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Wages gain ground

Workforce benefits in 1998 from tighter labor markets, higher minimum wage

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New data for 1998 reveal continued good news for the American workforce. The wages of middle- and low-wage workers continued to grow strongly in 1998, suggesting that persistently low unemployment, low inflation, and — for low-wage workers — the 1996-97 increase in the minimum wage have helped to partially reverse two decades of real wage losses for most American workers.

Strong wage growth since 1996

Table 1 presents hourly wages (adjusted for inflation) for workers at various wage levels. Wage growth has been particularly strong at the bottom of the wage scale, underscoring the importance of a tight labor market and an increased minimum wage for raising the real earnings of the least well-off.

Wage trends over the current business cycle (i.e., 1989-98) reveal two distinct patterns.[1] Between 1989 and 1996, real hourly wages declined at least 3% for the bottom 80% of the male workforce and fell 7.2% for the median male worker. Among women, wages were generally stagnant for the bottom half of the female workforce (falling slightly at the median; rising slightly at the 10th percentile[2]), with only high-wage female workers experiencing significant gains over the 1989-96 period.

Since 1996, however, these real wage trends have reversed sharply. For female workers, real wages at the 10th percentile grew 7.4% from 1996 to 1998, and gains among female workers at the 20th percentile were nearly as high, at 5.3%. As for men, wages grew 4.7% at the 10th percentile and 6.4% for 20th percentile workers. Female and male workers at the 50th percentile (i.e., median-wage workers) gained 4.7% and 3.9%, respectively, between 1996 and 1998.

While these recent gains are encouraging, the bottom row of each panel in Table 1 combines the two periods (1989-96 and 1996-98) and reveals that, despite these post-1996 wage gains, the bottom 80% of the male workforce had flat or falling wages over the length of the 1989-98 business cycle. In fact, the real wage of the median male was 3.6% lower in 1998 than in 1989. Only the top-earning males — those at the 90th percentile — experienced significant gains over the full period. Female workers, however, particularly at the bottom and top of the wage scale, had higher real wages by the end of the period.

TABLE 1
Wages by Selected Deciles and Gender, 1989-98 (1998 Dollars)

	Deciles					Ratio		
	10th	20th	50th	80th	90th	90/50	50/10	90/10
All								
1989	$5.47	$6.81	$11.35	$18.86	$23.83	2.10	2.07	4.35
1990	5.54	6.86	11.29	18.69	23.84	2.11	2.04	4.30
1991	5.61	6.88	11.29	18.47	23.86	2.11	2.01	4.25
1992	5.57	6.79	11.34	18.53	23.43	2.07	2.03	4.20
1993	5.52	6.74	11.20	18.61	23.69	2.11	2.03	4.29
1994	5.44	6.65	10.96	18.67	24.01	2.19	2.01	4.41
1995	5.41	6.62	10.83	18.50	23.90	2.21	2.00	4.42
1996	5.37	6.65	10.75	18.48	23.91	2.22	2.00	4.45
1997	5.55	6.84	10.99	18.66	24.27	2.21	1.98	4.38
1998	5.84	7.05	11.29	19.02	24.93	2.21	1.93	4.27
Percent change								
1989-96	-1.9%	-2.4%	-5.3%	-2.0%	0.3%	5.9%	-3.5%	2.2%
1996-98	8.7	6.0	5.0	2.9	4.3	-0.6	-3.4	-4.1
1989-98	6.7	3.5	-0.6	0.8	4.6	5.2	-6.8	-1.9
Males								
1989	$6.27	$7.85	$13.27	$21.18	$26.52	2.00	2.12	4.23
1990	6.15	7.72	13.02	21.16	26.93	2.07	2.12	4.38
1991	6.00	7.56	12.90	20.93	26.69	2.07	2.15	4.45
1992	5.88	7.43	12.74	20.76	26.57	2.09	2.16	4.52
1993	5.81	7.44	12.57	20.66	26.75	2.13	2.16	4.60
1994	5.75	7.39	12.30	20.66	26.60	2.16	2.14	4.62
1995	5.87	7.41	12.43	20.41	26.61	2.14	2.12	4.53
1996	5.90	7.35	12.31	20.51	26.25	2.13	2.09	4.45
1997	6.01	7.47	12.38	20.49	26.85	2.17	2.06	4.47
1998	6.18	7.82	12.80	21.18	27.88	2.18	2.07	4.51
Percent change								
1989-96	-5.8%	-6.3%	-7.2%	-3.1%	-1.0%	6.7%	-1.5%	5.1%
1996-98	4.7	6.4	3.9	3.2	6.2	2.2	-0.7	1.4
1989-98	-1.4	-0.4	-3.6	0.0	5.1	9.0	-2.2	6.6
Females								
1989	$5.09	$6.28	$9.70	$15.64	$19.64	2.02	1.90	3.85
1990	5.13	6.23	9.68	15.55	19.66	2.03	1.89	3.83
1991	5.21	6.19	9.67	15.58	19.97	2.06	1.86	3.83
1992	5.28	6.15	9.70	15.74	20.31	2.09	1.84	3.85
1993	5.28	6.23	9.76	16.14	20.47	2.10	1.85	3.87
1994	5.22	6.15	9.64	16.16	20.78	2.16	1.85	3.98
1995	5.18	6.17	9.54	15.96	20.50	2.15	1.84	3.96
1996	5.15	6.17	9.55	15.98	20.68	2.17	1.85	4.02
1997	5.23	6.24	9.78	16.16	20.93	2.14	1.87	4.00
1998	5.53	6.50	10.00	16.77	21.53	2.15	1.81	3.89
Percent change								
1989-96	1.1%	-1.6%	-1.5%	2.1%	5.3%	7.0%	-2.6%	4.2%
1996-98	7.4	5.3	4.7	5.0	4.1	-0.6	-2.4	-3.0
1989-98	8.5	3.6	3.1	7.2	9.7	6.3	-5.0	1.0

