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Minimum Wage - 128,000

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Table 1: Employment Effects of the October 1, 1996, Increase in the Federal Minimum Wage from \$4.25 to \$4.75: Workers Age 16-19

Panel A: Average Monthly Populations and Employment-to-Population Ratios: Workers Age 16-19

	Average Monthly Population (in thousands)		Average Monthly Employment-to-Population Ratio		
	Oct. 1995- Aug. 1996	Oct. 1996- Aug. 1997	Oct. 1995- Aug. 1996	Oct. 1996- Aug. 1997	Change in Employment Rate
All Workers Age 16-64	199,974	202,417	62.89	63.59	0.70
Workers Age 16-19	14,806	15,285	43.27	43.13	-0.14 ^s
Male Workers Age 16-19	7,529	7,786	43.34	42.74	-0.60 ^s
Female Workers Age 16-19	7,278	7,499	43.19	43.54	0.35

Panel B: Employment Changes due to the 1996 Increase in the Federal Minimum Wage: Workers Age 16 to 19

	Projected Employment Change*	Actual Employment Change	Employment Change due to Minimum Wage Increase
All Teen Workers	107,000	21,000	-128,000
Male Teen Workers	55,000	47,000	-102,000
Female Teen Workers	52,000	26,000	-26,000

* The Projected Employment Change is calculated as the 0.70 percentage-point change in the employment-to-population ratio for all workers multiplied by the 1997 population of teen workers age 16-19.

Table 2: Employment Effects of the October 1, 1996, Increase in the Federal Minimum Wage from \$4.25 to \$4.75: Workers Age 16-19 By Race, Ethnicity and Gender

Panel A: Average Monthly Populations and Employment-to-Population Ratios: Workers Age 16 to 19

	Average Monthly Population (in thousands)		Average Monthly Employment-to-Population Ratio		
	Oct. 1995- Aug. 1996	Oct. 1996- Aug. 1997	Oct. 1995- Aug. 1996	Oct. 1996- Aug. 1997	Change in Employment Rate ⁷
White, Non-Hispanic	9,940	10,136	50.20	49.95	-0.25
White, Non-Hispanic Male	5,081	5,176	49.80	49.25	-0.55 ✓
White, Non-Hispanic Female	4,859	4,961	50.62	50.68	0.06 ✓
Black, Non-Hispanic	2,293	2,349	26.70	26.64	-0.06
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White, Non-Hispanic Male	36,000	-28,000	-64,000
White, Non-Hispanic Female	35,000	3,000	-32,000
Black, Non-Hispanic	16,000 ✓	-1,000 ✓	-17,000
Black, Non-Hispanic Male	8,000	-12,000	-20,000
Black, Non-Hispanic Female	8,000	10,000 ✓	2,000
Hispanic	15,000 ✓	18,000 ✓	3,000
Hispanic Male	8,000	0	-8,000
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Data Source: Monthly Statistics from the Bureau of Labor Statistics Current Population Survey.

Empl.
- .0014%
+ 15285
Pop.
21,000

(850)
644-3586
654-8826
Dave McPherson
- Florida State

Job Loss in a Booming Economy

The Employment Policies Institute

J A N U A R Y 1 9 9 8

The Minimum Wage, Welfare Reform and Jobs for Low-skilled Workers

During the fourth week of August 1996, President Clinton signed into law two bills with serious implications for the ability of low-skilled workers to find jobs. On the 20th, he signed a bill that would increase the federal minimum wage from \$4.25 to \$4.75 effective October 1, 1996, and from \$4.75 to \$5.15 on September 1, 1997. On the 22nd, he signed a bill that would "end welfare as we know it," in part by requiring adult welfare recipients to find work within two years or lose their benefits. Lost in the fanfare over the signing of these two bills were the pernicious interactions that the new laws would have in the entry-level job market. Just as the welfare reform bill would be forcing hundreds of thousands of low-skilled adults into the job market, the higher minimum wage would be destroying the very jobs that could have offered these welfare recipients a first step on the ladder of economic success. Now, just as the clock is running out on those welfare recipients, organized labor and its supporters are pushing for yet another round of increases in the minimum wage.

The effect of such increases can only serve to further undermine the potential for welfare reform to succeed. Even in a booming economy, one key fact about welfare recipients cannot be ignored: most of them simply do not possess the skills needed to fill existing job vacancies. The classified ads are thick with job listings each week, but many welfare recipients lack the education and work skills required by employers. For example, two-thirds of welfare recipients scored in the bottom quartile of the Armed Forces Qualifying Test, with one-third in the bottom *decile*.¹ They might qualify for entry-level jobs if the wage rates reflected the skill levels of these applicants. Sadly, with each upward increment in the minimum wage, hundreds of thousands of entry-level job opportunities are destroyed.

Recently, in championing further increases in the minimum wage, Senator Ted Kennedy (D-MA) relied upon two erroneous claims: (1) "employment does not go down because the minimum wage goes up";² and (2) benefits from minimum wage increases go primarily to low-income families. In this article we outline the solid economic analysis that refutes these two claims. First, we calculate from official government employment data that the October 1, 1996, 50-cent minimum wage increase destroyed approximately 128,000 teen jobs. In other words, employment *does* go down when the minimum wage goes up, and it went down after the 1996 increase despite strong performance in the economy as a whole.³ The more recent September 1, 1997, minimum wage increase has undoubtedly destroyed even more jobs, but it is still too early to accurately measure these additional losses. Second, we calculate from the same data that the average family income for minimum wage workers is more than \$35,000, hardly what most Americans would classify as "low-income." Thus, the minimum wage increase does not target low-income families.

Rebel Cole
Chief Economist
Employment Policies Institute

Did the 1996 Increase in the Minimum Wage Destroy Jobs?

Supporters of the minimum wage legislation claimed that it would benefit millions of low-wage workers without causing significant job loss. Opponents challenged this free-lunch notion, citing overwhelming evidence to the contrary from academic studies that examined the employment effects of previous increases in the federal minimum wage (see Deere, Murphy and Welch, *American Economic Review* 85:2, 1995, pp. 232-237). We add to this existing body of evidence by providing the first comprehensive study of the employment effects associated with the October 1, 1996, minimum wage increase.

Both supporters and critics of the minimum wage agree that any negative employment effects associated with minimum wage increases are most easily detected by observing teen-aged workers, who account for approximately one-third of all minimum wage workers. Based

upon an analysis of changes in teen employment following the 1996 increase in the federal minimum wage, we estimate that 128,000 teen jobs were destroyed by that increase. To the extent that teen-aged workers are representative of all minimum wage workers, these findings imply that approximately 380,000 entry-level jobs were destroyed by the 1996 minimum wage increase.

We used employment data from the U.S. Department of Labor in a straightforward test of whether or not the 1996 increase in the federal minimum wage reduced employment from what it would have been in the absence of the increase.⁴ As shown in Panel A of Table 1, we found that the employment rate for all workers increased by 0.70 percentage points, from 62.89 percent to 63.59 percent. For teen workers age 16-19, however, the employment rate declined by 0.14 percentage points, from 43.27 percent to 43.13 percent.⁵ For teen males, the decline was especially severe, falling 0.60 percentage points from 43.34 percent to 42.74 percent.⁶

To put these teen employment changes into perspective, it is useful to translate them into job losses. In order to do this, however, we need a benchmark to control for the effect on employment of changes in economic conditions across the two measurement periods.

From October 1995

through August 1997, strong economic growth led to the creation of more than 4.5 million jobs. The most logical benchmark for measuring changes in teen employment is the change in the employment rate for all workers, i.e., the change in employment that would have occurred if the teen employment rate had increased by 0.70—the average employment-rate change for all workers from the period before to the period after the 1996 minimum wage

Change in Employment-to-Population Ratios Following the 1996 Minimum Wage Increase

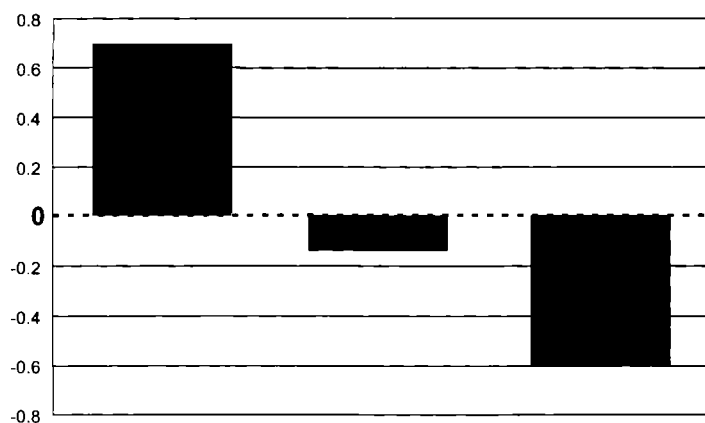


Figure 1

increase. Previous research has shown that teen employment closely tracks aggregate employment (again, see Deere, Murphy and Welch, 1995). Therefore, we calculate employment changes due to the minimum wage increase as the actual change in employment relative to the change in employment projected using this benchmark.

As shown in Panel B of Table 1, we calculate that teen employment would have increased by 107,000 jobs had the teen employment rate increased by 0.70 percentage points—the employment-rate change for all workers and the expected employment change for teens had there not been an increase in the

minimum wage. Actual teen employment, however, declined by 21,000 jobs. Hence, for all teens, the number of lost jobs due to the minimum wage increase is the combined projected (unrealized) increase and actual decrease, or 128,000 (107,000

and -21,000). Because teen workers account for only one in three minimum wage workers, this analysis suggests that approximately 380,000 jobs were destroyed by the 1996 minimum wage increase from \$4.25 to \$4.75. Moreover, there are at least twice as many workers who were affected by the yet-unexamined September 1, 1997, minimum wage increase from \$4.75 to \$5.15. The number of jobs destroyed by that increase is likely to be much larger, especially coming so soon (11 months) after the prior increase.

The 1996 wage hike (50 cents) was the first mandated increase to follow several years of strong economic growth. (Prior to 1996, the minimum wage last increased in 1991.) Thus, the effects of the 1996

wage hike were, to some extent, muted by the fact that market wages had risen with the strong economy, making the initial 50-cent increase less “binding” in the workforce. The second wage hike (40 cents, in 1997) may have had a larger impact because the new mandated pay floor was much closer to — if not above — the market rate of pay for entry-level employees nationwide. However, we won’t be able to accurately measure that number until the increase has been in effect long enough to trigger all adjustments. Empirical research suggests about one year of data are needed to accurately measure such employment effects (see Deere, Murphy and Welch, 1995).

Teen Job Loss Following 1996 Minimum Wage Increase

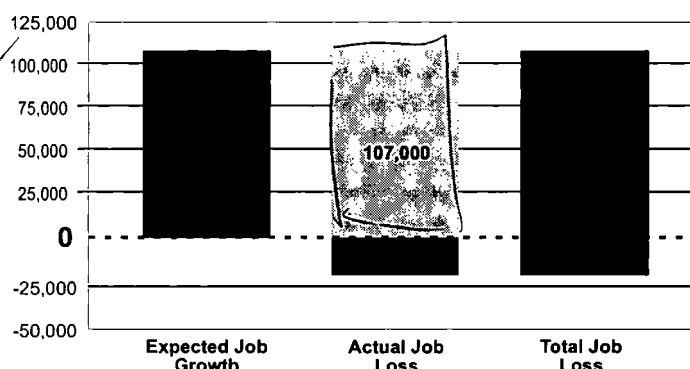


Figure 2

Table 1 also breaks out teen job losses due to the minimum wage increase by gender. This breakout reveals that the pain of the minimum wage increase was borne disproportionately by teen male workers. Of the 128,000 teen

jobs that were lost, teen males lost 102,000, accounting for almost 80 percent of the total teen job loss. This asymmetry of job loss shows how important it is to consider the effects of minimum wage legislation on demographic subgroups as well as the aggregate effects.

Table 2 breaks out teen job losses due to the minimum wage increase by race and ethnicity as well as gender.⁷ Because of the small sample sizes in the Bureau of Labor Statistics survey database, the results for Black and Hispanic teens are less reliable (statistically) than the overall teen numbers or the results for White teens. Nonetheless, the change in employment for Black and Hispanic teens is instructive. The figures in Panel A of Table 2 reveal that

teen Black, non-Hispanic males suffered the most from the minimum wage increase. For this demographic group, the employment rate declined a full percentage point, from 25.21 percent to 24.21 percent at the same time the overall employment rate was increasing by 0.7 percentage points. As shown in Panel B of Table 2, this suggests that job losses among teen Black, non-Hispanic males total to 20,000, or more than 7 percent of the approximately 280,000 workers in this demographic group. Yet these are the types of workers minimum wage advocates would have us believe are the beneficiaries of the minimum wage increases. The data in Table 2 also suggest that teen Hispanic males suffered as a result of the 1996 minimum wage increase, with job losses at 8,000 or 2 percent of the approximately 400,000 workers in this demographic group.

