

Usual weekly earnings: another look at intergroup differences and basic trends

Recent years of inflation and recession held real earnings of wage and salary workers below 1973 levels; the pay gap between black and white full-time employees narrowed after 1967, but the wide earnings disparity by sex remains

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Interest in earnings differences among various population groups—men and women, blacks and whites, young and old—has grown over the years since data on usual weekly earnings were first published in the *Review* a decade ago. Because of this, the Bureau of Labor Statistics has expanded the collection and publication of the demographically oriented data on weekly and hourly earnings from the Current Population Survey (CPS). Previously collected only in May of each year, these data are now obtained monthly from one-fourth of the CPS sample and are published on a quarterly basis.¹

Aggregation of the new data into annual averages yields the most reliable measures of the earnings differences among the various population groups. At the same time, the quarterly data, although subject to lower statistical reliability,² give at least a broad indication of how the earnings of the various demographic groups are affected by cyclical (or short-term) changes in economic conditions. This article focuses first on the annual average data for 1981 to re-examine the intergroup differences in earnings among both full- and part-time workers and then looks at some of the quarterly data to see how the earnings of the various groups have been

changing over time. Other articles in this issue, by Nancy F. Rytina and Sylvia Lazos Terry, deal more specifically with the relationship of pay to race, sex, occupational tenure, and work experience.

Major differences among full-time workers

Of all persons employed as wage and salary workers in 1981, about 72 million usually worked full time—that is, 35 or more hours a week—and 16 million usually worked part time. On an annual average basis, the median weekly earnings for full-time workers were \$289, but this average masked very wide differences among the various population groups.

Disparities in earnings among groups are largely a reflection of differences in the amount, type, and location of work performed. If the number of hours worked by each group were the same, and if each group were equally distributed among the various occupations, industries, and geographic areas, the inter-group differences in earnings would probably not be very large. But, in reality, there are differences among the various population groups in terms of hours worked—even within the full-time universe—and in terms of the specific occupations and industries in which the work is performed. And, in the case of the principal racial and ethnic groups, there are also wide differences in terms of geographic concentration, which are known to have a

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further effect on earnings. Other factors, such as differences in age, education, job tenure, and the subtle and not so subtle effects of discrimination may also have some impact on a group's earnings, but it is not the purpose of this article to identify all such factors, and even less to attempt to quantify their effects. Nevertheless, the most obvious are cited when comparing widely different levels of earnings.

Men and women. For men working full time, median weekly earnings in 1981 were \$347. For women, the median was \$224, or 65 percent of that for men. Without searching for all the factors which produce this ratio—a most difficult task even when carried out through a complex econometric model—it can be pointed out that men worked more hours than women even within the full-time universe³ and, more importantly, were generally more concentrated within high-pay occupations in such fields as management and administration, professional and technical work, and the various crafts. Women, on the other hand, tend to be more concentrated in such lower-paying fields as clerical and service jobs.

Male-female gaps in earnings prevail even within each

occupation, but they are generally smaller than at aggregate levels. To take an extreme example, the median weekly earnings for women in sales were only 52 percent of those for men in the same field (table 1). However, a further look at this broad occupational group shows women to be largely concentrated in retail sales, where median weekly earnings for all full-time workers were only \$197. By contrast, men were more heavily grouped in "other sales," where the overall weekly median was \$382. Within each of these two fields, sex earnings ratios were significantly higher than the 52 percent average for all salesworkers. Specifically, the ratio was 61 percent in retail sales and 66 percent for "other" sales work. Needless to say, this was still far below parity, and one would have to dig much deeper for the causes of the remaining gap. Unfortunately, it has not been possible to explain all of the male-female disparity in earnings even when more detailed data on the work roles of men and women are available.⁴

Among some of the personal characteristics which are difficult to quantify but which may have a significant effect on the male-female earnings ratio is the discontinuous work experience of many women. Although this practice has changed considerably in recent years, it

Table 1. Median weekly earnings of full-time wage and salary workers, by selected demographic characteristics, annual averages, 1981

Age, major occupational group, and years of school completed	All races			White			Black			Hispanic		
	Both sexes	Men	Women	Both sexes	Men	Women	Both sexes	Men	Women	Both sexes	Men	Women
Age												
Total, 16 years and over	\$289	\$347	\$224	\$296	\$356	\$226	\$238	\$271	\$210	\$229	\$252	\$192
16 to 24 years	204	225	184	206	227	185	185	196	174	187	197	172
16 to 19 years	163	173	150	164	174	151	148	150	145	—	—	—
20 to 24 years	219	241	193	222	244	195	192	207	179	—	—	—
25 years and over	316	378	237	325	389	239	251	290	220	246	282	201
25 to 34 years	302	346	242	310	354	245	248	280	223	—	—	—
35 to 44 years	335	406	241	345	416	243	267	311	227	—	—	—
45 to 54 years	329	408	231	340	417	234	248	295	213	—	—	—
55 to 64 years	317	386	227	326	396	231	243	281	198	—	—	—
65 years and over	227	270	190	228	275	189	216	233	(¹)	—	—	—
Occupation												
Total, 16 years and over	289	347	224	296	356	226	238	271	210	229	252	192
Professional and technical workers	377	439	316	381	443	315	324	352	308	336	386	285
Managers and administrators, except farm	407	466	283	410	471	282	347	391	303	347	381	271
Salesworkers	306	366	190	311	372	191	221	249	182	240	286	(¹)
Clerical workers	233	328	220	233	335	219	230	286	220	226	280	214
Craft and kindred workers	352	360	239	356	364	239	309	314	239	296	304	(¹)
Operatives, except transport	242	298	187	246	304	189	222	267	179	199	231	169
Transport equipment operatives	303	307	237	314	319	237	257	258	(¹)	261	261	(¹)
Nonfarm laborers	238	244	193	241	247	193	217	220	(¹)	222	225	(¹)
Service workers	192	238	165	195	245	165	182	214	166	173	190	147
Farmworkers	179	183	148	181	185	148	147	154	(¹)	185	191	(¹)
Years of school completed												
Total, 25 years and over	316	378	237	325	389	239	251	290	220	246	282	201
Less than 4 years of high school	242	290	180	249	301	182	211	241	172	210	232	167
8 years of school or less	227	259	169	232	268	171	203	225	160	199	221	158
1 to 3 years of high school	256	314	187	268	326	190	217	257	177	235	266	185
4 years of high school or more	333	402	249	341	409	251	273	317	237	293	349	234
4 years of high school	291	363	222	298	372	224	243	294	209	264	319	211
1 to 3 years of college	334	398	259	342	405	261	283	325	246	316	370	258
4 years of college or more	417	482	325	422	490	326	350	396	326	371	414	308
4 years of college	393	459	299	402	471	301	321	354	296	340	384	285
5 years of college or more	443	507	362	445	510	359	416	449	384	421	446	(¹)

¹ Median not shown where base is less than 50,000.

