that ratio was 61.7%. This is a five percent improvement over 11 years. (See Exhibit 1.)

National numbers directly comparable to Alaska data are not available. However, the US Census Bureau reports that, based on March 2000 Current Population Survey data, women age 15 and over working full time and year-round had median earnings of \$26,300, approximately 72 percent of the median earnings of men.

The difference in average annual wages between the genders in Alaska was \$10,000 in 1999. Alaska females earned on average \$20,079 versus average male earnings of \$30,066. (See Exhibit 1.) Total earnings per worker include all wage and salary earnings from part-time and full-time work.

In the private sector, the ratio of female to male earnings was 62.4%, while in state and local government it was 74.4%. The private sector employs about 72 percent of the workforce in Alaska. (See Exhibit 3.)

Many industries are dominated by one gender

In many industries, the vast majority of the workers are all one gender. Less than 13 percent of all

workers in mining (including oil and gas) and construction are female. More than 60 percent of workers in the services and finance/insurance/real estate industries are female. Health services, insurance and local education account for the largest number of female workers. (See Exhibits 2 and 4.)

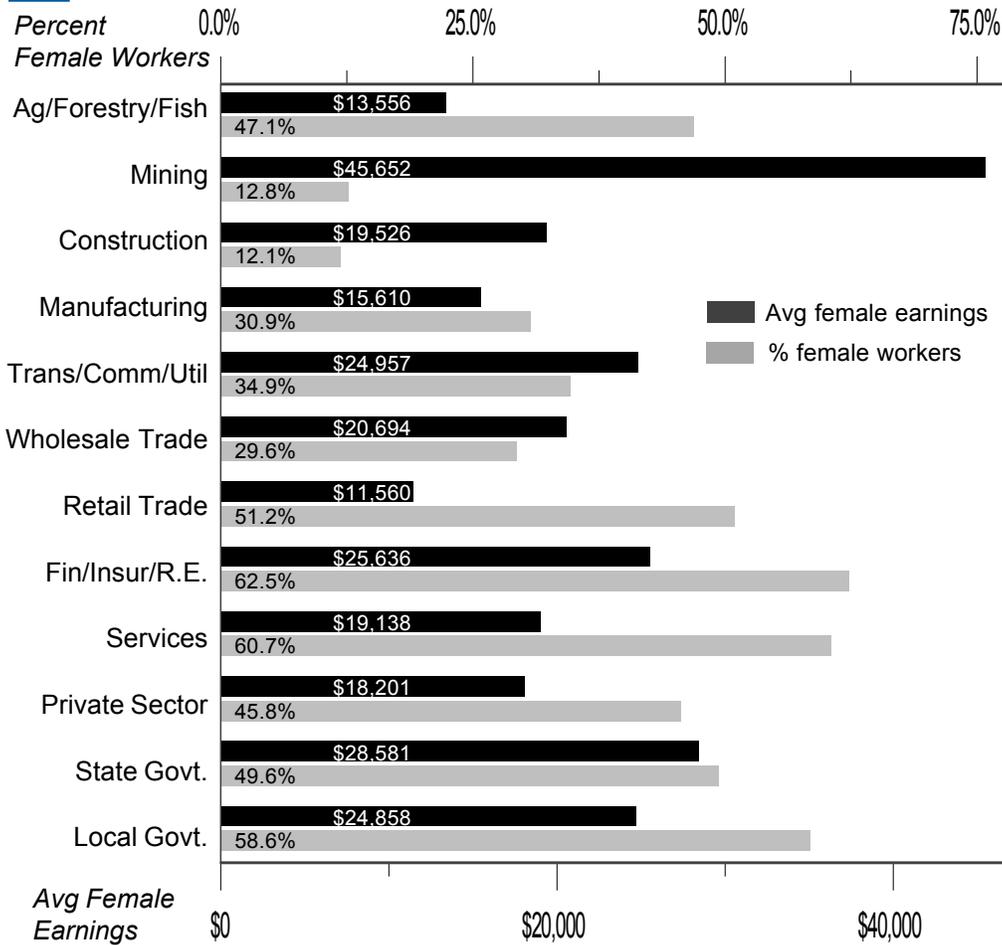
The highest average earnings were in the mining industry (including oil and gas). Men earned a little more than \$60,000 in 1999 versus \$45,652 for women. Men held 87 percent of these nearly 9,000 jobs. For men, the second highest average earnings were in transportation, which includes high-paying oil pipeline and air transportation jobs. For women, the second highest paying industry