In summary, the data are now in and the evidence is clear. The October 1996 increase in the minimum wage from \$4.25 per hour to \$4.75 per hour was not so painless as its proponents would profess, despite a strong job market. A straightforward review of government employment data demonstrates that this increase hit minimum wage workers with job losses, and hit them hard. The analysis here suggests that as many as 380,000 jobs were lost, with one-third of these losses concentrated among teenagers aged 16-19. Especially vulnerable were Black males aged 16-19, as well as teen males in general. These are the faces of the "losers" from the 1996 minimum wage increase. And the pain does not stop here. During 1998, as the full effects of the second step

increase in the minimum wage from \$4.75 to \$5.15 come into play, hundreds of thousands of additional entry-level jobs will be at risk.

Did the Minimum Wage Increase Go to Low-Income Families?

The most often cited justification for raising the minimum wage is that such increases benefit low-income families. To quote Sen. Kennedy, "No one who works for a living should have to live in poverty."⁸ However, this raises a fundamental question: Do increases in the minimum wage primarily benefit low-income families? If the answer is no, then policymakers should pursue proven, effective anti-poverty tools such as the earned income tax credit, and abandon efforts to increase the minimum wage.

We used official government data from the U.S. Department of Labor to calculate who benefited from the 1996 minimum

Percentage Employment Losses: Teen Males

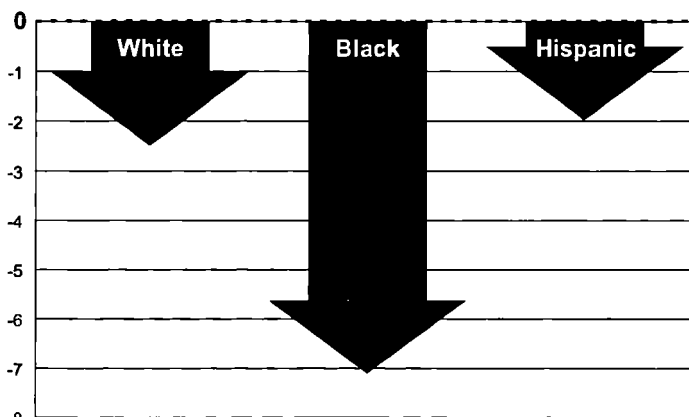


Figure 3

wage increase.⁹ As shown in Table 3 (and Figure 4), more than 70 percent of the minimum wage gains went to families and individuals in the upper four income quintiles (those earning more than \$15,777 per year), and more than half of the minimum wage gains went to those in the upper three income quintiles (earning more than \$29,424 per year). We find that less than 18 percent of the minimum wage gains went to families and individuals living below the federally defined level of poverty, which in 1996 was \$12,516 for a family of three.

low threshold

We are not the first to show that the benefits of minimum wage increases go in large part to upper income families. In an analysis of the 1989 law that raised the minimum wage from \$3.35 to \$4.25, researchers found that the increases "yielded more income for low-wage workers living in upper income households than it did for low-wage workers who lived in poor households."¹⁰

When we restrict the analysis to traditional families (i.e., exclude single persons living alone), the trend is even more instructive. Almost 80% of the gains went to families in the upper four income quintiles, and *every family* in those quintiles has an income that far exceeds the poverty level for a family of four. From these numbers, it is clear that increases in the minimum wage *do not* go predominantly to low-income families, despite the rhetoric to the contrary. Even former Labor Secretary Robert Reich, a strong and vocal advocate for a higher minimum wage, has conceded that "most minimum wage workers are not poor."¹¹

Conclusion

In this article, we answer the two most important questions that should be asked about increases in the minimum wage. Do increases cause job loss? Yes, and those losses traditionally have fallen most heavily on Black teens. Do most of the gains from

increases go to low-income families? No. Less than one dollar in five goes to low-income families living in poverty, while more than half of the gains go to families and individuals with annual incomes greater than \$29,000. Taken together, these answers imply that the minimum wage does nothing to combat poverty. Other researchers have come to a similar conclusion. For example, Neumark and Wascher

("Do Minimum Wages Fight Poverty?" NBER Working Paper No. 6127, August 1996) conclude, "On average, minimum wages appear to slightly increase the proportion of families that are poor." In other words, the number of families that fall into poverty because of job loss is greater than the number of families that rise out of poverty because of the higher minimum wage.

When 1998 draws to a close, the hundreds of thousands of low-skilled adult welfare recipients forced to seek work by the "Personal Responsibility and Work Opportunity Act of 1996" will face even fewer opportunities for work than they could have imagined. Do we really want to exacerbate this already bleak situation by increasing the minimum wage yet again, and destroying even more jobs? Or should we be looking for alternative policy prescriptions to help the working poor, such as exempting them from payroll taxes, or expanding the earned income tax credit? These are the questions we should be asking legislators as they face these important policy decisions.

Distribution of 1996 Minimum Wage Gains Across All Individuals and Families, by Income Level

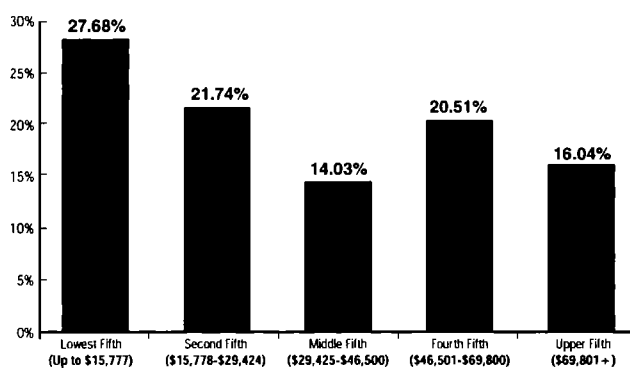


Figure 4

not is part of not as upper income

Table 3: 1996 Minimum Wage Gains Across All Individuals and Families, by Income Level

	Individuals and Families			Families		
	Minimum Wage Share	Average Family Size	Upper Income Limit of Quintile	Minimum Wage Share	Average Family Size	Upper Income Limit of Quintile
Lowest Fifth	27.68%	2.56	\$15,777	21.63%	3.51	\$19,200
Second Fifth	21.74%	2.93	\$29,424	21.37%	3.43	\$33,815
Middle Fifth	14.03%	3.24	\$46,500	17.79%	3.58	\$50,000
Fourth Fifth	20.51%	3.62	\$69,800	22.46%	3.80	\$73,139
Upper Fifth	16.04%	3.84	*	16.76%	3.91	*

*This quintile includes the richest American families and has no upper income limit.

Data Source: Monthly Statistics from the Bureau of Labor Statistics *Current Population Survey*.

Endnotes

¹ See Krista Olson and LaDonna Pavetti, *Personal and Family Challenges to the Successful Transition from Welfare to Work*, The Urban Institute, 1996.

² Statement of Senator Edward M. Kennedy, *U.S. Congressional Record*, July 11, 1997, Vol. 143, No. 98 p.S7303.

³ This is generally accepted as fact by economists. A recent survey of labor economists co-authored by Alan Krueger (who believes higher minimum wages may increase employment) reports that "the median labor economist reported that a 10 percent increase in the minimum wage would be associated with a 1 percent decrease in teenage employment." See p. 6 of Victor Fuchs, Alan Krueger and James Poterba, "Why do Economists Disagree about Policy," NBER Working Paper, August 1997.

⁴ Specifically, we used data from the Bureau of Labor Statistics *Current Population Survey* to compare the average monthly employment-to-population ratio ("employment rate") during the full 11 months for which the \$4.75-per-hour minimum wage was in effect (October 1, 1996-August 31, 1997) with the average monthly employment rate during the same 11 months one year earlier (October 1, 1995-August 31, 1996). This type of comparison avoids problems of seasonality that arise when comparing different time periods within the calendar year. As we are looking at 11-month averages, this approach also minimizes the effects of monthly fluctuations in the data. We look at 11 months of data because the minimum wage increased from \$4.75 to \$5.15 on September 1, 1997, so that the \$4.75 minimum wage was in effect for only 11 months.

⁵ The -0.14 decline in teen employment is statistically different from the +0.70 increase in overall employment at the 10% level using a two-tail test, and is significantly less than the +0.70 increase at the 5% level using a one-tail test.

⁶ The -0.60 decline in teen male employment is statistically different from the +0.70 increase in overall employment at the 10% level using a two-tail test, and is significantly less than the +0.70 increase at the 5% level using a one-tail test.

⁷ Because of the small sample sizes for Black and Hispanic teens in the available data, the measured changes in their employment-to-population ratios cannot be reliably distinguished from the employment ratio change for all workers, using standard statistical techniques.

⁸ Senator Edward M. Kennedy, speech to the National Press Club luncheon, Washington, D.C., December 12, 1997.

⁹ Specifically, we used data from the Bureau of Labor Statistics March 1996 *Current Population Survey* to examine how the income gains from the minimum wage are distributed across income quintiles. We looked at workers whose hourly wages were in the range that would be affected (\$4.25-\$4.74) by the 1996 increase and then calculated their hourly increase based on the new minimum of \$4.75. This value was multiplied by their annual hours worked in 1995 to arrive at the annual gains from the minimum wage hike. Within each quintile we maintained equal numbers of persons rather than equal numbers of families to avoid the equal families-unequal persons (and hence earners) problem. The minimum wage gain shares were then easily calculated by quintile.

¹⁰ See p. 91 of Richard Burkhauser, Kenneth Couch and Andrew Glenn, 1996, "Public Policies for the Working Poor: The Earned Income Tax Credit versus Minimum Wage Legislation," *Research in Labor Economics* 15, 65-10.

¹¹ Robert B. Reich, Memorandum to the President of the United States, July 20, 1993.

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Data Source: Monthly Statistics from the Bureau of Labor Statistics Current Population Survey.

DRAFT # 1
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STATEMENT OF BERNARD E. ANDERSON
ASSISTANT SECRETARY FOR
EMPLOYMENT STANDARDS
U.S. DEPARTMENT OF LABOR
BEFORE THE
DEMOCRATIC FORUM

March 19, 1998

Distinguished Members of the Forum, thank you for the opportunity to appear before you today to discuss the issue of the minimum wage.

As you know, President Clinton has proposed increasing the Federal minimum wage by \$1 an hour, in two \$.50 increments, by January 1, 2000. Today I would like to briefly explain why the Administration believes it is essential to enact this proposal into law.

Millions of Workers Need and Deserve A Pay Raise

~~90 cent~~
In August 1996, President Clinton signed into law a minimum wage hike, raising it from \$4.25 to \$5.15 an hour ^{in two steps.} But, there are still millions of workers trying to raise a family and struggling to make ends meet. With our economy the strongest in a generation, now is the time to help these workers make ends meet by raising the minimum wage again. For someone who works full-time, this minimum wage increase will mean an additional \$20⁰⁰ per year.

According to data from the Department's Bureau of Labor Statistics (BLS), 12 million hourly paid workers earn between

we believe

\$5.15 and \$6.14 an hour and ²would directly benefit from the President's minimum wage increase proposal. Three-quarters (74%) of the workers who would benefit are adults, age 20 or over, and ~~three-fifths~~ ^{Research shows to parent} ~~60%~~ are women, many of whom are trying to raise a family on \$5.15 an hour. ~~two-fifths~~ About ~~two-fifths~~ of the workers who will benefit from the increase are the sole wage earners in their household, and the average minimum wage worker brings home half ^{his or her} of ~~their~~ family's earnings.

We Need to Restore the Value of the Minimum Wage *and Value Work*

Increasing the minimum wage by \$1 in two equal steps -- combined with the previous \$.90 increase -- simply restores the real value of the minimum wage to ^{*levels it last held in the 1970s*} ~~what it was in 1981~~. The minimum wage is still low compared to its historical value -- we have yet to make up for the inflation of the 1980's that eroded the real value of the minimum wage. This erosion can also be seen when you compare the minimum wage to the average wage. The minimum wage was generally worth more than 50% of the national average hourly wage during the 1950's and 1960's and 46% in the 1970's. Yet the 1980's and 1990's have seen the value of the minimum wage decline to near 40% of the average wage. The President's proposed increase -- in percentage terms -- is in line with previous ^{*increases*} ~~ones~~ that helped low-wage workers without adversely affecting the economy: both this proposal and the last one increase the minimum wage by about 20%.

And it would still be less than half of the average hourly wage (\$12.60 in February 1998), ~~even at \$6.15 an hour.~~ *Even at*

A Higher Minimum Wage Helps Narrow Our Persistent Wage Gap

Despite the strongest economy in more than a generation, the less skilled are not reaping the benefits of our economic prosperity. While the more educated and highly skilled have experienced substantial income growth, the less skilled and educated have fallen further behind.