NOTE: Dashes indicate data not available.

used to be customary for women to leave the job market for many years in order to bear and rear their children. This affected not only their accumulation of seniority, but also the advancement of their skills.⁵

An age-earnings profile of CPS data clearly shows that, for one or a number of reasons, the average weekly earnings of women reach a peak at a younger age than do the earnings of men. As shown in chart 1, median weekly earnings of women show no further rise after reaching a peak of about \$240 at ages 25 to 34. For men, however, the peak value of about \$410 reported for the 35-to-44 and the 45-to-54 age groups was considerably higher than the median for the 25-to-34 age group.

One question raised by the chart is whether the relatively narrow earnings gap which now exists between younger men and women will widen as these workers age, or whether the disparity exhibited by older workers merely reflects wage and employment patterns by sex that are gradually being eroded. Only time can answer this question, but it should be noted that, over the past 14 years, the overall sex-earnings ratio has not changed much. It was 62 percent in May 1967 and had risen only to 64 percent by the second quarter of 1981.

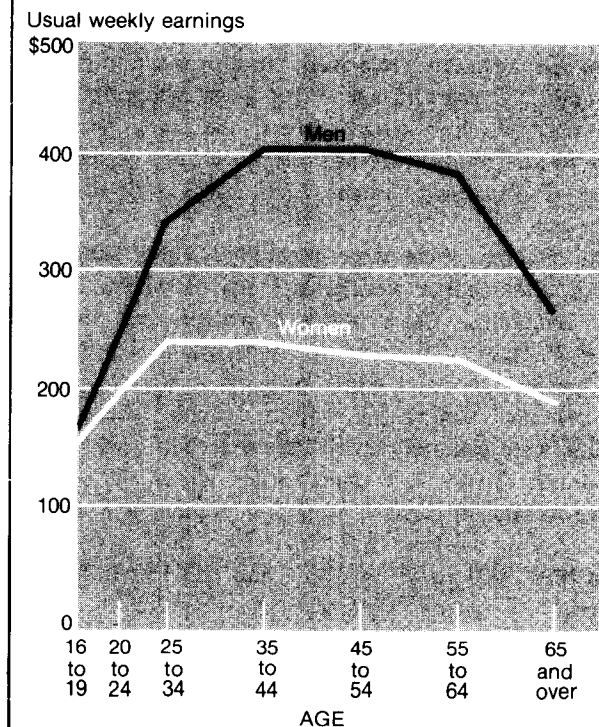
Blacks and Hispanics. The earnings differences among whites, blacks, and Hispanics are shown in table 1 in terms of age, sex, occupation, and education. The tabulation below summarizes the usual weekly earnings of full-time workers by racial and ethnic origin and major age-sex groups based on annual averages for 1981.

	<u>White</u>		<u>Black</u>		<u>Hispanic</u>	
	<u>Level</u>	<u>Level</u>	<u>Percent</u>	<u>Level</u>	<u>Percent</u>	<u>Level</u>
			<u>of white</u>		<u>of white</u>	
			<u>earnings</u>		<u>earnings</u>	
Total	\$296	\$238	80	\$229	77	
Men:						
16 to 24 years old	227	196	86	197	87	
25 years and over	389	290	75	282	72	
Women:						
16 to 24 years old	185	174	94	172	93	
25 years and over	239	220	92	201	84	

As shown above, the overall median weekly earnings of blacks were 80 percent of the overall median for whites, and the median for Hispanics was 77 percent of that for whites. The greatest racial and ethnic differences in earnings, both in absolute and relative terms, were among men 25 years and over. Within this group, the medians for blacks and Hispanics were about 75 percent of that for whites. Among women, the racial-ethnic differences were much smaller.

But even among men, the racial-ethnic differences in earnings were significantly smaller when examined by occupation. Whereas the overall black-to-white ratio for

Chart 1. Earnings profile of full-time wage and salary workers, by sex and age, 1981



men was 76 percent, the ratios for most of the occupational groups exceeded 80 percent for men and were much higher for women. (See table 1.) The reason the overall ratios are so much lower, particularly for men, is because of the relatively high concentration of blacks in low-skill, low-pay occupations, which could, in turn, reflect differences in education or training, or the lingering effects of discrimination. That the racial-ethnic earnings gaps are very small among young workers, both male and female, probably reflects the fact that there is, as yet, little difference among these groups in terms of educational attainment, skills, and general experience on the job.

Regional differences in earnings, coupled with the unequal geographical distribution of the various racial-ethnic groups, also contribute to the earnings variation among these groups. In the South, which employs more than half of all black men with jobs, but less than a third of all white men, workers of each race earned less than their counterparts in the other regions.⁶ And, at \$237 per week, the earnings of black men in the South were 71 percent of those for white men (\$332), a ratio lower than in any other region.

Hispanic men as a group earned \$252 per week, about 93 percent as much as black men and 71 percent

as much as white men. A comparison of the earnings of Hispanic men with the earnings of all white men shows a pattern similar to that for blacks—that is, more favorable earnings ratios within individual occupational groups than overall.

The lower earnings figure for Hispanic men also reflects the fact that a relatively large proportion of them are under 25 years of age. Within age categories, black and Hispanic men earned about the same per week. Men in the major Hispanic ethnic groups—Mexicans, Puerto Ricans, and Cubans—had roughly similar earnings.