Source: EPI analysis of Current Population Survey data.

Table 1 also examines the growth of wage inequality during this period by examining the ratios of high (90th percentile), middle (50th percentile), and low (10th percentile) wages. As has been documented in other research,[3] not only have wages declined over the long-term, but they have also become much more unequally distributed since the late 1970s. Over the past 10 years, the pattern of wage inequality can be characterized as one in which the top earners are pulling away from the rest of the pack. That is, the wages of the highest-paid male and female workers continued to grow steadily relative to the wages of those at the middle or bottom of the scale.

This pattern has continued over the current recovery. For males, for example, the wage gap between high- and middle-wage workers grew persistently over the full period. The ratio of wages earned by male workers at the 90th percentile relative to those at the 50th percentile increased 9% between 1989-98. The gap between workers at the 50th percentile and those at the 10th percentile actually closed by 2.2% over this same period. A similar pattern is evident for female workers. As a consequence of the strong wage growth at the bottom of the wage scale, low-wage workers have managed to close part of the gap between their earnings and those of middle-wage workers. The wage inequality problem persists, driven by the large relative gains of the highest-paid workers.

Putting the recent gains in perspective

While the recent gains in real wages are good news for workers, they must be considered in their historical context. First, for male workers, the wages of 80% of the workforce are lower, *much lower* at some wage levels, than in 1979, when wage stagnation and inequality began to accelerate. The median male wage is 12.4% lower now than in 1979; the 20th percentile male wage is 14.3% below its 1979 level. For low-wage (10th percentile) females, hourly wages in 1998 were 11.2% below their 1979 level. Fortunately, higher-paid females have fared better — the median female wage has grown by 9.1% since 1979.

Another perspective is offered in **Figure 1**, in which we compare the growth of median wages by gender (indexed to 1989) to that of productivity.[4] Productivity, or output per hour, is one measure of how fast the economy is expanding — growing productivity means there is more output per hour of work to be distributed as compensation to the workforce and as profits or investment.