CHECO
FOASP

The reasons for the worsening fortunes of the less skilled are many and diverse. Part of the explanation lies in increased globalization; part lies in technological change that has reduced ^{or, growth in demand} the demand for less skilled workers; part lies in the decline in union membership as a proportion of the workforce. And a significant percent of the erosion in the wages of less-skilled workers is due to the fact that the minimum wage has not come close to keeping up with inflation. The President's proposal will help ^{remedy} ~~address~~ this situation. Fast
Check

The Increase Helps To Ensure Parents Can Raise Their Children Out of Poverty

The minimum wage, when combined with the Earned Income Tax Credit (EITC), can help lift people out of poverty. In 1993, President Clinton expanded the EITC, helping to lift hundreds of thousands of working families out of poverty. Today, with the previous minimum wage increase and the expanded EITC, parents who work full-time do not have to bring up their children in poverty.

a family of three ^{with a parent working full time} is no longer in poverty.
1

4

Raising the minimum wage by \$1.00 will help ensure that -- as costs continue to increase -- parents who work hard and play by the rules can bring up their children out of poverty.

increase in

No Overall¹ Unemployment Is Expected From The Increase

When the minimum wage is increased in such a positive economic environment as we ~~have~~ *enjoy* today, it is unlikely to have a detrimental impact on jobs. This is supported by the experience from the last minimum wage increase. That increase provided a pay raise to 10 million workers, and since the President signed the minimum wage increase into law in August 1996, the economy has created new jobs at an ~~historically high~~ *very rapid* pace of 250,000 per month; the inflation rate has declined from 2.9% to 1.7%; and the unemployment rate has fallen to ~~4.7%~~ *4.6%* -- its lowest level in ~~25~~ *years* *in the 20th century*. For teenagers, African Americans, and women, unemployment is down and employment rates are up. With our economy the strongest in a generation, there simply could not be a better time to raise the minimum wage.

There Should Be No Harmful Impact on Young Minority Men

, and we should be concerned,

Some ~~(of course)~~ may argue [^] that raising the minimum wage will negatively impact employment of young black men.

Admittedly, the unemployment rate for young black men is too high, although it has fallen over the last 5 years by 5.5 percentage points, (1992-1997; 16-19 year olds).

from 42.0% ~~in 1992~~ *STEP* to 36.5% in 1997. [^] *from what to what rate?*

Moreover, only 16.4% of workers in this age group were paid \$4.26 to \$5.14 per hour.

5

But the problems faced by young African American men in our country are complicated, and are certainly not caused by the minimum wage. If they were, one might expect to see more youth being paid at the sub-minimum wage level of \$4.25 an hour, which, under the most recent minimum wage amendments, is permitted for employees under age 20 during the first 90 consecutive calendar days of employment with an employer. However, BLS data for the fourth quarter of 1997 show that only 23,000 16- to 19-year olds were paid \$4.25 an hour, and that these young workers represented only 0.4% of all 16- to 19-year olds paid an hourly wage.

(What % were paid \$4.26 - \$5.14 per hour?) 16.4%

Keeping wages low will not solve the employment problems of young African American men. The solution, the Administration believes, will come from a growing economy, enhanced education and training opportunities, and full enforcement of our nation's civil rights laws -- all of which are top priorities of this Administration.

We simply should not be satisfied with bare subsistence incomes for the working poor.

In conclusion, let me say that any American who works hard and plays by the rules ought to have a fair chance to get ahead. The current \$5.15 an hour Federal minimum wage ~~is inadequate and~~ needs to be increased to help the millions of struggling workers and their families in this country. As the President stated in his State of the Union Address: "In an economy that honors opportunity, all Americans must be able to reap the rewards of prosperity. Because these times are good, we can afford to take

one simple, sensible step to help ⁶millions of workers struggling
to provide for their families: We should raise the minimum wage."

This concludes my prepared remarks. I would be glad to
respond to any questions.

Quinta Buker

From: Bingham Barbara
Sent: Wednesday, March 18, 1998 9:20 AM
To: Buker Quinta,ESA
Subject: RE: min wage statement

we don't have data on number of families who have mw workers as sole earner...might get it later from Urban Institute...sorry!

From: Buker Quinta,ESA
Sent: Tuesday, March 17, 1998 5:36 PM
To: Bingham Barbara
Subject: min wage statement

How many families will be raised out of poverty with an increase in the min wage and EITC.

The chamber of commerce letter sites a study by the Employment Policies Institute as saying that the minimum wage increase caused over one-hundred thousand teenage jobs, disproportionately minorities and that the benefits did not go to low income families.

Claims Jobs lost

The Employment Policies Institute claims that 128,000 teen jobs were lost and 380,000 jobs overall. They arrive at these numbers through several steps.

- They begin by citing a research that according to EPI says that teen employment closely tracks aggregate employment.
- Then they observe that the employment-to-population ratio grew by 0.70 % between the 11 month period October 1995-August 1996 prior to the first minimum wage increase and the period October 1996-August 1997 after the minimum wage increase.
- They observe that the employment rate for teen workers fell by 0.14 percent and for teen males fell 0.60 percent.
- They claim that the difference between the employment rate gains of the total population and the employment rate losses of teen workers can be completely explained by the rise in the minimum wage. They calculate that if the teen employment increased by the same 0.70 percentage points of all workers, there would have been 107,000 more teen jobs.
- Then they claim that teen employment actually declined by 21,000 to arrive at a total of 128,000 teen jobs “lost”.
- Finally, they say that since teen workers account for only one in three minimum wage workers, a approximately 380,000 jobs were lost ($3 \times 128,000 = 384,000$).

Response

- The study they cite, (Deere, Murphy and Welch, *American Economic Review* 85:2 1995), does not appear to discuss teen employment tracking overall employment.
- While there is some correlation between overall employment and teen employment, black teens, white teens, and hispanic teens, the correlation is not large enough to warrant EPI's claim that teen employment should have risen by the same 0.70% as overall employment. Estimates suggest that the correlation is small.
-
- EPI's attempt to extrapolate 380,000 total jobs lost from their 128,000 teens jobs is flawed. The 107, 000 number is derived from the difference between the change in the teen EPOP and the overall EPOP. This number cannot

Who benefits

- The employment policies institute sites data to claim that more than 70% of the gains went to families in the upper four income quintiles.

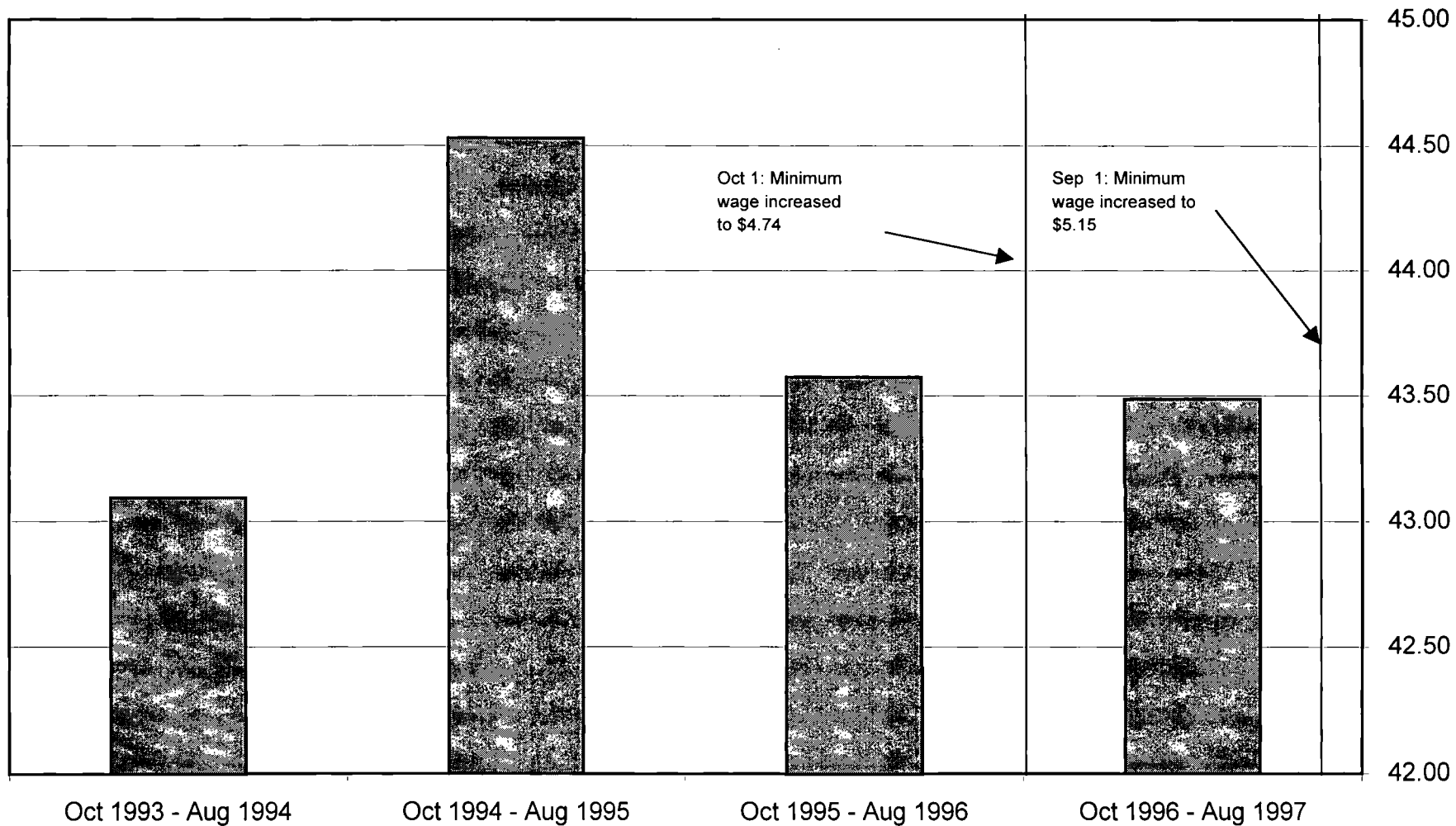
Without rechecking their numbers, their claim even based on the numbers they use is misleading.

Most importantly, one can describe their same numbers to say that almost 85% of the gains went to lower income families in the bottom four income quintiles. The lowest quintile was the single group that benefited most by receiving almost one-third of all the benefits.

filename: mwcrit.wpd

The Decline in Employment Rates for Teens Occurred Before the First Minimum Wage

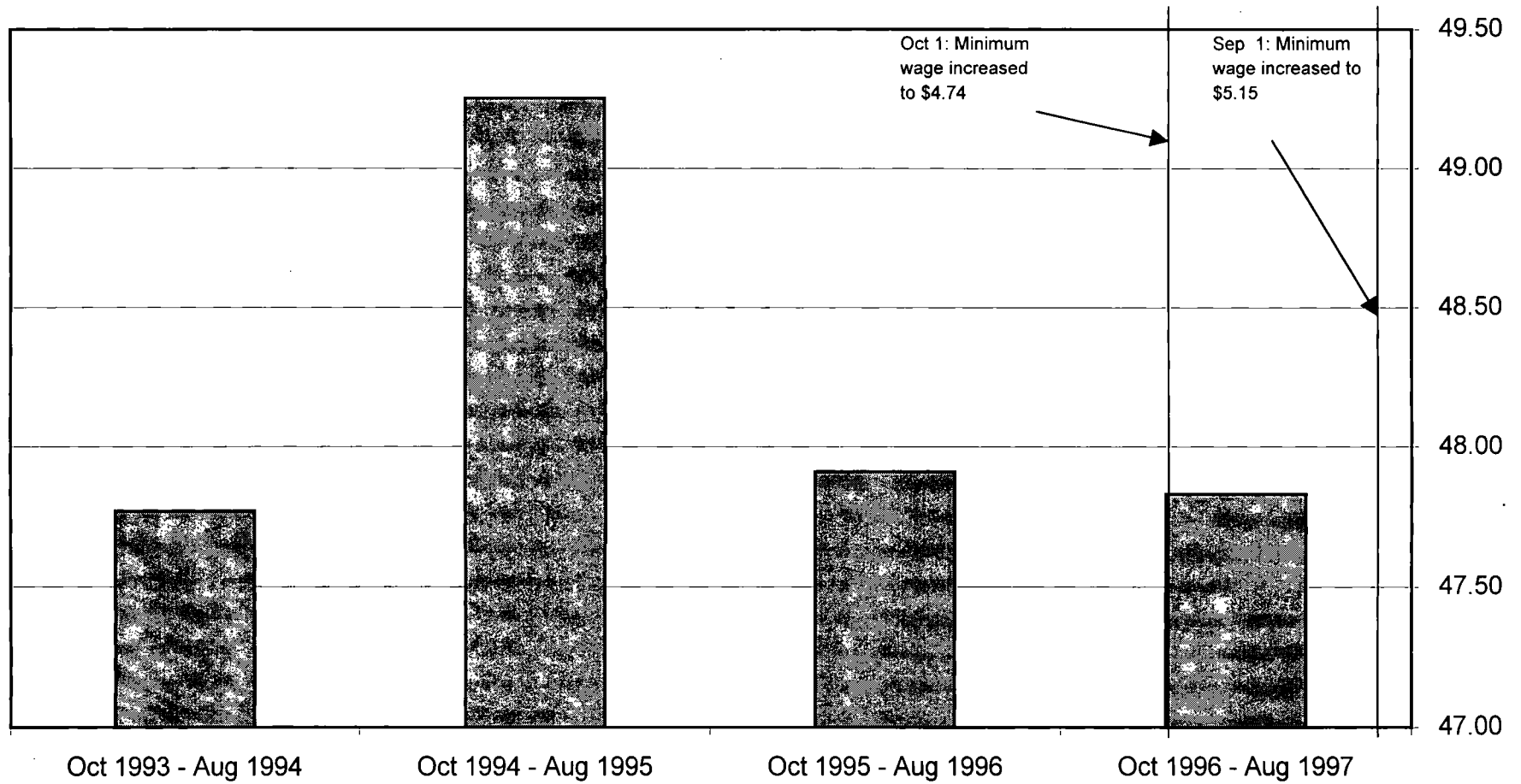
Employment Rates, Teens, 16-19
10 Month Average