Employment and Earnings 1 By gender, 1988-1999

		1988	1990	1995	1997	1999
Employment (Percent)	Male	53.0	52.7	53.0	52.8	52.2
	Female	47.0	47.3	46.9	47.2	47.8
Total Wages (Percent)	Male	64.6	64.5	63.3	63.2	62.1
	Female	35.4	35.5	36.7	36.8	37.9
Avg. Annual Wages	Male	\$24,232	\$27,655	\$29,261	\$29,327	\$30,066
	Female	14,962	16,934	19,182	19,059	20,079
Ratio Female to Male Avg. Wage		61.7%	61.2%	65.6%	65.0%	66.8%

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

2 Female Workers and Earnings by Industry Alaska 1999



sector was state government. Women working in local government experienced narrower earnings gaps with men. Those female workers (many working in local education as teachers) earned on average 79 percent of what men earned in local government in 1999.

Gender concentration by occupation

Certain occupations show heavy concentrations of one gender. Nationally, about 58 percent of employed women age 16 and over work in administrative support, clerical, and service jobs. In Alaska, where the occupational coding information is not directly comparable to national data, at least 50 percent of women workers in 1999 were employed in administrative support, clerical, and service jobs.

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

3 Workers and Earnings by Sex and Major Industry Alaska 1999

	Average Total Earnings	Male Workers	Male Earnings	Male Avg Annual Earnings	Male Qtrs Worked	Male Avg Qtrly Earnings
Ag/Forestry/Fishing	\$15,857	1,083	\$19,389,569	\$17,904	3,040	\$6,378
Mining	58,301	9,005	541,759,897	60,162	32,239	16,804
Construction	28,438	17,861	529,893,564	29,668	55,932	9,474
Manufacturing	23,291	8,968	239,660,237	26,724	28,390	8,442
Trans/Comm/Util	34,316	18,506	727,803,952	39,328	64,838	11,225
Wholesale Trade	28,119	7,112	222,149,993	31,236	24,260	9,157
Retail Trade	14,710	29,549	532,256,889	18,013	92,841	5,733
Finance/Insur/R.E.	28,529	5,111	170,439,096	33,348	16,609	10,262
Services	21,107	29,853	720,961,680	24,150	94,061	7,665
Total Private Sector	24,141	127,048	3,704,314,877	29,157	412,210	8,986
State Govt.	33,725	11,202	434,414,964	38,780	40,855	10,633
Local Govt.	27,611	16,520	520,470,525	31,505	55,688	9,346

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

Exhibits 8 and 9 show the occupations with the largest number of male and female workers in Alaska in 1999. The largest numbers of male workers were employed in manual occupations, and as carpenters, construction laborers, janitors/cleaners, and cannery workers. The largest numbers of female workers were working in general office occupations, and as sales clerks, secretaries, and bookkeepers.

Among the occupations with the largest number of male workers, women earned about as much or more than men when working as food and beverage preparation workers, teacher aides, tractor-trailer truck drivers, combined food preparation occupations, kitchen workers, plant operators, elementary school teachers, and freight movers. However, although female elementary school teachers earned almost as much as males, the earnings gap widened at the secondary and post-secondary level. Female post-secondary teachers earned about two-thirds as much as men in 1999.

Some male-dominated occupations have very few female workers. Occupations with 5 percent or fewer women include: heavy equipment mechanics, plumbers/pipe-fitters, automobile mechanics, welders and cutters, carpenters, electricians, material moving equipment operators, truck drivers-tractor-trailer, supervisors of mechanics and repairers, airplane pilots and navigators, and excavating/loading machine operators.