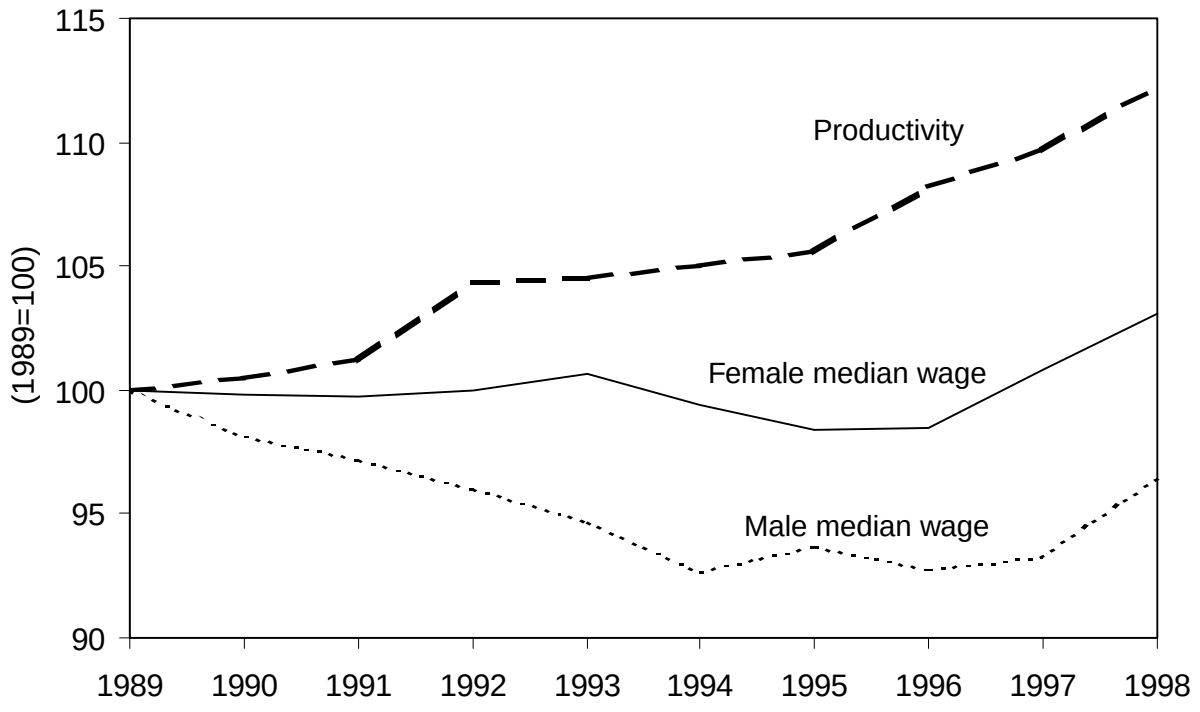
Historically, increases in productivity have meant growth in real compensation for much of the workforce. As the figure reveals, however, the gap between productivity and the median wages of both males and females grew through the 1989-96 period, and, despite the stronger wage growth since 1996, this gap between the economy's growth and the growth of workers' wages remains significant. Even with the recent growth spurt in wages, the economic fortunes of the median worker continue to diverge from the overall growth in the economy.

Trends by state and region

Tables 2 and **3** present wages by state and region for the median- and low-wage (20th percentile) worker, respectively.[5] The trends generally follow those on the national level, with real wages falling in most states over the 1989-96 period and rising over the 1996-98 period.

Turning first to median wages, workers in the Northeastern and Western regions experienced relatively large wage losses over the 1989-96 period (the recession of the early 1990s was felt most acutely in both of those regions). Smaller median wage losses occurred that period in most Southern and Midwestern states. But in the 1996-98 period, wages rebounded sharply in all regions, with particularly large gains in the Midwest. In fact, the median hourly wages of most Midwestern and Southern workers were higher in 1998 than in 1989.

FIGURE 1: Median wage and productivity growth, 1989-98



Source: See Data Appendix.

Table 3 reveals that low-wage (20th percentile) workers in most Northeastern and Western states lost ground over the 1989-96 period. Some of the low-wage Southern states, such as Mississippi and Kentucky, did relatively well in this period, perhaps due to their relatively strong job growth in low-wage sectors and the 1990-91 increase in the minimum wage.[6] In fact, low-wage growth was positive in almost every state from 1996 to 1998, with particularly high job growth rates in the South and Midwest. Despite this growth, 20th percentile wages still were lower for most Northeastern workers in 1998 than in 1989.