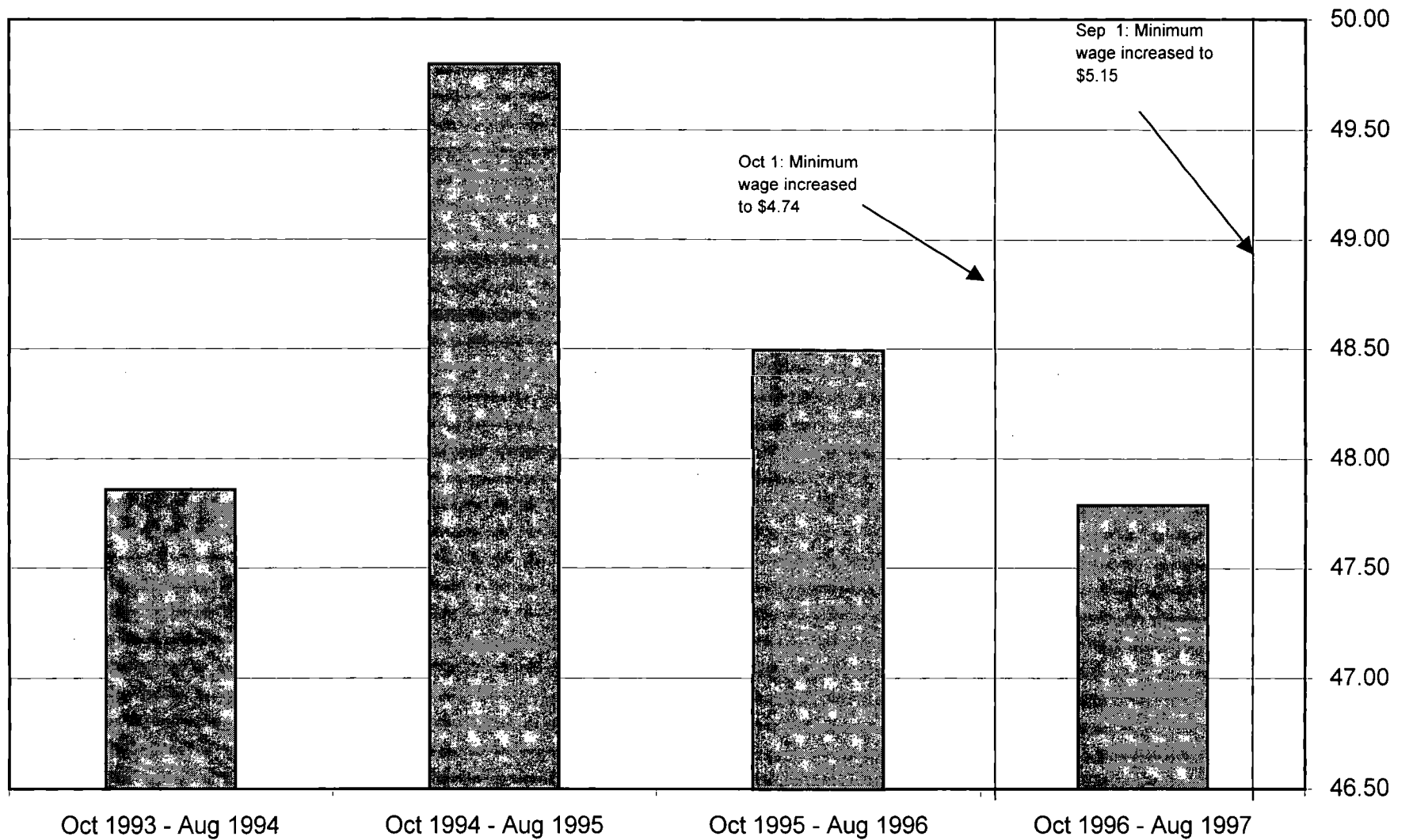
The Decline in Employment Rates for White Teens Occurred Before the First Minimum Wage

Increase

Employment Rates, White Teens, 16-19
10 Month Average

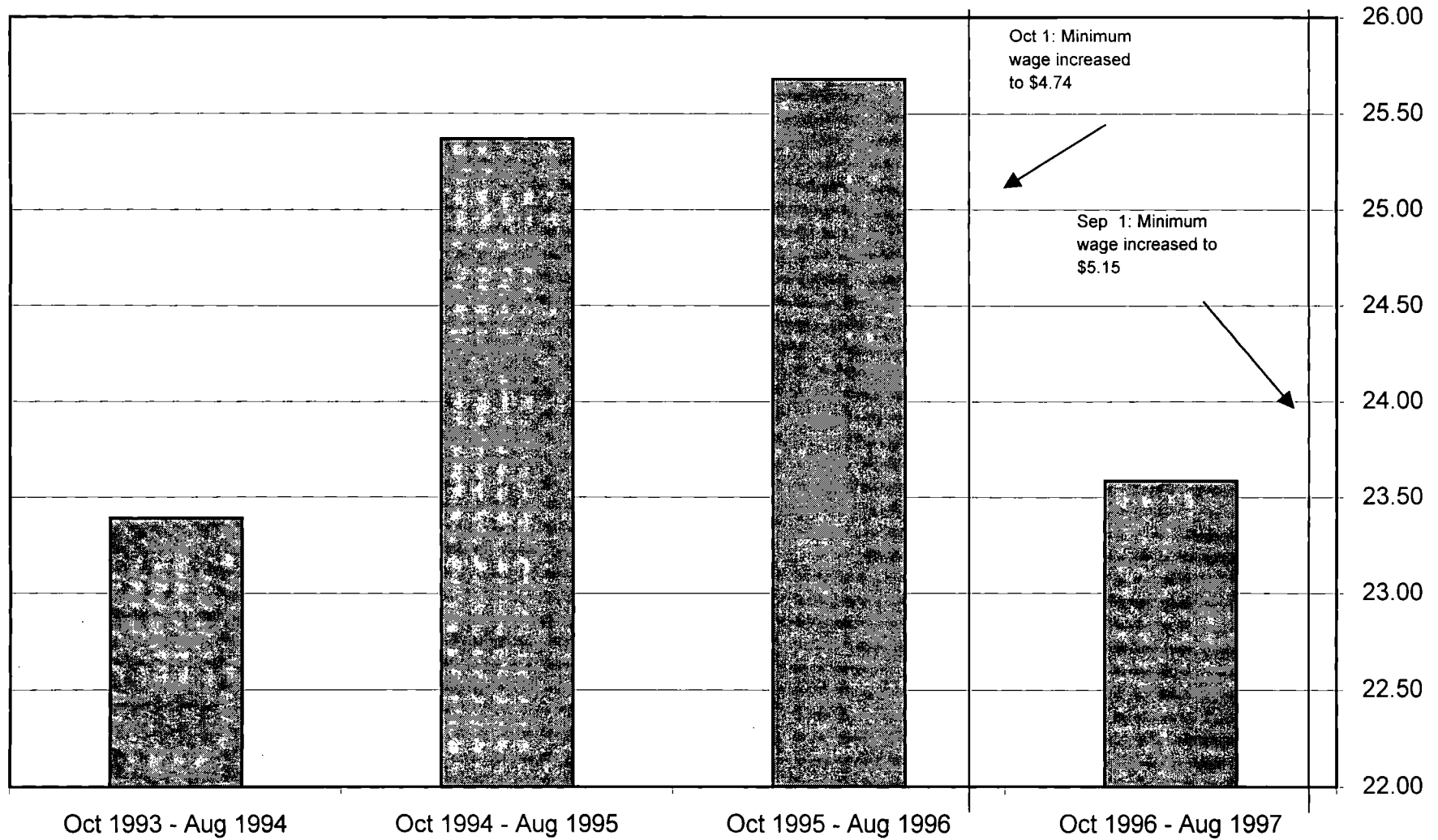


Employment Rates, White Male Teens, 16-19



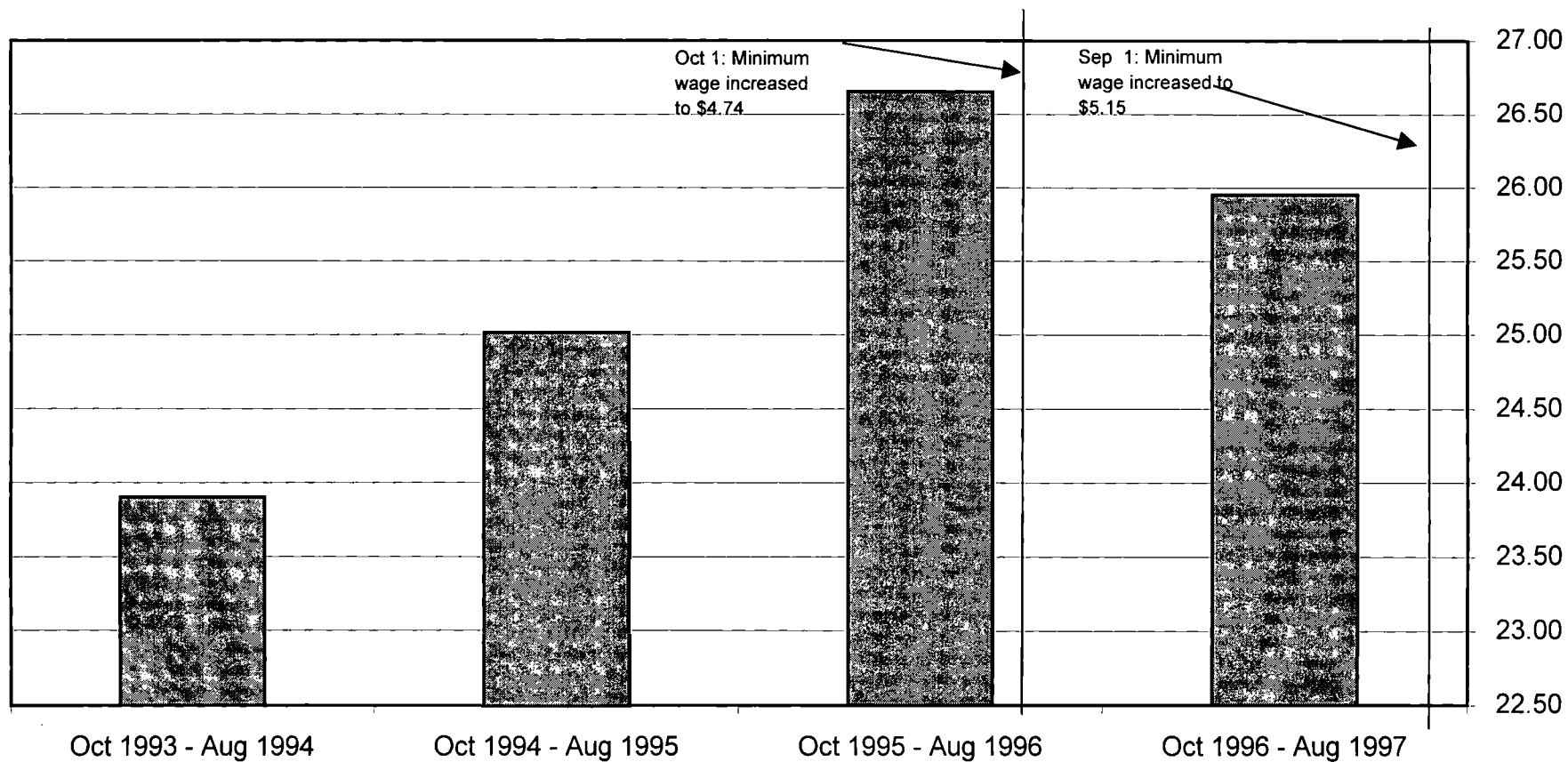
Employment Rates, Black Teens, 16-19

10 Month Average



The Employment Rates for Black Male Teens, 16-19

10 Month Average



Draft
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3/18/98

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3/17/98 (3/17/98)
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3/17/98

STATEMENT OF BERNARD E. ANDERSON
ASSISTANT SECRETARY FOR
EMPLOYMENT STANDARDS
U.S. DEPARTMENT OF LABOR
BEFORE THE
DEMOCRATIC FORUM

March 19, 1998

Distinguished Members of the Forum, thank you for the opportunity to appear before you today to discuss the issue of the minimum wage.

As you know, President Clinton has proposed increasing the Federal minimum wage by \$1 an hour, in two \$.50 increments, by January 1, 2000. Today I would like to briefly explain why the Administration believes it is essential to enact this proposal into law.

Millions of Workers Need and Deserve A Pay Raise

In August 1996, President Clinton signed into law a ~~90 cent~~ minimum wage hike, raising it from \$4.25 to \$5.15 an hour ^{in two steps.} But, there are still millions of workers trying to raise a family and struggling to make ends meet. With our economy the strongest in a generation, now is the time to help these workers make ends meet by raising the minimum wage again. For someone who works full-time, this minimum wage increase will mean an additional \$2000 per year.