Occupations employing the largest numbers of female workers include general office occupations, sales clerks, bookkeepers and accounting and auditing clerks, secretaries, elementary school teachers, waiters and waitresses, teacher aides, and cashiers. Occupations where at least 90 percent of the workers were female in 1999 include: legal secretaries, dental assistants, hairdressers and cosmetologists, secretaries, receptionists, billing clerks, pre-kindergarten and kindergarten teachers, bank tellers, registered

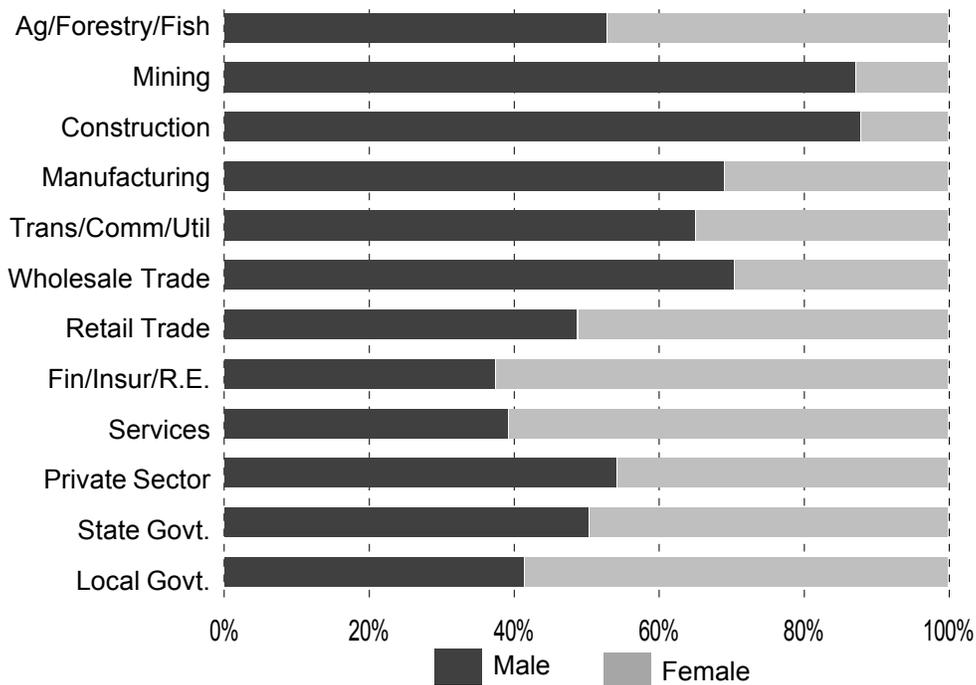
Workers and Earnings by Sex and Major Industry 3

Alaska 1999 (continued)

	Female Workers	Female Earnings	Female Avg Annual Earnings	Female Qtrs Worked	Female Avg Qtrly Earnings	Fem/Male Avg Annual Earnings %	Fem/Male Avg Qtrly Earnings %
Ag/Forestry/Fishing	963	\$13,054,749	\$13,556	3,047	\$4,284	75.7	67.2
Mining	1,325	60,488,849	45,652	4,709	12,845	75.9	76.4
Construction	2,464	48,111,258	19,526	7,660	6,281	65.8	66.3
Manufacturing	4,008	62,566,794	15,610	12,387	5,051	58.4	59.8
Trans/Comm/Util	9,910	247,320,517	24,957	34,936	7,079	63.5	63.1
Wholesale Trade	2,985	61,770,130	20,694	10,015	6,168	66.2	67.4
Retail Trade	30,975	358,067,191	11,560	94,967	3,770	64.2	65.8
Finance/Insur/R.E.	8,515	218,292,776	25,636	30,167	7,236	76.9	70.5
Services	46,160	883,429,654	19,138	151,099	5,847	79.2	76.3
Total Private Sector	107,305	1,953,101,918	18,201	348,987	5,596	62.4	62.3
State Govt.	11,006	314,560,088	28,581	40,266	7,812	73.7	73.5
Local Govt.	23,362	580,730,228	24,858	80,161	7,245	78.9	77.5