Recent gains help minorities

When the labor market tightens, as it has over the past few years, minorities typically benefit relative to other, less disadvantaged groups of workers. As a result, the recent low unemployment rates have reduced the gap in the earnings between minorities like African Americans and those of whites. **Figure 2** shows the ratio of median weekly earnings of African American males relative to white males from 1979 to 1998.[7] Though the trend is somewhat jumpy, the gap between whites' and blacks' wages clearly expanded throughout the 1980s and much of the 1990s. Since 1996, however, the weekly earnings of the median black worker have grown significantly faster than those of his white counterpart, helping to remedy the disparity between the two groups' median earnings. In fact, perhaps the most noteworthy trend found in the data is that these recent gains for blacks at the median have made up all of the ground lost since 1979.

TABLE 2
Median Wages by State, 1989-98 (1998 Dollars)

State	1989	1996	1997	1998	Percent changes 1989-96	1996-98	1989-98
Northeast	**$12.88**	**$12.15**	**$12.14**	**$12.33**	**-5.7%**	**1.5%**	**-4.2%**
Maine	10.53	10.02	10.20	10.29	-4.9	2.7	-2.3
New Hampshire	12.56	11.56	11.75	11.97	-8.0	3.6	-4.7
Vermont	10.96	10.64	10.39	10.43	-3.0	-1.9	-4.8
Massachusetts	13.32	12.66	12.84	13.15	-4.9	3.9	-1.3
Rhode Island	11.64	11.02	11.26	12.01	-5.3	9.0	3.2
Connecticut	13.89	13.62	13.28	13.91	-2.0	2.1	0.1
New York	13.05	12.13	12.07	12.29	-7.0	1.3	-5.8
New Jersey	13.85	13.04	13.09	13.59	-5.8	4.2	-1.9
Pennsylvania	11.34	11.28	11.36	11.60	-0.5	2.8	2.3
Midwest	**$11.21**	**$10.92**	**$11.13**	**$11.54**	**-2.6%**	**5.6%**	**2.9%**
Ohio	11.42	10.93	11.11	11.50	-4.3	5.2	0.7
Indiana	10.43	10.34	10.46	11.28	-0.9	9.2	8.2
Illinois	12.13	11.54	11.95	12.17	-4.8	5.4	0.3
Michigan	12.05	11.95	11.76	12.16	-0.9	1.8	0.9
Wisconsin	10.83	10.97	11.31	11.50	1.3	4.9	6.2
Minnesota	11.67	11.68	11.94	12.60	0.1	7.9	8.0
Iowa	10.13	10.18	10.21	10.17	0.5	-0.1	0.4
Missouri	10.50	10.49	10.90	11.05	-0.1	5.3	5.3
North Dakota	9.36	9.01	9.08	9.23	-3.7	2.4	-1.4
South Dakota	8.73	9.24	9.10	9.15	5.9	-0.9	4.9
Nebraska	9.57	9.51	9.68	10.05	-0.5	5.6	5.1
Kansas	10.66	10.24	10.36	10.24	-4.0	0.0	-4.0
South	**$10.31**	**$10.09**	**$10.21**	**$10.46**	**-2.2%**	**3.7%**	**1.5%**
Delaware	12.01	11.68	11.46	12.08	-2.7	3.4	0.6
Maryland	12.94	12.67	12.95	13.15	-2.1	3.7	1.6
District	13.11	12.55	12.83	13.41	-4.3	6.9	2.3
Virginia	11.94	10.56	11.41	12.14	-11.5	14.9	1.7
West Virginia	9.63	9.58	9.96	9.79	-0.6	2.3	1.7
North Carolina	9.91	10.19	10.25	10.46	2.7	2.7	5.5
South Carolina	9.87	9.79	10.13	10.60	-0.8	8.3	7.4
Georgia	10.66	10.50	11.06	10.86	-1.5	3.4	1.9
Florida	10.24	10.09	10.02	10.10	-1.5	0.2	-1.3
Kentucky	10.20	10.10	10.11	10.18	-1.0	0.7	-0.2
Tennessee	9.46	9.59	9.98	10.01	1.4	4.3	5.8
Alabama	9.78	9.07	9.55	10.08	-7.2	11.1	3.1
Mississippi	8.48	8.74	9.00	10.00	3.1	14.4	18.0
Arkansas	8.69	8.64	8.72	8.93	-0.6	3.4	2.8
Louisiana	9.50	9.19	9.48	10.01	-3.3	8.9	5.4
Oklahoma	10.15	9.33	9.30	10.00	-8.1	7.2	-1.5
Texas	10.29	9.78	10.05	10.20	-4.9	4.2	-0.9
West	**$12.31**	**$11.26**	**$11.23**	**$11.72**	**-8.6%**	**4.1%**	**-4.9%**
Montana	9.83	9.38	9.25	9.60	-4.6	2.3	-2.3
Idaho	9.63	9.80	9.91	10.15	1.7	3.6	5.4
Wyoming	10.80	9.69	10.03	10.24	-10.3	5.8	-5.1
Colorado	11.36	11.72	11.63	12.23	3.2	4.3	7.7
New Mexico	9.48	9.69	9.91	10.12	2.2	4.4	6.7
Arizona	10.98	9.98	9.97	10.22	-9.1	2.5	-6.9
Utah	10.73	10.35	10.30	10.75	-3.5	3.8	0.2
Nevada	11.56	10.97	10.58	10.72	-5.1	-2.3	-7.3
Washington	12.54	11.66	12.42	12.87	-7.0	10.4	2.7
Oregon	12.01	10.75	10.97	11.16	-10.5	3.8	-7.1
California	13.00	11.78	11.61	11.96	-9.4	1.6	-8.0
Alaska	15.55	13.96	14.17	13.88	-10.2	-0.5	-10.7
Hawaii	12.36	11.27	11.11	11.39	-8.8	1.1	-7.9