According to data from the Department's Bureau of Labor Statistics (BLS), 12 million hourly paid workers earn between

we believe

2

\$5.15 and \$6.14 an hour and would directly benefit from the President's minimum wage increase proposal. Three-quarters (74%) of the workers who would benefit are adults, age 20 or over, and ~~three fifths (60%)~~ *Research shows 40 percent* are women, many of whom are trying to raise a family on \$5.15 an hour. ~~About two fifths~~ *Research shows 40 percent* of the workers who will benefit from the increase are the sole wage earners in their household, and the average minimum wage worker brings home half *his or her* of ~~their~~ family's earnings.

We Need to Restore the Value of the Minimum Wage *and Value Work*

Increasing the minimum wage by \$1 in two equal steps -- combined with the previous \$.90 increase -- simply restores the real value of the minimum wage to ~~what it was in 1981~~ *levels it last held in the 1970s*. The minimum wage is still low compared to its historical value -- we have yet to make up for the inflation of the 1980's that eroded the real value of the minimum wage. This erosion can also be seen when you compare the minimum wage to the average wage. The minimum wage was generally worth more than 50% of the national average hourly wage during the 1950's and 1960's and 46% in the 1970's. Yet the 1980's and 1990's have seen the value of the minimum wage decline to near 40% of the average wage. The President's proposed increase -- in percentage terms -- is in line with previous ~~ones~~ *increases* that helped low-wage workers without adversely affecting the economy: both this proposal and the last one increase the minimum wage by about 20%.

And it would still be less than half of the average hourly wage (\$12.60 in February 1998), [confirms] even at \$6.15 an hour. Even at \$6.15 an hour.

325 12.64 in Feb

A Higher Minimum Wage Helps Narrow Our Persistent Wage Gap

Despite the strongest economy in more than a generation, the less skilled are not reaping the benefits of our economic prosperity. While the more educated and highly skilled have experienced substantial income growth, the less skilled and educated have fallen further behind.

CHECO
FOASP

The reasons for the worsening fortunes of the less skilled are many and diverse. Part of the explanation lies in increased globalization; part lies in technological change that has reduced ^{or, growth in demand} the demand for less skilled workers; part lies in the decline in union membership as a proportion of the workforce. And a significant percent of the erosion in the wages of less-skilled workers is due to the fact that the minimum wage has not come close to keeping up with inflation. The President's proposal will help ^{remedy} ~~address~~ this situation. / *fact check*

The Increase Helps To Ensure Parents Can Raise Their Children Out of Poverty

The minimum wage, when combined with the Earned Income Tax Credit (EITC), can help lift people out of poverty. In 1993, President Clinton expanded the EITC, helping to lift hundreds of thousands of working families out of poverty. Today, with the previous minimum wage increase and the expanded EITC, parents who work full-time do not have to bring up their children in poverty.

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Raising the minimum wage by \$1.00 will help ensure that -- as costs continue to increase -- parents who work hard and play by the rules can bring up their children out of poverty.

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No Overall¹ Unemployment Is Expected From The Increase

When the minimum wage is increased in such a positive economic environment as we ~~have~~ ^{enjoy} today, it is unlikely to have a detrimental impact on jobs. This is supported by the experience from the last minimum wage increase. That increase provided a pay raise to 10 million workers, and since the President signed the minimum wage increase into law in August 1996, the economy has created new jobs at an ~~historically high~~ ^{very rapid} pace of 250,000 per month; the inflation rate has declined from 2.9% to 1.7%; and the unemployment rate has fallen to 4.7% ^{4.6%} -- its lowest level in ~~25~~ ^{nearly} ~~one quarter century~~ ^{years}. For teenagers, African Americans, and women, unemployment is down and employment rates are up. With our economy the strongest in a generation, there simply could not be a better time to raise the minimum wage.

There Should Be No Harmful Impact on Young Minority Men

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Some ~~(of course)~~ may argue [^] that raising the minimum wage will negatively impact employment of young black men.

Admittedly, the unemployment rate for young black men is too high, although it has fallen over the last 5 years by 5.5 percentage points, (1992-1997; 16-19 year olds).

from 42.0% in 1992 to 36.5% in 1997. ^ from what to what rate?

Moreover, only 16.4% of workers in this age group were paid \$4.26 to \$5.14 per hour.

5

But the problems faced by young African American men in our country are complicated, and are certainly not caused by the minimum wage. If they were, one might expect to see more youth being paid at the sub-minimum wage level of \$4.25 an hour, which, under the most recent minimum wage amendments, is permitted for employees under age 20 during the first 90 consecutive calendar days of employment with an employer. However, BLS data for the fourth quarter of 1997 show that only 23,000 16- to 19-year olds were paid \$4.25 an hour, and that these young workers represented only 0.4% of all 16- to 19-year olds paid an hourly wage.

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In conclusion, let me say that any American who works hard and plays by the rules ought to have a fair chance to get ahead. The current \$5.15 an hour Federal minimum wage ~~is inadequate and~~ needs to be increased to help the millions of struggling workers and their families in this country. As the President stated in his State of the Union Address: "In an economy that honors opportunity, all Americans must be able to reap the rewards of prosperity. Because these times are good, we can afford to take

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This concludes my prepared remarks. I would be glad to
respond to any questions.

EPI Claims that 128,000 teen jobs and 380,000 total jobs overall were lost due to the minimum wage increase.

The Employment Policies Institute claims that 128,000 teen jobs were lost and 380,000 jobs overall. They arrive at these numbers through several steps.

- They begin by citing a research study that, according to EPI, says that teen employment closely tracks aggregate employment. *rates.*
- Then they observe that the total employment-to-population ratio grew by 0.70 percentage points between the 11 month period October 1995-August 1996 prior to the first minimum wage increase compared to the average for the period October 1996-August 1997 after the minimum wage increase.
- They observe that the employment rate for teen workers fell by 0.14 percent and for teen males fell 0.60 percent. This 0.14 point decline in the employment rate extrapolated into 21,000 fewer teen being employed.
- They claim that the difference between the employment rate gains of the total population and the employment rate losses of teen workers can be completely explained by the rise in the minimum wage. They calculate that if the teen employment increased by the same 0.70 percentage points of all workers, there would have been 107,000 more teen jobs.
- Total jobs loss was calculated to be the sum of the actual job loss of 21,000 and the potential job loss of 107,000.
- Finally, they say that since teen workers account for only one in three minimum wage workers, so approximately 380,000 jobs were lost ($3 \times 128,000 = 384,000$).

Department of Labor Response

- Drawing from their data, actual employment of teens grew by 186,000 more in the 11 month period after the minimum wage increase compared to the 11 month period before the increase.

Since the second minimum wage increase in September 1997, teen employment grew by an impressive 317,000.

- Rather than teen employment falling as they claim, using their data, teen employment actually grew 2.9% after the minimum wage increase. That is a faster rate of growth than for all individuals aged 16-64, which grew at 2.3%.
- Despite the increase in the minimum wage, *total employment growth* in the 11 months after the minimum wage was exactly the same as in the ten months before the minimum wage increase.

- Instead of teen unemployment *increasing* after the minimum wage, the seasonally adjusted unemployment rate for teens *dropped* slightly from 17 percent to 16.5 percent after the minimum wage increase.
- During the two periods compared by EPI, teen school enrollment increased by 415,000. This may mean that instead of the minimum wage increase causing employment opportunities to decline, more of our nation's young people are choosing school and gaining higher skills as the path to a brighter future.
- During the 10 months covering October 1994 - August 1996, significantly before the minimum wage increase, teen employment rates dropped a full 1.1 percentage points. This represents a greater decline in employment rates than EPI figure of 0.14 percentage points they attributed to the minimum wage increase. This suggests that the decline in teen employment rates is a trend that is unrelated to the minimum wage increase.
- Eighty-three percent of the employment loss claimed by EPI is a projected loss of potential jobs, not the elimination of existing jobs. Furthermore, this projection hinges on their *extreme* assumption that teen employment rates and total employment rates are perfectly correlated or move one-for-one. An historical analysis suggests that this correlation is substantially less.
- Even the study they cite by Murphy and Welch to defend their methodology makes no reference to the correlation between total employment rates and teen employment rates used by the EPI study. (see Deere, Murphy, and Welch, *American Economic Review* 85:2, 1995).
- EPI's attempt to extrapolate 380,000 total jobs from 128,000 teen jobs relies on a *second extreme assumption* that employers are equally likely to hire and fire their adult workers as they are their teen workers. Even opponents of minimum wage increases such as Murphy and Welch do not find this to be the case.

REEXAMINING METHODS OF ESTIMATING MINIMUM-WAGE EFFECTS[†]

Employment and the 1990–1991 Minimum-Wage Hike

By DONALD DEERE, KEVIN M. MURPHY, AND FINIS WELCH*

After nine years of fortuitous neglect, the federal minimum wage was increased more than 25 percent in two steps, from \$3.35 to \$3.80 on April 1, 1990, and then to \$4.25 on April 1, 1991.¹ Our purpose is to investigate the employment effects of these increases.

As evidence of potential effect we examine changes in the distribution of wages. Table 1 refers to employees aged 15–19 earning less than \$5.00 per hour for the years ending March 31, 1989, 1990, and 1991. In each period there is a sharp spike in the wage distribution that coincides with the applicable federal minimum; and there was a substantial shift from below \$4.25 to \$4.25 and higher that coincided with the increased federal minimum. During the year before the first increase, 76 percent of these low-wage employees reported earning less than \$4.25; two years later (i.e., in the year after the second increase), only 25 percent indicated an hourly wage below \$4.25. This shift is much larger than the 9 percent increase in overall average hourly earnings, and we view it as clear evidence that the increased federal minimum raises the cost of hiring relatively unskilled workers.

Table 2 reports employment/population ratios for youth aged 15–19 between 1985 and 1992. The employment rate is indexed to its 1985 value, and the employment index for men 35–44 years old is included for reference. Each year begins in April and goes through March, so that 1990 begins with the increase in the minimum to \$3.80 an hour, and 1991 begins with the increase to \$4.25. Teenage employment rates grew from 1985 through 1989 and then fell in 1990 and again in 1991, with a further, though less pronounced, drop in 1992.

Until recently there had been a consensus that the increase in wage rates documented in Table 1 and the employment changes depicted in Table 2 were essentially cause and effect. There was quibbling about the exact magnitude of the effect, but not much discussion about whether negative employment effects existed. This consensus appears to have been splintered by a series of recent studies (David Card, 1992a, b; Lawrence Katz and Alan Krueger, 1992; Card and Krueger, 1994), although other recent studies continue to find the more standard effect (e.g., David Neumark and William Wascher, 1992). We attempt to provide some glue that can be used to put the pieces back together again.

I. Analysis

The idea that we pursue is the obvious one that minimum-wage increases have the largest effects on employment where effects on wages are also largest, so we compare changes in employment rates of high- and low-wage populations. The high- versus low-wage partitions are demographic (by age, education, race, ethnicity, marital sta-

[†]*Discussant:* Charles Brown, University of Michigan.

*Deere and Welch: Department of Economics, Texas A&M University, College Station, TX 77843-4228; Murphy: Graduate School of Business, University of Chicago, Chicago, IL 60637. Financial support was provided by the Scaife Foundation, the Smith-Richardson Foundation, and by the Private Enterprise Research Center at Texas A&M University.

¹At the time of the first increase, 12 states and the District of Columbia had minimums in excess of the \$3.35 federal level, but only two of them (Connecticut and California) had a minimum as high as \$4.25.

TABLE 1—WAGES OF HOURLY EMPLOYEES BEFORE AND AFTER THE APRIL 1, 1990 AND 1991 INCREASES IN THE FEDERAL MINIMUM WAGE

Hourly wages	Percentages ^a		
	1989	1990	1991
Less than \$3.35	10.8	9.4	9.7
\$3.35 exactly	16.9	3.3	0.5
\$3.36–\$3.79	23.5	9.6	3.9
\$3.80 exactly	0.8	10.8	0.8
\$3.81–\$4.24	24.1	34.2	10.2
\$4.25 exactly	7.0	10.0	36.3
\$4.26–\$4.99	16.9	22.7	38.6
Total	100.0	100.0	100.0

Source: CPS Outgoing Rotation Earner Study respondents, ages 15–19, paid by the hour with wages below \$5.00.

^aApril 1 of indicated year until March 31 of following year.

TABLE 2—TRENDS IN TEENAGE EMPLOYMENT RATES
APRIL 1, 1985 THROUGH MARCH 31, 1992

Year ^a	Employment rate index (1985 = 100)		
	Ages 15–17	Ages 18–19	Men ages 35–44
1985	100.0	100.0	100.0
1986	104.4 /	99.6 \	99.8 \
1987	107.8 /	102.2 /	100.2 /
1988	108.6 /	104.6 /	101.0 /
1989	109.2 /	104.7 /	100.9 \
1990	97.8 \	99.6 \	100.1 \
1991	89.2 \	95.2 \	98.3 \
1992	86.6 \	94.7 \	97.7 \

Note: Employment rate index is the employment/population ratio, indexed to the 1985 value.