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

4 Employment by Gender and Industry Alaska 1999



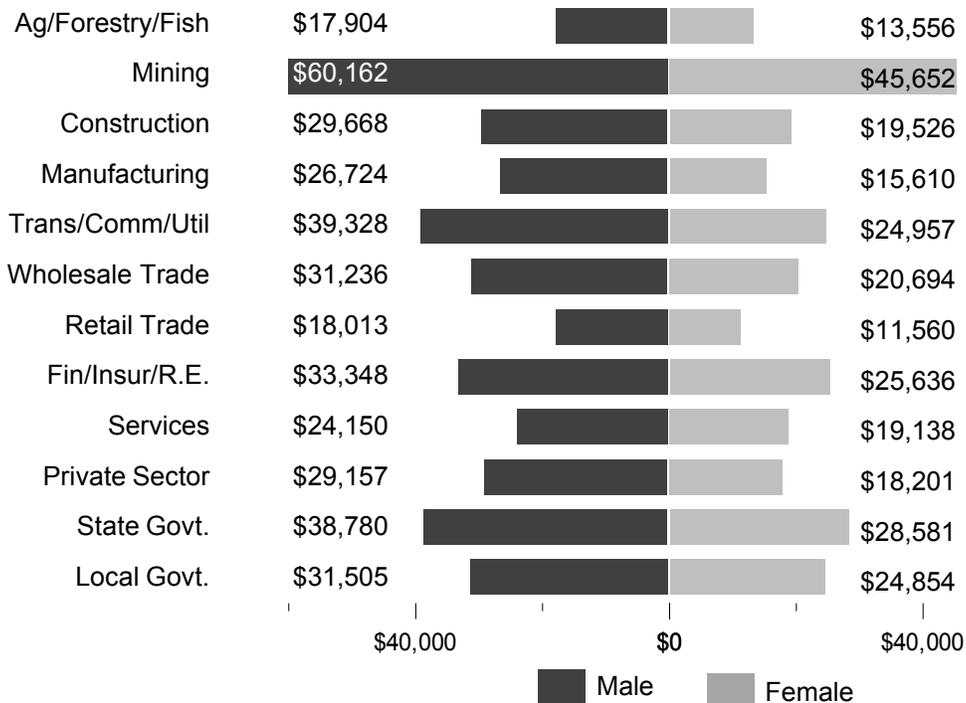
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

nurses, hairdressers, and dental assistants.

Somesituationsbetterfor women

Although there is no occupation, industry, location or category where females attain both good wages and parity with males, there are some where they fare above average. Females are about half of the state government workforce, and they bring home 73.5% as much wages as males. Some 11,000 Alaska women work in state jobs, the majority in Juneau and Anchorage, earning an average of \$28,581. In local government, women enjoy a smaller gender gap, but lower average earnings.

5 Average Annual Earnings By gender and industry—Alaska 1999



Dollarsandpercents

There are several occupations in which females earn more than their male counterparts. Striking among these are legal secretaries, who earn 192% of male earnings. These earnings, however, are less than the average earnings figure for males, and the same is true of other occupations in this group.

Since the most recent *Trends* gender gap article was published in 1999, showing 1997 data, female general managers and other top executives have crossed the 50 percent line, rising from 48.4% of male wages to 55.4%. In that report, five

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

Ratio Female to Male Earnings 6

Annual averages by industry—Alaska 1999

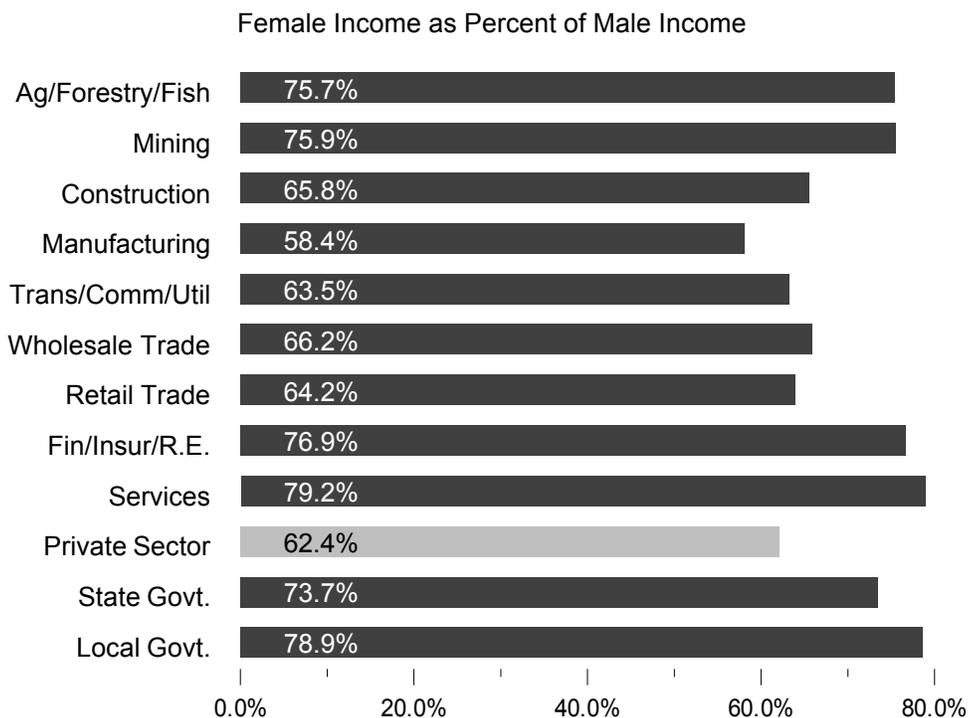
occupations showed female wages less than 50 percent of male wages; in the current report all are above 50 percent.