For women, there were generally smaller differences among the median weekly earnings of whites, blacks, and Hispanics. Black teenage women had earnings equal to those of their white counterparts. In the older age groups the black-white earnings ratios were about 90 percent. Differences within specific occupational groups were generally small between white and Hispanic women. Hispanic women earned about the same as white women in clerical jobs and as managers and administrators working full time. But they earned less than their white counterparts—and still less than black women—in factory operative and service jobs.⁷

Education. Earnings are closely related to education, as better educated workers generally have access to higher-paying jobs. For full-time workers over age 24 (most of whom had completed their education), median usual earnings in 1981 ranged from \$242 for those with less than 4 years of high school to \$443 for those with 5 years of college or more. (See table 1.)

Among the highly educated workers, earnings of women and minority men compared more favorably

with those of white men than among the less educated. On the average, women with 4 years of college earned 65 percent as much as men with the same attainment, and those with 5 or more years of college earned 71 percent as much as men at the same level of education. On the other hand, among workers with only a high school education, the median weekly earnings of women were only 61 percent of those of men. Working women with any college education are, on the average, younger than men with the same educational attainment, and so have less work experience in their chosen vocation. This may explain, in part, apparent earnings disparities by educational attainment.

Earnings of black men generally hovered around 80 percent those of white men with the same level of education, but blacks with 5 or more years of college earned about 90 percent as much. Relatively fewer black men fit this category, however; 5 percent had 5 or more years of college compared to 12 percent of white men. Several researchers have found that, after standardizing for work experience, returns to education for black men equal or exceed those of white men.⁸ At higher levels of educational attainment, black men are, on the average, younger than white men with similar education.

As can be seen in table 1, younger black men had a more favorable earnings ratio relative to white men their age than did older black men. This is at least partly because, relative to the white counterparts of each group, younger blacks have received more and better quality schooling than did older blacks. It remains to be seen whether young blacks can carry with them this improvement in relative earning power throughout their lives.⁹

Table 2. Percent distribution of full-time wage and salary workers, by usual weekly earnings for major industry groups, annual averages, 1981

Industry group	Number of workers (in thousands)	Percent distribution by weekly earnings									Median
		Total	Under \$150	\$150 to \$199	\$200 to \$249	\$250 to \$299	\$300 to \$349	\$350 to \$399	\$400 to \$499	\$500 or more	
Total	72,491	100.0	9.8	14.5	15.9	12.3	11.2	8.3	13.3	14.7	\$289
Private sector	59,112	100.0	10.6	15.4	16.2	11.8	10.7	7.9	12.8	14.6	282
Goods-producing industries	25,813	100.0	7.1	12.9	15.6	11.9	11.4	9.1	15.6	16.4	310
Agriculture	1,050	100.0	29.1	26.3	19.9	9.5	5.2	3.8	3.2	3.0	189
Mining	1,055	100.0	1.3	3.7	7.5	8.8	10.9	10.6	24.5	32.7	423
Construction	3,658	100.0	4.0	9.4	15.9	10.8	11.6	8.7	17.4	22.3	342
Manufacturing	20,050	100.0	6.8	13.4	15.7	12.4	11.8	9.3	15.4	15.2	306
Durable goods	12,300	100.0	4.3	10.6	15.2	12.8	12.2	10.2	17.7	17.1	329
Nondurable goods	7,750	100.0	10.9	17.8	16.6	11.8	11.0	7.9	11.7	12.3	269
Service-producing industries	33,299	100.0	13.3	17.4	16.6	11.8	10.2	7.0	10.7	13.1	261
Transportation and public utilities	5,033	100.0	2.5	6.8	11.3	10.2	12.3	10.8	22.9	23.1	381
Trade	11,593	100.0	17.7	20.0	16.7	11.2	9.6	6.2	8.6	10.0	236
Finance, insurance, and real estate	4,645	100.0	7.8	19.8	19.4	13.3	9.6	6.2	8.0	16.0	261
Private households	369	100.0	70.7	14.6	10.0	2.4	1.1	0.2	0.8	0.5	114
Miscellaneous services	11,660	100.0	13.9	18.4	17.8	12.8	10.5	6.5	8.9	11.2	249
Public sector	13,379	100.0	6.1	10.6	15.0	14.6	12.9	10.1	15.2	15.3	313
Federal	2,929	100.0	2.7	6.2	10.9	12.1	11.4	12.2	22.2	22.4	377
State	3,162	100.0	6.5	12.1	16.3	15.4	12.9	9.0	12.6	15.3	298
Local	7,162	100.0	7.3	11.8	16.2	15.3	13.6	9.7	13.6	12.5	297

NOTE: Small values in the percent distributions are subject to relatively large sampling errors and should be interpreted with caution. Specifically, values of less than 1 percent are subject to relative errors of 25 percent or more.

Occupation and industry. Workers in managerial or administrative jobs had the highest median weekly earnings (\$407) among the major occupational groups. Professional and technical workers were the second highest-paid group. These two groups included all but one of the eight specific occupations with median weekly earnings of \$500 or more in 1981: lawyers, sales managers other than retail trade, engineers, economists, stock and bond sales agents, airplane pilots, computer systems analysts, and physicians.¹⁰ The same two groups included most of the specific occupations with medians between \$450 and \$499: school administrators, operations and systems researchers and analysts, chemists, and pharmacists. (There also was one blue-collar occupation—structural metal workers.)

Lowest median earnings among the major occupational groups were reported for farmworkers, \$179, and service workers, \$192. The services field included all of the specific occupations with median weekly earnings below \$150.

It is generally recognized that the most precise data on earnings patterns by industry are those collected not through a household survey such as the CPS, but through a survey of establishments such as the “790” survey conducted monthly by the BLS.¹¹ Nevertheless, data from the CPS are still a valuable complement to the establishment-based earnings data, as the latter cannot generally be crosstabulated with any of the characteristics of the earners, such as sex and full- or part-time status. The CPS data can be disaggregated by these characteristics and, at least until 1980, could also be crosstabulated with union membership.¹²

In 1981, full-time workers in the private sector had median weekly earnings of \$282, with respective medians of \$310 in goods-producing industries and \$261 in the service sector. (See table 2.) In the public sector, full-time workers had median weekly earnings of \$313, with Federal employees reporting higher average earnings than employees of State or local governments.