^aApril 1 of indicated year until March 31 of following year.

tus, and gender) and geographic (by state of residence). Within each partition we compare employment changes to the fraction of workers who earn low wages (less than or equal to \$4.25 in the year before the 1990 increase). When the population is divided on the basis of age, race, ethnicity, education, and marital status, we find that subgroups with more low-wage workers in 1989 experience larger declines in employment following the increase in the federal minimum. The other two partitions, by state and by gender, give the opposite result. The employment rate of women does not fall relative to the rate for men, and low-wage

employment does not fall more in low-wage states than in higher-wage states. The result for women is not surprising given their persistent employment growth over the past several decades. The result for states might seem surprising, but as we note, employment changes have not been neutral; employment for all workers (not just low-wage workers) grew significantly faster after 1989 in low-wage states than in the country as a whole.

The data are from the 1985 through 1993 CPS Outgoing Rotation Files. The monthly data are arranged into 12-month intervals that begin April 1, and we label each with the calendar year at the beginning of the interval. The arrangement is convenient since it allows for splits on dates when the minimum-wage hikes occur. Hourly wage data are calculated for all earner-study participants as usual weekly earnings divided by usual hours per week.²

Table 3 lists changes in employment rates relative to the 1989 levels. The employment changes appear alongside the incidence of low wages in 1989 for the indicated groups. The incidence of low wages is reported in the first column for men and in the third column for women. The second and fourth columns give the percentage change in employment between the 1989 baseline and 1991. The age comparisons show that employment declines are greatest for those aged 15–19 followed by the declines for those aged 20–24, two of the groups that have the highest incidence of low wages. Comparisons across racial groups show that blacks, the group with the highest low-wage incidence, experienced the largest employment losses; they are followed by whites and then Asians (exactly the order of the fractions of low-wage workers). The relationship between education and employment change is also monotonic and in the expected direction, and the groupings on Spanish ethnicity show the same pattern. The married populations, who have a much

²Workers with imputed values for the earner variables were excluded.

TABLE 4—REGRESSION ESTIMATES OF EMPLOYMENT
LOSSES FROM THE 1990–1991 INCREASE
IN THE FEDERAL MINIMUM WAGE

Variable	Men	Women	Blacks
<i>Teenagers, Aged 15–19:</i>			
Employment rate, men aged 15–64	3.29 (18.37)	2.27 (8.19)	4.76 (6.41)
Year effects			
Minimum = \$3.80	–4.78 (4.97)	–6.63 (3.73)	–7.47 (2.02)
Minimum = \$4.25	–7.29 (9.04)	–11.37 (4.80)	–10.00 (3.16)
Test: other year effects, Pr > F	0.87	0.32	0.88
<i>High-School Dropouts, Adults Aged 20–54:</i>			
Employment rate, men aged 15–64	1.19 (12.18)	1.66 (7.42)	1.32 (3.50)
Year effects			
Minimum = \$3.80	–1.49 (2.93)	–2.54 (1.80)	–4.43 (2.33)
Minimum = \$4.25	–3.13 (7.14)	–5.17 (2.72)	–6.66 (4.10)
Test: other year effects, Pr > F	0.19	0.924	0.39

Notes: Observations are aggregates by state and year (1985–1992). Years begin April 1. The dependent variable is the natural log of the employment/population ratio for the group indicated. The aggregate employment variable refers to men only and is also a natural logarithm. The minimum-wage variables are indicators for 1990 (when \$3.80 applied) and 1991 and 1992 (when \$4.25 applied). This specification has one indicator that identifies the 1990 observations and another that identifies the 1991 and 1992 observations without distinguishing between them. The coefficients on the minimum-wage indicators have been multiplied by 100. The rows labeled "Test: other year effects, Pr > F" refer to the alternative hypothesis that each of the eight years has an independent effect. The regressions that are restricted to women include a trend term; the regressions for blacks include pooled observations for men and women with an indicator that distinguishes between them. All regressions also include state effects. Numbers in parentheses are *t* statistics.

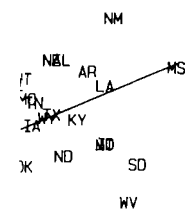
first column refers to men of all races, the second column to women of all races, and the third column to blacks, both men and women. The regressions for women include a time trend, and the regressions for blacks include an indicator for men. The unit of observation is a state-by-year by gender aggregate (the observations for blacks are pooled across gender) for 1985–1992. The coefficients on the aggregate employment

rate are elasticities, while the coefficients on the minimum-wage indicators have been multiplied by 100 to signify percentage changes.

The estimates for teenagers imply that teenage employment is quite sensitive to the aggregate employment of men, with elasticities of 3.3, 2.3, and 4.8 for men, women, and blacks, respectively. The minimum-wage variables show that teenage employment dropped sharply following the 1990 increase in the federal minimum and dropped again after the second increase in 1991. Compared to the employment level projected from the movement in aggregate employment with the \$3.35 federal minimum, teenage employment was 4.8-percent, 6.6-percent, and 7.5-percent lower in 1990 for men, women, and blacks, respectively, and 7.3-percent, 11.4-percent, and 10.0-percent lower in 1991–1992.

The estimates for adult high-school dropouts tell a similar story. Elasticities of employment with respect to aggregate employment are 1.2, 1.7, and 1.3 for men, women, and blacks, respectively. The minimum-wage variables show a decline in the employment of each group following the increase to \$3.80 and a further decline after the increase to \$4.25. Compared to the employment level projected from the movement in aggregate employment with the \$3.35 federal minimum, employment of adult high-school dropouts was 1.5-percent, 2.5-percent, and 4.4-percent lower in 1990 for men, women, and blacks, respectively, and 3.1-percent, 5.2-percent, and 6.7-percent lower in 1991–1992.

Table 2 showed a distinct time pattern to teenage employment during 1985–1992 with sizable increases from 1985 through 1989 followed by the steep declines from 1990 through 1992. A similar pattern holds for the employment of adult high-school dropouts. The minimum-wage variable for \$3.80 is an indicator for 1990, and the \$4.25 variable is an indicator for 1991 and 1992 jointly. We tested the alternative hypothesis that eight separate year effects are necessary to describe the time pattern of employment in each regression. The reported *p* values are for the test of this hypothesis



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in employment of six groups with disproportionately large numbers of low-wage workers. Three of the groups are teenagers, aged 15-19: men, women, and blacks (both men and women). The other three are high-school dropouts aged 20-54, also grouped as men, women, and blacks (both men and women). In the five years preceding the first minimum-wage hike, employment of low-wage workers grew relative to employment of others, but the regression control for aggregate employment and trend suggests that these increases are no larger than expected. This is not true for the period after the minimum-wage increases. Although there are reductions of employment rates in prime age ranges, the reductions among low-wage employment are greater than predicted. During the year when the \$3.80 hourly minimum existed, we estimate that, relative to projections of employment rates based on the \$3.35 minimum, employment of teenage men was reduced by 4.8 percent; the corresponding reductions for teenage women and teenage blacks are 6.6 percent and 7.5 percent, respectively, while for adults (ages 20-54) who did not finish high school they are 1.5 percent, 2.5 percent, and 4.4 percent, respectively, for men, women, and blacks. Then, when the minimum wage was raised a second time to \$4.25 per hour, employment of low-wage workers also fell a second time. The reductions over the projections based on the \$3.35 minimum are: 7.3 percent, 11.4 percent, and 10.0 percent for teenagers (men, women, and blacks, re-

spectively), and for high-school dropout adults they are 3.1 percent, 5.2 percent, and 6.7 percent.

The regression estimates have no surprises. When the cost of employing low-wage laborers is increased, fewer low-wage laborers are employed.

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Table 1-G, which applies to estimates of consecutive monthly change, lists parameters for some characteristics classified by a measure of correlation between monthly estimates. Estimates of the number of persons employed full time, for example, change relatively little from one month to the next, and the two monthly estimates are said to be highly correlated. Consecutive monthly estimates of part-time employment, by contrast, have low correlation, since these estimates are relatively volatile.

Major characteristics for which consecutive monthly estimates are known to have high or low correlation are indicated in table 1-G. Not all categories in table 1-G, however, are broken down into low or high correlation characteristics. When high or low correlation is not specified in table 1-G, the parameters in table 1-G should be selected from the rows labeled "Most characteristics" or from rows not specifying correlation.

Standard errors of estimated levels. The approximate standard error, s_x , of an estimated monthly level, x , can be obtained using the formula below, where a and b are the parameters from table 1-F associated with the particular characteristic. The same formula can be used to approximate the standard error of an estimated month-to-month change in level; simply average the levels for the 2 consecutive months and use the parameters from table 1-G.

$$s_x = \sqrt{ax^2 + bx}$$

Illustration. Assume that in a given month there are an estimated 6 million unemployed men in the civilian labor force ($x = 6,000,000$). Obtain the appropriate a and b parameters from table 1-F ("Unemployment: Total or white"). Use the formula to compute an approximate standard error on the estimate of 6,000,000.

$$a = -0.000017962 \quad b = 2957.13$$

$$s_x = \sqrt{(-0.000017962)(6,000,000)^2 + (2957.13)(6,000,000)} \doteq 131,000$$

Suppose that in the next month the estimated number of unemployed men increases by 200,000 to 6,200,000. The average of the monthly levels is $x = 6,100,000$. Obtain the appropriate a and b parameters from table 1-G ("Unemployment: Total or white, Total, men, women"). Use the formula to compute an approximate standard error on the estimated change of 200,000.

$$a = -0.000093662 \quad b = 4191.84$$

$$s_x = \sqrt{(-0.000093662)(6,100,000)^2 + (4191.84)(6,100,000)} \doteq 149,000$$

An approximate 90-percent confidence interval for the true month-to-month change would be the interval from

-38,000 to 438,000. Because this interval covers zero, one cannot assert at this level of confidence that any real change has occurred in the unemployment level. This result can also be expressed by saying that the apparent change of 200,000 is not significant at a 90-percent confidence level.

Standard errors of estimated percentages and rates. Generally, percentages and rates are not published unless the monthly base (denominator) is greater than 75,000 persons, the quarterly average base is greater than 60,000 persons, or the annual average base is greater than 35,000 persons.

The reliability of an estimated percentage or rate depends upon the magnitude of the percentage or rate and its base. When the numerator and base are in different categories, use the parameters from table 1-F or 1-G relevant to the numerator. The approximate standard error, $s_{y,p}$, of an estimated percentage or rate, p , can be obtained using the following formula, where y is the estimated number of persons in the base.

$$s_{y,p} = \sqrt{\frac{b}{y} p(100-p)}$$

Illustration. For a given month, suppose that 5,600,000 women, 20 to 24 years of age, are estimated to be employed. Of this total, 1,800,000 or 32 percent are classified as part-time workers. To estimate the standard error on this percentage, proceed as follows. Obtain the parameter $b = 2529.99$ from table 1-F ("Labor force and not-in-labor-force data other than agricultural employment and unemployment: Total, Women"). Apply the formula to obtain:

$$s_{y,p} = \sqrt{\frac{2529.99}{5,600,000} (32)(100-32)} \doteq 1.0 \text{ percent}$$

Suppose that in the next month 5,700,000 women in this same age group are reported employed and that 1,950,000 or 34 percent are part-time workers. To estimate the standard error on the observed month-to-month change of 2 percentage points, first average the values for p and y over the 2 months to get $p = 33$ percent and $y = 5,650,000$. Next, obtain the parameter $b = 2690.59$ from table 1-G ("Labor force and not-in-labor-force data other than agricultural employment and unemployment: Total or white, Women: Low correlation characteristics") and apply the formula as follows.

$$s_{y,p} = \sqrt{\frac{2690.59}{5,650,000} (33)(100-33)} \doteq 1.0 \text{ percent}$$

It should be noted that the numerator of the percentage (part-time employed) determined the choice of correlation.

Table 1-F. Parameters for computation of standard errors for estimates of monthly levels

Characteristic	a	b
Labor force and not-in-labor-force data other than agricultural employment and unemployment:		
Total ¹	-0.000017682	2985.26
Men ¹	-.000032770	2764.05
Women	-.000029553	2529.99
Both sexes, 16 to 19 years	-.000171805	2544.62
White ¹	-.000020028	2984.72
Men	-.000036840	2766.67
Women	-.000033710	2526.82
Both sexes, 16 to 19 years	-.000204195	2549.88
Black	-.000125300	3139.26
Men	-.000302096	2930.79
Women	-.000182509	2637.41
Both sexes, 16 to 19 years	-.001294516	2949.48
Hispanic origin	-.000206380	3895.71
Not in labor force, total or white, excluding women and 16-to-19 year olds	.000005931	828.79
Agricultural employment:		
Total or white	.000782035	3048.57
Men	.000858136	2825.09
Women or both sexes, 16 to 19 years	-.000024885	2582.39
Black	-.000134884	3154.76
Hispanic origin:		
Total or women	.011857446	2894.85
Men or both sexes, 16 to 19 years	.015736341	1702.50
Unemployment:		
Total or white	-.000017962	2957.13
Black	-.000212109	3149.77
Hispanic origin	-.000101820	3576.47

¹ Excludes not-in-labor-force data.

If the example had illustrated percentages of women employed full time, the numerator would have been a high correlation characteristic. Table 1-G, however, does not explicitly list high correlation parameters for employed women; thus, the row labeled "Women. Most characteristics" would have been used.