In the agriculture, forestry and fisheries industry, the gender income ratio improved more than ten percent, from 65.5% in 1997 to 75.7% in 1999. This is a small sector, with only 2,046 workers in 1999. (See Exhibits 3 and 6.)

Truck drivers present some interesting statistics. Some 14 percent of light truck drivers are female, and their average earnings of \$12,938 are 56 percent of what males earn. Heavy truck drivers are 5.4% female, and earn 72.3% of male earnings. The 34 women tractor-trailer drivers represent 4.2% of the workers, and they earn 111 percent of male earnings, at \$38,583.

Earnings by age group

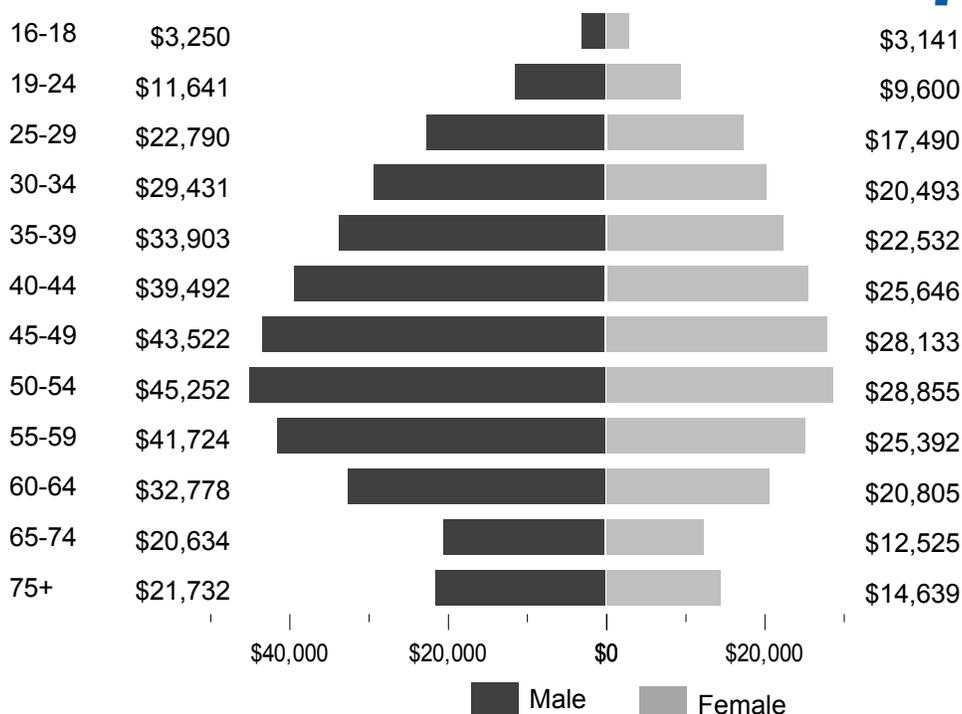
Females earned less than males in every age category in 1999. Earnings for both men and women peaked in the 50 to 54 year age group, when women workers were earning 63.8% as much as men, below the overall average. The income disparity between men and women is smaller in the younger age groups. Women age 25 to 29 earn about 77 percent as much as men while women age 30 to 34 earn about 70 percent as much as men.