From an all-inclusive list of 46 industry groups in the private sector, the six with the highest reported earnings for full-time workers—medians of \$400 or more—included four in manufacturing (petroleum and coal products, motor vehicle and equipment manufacture, aircraft and parts manufacture, and ordnance), mining, and one in the service-producing sector (railroad transportation). These industries typically have higher than average proportions of professional and technical workers, managers and administrators, and craftworkers. They also have above-average proportions of workers who are covered by union agreements and below-average proportions of women employees. This is clearly illustrated in the following tabulation which, in addition to the median weekly earnings for full-time workers in the six highest- and lowest-paying industries, also shows the

percentage of wage and salary workers who were represented by a union as of May 1980 and the percentage who are women.

	<i>Median weekly earnings</i>	<i>Percent represented by a union</i>	<i>Percent who are women</i>
All full-time workers.	\$289	29	39
Highest-paying industries:			
Petroleum and coal products	433	36	20
Mining	423	36	15
Railroad transportation	422	82	7
Aircraft and parts manufacture	414	50	23
Ordnance	410	37	22
Motor vehicle and equipment manufacture . . .	407	63	15
Lowest-paying industries:			
Private households	114	1	90
Apparel manufacture	170	27	79
Eating and drinking places	174	8	55
Leather and leather products	185	24	61
Personal services	188	18	59
Agriculture	189	4	16

Low earners and high earners. Medians are probably the most useful measure of earnings one can use for intergroup comparison. However, information on the distribution of earnings within groups—that is, the proportion of workers at given levels of earnings—show more fully the extent of differences in earnings. For example, while the median earnings of two groups of workers might be about the same, one group could have a larger proportion of very low earners than the other.

From the distribution of earnings in table 3, we see that about 7 million full-time wage and salary workers, or 10 percent of the total, were reported as earning under \$150 a week in 1981. About 600,000 of them were earning under \$100 a week, or considerably less than they could earn if they received the minimum wage (\$3.35 per hour at the time) and worked a 40-hour week.

Earnings below \$150 a week were most common among youth, women, and minority employees. The extent to which these groups were overrepresented among low earners in 1981 can be seen by comparing their share of the full-time work force with their share of the low-earning universe:

	<i>Percent of full-time workers</i>	<i>Percent earning under \$150</i>
Workers 16 to 24 years	19	41
Women	39	66
Blacks	10	17
Hispanics	5	10

Some occupations and industries have a substantially higher share of low earners than others. About 40 percent of service workers and 34 percent of farmworkers, compared to about 3 percent of professional and technical workers, managers and administrators, and craftworkers were reported as earning under \$150 for full-time work in 1981.

Among the major industry groups, private households, agriculture, and trade had the highest proportion of workers reporting less than \$150 for full-time work. Mining, transportation and public utilities, and the Federal Government had the lowest proportions in this low-earning bracket.

At the upper end of the earnings spectrum, 11 million full-time employees reported weekly earnings of \$500 or more per week. They constituted about 15 percent of all full-time workers. An overwhelming majority of the high earners (86 percent) were white males age 25 and over, most of them married. Men with 4 or more years of college—13 percent of all full-time employees—made up 41 percent of the workers with \$500

or more in weekly earnings, while women with the same level of education were underrepresented among these high earners. Three occupational groups—professional and technical, managerial and administrative, and craft—accounted for 76 percent of the high earners, but only 43 percent of all full-time workers.

Part-time workers

For the 16 million persons who were reported as usually working part time, median weekly earnings were \$82 in 1981. This was equivalent to 28 percent of the median for full-time workers, for workweeks that were almost half as long.¹³

In addition to the shorter workweek, the occupational distribution and demographic composition of part-time workers figured in their lower earnings. For example, part-time workers include a higher proportion of women and of persons outside the prime earning ages (25 to 54 years). The following tabulation shows the percentages of the part-time and full-time work forces accounted for by various demographic groups in 1981.

Table 3. Percent distribution of full-time wage and salary workers, by usual weekly earnings and selected demographic characteristics, annual averages, 1981

Characteristic	Number of workers (in thousands)	Percent distribution by weekly earnings									Median
		Total	Under \$150	\$150 to \$199	\$200 to \$249	\$250 to \$299	\$300 to \$349	\$350 to \$399	\$400 to \$499	\$500 or more	
Sex and age											
Total, 16 years and over	72,491	100.0	9.8	14.5	15.9	12.3	11.2	8.3	13.3	14.7	\$289
16 to 24 years	13,702	100.0	21.2	26.6	21.2	11.9	7.6	4.4	4.7	2.4	204
25 years and over	58,789	100.0	7.1	11.7	14.7	12.5	12.0	9.2	15.2	17.6	316
Men, 16 years and over	43,888	100.0	5.4	9.0	12.7	11.3	12.1	10.0	17.8	21.7	347
16 to 24 years	7,672	100.0	10.4	22.3	21.7	13.1	9.6	6.0	7.1	3.7	225
25 years and over	36,216	100.0	3.1	6.2	10.7	10.9	12.6	10.9	20.0	25.5	378
Women, 16 years and over	28,603	100.0	16.4	23.0	21.0	14.0	9.7	5.6	6.3	4.1	224
16 to 24 years	6,030	100.0	27.4	32.0	20.5	10.2	5.1	2.3	1.7	0.8	184
25 years and over	22,573	100.0	13.4	20.5	21.1	15.0	10.9	6.5	7.6	4.9	237
Race, Hispanic origin, and sex											
White	63,241	100.0	9.0	14.0	15.6	12.2	11.3	8.5	13.7	15.8	296
Men	38,874	100.0	4.8	8.4	12.1	11.0	12.1	10.2	18.2	23.1	356
Women	24,367	100.0	15.6	22.8	21.1	14.2	10.0	5.8	6.4	4.1	226
Black	7,499	100.0	16.0	19.3	18.9	13.0	10.2	6.8	9.7	6.1	238
Men	4,023	100.0	11.2	15.1	17.9	13.4	12.1	8.5	13.5	8.4	271
Women	3,477	100.0	21.6	24.1	20.2	12.6	8.0	4.8	5.3	3.4	210
Hispanic	4,284	100.0	16.9	21.2	19.7	12.0	8.7	6.3	8.8	6.4	229
Men	2,759	100.0	11.8	17.7	19.7	12.5	10.1	7.6	11.5	9.0	252
Women	1,525	100.0	26.1	27.5	19.7	11.3	6.0	3.9	4.0	1.5	192
Occupation											
Professional and technical workers	12,870	100.0	2.5	4.7	9.6	13.0	14.1	10.9	18.4	26.8	377
Managers and administrators, except farm	7,864	100.0	2.8	5.9	9.2	10.5	11.0	9.1	15.2	36.4	407
Salesworkers	3,601	100.0	13.1	13.4	12.1	9.9	11.3	6.8	11.3	22.2	306
Clerical workers	14,066	100.0	10.2	23.6	24.2	14.8	9.8	6.2	7.4	3.7	233
Craft and kindred workers	10,558	100.0	2.9	7.3	13.4	12.1	13.5	11.4	22.0	17.3	352
Operatives, except transport	9,440	100.0	13.6	20.5	18.6	12.5	10.3	7.8	11.8	4.8	242
Transport equipment operatives	2,792	100.0	5.5	12.3	17.6	13.7	12.6	9.5	15.8	13.0	303
Nonfarm laborers	3,227	100.0	15.2	19.7	19.3	12.1	10.3	8.2	10.7	4.6	238
Service workers	7,305	100.0	29.3	24.1	18.2	9.8	6.8	3.9	4.8	3.2	192
Farmworkers	766	100.0	33.6	27.7	19.6	8.1	4.2	3.2	1.6	2.1	179