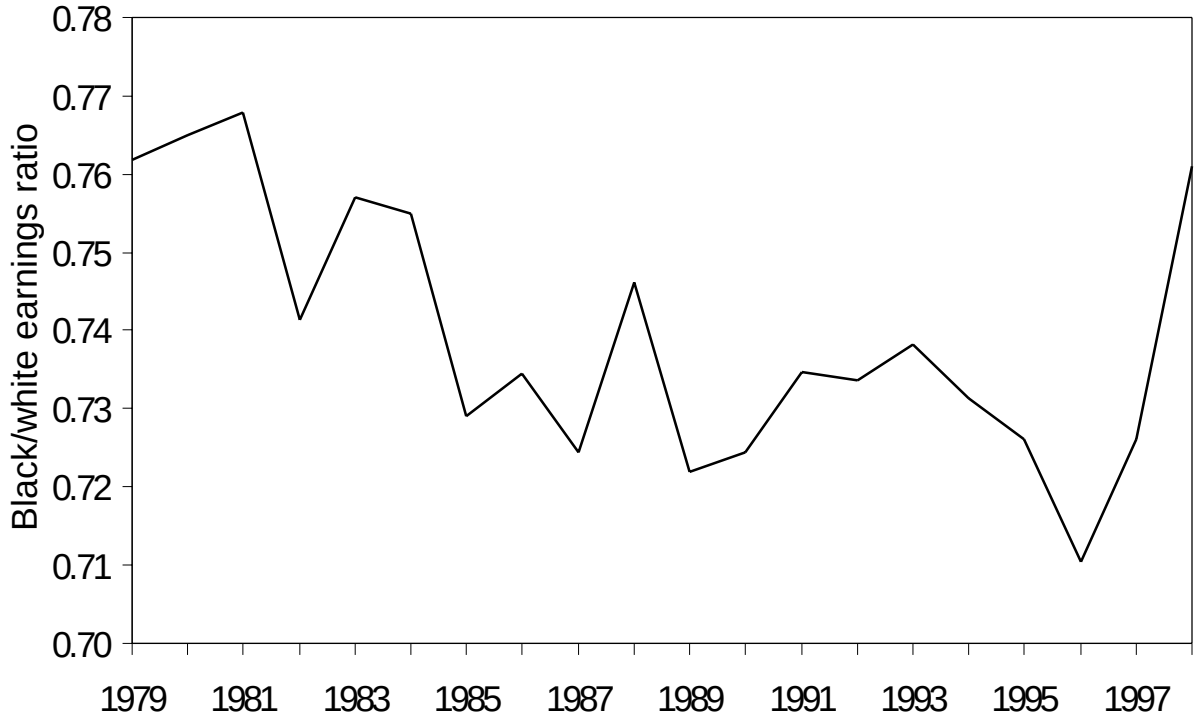
Source: EPI analysis of CPS ORG data; see Data Appendix.