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

Annual Average Earnings by Age 7

And gender—Alaska 1999



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



Top Male Occupations—Workers, Earnings, Earnings Ratio

Alaska 1999

	Male Workers	Female Workers	Percent Female	Avg Male Earnings	Avg Female Earnings	Female Earn as % of Male Earn
Manual Occupations, nec	5,902	1,156	16.4	\$12,381	\$6,817	55.1
Carpenters	4,363	131	2.9	23,608	18,679	79.1
Construction Laborers	4,129	406	9.0	16,943	13,316	78.6
Janitors & Cleaners	3,781	2,182	36.6	14,537	12,073	83.0
Cannery Workers, Incl. Seafood Processing	2,949	1,599	35.2	10,467	8,898	85.0
Sales Clerks	2,778	5,959	68.2	13,745	9,462	68.8
Freight, Stock, & Material Movers, nec	2,605	329	11.2	20,961	18,893	90.1
General Office Occupations	2,554	10,157	79.9	18,217	16,343	89.7
Stock Handlers & Baggers	2,148	752	25.9	12,928	7,327	56.7
Combined Food Prep & Service, Fast Food	1,865	1,758	48.5	4,917	5,252	106.8
Automobile Mechanics	1,846	45	2.4	30,536	17,536	57.4
Misc. Food & Beverage Preparation Occup.	1,824	1,199	39.7	8,804	10,096	114.7
Maintenance Repairers, General Utility	1,824	175	8.8	25,588	13,645	53.3
General Managers & Other Top Executives	1,798	1,003	35.8	71,746	39,721	55.4
Truck Drivers, Light	1,773	296	14.3	22,745	12,938	56.9
Electricians	1,732	53	3.0	41,496	25,465	61.4
Management Related Occup., nec	1,599	2,034	56.0	40,700	27,603	67.8
Truck Drivers, Heavy	1,576	90	5.4	31,368	22,680	72.3
Operating Engineers	1,504	83	5.2	42,176	28,733	68.1
Cashiers	1,393	3,385	70.8	13,692	11,569	84.5
Guards & Police, Except Public Service	1,392	312	18.3	21,708	16,051	73.9
Plumbers, Pipefitters & Steamfitters	1,345	22	1.6	39,466	16,047	40.7
Cooks, Restaurant	1,336	435	24.6	13,695	10,213	74.6
Mechanics & Repairers, nec	1,288	138	9.7	31,295	23,336	74.6
Airplane Pilots & Navigators	1,253	64	4.9	54,791	42,526	77.6
Sheriffs, Bailiffs, & Other Law Officers	1,251	219	14.9	43,336	34,497	79.6
Kitchen Workers, Food Preparation	1,221	1,477	54.7	11,095	10,935	98.6
Elementary School Teachers	1,193	3,714	75.7	37,788	35,810	94.8
Supervisors, Mechanic & Repairer	1,172	58	4.7	52,171	41,663	79.9
Stock & Inventory Clerks	1,143	639	35.9	24,259	16,060	66.2
Secondary School Teachers	1,101	1,530	58.2	39,848	33,725	84.6
Heavy Equipment Mechanics	1,043	14	1.3	43,537	38,141	87.6
Bus Drivers	1,032	612	37.2	15,614	13,310	85.2
Salespersons; nec	1,005	1,381	57.9	24,905	13,260	53.2
Officials & Administrators; Other, nec	967	745	43.5	56,519	41,150	72.8
Supervisor; Sales, Retail	932	843	47.5	40,583	27,011	66.6
Social Workers	902	2,089	69.8	28,942	25,221	87.1
Writers & Waitresses	867	3,596	80.6	10,858	9,040	83.3
Counter Clerks	865	1,334	60.7	13,989	9,715	69.4
Postsecondary Teachers	849	785	48.0	31,211	20,719	66.4
Civil Engineers	803	146	15.4	55,253	40,043	72.5
Truck Drivers, Tractor-Trailer	783	34	4.2	34,721	38,583	111.1
Adult Education & Other Teachers, nec	774	1,702	68.7	20,402	17,527	85.9
Teacher Aides	752	3,489	82.3	10,331	11,705	113.3
Police & Detectives, Public Service	739	117	13.7	47,384	35,264	74.4
Garage & Service Station Related Occup.	721	114	13.7	12,136	9,900	81.6
Salespersons, Motor Vehicles, Mobile Home	715	145	16.9	34,438	22,759	66.1
Supervisor, Food & Beverage Prep & Svc	715	674	48.5	28,395	20,535	72.3
Vehicle Washers & Equipment Cleaners	713	131	15.5	12,333	8,564	69.4
Misc. Plant or Systems Operators	704	47	6.3	87,821	85,391	97.2
Attendants, Amusement & Recreation Facil	701	863	55.2	7,841	6,336	80.8
Stevedores	698	69	9.0	18,038	9,721	53.9
Sailors & Deckhands	694	91	11.6	21,493	11,478	53.4
Bookkeepers & Accounting & Auditing Clerks	675	4,020	85.6	27,999	22,900	81.8
Welders & Cutters	668	20	2.9	35,758	24,418	68.3
Engineers, nec	666	107	13.8	67,026	51,757	77.2
Traffic, Shipping, & Receiving Clerks	663	351	34.6	19,139	16,902	88.3
Painters (Construction & Maintenance)	642	53	7.6	20,360	10,519	51.7
Excavating & Loading Machine Operators	640	34	5.0	34,640	20,726	59.8
Misc. Material Moving Equipment Operators	633	25	3.8	46,674	25,253	54.1
Manager, Administrative Services	617	1,242	66.8	55,323	33,963	61.4
Accountants & Auditors	609	997	62.1	47,648	39,277	82.4