NOTE: Small values in the percent distributions are subject to relatively large sampling errors and should be interpreted with caution. Specifically, values of less than 1 percent are subject to relative errors of 25 percent or more.

	<i>Part time</i>	<i>Full time</i>
Women	69	39
Persons under 25 years	43	19
Persons 55 years and older	15	12
White	89	87
Black	9	10
Hispanic	4	5

The unique industry composition of the part-time work force also contributed to its lower earnings. Almost nine-tenths of all part-time employment, compared with about two-thirds of full-time employment, is in the service-producing sector, where pay scales are relatively low.

Women as a group earned slightly more per week than men for part-time work in 1981 (\$84 versus \$78). However, this is largely because one-half the women but only one-sixth the men in part-time work are age 25 to 54. Within each age group, women earned less than men for part-time work. (See table 4.) The gap was least for workers under 25 years and widest for those age 35 to 44.

Median weekly earnings of part-time workers by occupation ranged from \$32 for private household work and \$59 for farmwork to \$123 for professional and technical jobs. In each occupation, the ratio of median weekly earnings, part time to full time, was lower than the ratio of mean hours between the two groups. (See table 5.)

Trends in weekly earnings

An examination of the broad earnings trends for the period beginning with May 1967 and ending with the second quarter of 1981 reveals significant gains in constant dollars (current dollars deflated by the CPI-W) up to 1973 and some erosion thereafter.¹⁴ The erosion reflects both the effects of the recession of 1974-75 and of the slowdown that began in 1980, as well as the acceleration in prices over this period. For 1981 no group shown in table 6 had constant-dollar earnings exceeding their 1973 level.

Overall, the median earnings for all full-time workers

Age	Median weekly earnings			Women's earnings as a percent of men's
	Both sexes	Men	Women	
Total, 16 years and over	\$82	\$78	\$84	108
16 to 19 years	61	62	59	95
20 to 24 years	84	86	83	97
25 to 34 years	103	119	100	84
35 to 44 years	104	150	101	67
45 to 54 years	99	119	97	82
55 to 64 years	91	105	88	84
65 years and over	71	78	65	83

Table 5. Weekly earnings and hours of part-time workers and as a percent of those of full-time workers, by occupation, annual averages, 1981

Occupation group	Median weekly earnings		Mean hours ¹	
	Part-time workers	As a percent of full-time earnings	Part-time workers	As a percent of full-time hours
Total	\$ 82	28	19.0	46
Professional and technical workers	123	33	19.1	45
Managers and administrators, except farm	108	27	20.7	46
Salesworkers	73	24	19.1	44
Clerical workers	88	38	19.7	50
Craft and kindred workers	105	30	20.1	48
Operatives, except transport	91	38	20.4	50
Transport equipment operatives	93	31	19.1	43
Nonfarm laborers	70	29	17.8	44
Service workers	69	36	18.2	44
Private household workers	32	30	13.5	31
Other service workers	73	37	18.9	46
Farmworkers	59	33	16.5	33

¹Hours are for wage and salary workers who usually work part time for non-economic reasons and for wage and salary workers on full-time schedules.

were about 4 percent lower in real terms in 1981 than in 1967. This overall decline, however, was partly a function of changes in the demographic composition of the work force. Most of the gains in employment over the 1967-81 period were made by women and very young workers, whose earnings are generally much lower than those of adult men. Thus, the increase in the youth and female proportions of the work force had a depressing effect on the earnings average for all full-time workers.

As shown in table 6, the inflation-adjusted earnings of men 25 and over were still 5 percent higher in mid-1981 than in 1967, while those of women 25 and over were 9 percent higher. It was only the earnings of young workers 16 to 24 that were lower in real terms in mid-1981 than in 1967, a phenomenon that has been widely attributed to the very rapid increase in the number of youth entering the labor force over this period.¹⁵

A more encouraging development was the relatively sizable gain in the earnings of blacks. During 1967-73, black men and women experienced gains in earnings adjusted for inflation about twice as large, in percentage terms, as those of their white counterparts. Moreover, subsequent periods of recession and spiraling prices eroded the gains of black workers much less. After allowance for inflation, median weekly earnings were 12 percent greater for black men and 24 percent greater for black women in 1981 than in 1967. In contrast, white men had real earnings equal to their 1967 level, while white women had earnings only 4 percent higher than their 1967 level. Thus, there was significant narrowing in the racial earnings gap over this period.