TABLE 3
Low Wages* by State, 1989-98 (1998 Dollars)

State	1989	1996	1997	1998	Percent changes 1989-96	1996-98	1989-98
Northeast	**$7.86**	**$7.26**	**$7.29**	**$7.55**	**-7.6%**	**4.0%**	**-3.9%**
Maine	7.40	6.66	6.86	6.96	-9.9	4.5	-5.9
New Hampshire	8.29	7.67	7.72	7.84	-7.5	2.2	-5.5
Vermont	7.61	7.21	6.86	7.19	-5.3	-0.3	-5.6
Massachusetts	8.88	7.90	8.07	8.14	-11.1	3.2	-8.2
Rhode Island	7.75	6.94	7.00	7.46	-10.4	7.4	-3.7
Connecticut	9.20	8.06	8.11	8.30	-12.3	2.9	-9.8
New York	7.71	7.07	7.06	7.22	-8.3	2.2	-6.3
New Jersey	8.50	7.91	7.82	7.89	-7.0	-0.2	-7.1
Pennsylvania	7.04	6.87	7.04	7.27	-2.4	5.8	3.2
Midwest	**$6.70**	**$6.91**	**$7.01**	**$7.24**	**3.2%**	**4.8%**	**8.1%**
Ohio	6.82	6.75	6.71	7.03	-0.9	4.1	3.1
Indiana	6.46	6.84	7.12	7.63	6.0	11.5	18.2
Illinois	7.13	7.19	7.14	7.38	0.8	2.7	3.5
Michigan	6.85	7.19	7.14	7.44	4.9	3.5	8.6
Wisconsin	6.59	7.13	7.44	7.62	8.1	6.9	15.6
Minnesota	7.27	7.15	7.31	7.86	-1.7	10.1	8.2
Iowa	6.27	6.51	6.84	6.93	3.9	6.5	10.6
Missouri	6.40	6.64	6.87	7.16	3.8	7.8	12.0
North Dakota	6.05	6.00	6.10	6.42	-0.8	7.0	6.1
South Dakota	5.69	6.32	6.31	6.44	11.0	2.0	13.1
Nebraska	6.19	6.52	6.48	6.80	5.2	4.3	9.7
Kansas	6.49	6.37	6.63	6.90	-1.9	8.4	6.4
South	**$6.42**	**$6.29**	**$6.45**	**$6.78**	**-2.1%**	**7.9%**	**5.6%**
Delaware	7.53	7.35	7.23	7.54	-2.4	2.6	0.1
Maryland	7.99	7.39	7.62	8.06	-7.5	9.1	0.9
District	8.02	7.41	7.35	8.17	-7.6	10.2	1.9
Virginia	7.20	6.72	7.15	7.26	-6.7	8.1	0.9
West Virginia	5.49	5.82	5.94	6.05	6.0	4.1	10.3
North Carolina	6.58	6.69	6.84	6.99	1.6	4.5	6.2
South Carolina	6.32	6.41	6.72	6.86	1.3	7.0	8.4
Georgia	6.68	6.67	7.01	7.13	-0.1	6.8	6.7
Florida	6.64	6.25	6.36	6.70	-5.8	7.1	0.9
Kentucky	5.90	6.49	6.55	6.80	10.0	4.9	15.4
Tennessee	6.16	6.33	6.65	6.85	2.8	8.2	11.2
Alabama	6.09	5.93	6.16	6.58	-2.6	11.1	8.2
Mississippi	5.28	5.59	5.95	6.08	5.8	8.8	15.1
Arkansas	5.70	5.78	6.00	6.16	1.4	6.5	8.0
Louisiana	5.71	5.86	5.98	6.24	2.6	6.5	9.3
Oklahoma	6.29	6.06	6.08	6.18	-3.7	2.0	-1.7
Texas	6.14	6.10	6.22	6.48	-0.6	6.1	5.5
West	**$7.11**	**$6.70**	**$6.72**	**$7.01**	**-5.8%**	**4.7%**	**-1.4%**
Montana	6.07	6.08	6.09	6.19	0.1	1.9	2.1
Idaho	5.97	6.25	6.50	6.60	4.7	5.6	10.5
Wyoming	6.27	6.13	6.09	6.33	-2.2	3.3	0.9
Colorado	6.68	7.32	7.36	7.90	9.6	7.9	18.2
New Mexico	5.81	6.13	6.14	6.44	5.5	5.0	10.8
Arizona	6.71	6.27	6.27	6.62	-6.6	5.6	-1.3
Utah	6.71	6.96	6.96	7.09	3.6	1.9	5.6
Nevada	7.33	7.12	7.27	7.28	-2.9	2.2	-0.7
Washington	7.41	7.29	7.29	7.79	-1.6	6.9	5.1
Oregon	7.22	6.96	7.01	7.39	-3.7	6.1	2.3
California	7.46	6.55	6.51	6.89	-12.1	5.2	-7.5
Alaska	9.64	8.40	8.55	8.16	-12.8	-2.8	-15.3
Hawaii	7.66	7.04	7.04	7.09	-8.1	0.7	-7.5