nec: not elsewhere classified

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

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Top Female Occupations—Workers, Earnings, Earnings Ratio

Alaska 1999

	Male Workers	Female Workers	Percent Female	Average Male Earnings	Average Female Earnings	Female Earn as % of Male Earn
General Office Occup.	2,554	10,157	79.9	\$18,217	\$16,343	89.7
Sales Clerks	2,778	5,959	68.2	13,745	9,462	68.8
Bookkeepers & Accounting & Auditing Clerks	675	4,020	85.6	27,999	22,900	81.8
Secretaries	278	3,850	93.3	21,272	23,791	111.8
Elementary School Teachers	1,193	3,714	75.7	37,788	35,810	94.8
Waiters & Waitresses	867	3,596	80.6	10,858	9,040	83.3
Teacher Aides	752	3,489	82.3	10,331	11,705	113.3
Cashiers	1,393	3,385	70.8	13,692	11,569	84.5
Registered Nurses	265	2,933	91.7	43,012	37,504	87.2
Receptionists	221	2,897	92.9	19,053	15,525	81.5
Maids & Housemen	556	2,220	80.0	11,800	9,482	80.4
Janitors & Cleaners	3,781	2,182	36.6	14,537	12,073	83.0
Social Workers	902	2,089	69.8	28,942	25,221	87.1
Management Related Occup., nec	1,599	2,034	56.0	40,700	27,603	67.8
Child Care Workers, exc. Private Household	323	1,814	84.9	11,335	8,596	75.8
Admin. Support Occup, incl. Clerical	503	1,795	78.1	20,280	20,654	101.8
Nursing Aides, Orderlies, & Attendants	383	1,770	82.2	21,777	17,659	81.1
Combined Food Prep & Service, Fast Food	1,865	1,758	48.5	4,917	5,252	106.8
Adult Education & Other Teachers, nec	774	1,702	68.7	20,402	17,527	85.9
Cannery Workers, incl. Seafood Process	2,949	1,599	35.2	10,467	8,898	85.0
Administrative Assistants & Officers	305	1,540	83.5	44,469	25,617	57.6
Secondary School Teachers	1,101	1,530	58.2	39,848	33,725	84.6
Kitchen Workers, Food Prep.	1,221	1,477	54.7	11,095	10,935	98.6
Food Counter, Fountain & Related Occup.	557	1,422	71.9	7,168	6,440	89.8
Salespersons; nec	1,005	1,381	57.9	24,905	13,260	53.2
Counter Clerks	865	1,334	60.7	13,989	9,715	69.4
Reservation Agents & Ticket Clerks	376	1,245	76.8	19,475	18,267	93.8
Manager, Administrative Services	617	1,242	66.8	55,323	33,963	61.4
Teachers, exc. Postsecondary	373	1,226	76.7	22,061	15,559	70.5
Misc. Food & Beverage Prep. Occup.	1,824	1,199	39.7	8,804	10,096	114.7
Bartenders	523	1,194	69.5	12,767	11,123	87.1
Manual Occup., nec	5,902	1,156	16.4	12,381	6,817	55.1
Bank Tellers	99	1,124	91.9	15,801	15,768	99.8
Health Aides, Except Nursing	162	1,087	87.0	23,059	22,864	99.2
General Managers & Other Top Executives	1,798	1,003	35.8	71,746	39,721	55.4
Accountants & Auditors	609	997	62.1	47,648	39,277	82.4
Attendants, Amusement & Recreation Facil	701	863	55.2	7,841	6,336	80.8
Supervisor; Sales, Retail	932	843	47.5	40,583	27,011	66.6
Postsecondary Teachers	849	785	48.0	31,211	20,719	66.4
Cooks, Institution & Cafeteria	450	779	63.4	25,909	15,093	58.3
Information Clerks, nec	231	768	76.9	26,316	22,342	84.9
Stock Handlers & Baggers	2,148	752	25.9	12,928	7,327	56.7
Officials & Administrators; Other, nec	967	745	43.5	56,519	41,150	72.8
Teachers; Special Education	203	744	78.6	45,190	43,359	95.9
Personal Service Occup., nec	336	725	68.3	16,306	14,069	86.3
Billing Clerks	56	697	92.6	26,953	24,232	89.9
Purchasing Agents & Buyers, nec	526	680	56.4	41,383	25,499	61.6
Supervisors, Food & Beverage Prep & Svc.	715	674	48.5	28,395	20,535	72.3
Dental Assistants	42	671	94.1	21,447	20,031	93.4
Stock & Inventory Clerks	1,143	639	35.9	24,259	16,060	66.2
Record Clerks, Nec	125	620	83.2	22,549	17,719	78.6
Hairdressers & Cosmetologists	44	620	93.4	14,057	13,974	99.4
Hotel Clerks	233	617	72.6	11,889	10,568	88.9
Bus Drivers	1,032	612	37.2	15,614	13,310	85.2
Supervisors, General Office Occup.	181	577	76.1	40,349	30,427	75.4
Welfare Service Aides	267	572	68.2	4,987	8,113	162.7
Health Technologists & Technicians, nec	287	556	66.0	31,651	24,696	78.0
Order Clerks	215	545	71.7	32,065	30,945	96.5
Recreation Workers	326	532	62.0	10,682	9,147	85.6
Pre-kindergarten & Kindergarten Teachers	44	523	92.2	23,808	22,882	96.1
Short-Order Cooks	607	481	44.2	6,143	5,164	84.1
Personnel, Training, & Labor Relations	275	471	63.1	45,053	36,827	81.7
Technicians, nec	501	469	48.4	39,794	30,054	75.5
Secretaries, Legal	9	452	98.0	14,615	28,091	192.2