Had the example dealt with teenage women employed part time, either of two rows in table 1-G could have been applied ("Women: Low correlation characteristics" or "Both sexes, 16 to 19 years"). In situations like this, where it is not clear which row applies, a general rule to follow is to choose the row with the largest b parameter. This gives a more conservative estimate of standard error.

Use of table 1-H. Use this table with table 1-B, 1-C, 1-D, or 1-F to calculate approximate standard errors for quarterly

or yearly averages, changes in consecutive quarterly or yearly averages, and consecutive year-to-year changes in monthly estimates. Table 1-H gives factors that can be used to convert standard errors for monthly levels into standard errors for other time periods and changes over time. Follow these three basic steps:

Step 1. Average estimates appropriately. For quarterly estimates, average the 3 monthly estimates. For yearly estimates, average the 12 monthly estimates. For changes in consecutive averages, average over the 2 quarters or 2 years. For consecutive year-to-year changes in monthly estimates, average the 2 months involved.

Step 2. Obtain a standard error on a monthly estimate using table 1-B or 1-C, or apply the procedures for table 1-D or 1-F to the average calculated in step 1, as if the average were an estimate for a single month.

Step 3. Determine the standard error on the average or on the estimate of change. Multiply the result from step 2 by the appropriate factor from table 1-H.

Illustration. Suppose that standard errors are desired for a quarterly average of black employment levels and for the change in averages from 1 quarter to the next. For each successive month of the first quarter, suppose the levels are observed to be 11,500,000, 11,600,000, and 11,700,000.

Step 1. The quarterly average is 11,600,000.

Step 2. Obtain the a and b parameters from table 1-F ("Labor force and not-in-labor-force data other than agricultural employment and unemployment: Black"). Use the formula for s_x to compute an approximate standard error for a monthly estimate of 11,600,000.

$$a = -0.000125300 \quad b = 3139.26$$

$$S_x = \sqrt{(-0.000125300)(11,600,000)^2 + (3139.26)(11,600,000)} \doteq 140,000$$

Step 3. Multiply this result by the factor .87 from table 1-H (column labeled "Quarterly averages" and row labeled "Labor force and not-in-labor-force data other than agricultural employment and unemployment, Black"). This gives an approximate standard error of 122,000 on the quarterly average of 11,600,000.

Proceed to obtain the approximate standard error on the change in consecutive quarterly average estimates of black employment. Assume that black employment estimates for the months in the second quarter are observed to be 11,100,000, 11,200,000, and 11,300,000.

Step 1. The average for the second quarter is 11,200,000.

Table 1-G. Parameters for computation of standard errors for estimates of month-to-month change in levels

Characteristic	a	b
Labor force and not-in-labor-force data other than agricultural employment and unemployment:		
Total or white:		
Most characteristics	-0.000012482	2001.12
High correlation characteristics ¹	-0.00009288	1564.84
Low correlation characteristics ¹	-0.000016162	2550.56
Men:		
Most characteristics	-0.000022599	1921.13
High correlation characteristics	-0.000016814	1500.99
Low correlation characteristics	-0.000058387	2668.56
Women:		
Most characteristics	-0.000021229	1689.99
Low correlation characteristics	-0.000059785	2690.59
Both sexes, 16 to 19 years	-0.000186555	2616.54
Black:		
Most characteristics	-0.000098960	2147.36
Low correlation characteristics	-0.001928030	6513.82
Men:		
Most characteristics	-0.000234427	2280.03
Low correlation characteristics	-0.002881467	5829.60
Women:		
Most characteristics	-0.000156363	1860.78
Low correlation characteristics	-0.002311407	5420.13
Both sexes, 16 to 19 years	-0.001288452	3131.77
Hispanic origin:		
Total	-0.000157201	2774.53
Civilian labor force and not in labor force	-0.000102898	1930.51
Low correlation characteristics	-0.002624078	8620.43
Men, civilian labor force and not in labor force	-0.000248038	2347.42
Men, 16 years and over; 20 years and over; and both sexes, 16 to 19 years	-0.000398909	3615.62
Women, 16 years and over and 20 years and over	-0.000338741	2569.69
Agricultural employment:		
Total or white:		
Total	-0.000395757	3838.04
Men	-0.000672985	3959.25
Women or both sexes, 16 to 19 years	.000130289	2367.00
Black:		
Total or women	-0.000122355	2861.72
Men or both sexes, 16 to 19 years	-0.019110769	5876.77
Hispanic origin:		
Total or women	.002872129	4640.81
Men or both sexes, 16 to 19 years	.002884390	4028.10
Self-employed	-0.000245791	2091.57
Unemployment: ²		
Total or white:		
Total, men, women	-0.000093662	4191.84
Both sexes, 16 to 19 years and low correlation characteristics	-0.000071624	5121.75
Black:		
Total, men, women, and both sexes, 16 to 19 years	-0.000414217	4361.16
High correlation characteristics	.000048170	3088.91
Hispanic origin:		
Total, men, women	-0.000252897	5054.25
Both sexes, 16 to 19 years and low correlation characteristics	-0.000996431	7037.75

¹ High correlation characteristics include employed full-time, manufacturing, service workers, and not in the labor force. Low correlation characteristics include all part-time workers; employed, with a job, but not at work; unpaid family workers; and precision production, craft, and repair occupations.

² High correlation characteristics include full-time jobseekers; job losers; manufacturing workers; and operators, fabricators, and laborers. Low correlation characteristics include part-time jobseekers, reentrants, persons unemployed for less than 5 weeks and from 5 to 14 weeks.

The average of the 2 quarters is 11,400,000.

Step 2. Obtain the a and b parameters as above and use the formula for s_x to compute an approximate standard error for the estimate of 11,400,000, treating it as an estimate for a single month.

$$s_x = \sqrt{(-0.000125300)(11,400,000)^2 + (3139.26)(11,400,000)} = 140,000$$

Step 3. Multiply this result by the factor .84 from table

1-H (column labeled "Change in quarterly averages" and row labeled "Labor force and not-in-labor-force data other than agricultural employment and unemployment, Black"). This gives an approximate standard error of 118,000 on the estimated change of 400,000 from one quarter to the next.

The estimated change clearly exceeds 2 standard errors; therefore, one could conclude from these data that the change in quarterly averages is significant.

Table 1-H. Factors to be used with tables 1-B, 1-C, 1-D, and 1-F to compute the approximate standard errors for levels, rates, and percentages for year-to-year change of monthly estimates, quarterly averages, change in quarterly averages, yearly averages, and change in yearly averages

Characteristic	Factor				
	Year-to year change of monthly estimate	Quarterly averages	Change in quarterly averages	Yearly averages	Change in yearly averages
Agricultural employment:					
Total or men	1.30	0.92	0.70	0.79	0.70
Women	1.30	.82	.84	.57	.70
Both sexes, 16 to 19 years	1.30	.78	.88	.49	.70
Part time	1.40	.80	.80	.59	.70
Unemployment:					
Total	1.40	.74	.88	.46	.65
Part time	1.40	.67	.88	.42	.54
Labor force and not-in-labor-force data other than agricultural employment and unemployment:					
Total or white	1.30	.87	.85	.65	.70
Black	1.30	.87	.84	.65	.70
Hispanic origin	1.30	.87	.80	.65	.70
Both sexes, 16 to 19 years	1.30	.79	.88	.54	.70
Part time	1.40	.82	.90	.51	.60

General Linear Models Procedure

Time Series

Dependent Variable: TOTAL_1

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	104.02051526	104.02051526	19.40	0.0001
Error	311	1667.59961470	5.36205664		
Corrected Total	312	1771.62012996			
	R-Square	C.V.	Root MSE	TOTAL_1 Mean	
	0.058715	3.849910	2.3156115	60.14715311	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
_6_19_Y6	1	104.02051526	104.02051526	19.40	0.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
_6_19_Y6	1	104.02051526	104.02051526	19.40	0.0001

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	55.57804889	53.15	0.0001	1.04560290
_6_19_Y6	0.10270837	4.40	0.0001	0.02331911

General Linear Models Procedure

Dependent Variable: TOTAL_1

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	104.02051526	104.02051526	19.40	0.0001

Error	311	1667.59961470	5.36205664		
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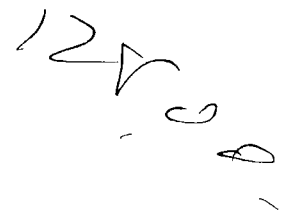
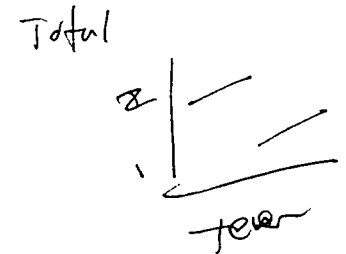
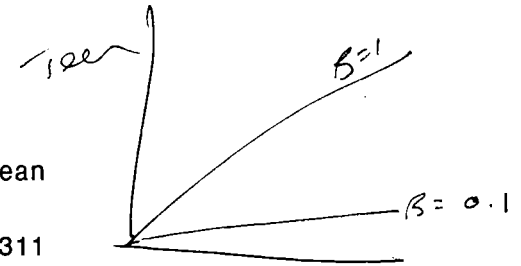
Corrected Total	312	1771.62012996			
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R-Square	C.V.	Root MSE	TOTAL_1 Mean
0.058715	3.849910	2.3156115	60.14715311

Source	DF	Type I SS	Mean Square	F Value	Pr > F
_6_19_Y6	1	104.02051526	104.02051526	19.40	0.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
_6_19_Y6	1	104.02051526	104.02051526	19.40	0.0001

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	55.57804889	53.15	0.0001	1.04560290
_6_19_Y6	<u>0.10270837</u>	4.40	0.0001	0.02331911



- 1) Time Dummies
2) 91 →

General Linear Models Procedure

Dependent Variable: TOTAL_1

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	154.53449575	154.53449575	29.72	0.0001
Error	311	1617.08563420	5.19963226		
Corrected Total	312	1771.62012996			

R-Square	C.V.	Root MSE	TOTAL_1 Mean
0.087228	3.791152	2.2802702	60.14715311

Source	DF	Type I SS	Mean Square	F Value	Pr > F
_6_19_Y7	1	154.53449575	154.53449575	29.72	0.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
_6_19_Y7	1	154.53449575	154.53449575	29.72	0.0001

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	54.23054422	49.62	0.0001	1.09291820
_6_19_Y7	<u>0.12188081</u>	5.45	0.0001	0.02235676

white Teen

General Linear Models Procedure

Dependent Variable: TOTAL_1

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	17.19012878	17.19012878	3.05	0.0819
Error	311	1754.43000117	5.64125402		
Corrected Total	312	1771.62012996			

R-Square	C.V.	Root MSE	TOTAL_1 Mean
0.009703	3.948869	2.3751324	60.14715311

Source	DF	Type I SS	Mean Square	F Value	Pr > F
_6_19_Y8	1	17.19012878	17.19012878	3.05	0.0819

Source	DF	Type III SS	Mean Square	F Value	Pr > F
_6_19_Y8	1	17.19012878	17.19012878	3.05	0.0819

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	58.47243497	60.36	0.0001	0.96872612
_6_19_Y8	0.03310824	1.75	0.0819	0.01896637

White Male Teen

General Linear Models Procedure

Dependent Variable: TOTAL_1

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	324.70511030	324.70511030	69.79	0.0001
Error	311	1446.91501965	4.65245987		
Corrected Total	312	1771.62012996			

R-Square	C.V.	Root MSE	TOTAL_1 Mean
0.183281	3.586132	2.1569561	60.14715311

Source	DF	Type I SS	Mean Square	F Value	Pr > F
_6_19_Y9	1	324.70511030	324.70511030	69.79	0.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
_6_19_Y9	1	324.70511030	324.70511030	69.79	0.0001

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	55.40175468	95.36	0.0001	0.58096424
_6_19_Y9	0.19486121	8.35	0.0001	0.02332503

Black tee

General Linear Models Procedure

Dependent Variable: TOTAL_1

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	44.92653758	44.92653758	8.09	0.0047
Error	311	1726.69359238	5.55206943		
Corrected Total	312	1771.62012996			
	R-Square	C.V.	Root MSE	TOTAL_1 Mean	
	0.025359	3.917530	2.3562829	60.14715311	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
_6_19_10	1	44.92653758	44.92653758	8.09	0.0047

Source	DF	Type III SS	Mean Square	F Value	Pr > F
_6_19_10	1	44.92653758	44.92653758	8.09	0.0047

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	58.60466234	104.96	0.0001	0.55836540
_6_19_10	0.05843984	2.84	0.0047	0.02054400

Black milk fern

General Linear Models Procedure

Dependent Variable: TOTAL_1

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	803.49951047	803.49951047	258.12	0.0001
Error	311	968.12061949	3.11292804		
Corrected Total	312	1771.62012996			
	R-Square	C.V.	Root MSE	TOTAL_1 Mean	
	0.453539	2.933388	1.7643491	60.1471531	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
_6_19_11	1	803.49951047	803.49951047	258.12	0.0001
Source	DF	Type III SS	Mean Square	F Value	Pr > F
_6_19_11	1	803.49951047	803.49951047	258.12	0.0001

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	52.95014013	115.38	0.0001	0.45893141
_6_19_11	0.32084989	16.07	0.0001	0.01997072