The disparity between the earnings of men and women also narrowed slightly, but continued to be large. The tabulation below shows the earnings of women

working full time as a percentage of the earnings of men of comparable age for 1967 and 1981.

	1967 (May)	1981 (Second quarter)
16 years and over	61.9	64.2
16 to 24 years	76.8	80.4
25 years and over	60.5	62.6

More recently, over the 2-year period ended with the fourth quarter of 1981, median weekly earnings of full-time workers rose by 19.1 percent, while consumer prices rose by 23.1 percent. This resulted in a 3.3-percent decline in constant-dollar earnings, most of which occurred during 1980. For most of the major groups, the changes between the fourth quarters of 1980 and 1981 were not statistically significant. The fact that there was no further erosion of real earnings over this period reflects a slowdown in the increase in the CPI-W (from 12.6 to 9.4 percent annually) rather than an acceleration in current-dollar earnings.

Although the recession which began in the latter part of 1981 had a negative impact on the number of full-time workers, it did not have a noticeable effect on the average weekly earnings of this group. This reflects contractual and other factors working against reducing wage increases (for example, cost-of-living adjustments). Also, during a production cutback, workers with the least seniority on the job are generally laid off first, and this may result in a smaller but higher-tenured and higher-paid workforce.

A look at hourly earnings

Of all wage and salary workers, about three-fifths, or a little under 52 million, were paid by the hour in 1981. The data on the hourly earnings of these workers, when crossed with their demographic characteristics, provide some additional insight on the earnings distribution, particularly in terms of those who are at the lower end.

Workers paid by the hour are highly concentrated in lower skilled occupations. Those most likely to be paid hourly rates in 1981 were factory operatives and non-farm laborers; the least likely were professional and technical workers and managers and administrators. In terms of industries, hourly wage workers accounted for more than two-thirds of construction, manufacturing, and trade employees, but for only one-fourth of those in finance, insurance, and real estate.

Within the hourly earnings universe—which, to a certain extent, tends to group workers according to skills and education—the inter-group differences in earnings are not as large relatively as they are for all wage and salary workers. For example, as shown in table 7, the median hourly earnings for black men were \$5.93 in 1981. This was 87 percent of the median for white men paid by the hour, compared with a 76 per-

cent ratio of the weekly medians for the two groups. The median hourly earnings of black women (\$4.27) were only slightly lower than those of white women (\$4.36).

Men had much higher hourly earnings than women at every age. And, as in the case of weekly earnings, women reached a peak in hourly earnings at an earlier age than did men. According to the cross-sectional data for 1981, women reached a peak in median hourly earnings at ages 25 to 34, whereas the median for men continued to rise through the 35-to-44 age group and remained about the same for men age 45 to 54.

In terms of distribution, about 6.8 million workers paid by the hour, or 13 percent, made \$10 or more in 1981. An overwhelming majority of them, 80 percent,

Table 6. Median weekly earnings of wage and salary workers who usually work full time, by selected characteristics, 1967, 1973, and 1981

Characteristic	Median weekly earnings			Index of constant dollars (May 1967 = 100.0)	
	1967 (May)	1973 (May)	1981 (Second quarter)	1973 (May)	1981 (Second quarter)
Sex and age					
Both sexes, 16 years and over	\$109	\$159	\$285	110.1	96.3
16 to 24 years	84	119	202	107.1	89.3
25 years and over	115	170	312	111.3	100.0
Men, 16 years and over	125	188	344	113.6	101.6
16 to 24 years	97	136	225	106.2	85.6
25 years and over	131	203	374	116.8	105.3
Women, 16 years and over	78	116	221	112.8	105.1
16 to 24 years	74	103	181	105.4	90.5
25 years and over	79	121	234	115.2	108.9
Race					
White	113	162	293	108.0	95.6
Men	130	193	353	112.3	100.0
Women	79	117	223	111.4	103.8
Black and other races ¹	79	129	238	124.1	111.4
Men	90	149	274	125.6	112.2
Women	63	107	210	128.6	123.8
Marital status					
Men, 16 years and over:					
Never married	95	134	238	106.3	92.6
Married, spouse present	131	200	377	115.3	106.1
Other marital status	113	171	344	114.2	112.4
Women, 16 years and over:					
Never married	79	114	206	108.9	96.2
Married, spouse present	79	117	226	111.4	105.1
Other marital status	75	115	225	116.0	110.7
Occupation					
Professional and technical workers	145	212	368	110.3	93.8
Managers and administrators, except farm	164	238	409	109.8	92.1
Salesworkers	113	163	301	108.8	98.2
Clerical workers	91	130	230	107.7	93.4
Craft and kindred workers	131	195	347	112.2	97.7
Operatives, except transport ²	—	132	243	—	—
Transport equipment operatives ²	—	169	299	—	—
Nonfarm laborers	93	138	236	111.8	93.5
Service workers	70	107	189	115.7	100.0
Farmworkers	58	96	179	125.9	113.8

¹ Data for blacks (exclusive of other races) are not available prior to 1978.

² Data not available prior to 1972.

Table 7. Median hourly earnings of wage and salary workers paid hourly rates, by selected demographic characteristics, annual averages, 1981