nec: not elsewhere
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What are the underlying causes of income disparity between genders?

An analysis of causes of the gender gap is outside the scope of this article. However, a number of factors may influence these differences. Since experience and tenure on the job command a premium in pay, women workers who leave the workforce, or work part time in order to care for children and families, are at a disadvantage. Differences between men and women in the number of hours worked per week and weeks worked per year also affect earnings. Women, especially those who are single heads of families, are often unable to work the long hours that bring higher pay. These are factors associated with the worker or the worker's immediate environment.

Educational differences may play a role in upper echelon jobs. The US Census Bureau reports that an equal percentage of women and men in the US have high school diplomas. In the 25 to 29 age group, women are more likely to have at least bachelor's degrees (30 percent) than men (28 percent). Men possess doctoral degrees to a much greater extent than women. This could be a factor in their possession of the highest paying management and professional jobs.

Another type of factor is discrimination. Discrimination or other barriers may exist in hiring, training, advancement or pay rates.

Summary

From 1988 to 1999, females have made a modest increase in their rate of participation in the Alaska workforce, from 47.0% to 47.8%. Men's average annual earnings have remained about \$10,000 more than women's since 1988. The gender gap, or ratio of female to male earnings, has narrowed by 5% from 61.7% to 66.8%.

From 1990 to 1999, the difference between the gender gap in private industry and that in state and local government has narrowed from 15 percent to 12 percent.

Much of the gender gap is related to the different employment patterns of males and females, and the wide range of wage rates among occupational groups and industries. Little change is evident in these patterns of employment over recent years. Little change is evident in male domination in the highest paying industries and occupational groups.

Methodology

All private sector, state and local government worker unemployment insurance wage records were aggregated to obtain total worker wage and salary earnings for 1999. Worker occupation, industry and place of work data were obtained from the employer for whom they earned the most money in 1999. A total of 296,443 wage records had complete age and gender information obtained from a match with historical Permanent Fund Dividend applicant files from 1994 through 1999 and with current Alaska voter registration files.