* 20th percentile wage
Source: EPI analysis of CPS ORG data; see Data Appendix.

FIGURE 2: Earnings ratio of black and white median-wage males, 1979-98



Source: Bureau of Labor Statistics. Data are usual weekly median earnings for full-time male workers, age 16 and over.

Conclusion

From the perspective of real wage growth, the most important policy lesson of this recovery is that persistently tight labor markets raise real wages. For years U.S. monetary authorities used interest rate policy to keep unemployment from falling below 6%, sacrificing the type of real wage growth that this report demonstrates is possible. The rationale, of course, was that declining unemployment would lead to spiraling inflation. The Federal Reserve has tested this misleading theory, and working families have clearly benefited from the experiment, with no evidence at all of inflationary pressure.

A similar logic prevailed for many years regarding the minimum wage. Opponents of minimum wages argued that the two legislated increases during this business cycle, which took the nominal minimum wage from $3.35 in 1989 to $5.15 in 1997, would lead to higher unemployment and inflation rates. Clearly, these predictions were wrong, and the policy has had its intended effect of raising the pay of low-wage workers without hurting their employment opportunities.

Tight labor markets and the increased minimum wage have helped workers begin their climb out of the wage hole that has been dug over the last two decades. It is important that these labor market conditions persist. Pursuing these policies has proven to be an excellent prescription for generating real, broad-based wage growth and has given American workers a much-needed foothold to begin regaining two decades of lost ground.

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Data Appendix

Tables 1-3: These data are derived from the Current Population Survey, Outgoing Rotation Group files. The sample includes wage and salary workers, age 18-64, excluding the self-employed. Cases with hourly wages of less than $0.50 or more than $100.00 in 1989 dollars are considered outliers and are not used. For workers who report being paid on an hourly basis, we use the reported hourly wage; for those who report earnings in other periodicities, we divide usual weekly earnings by usual weekly hours. Further information on data construction, including a description of how we calculate wage deciles (using a smoothing algorithm) is given in Mishel et al. (1999), Appendix B.

Wages are deflated using the CPI-U, that is, the Bureau of Labor Statistics' consumer price index for urban consumers.

Figure 1: Wage data are from Table 1, indexed to 1989. Labor productivity is from the BLS series (1999), output per hour, nonfarm business sector. Since these data were only available through the third quarter of 1998, we assumed that the growth rate of productivity in the fourth quarter would equal the average of the (seasonally adjusted) rates in the first three quarters. This average was then applied to the 1997 level of the index.

Endnotes

1. Due to their divergent patterns, we focus on males and females separately.

2. The 10th percentile worker earns more than 10% but less than 90% of the workforce.

3. See *State of Working America 1998-99* by Mishel et al.

4. The 1998 value for labor productivity is forecast based on the growth rate of the first three quarters of the year; see Data Appendix.

5. Since males and females often experience different wage trends, we generally prefer to focus on wage rates by gender. However, to avoid small sample sizes in state-level analyses, we combine both genders.

6. Since higher-wage states such as New York have a smaller share of their workforce affected by a minimum wage increase relative to the lower-wage Southern states, low-wage rates in these areas are less likely to respond to a minimum wage increase.

7. These data are from the BLS series on the usual weekly earnings of full-time workers, age 16 and over. Annual values of this series are in the January BLS publication, *Employment and Earnings.*

Bibliography

Bureau of Labor Statistics. 1999. *Major Sector Productivity and Costs Index* <http://146.142.4.24/cgi-bin/srgate>.

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