Age and years of school completed	Total			White			Black			Hispanic		
	Both sexes	Men	Women	Both sexes	Men	Women	Both sexes	Men	Women	Both sexes	Men	Women
Age												
Total, 16 years and over	\$5.27	\$6.72	\$4.35	\$5.30	\$6.84	\$4.36	\$5.01	\$5.93	\$4.27	\$4.90	\$5.45	\$4.15
16 to 24 years	4.04	4.41	3.75	4.06	4.44	3.76	3.88	4.11	3.70	4.08	4.34	3.80
16 to 19 years	3.47	3.61	3.39	3.48	3.64	3.39	3.39	3.40	3.38	-	-	-
20 to 24 years	4.68	5.25	4.17	4.75	5.31	4.19	4.24	4.58	3.93	-	-	-
25 years and over	6.13	7.92	4.74	6.25	8.14	4.77	5.43	6.64	4.51	5.35	6.38	4.37
25 to 34 years	6.24	7.53	4.98	6.36	7.69	4.99	5.56	6.50	4.81	-	-	-
35 to 44 years	6.38	8.49	4.84	6.51	8.77	4.85	5.64	6.98	4.63	-	-	-
45 to 54 years	6.18	8.65	4.63	6.35	8.96	4.68	5.32	6.77	4.35	-	-	-
55 to 64 years	5.88	8.05	4.45	5.99	8.26	4.49	5.26	6.67	4.09	-	-	-
65 years and over	3.98	4.35	3.76	4.03	4.41	3.79	3.53	3.75	3.41	-	-	-
Years of school completed												
Total, 25 years and over	6.13	7.92	4.74	6.25	8.14	4.77	5.43	6.64	4.51	5.35	6.38	4.15
Less than 4 years of high school	5.30	6.77	4.05	5.43	7.00	4.10	4.71	5.65	3.86	4.82	5.45	3.80
8 years of school or less	5.06	6.09	3.88	5.17	6.29	3.92	4.44	5.19	3.63	4.53	5.19	3.73
1 to 3 years of high school	5.50	7.40	4.18	5.79	7.65	4.24	4.90	6.16	3.98	5.44	6.59	3.92
4 years of high school or more	6.47	8.45	5.03	6.53	8.62	5.02	6.03	7.27	5.03	6.32	7.77	4.60
4 years of high school	6.19	8.43	4.71	6.28	8.61	4.71	5.65	7.05	4.71	6.07	7.54	4.46
1 to 3 years of college	6.91	8.60	5.49	6.96	8.78	5.47	6.69	7.74	5.70	7.09	8.48	4.73
4 years of college or more	7.21	8.22	6.36	7.22	8.31	6.29	7.03	7.56	6.46	6.55	7.05	(¹)
4 years of college	6.93	8.09	5.97	6.95	8.21	5.92	6.86	7.58	6.22	6.36	(¹)	(¹)
5 years of college or more	7.92	8.53	7.40	7.88	8.51	7.28	7.95	(¹)	(¹)	(¹)	(¹)	(¹)

¹ Median not shown where base is less than 50,000.

NOTE: Dashes indicate data not available.

were white men. Only 12 percent of the high wage earners were women, 8 percent were black, and 5 percent were Hispanic.

At the low end of the earnings scale, about 1.4 million of the workers paid an hourly wage earned less than \$3 an hour in 1981, when the prevailing minimum wage under the Fair Labor Standards Act was \$3.35. Of course, the Act exempts certain types of workers from the minimum wage provisions and permits a lower minimum for others.¹⁶ About half of the workers who

earned less than the prevailing minimum were employed in retail trade—two-thirds of them in eating and drinking places, where exemptions from the minimum are very prevalent. One-tenth worked in private households.

Workers who reported that they earned less than the minimum wage were predominantly young (57 percent were under 25 years of age), and female. Among both whites and blacks, about 7 percent of the hourly employees reported earnings below the prevailing minimum. □

— FOOTNOTES —

¹ Quarterly data on weekly earnings from the CPS have been available since early 1979 and are published in a press release entitled "Weekly Earnings of Workers and Their Families." The release is available free of charge from the Bureau of Labor Statistics.

Before 1979, roughly comparable data on weekly earnings by demographic group were collected each May from 1967 to 1978, except for 1968. The data were published in press releases and occasional articles in the *Monthly Labor Review*. The first such article was Paul O. Flaim and Nicholas I. Peters, "Usual weekly earnings of American workers," *Monthly Labor Review*, March 1972, pp. 28-38. The most recent was Janice N. Hedges and Earl F. Mellor, "Weekly and hourly earnings of U.S. workers, 1967-78," *Monthly Labor Review*, August 1979, pp. 31-41.

The switch from annual to more frequent collection of earnings data in the CPS was made after two methodological tests indicated it was feasible to collect these data more often and that they would meet BLS standards of statistical reliability. The most important test was conducted in January 1977, when information on the earnings of about 4,000 workers was obtained directly from them or from members of their households and was then compared with information from their respective employers. Median hourly earnings for workers paid at hourly rates were \$3.53 on the basis of the household reports and \$3.64 on the basis of the employer reports—a difference of 11 cents or 3 percent. Median weekly earnings (excluding tips or commissions) were \$170.24 on the basis of the household reports and

\$179.50 on the basis of the employer reports, for a difference of \$9.26 or 5 percent. See Larry Carstensen and Henry Woltman, "Comparing Earnings Data From the CPS and Employer Records," *Proceedings of the Social Statistics Section, 1979* (Washington, American Statistical Association, 1979), pp. 168-74.

² For detailed information with regard to the reliability and other technical aspects of the quarterly earnings data from the CPS, see Earl F. Mellor, *Technical Description of the Quarterly Data on Weekly Earnings From the Current Population Survey*, Bulletin 2113 (Bureau of Labor Statistics, 1982).

³ During 1981, women on full-time schedules worked an average of 39.5 hours per week, compared to 43.1 hours for men.

⁴ The usual method for measuring intragroup wage differences is to estimate wage equations for each group through regression techniques which adjust for productivity-related personal characteristics. For example, see Burton G. Malkiel and Judith A. Malkiel, "Male-female pay differentials in professional employment," *American Economic Review*, September 1973, pp. 693-705.

This analysis rests in part on the foundation of human capital theory, which views schooling and training as investments increasing worker productivity and so future earnings. This theory is presented by Gary Becker in *Human Capital* (New York, Columbia University Press, 1964) and by Jacob Mincer in *Schooling, Experience, and Earnings* (New York, Columbia University Press, 1974), probably the two names most associated with the theory. In addition to variables mea-

suring human capital accumulation, wage equations typically include other variables thought to have a role in the wage determining process. Estimates of coefficients in wage equations, including any residual difference in earnings levels that remain after controlling for levels of the determining variables, are sensitive to the variables included in the equation as well as relevant variables that have been left out. The difference in earnings that remains may be due to discrimination but could also be due to variables not considered.

There are economists who view the science's understanding of wage determination as seriously incomplete, and who question the relevance of human capital theory and wage regressions. For examples, see Lester C. Thurow, *Generating Inequality* (New York, Basic Books, Inc., 1975); and Michael J. Piore, "The importance of human capital theory to labor economics: a dissenting view," *Industrial Relations Research Association's 26th Annual Winter Proceedings*.

⁵ The discontinuous work experience of many women may depress their earnings, in at least two ways. First, for periods when a woman does not have a job she is not accumulating work experience. Second, her skills accumulated in previous periods may depreciate. Women's fewer years of employment overall and at their current job lead to less on-the-job training. In addition, as suggested by Steven H. Sandell and David Shapiro, receipt of on-the-job training may increase with preferences for future labor force attachment and women may underestimate their future attachment and so underinvest in training. See "Work expectations, human capital accumulation, and the wages of young women," *Journal of Human Resources*, Summer 1980, pp. 335-53.

Mary Corcoran and Greg J. Duncan observed more likely and frequent interruption of work experience among women with the Panel Study on Income Dynamics. They found years of training completed on the current job explained 11 percent of the difference in earnings of white men and women while other work history explained 28 percent. After controlling for the levels of a long list of personal characteristics their technique left more than half of the wage differential unexplained. Results of their analysis suggest continuity of work experience had limited impact on earnings, implying that the impact of human capital depreciation during labor force withdrawal on earnings is minimal if it exists at all. See "Work history, labor force attachment and earnings differences between the races and the sexes," *The Journal of Human Resources*, Winter 1979, pp. 3-20. This evidence conflicts with that of Jacob Mincer and Solomon Polachek. See "Family investments in human capital: Earnings of women," *Journal of Political Economy*, Vol. 82, no. 2, part 2, March/April 1974, pp. S76-S108.

Bureau of Labor Statistics data from the CPS show that in January 1978, the average length of time at the current job (job tenure) was 4.5 years for men and 2.6 years for women. See Edward S. Sekscenski, "Job tenure declines as work force changes," *Monthly Labor Review*, December 1979, pp. 48-50, reprinted with additional data as *Special Labor Force Report* No. 235.

⁶ The South includes the South Atlantic (Delaware, the District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia), the East South Central (Alabama, Kentucky, Mississippi, and Tennessee), and the West South Central (Arkansas, Louisiana, Oklahoma, and Texas) divisions. Using CPS data from May 1978, George D. Stamas estimated hourly earnings in the South 10 percent lower for blacks, and 4 percent lower for whites, compared to workers with similar characteristics in the rest of the country. See "The puzzling lag in southern earnings," *Monthly Labor Review*, June 1981, pp. 27-36.

⁷ Some comparisons of earnings by occupation could not be made because there were not enough minority women in some occupations to provide reliable estimates of their median earnings. This was the case for black women employed as transport equipment operatives and farmworkers, and for Hispanic women employed as salesworkers,

craftworkers, transport equipment operatives, nonfarm laborers, and farmworkers.

⁸ For an analysis of recent differences in the earnings of black men and white men, see Daniel E. Taylor, "Education, on-the-job training, and the black-white pay gap," *Monthly Labor Review*, April 1981, pp. 28-34. Corcoran and Duncan used a more precise measure of on-the-job training and work experience and found returns for blacks and whites to be similar. See Corcoran and Duncan, "Work history."

⁹ James P. Smith and Finis Welch espouse this view in their "vintage" cohort improvement hypothesis. See "Race differences in earnings: a survey and new evidence," in Peter Mieszkowski and Mahlon Straszheim, eds., *Current Issues in Urban Economics* (Baltimore, Johns Hopkins University Press, 1979), pp. 40-73. An alternative hypothesis is that this pattern of race-earnings ratios by age represents the life cycle and that as cohorts age, earnings of black men will fall relative to those of white men.

¹⁰ There are additional occupations in this Bureau of the Census list of 428 for which the data indicate that earnings may be at least as high as those listed. However, the estimated number of full-time wage and salary workers in these jobs was less than the 50,000 required to provide reasonably reliable estimates of median earnings. Examples are physicists and astronomers, geologists, judges, and air traffic controllers.

¹¹ The Current Employment Statistics Survey, also known as the "establishment" survey or the "790" survey (collected via BLS Form 790) is conducted monthly by the Bureau of Labor Statistics to gather information on employment and earnings for detailed industries. Data from this survey are published in *Employment and Earnings*.

¹² Employment and earnings data on workers by union status are published in *Earnings and Other Characteristics of Organized Workers, May 1980*, Bulletin 2105 (Bureau of Labor Statistics, 1981).

¹³ Comparisons of weekly hours in 1981 represent mean hours reported by workers at work in the reference weeks: 41.7 hours for those at work full time and 19.0 hours for those at work part time who usually work part time.

¹⁴ Data from the quarterly series are not strictly comparable to those collected in May of prior years. See Earl F. Mellor, *Technical Description*. The earnings data are not seasonally adjusted, and only second quarter data from the quarterly series may be used in any comparisons with earlier figures. The extent of seasonal fluctuations cannot be accurately determined, and adjustments cannot be made until the data have been collected for at least 5 years. Hence, the quarterly series should not be used at this time to track quarter-to-quarter changes.

¹⁵ For several summaries of research on the subject of generational crowding see *Proceedings of the Social Statistics Section, 1979* (Washington, American Statistical Association, 1979), pp. 37-56.

In a separate paper, James P. Smith and Finis Welch reported that the difference in lifetime earnings between the smallest and the largest cohort entering the labor market since 1940 may be 4 percent for high school graduates and 10 percent for college graduates, with most of the impact on employment and earnings occurring during the early stages of work careers. See "No Time to be Young: The Economic Prospects for Large Cohorts in the United States," *Population and Development Review*, March 1981, pp. 71-83.

¹⁶ Examples of such workers are those in small retail and service establishments, persons employed as outside salesworkers, many agricultural workers, part-time workers attending school full time, and employees who earn tips. Tips also can be credited up to 40 percent of the minimum wage. The Fair Labor Standards Act and its coverage is outlined in *Minimum Wage and Maximum Hours Under the Fair Labor Standards Act, An Economic Effects Study Submitted to Congress, 1981* (U.S. Department of Labor, Employment Standards Administration, 1981).