Black Female Ter

General Linear Models Procedure

Dependent Variable: _6_19_Y6 16-19 yrs._1

*Time Series
back to '72*

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	578.96960297	578.96960297	19.40	0.0001
Error	311	9281.72182626	29.84476471		
Corrected Total	312	9860.69142923			
	R-Square	C.V.	Root MSE	_6_19_Y6 Mean	
	0.058715	12.28030	5.46303622	44.48619373	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
TOTAL_1	1	578.96960297	578.96960297	19.40	0.0001
Source	DF	Type III SS	Mean Square	F Value	Pr > F
TOTAL_1	1	578.96960297	578.96960297	19.40	0.0001

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	10.10209426	1.29	0.1970	7.81273925
TOTAL_1	0.57166628	4.40	0.0001	0.12979225

interacts badly
drown
Cost for

General Linear Models Procedure

Dependent Variable: _6_19_Y6 16-19 yrs._1

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	578.96960297	578.96960297	19.40	0.0001
Error	311	9281.72182626	29.84476471		
Corrected Total	312	9860.69142923			

R-Square	C.V.	Root MSE	_6_19_Y6 Mean
0.058715	12.28030	5.46303622	44.48619373

Source	DF	Type I SS	Mean Square	F Value	Pr > F
TOTAL_1	1	578.96960297	578.96960297	19.40	0.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
TOTAL_1	1	578.96960297	578.96960297	19.40	0.0001

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	10.10209426	1.29	0.1970	7.81273925
TOTAL_1	0.57166628	4.40	0.0001	0.12979225

General Linear Models Procedure

Dependent Variable: _6_19_Y7 16-19 yrs. White_1

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	907.42261531	907.42261531	29.72	0.0001
Error	311	9495.48557561	30.53210796		
Corrected Total	312	10402.90819093			

R-Square	C.V.	Root MSE	_6_19_Y7 Mean
0.087228	11.38258	5.52558666	48.54421971

Source	DF	Type I SS	Mean Square	F Value	Pr > F
TOTAL_1	1	907.42261531	907.42261531	29.72	0.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
TOTAL_1	1	907.42261531	907.42261531	29.72	0.0001

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	5.498044172	0.70	0.4871	7.90219323
TOTAL_1	0.715681014	5.45	0.0001	0.13127834

General Linear Models Procedure

Dependent Variable: _6_19_Y8 16-19 yrs. White Male_1

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	152.16528362	152.16528362	3.05	0.0819
Error	311	15530.03715542	49.93581079		
Corrected Total	312	15682.20243904			

R-Square	C.V.	Root MSE	_6_19_Y8 Mean
0.009703	13.97013	7.06652749	50.58312852

Source	DF	Type I SS	Mean Square	F Value	Pr > F
TOTAL_1	1	152.16528362	152.16528362	3.05	0.0819

Source	DF	Type III SS	Mean Square	F Value	Pr > F
TOTAL_1	1	152.16528362	152.16528362	3.05	0.0819

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	32.95575680	3.26	0.0012	10.10590714
TOTAL_1	0.29307076	1.75	0.0819	0.16788842

General Linear Models Procedure

Dependent Variable: _6_19_Y9 16-19 yrs. Black_1

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1567.31701670	1567.31701670	69.79	0.0001
Error	311	6984.10483871	22.45692874		
Corrected Total	312	8551.42185540			

R-Square	C.V.	Root MSE	_6_19_Y9 Mean
0.183281	19.45933	4.73887421	24.35270937

Source	DF	Type I SS	Mean Square	F Value	Pr > F
TOTAL_1	1	1567.31701670	1567.31701670	69.79	0.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
TOTAL_1	1	1567.31701670	1567.31701670	69.79	0.0001

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	-32.22015880	-4.75	0.0001	6.77710838
TOTAL_1	0.94057433	8.35	0.0001	0.11258742

General Linear Models Procedure

Dependent Variable: _6_19_10 16-19 yrs. Black Male_1

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	333.59327667	333.59327667	8.09	0.0047
Error	311	12821.22781704	41.22581292		
Corrected Total	312	13154.82109371			

R-Square	C.V.	Root MSE	_6_19_10 Mean
0.025359	24.32602	6.42073305	26.39450805

Source	DF	Type I SS	Mean Square	F Value	Pr > F
TOTAL_1	1	333.59327667	333.59327667	8.09	0.0047

Source	DF	Type III SS	Mean Square	F Value	Pr > F
TOTAL_1	1	333.59327667	333.59327667	8.09	0.0047

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	0.2946336376	0.03	0.9744	9.18235046
TOTAL_1	0.4339336620	2.84	0.0047	0.15254547

General Linear Models Procedure

Dependent Variable: _6_19_11 16-19 yrs. Black Female_1

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	3539.94761760	3539.94761760	258.12	0.0001
Error	311	4265.21265524	13.71451015		
Corrected Total	312	7805.16027284			

R-Square	C.V.	Root MSE	_6_19_11 Mean
0.453539	16.50972	3.70331070	22.43109066

Source	DF	Type I SS	Mean Square	F Value	Pr > F
TOTAL_1	1	3539.94761760	3539.94761760	258.12	0.0001
Source	DF	Type III SS	Mean Square	F Value	Pr > F
TOTAL_1	1	3539.94761760	3539.94761760	258.12	0.0001

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	-62.59029735	-11.82	0.0001	5.29613931
TOTAL_1	1.41355631	16.07	0.0001	0.08798423

General Linear Models Procedure

EPI Ref.
Replicating EPI
dates.

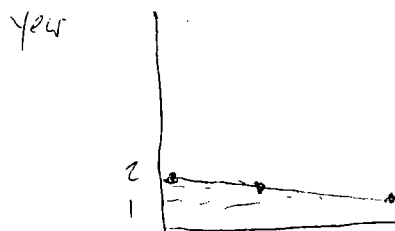
Dependent Variable: YEARDUMM

YearDummy

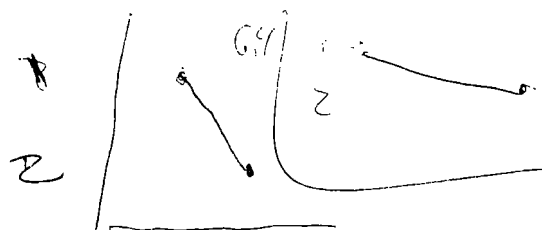
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.06001587	0.06001587	0.22	0.6436
Error	20	5.43998413	0.27199921		
Corrected Total	21	5.50000000			
	R-Square	C.V.	Root MSE	YEARDUMM Mean	
	0.010912	34.76903	0.52153543	1.50000000	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
TEEN	1	0.06001587	0.06001587	0.22	0.6436
Source	DF	Type III SS	Mean Square	F Value	Pr > F
TEEN	1	0.06001587	0.06001587	0.22	0.6436

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	6.974784051	0.60	0.5563	11.65567758
TEEN	-0.126144532	-0.47	0.6436	0.26854632



Teen



General Linear Models Procedure

Dependent Variable: YEARDUMM YearDummy

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.04694906	0.04694906	0.17	0.6826
Error	20	5.45305094	0.27265255		
Corrected Total	21	5.50000000			

R-Square	C.V.	Root MSE	YEARDUMM Mean
0.008536	34.81076	0.52216142	1.50000000

Source	DF	Type I SS	Mean Square	F Value	Pr > F
TEEN_WHI	1	0.04694906	0.04694906	0.17	0.6826

Source	DF	Type III SS	Mean Square	F Value	Pr > F
TEEN_WHI	1	0.04694906	0.04694906	0.17	0.6826

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	5.883887108	0.56	0.5838	10.56512912
TEEN_WHI	-0.091905775	-0.41	0.6826	0.22147981

General Linear Models Procedure

Dependent Variable: YEARDUMM YearDummy

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.16825029	1.16825029	5.39	0.0309
Error	20	4.33174971	0.21658749		
Corrected Total	21	5.50000000			

R-Square	C.V.	Root MSE	YEARDUMM Mean
0.212409	31.02597	0.46538961	1.50000000

Source	DF	Type I SS	Mean Square	F Value	Pr > F
TEEN__WH	1	1.16825029	1.16825029	5.39	0.0309

Source	DF	Type III SS	Mean Square	F Value	Pr > F
TEEN__WH	1	1.16825029	1.16825029	5.39	0.0309

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	15.63639397	2.57	0.0183	6.08758539
TEEN__WH	-0.29443473	-2.32	0.0309	0.12677621

General Linear Models Procedure

Dependent Variable: YEARDUMM YearDummy

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.49061015	0.49061015	1.96	0.1770
Error	20	5.00938985	0.25046949		
Corrected Total	21	5.50000000			
R-Square		C.V.	Root MSE	YEARDUMM Mean	
0.089202		33.36462	0.50046927	1.50000000	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
TEEN_BLA	1	0.49061015	0.49061015	1.96	0.1770
Source	DF	Type III SS	Mean Square	F Value	Pr > F
TEEN_BLA	1	0.49061015	0.49061015	1.96	0.1770

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	4.769880925	2.04	0.0548	2.33880235
TEEN_BLA	-0.124426145	-1.40	0.1770	0.08890390

General Linear Models Procedure

Dependent Variable: YEARDUMM YearDummy

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.97777011	1.97777011	11.23	0.0032
Error	20	3.52222989	0.17611149		
Corrected Total	21	5.50000000			
R-Square		C.V.	Root MSE	YEARDUMM Mean	
0.359595		27.97709	0.41965640	1.50000000	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
TEEN_BL1	1	1.97777011	1.97777011	11.23	0.0032

Source	DF	Type III SS	Mean Square	F Value	Pr > F
TEEN_BL1	1	1.97777011	1.97777011	11.23	0.0032

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	5.648300599	4.55	0.0002	1.24110240
TEEN_BL1	-0.167939432	-3.35	0.0032	0.05011395

General Linear Models Procedure

Dependent Variable: YEARDUMM YearDummy

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.23493224	0.23493224	0.89	0.3561
Error	20	5.26506776	0.26325339		
Corrected Total	21	5.50000000			
R-Square		C.V.	Root MSE	YEARDUMM Mean	
0.042715		34.20548	0.51308224	1.50000000	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
TEEN__BL	1	0.23493224	0.23493224	0.89	0.3561

Source	DF	Type III SS	Mean Square	F Value	Pr > F
TEEN__BL	1	0.23493224	0.23493224	0.89	0.3561

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	-.2953659803	-0.16	0.8783	1.90364899
TEEN__BL	0.0645429692	0.94	0.3561	0.06832264

General Linear Models Procedure

Dependent Variable: YEARDUMM YearDummy

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	4.35363666	4.35363666	75.96	0.0001
Error	20	1.14636334	0.05731817		
Corrected Total	21	5.50000000			
R-Square		C.V.	Root MSE	YEARDUMM Mean	
0.791570		15.96081	0.23941213	1.50000000	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
TOTAL	1	4.35363666	4.35363666	75.96	0.0001
Source	DF	Type III SS	Mean Square	F Value	Pr > F
TOTAL	1	4.35363666	4.35363666	75.96	0.0001

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	-74.59692503	-8.54	0.0001	8.73161514
TOTAL	1.20195617	8.72	0.0001	0.13791411

General Linear Models Procedure

EPI Rep.

Dependent Variable: TEEN

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.04115595	0.04115595	0.22	0.6436
Error	20	3.73047540	0.18652377		
Corrected Total	21	3.77163135			

R-Square	C.V.	Root MSE	TEEN Mean
0.010912	0.995104	0.4318839	43.40088276

Source	DF	Type I SS	Mean Square	F Value	Pr > F
YEARDUMM	1	0.04115595	0.04115595	0.22	0.6436

Source	DF	Type III SS	Mean Square	F Value	Pr > F
YEARDUMM	1	0.04115595	0.04115595	0.22	0.6436

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	43.53063840	149.50	0.0001	0.29117612
YEARDUMM	-0.08650376	-0.47	0.6436	0.18415595

General Linear Models Procedure

Dependent Variable: TEEN_WHI Teen White

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.04744664	0.04744664	0.17	0.6826
Error	20	5.51084446	0.27554222		
Corrected Total	21	5.55829110			
R-Square		C.V.	Root MSE	TEEN_WHI Mean	
0.008536		1.100468	0.5249211	47.69980049	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
YEARDUMM	1	0.04744664	0.04744664	0.17	0.6826
Source	DF	Type III SS	Mean Square	F Value	Pr > F
YEARDUMM	1	0.04744664	0.04744664	0.17	0.6826

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	47.83912023	135.18	0.0001	0.35390177
YEARDUMM	-0.09287983	-0.41	0.6826	0.22382713

General Linear Models Procedure

Dependent Variable: TEEN__WH Teen White Male

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	2.86240476	2.86240476	5.39	0.0309
Error	20	10.61349706	0.53067485		
Corrected Total	21	13.47590182			

R-Square	C.V.	Root MSE	TEEN__WH Mean
0.212409	1.517276	0.7284743	48.01197938

Source	DF	Type I SS	Mean Square	F Value	Pr > F
YEARDUMM	1	2.86240476	2.86240476	5.39	0.0309

Source	DF	Type III SS	Mean Square	F Value	Pr > F
YEARDUMM	1	2.86240476	2.86240476	5.39	0.0309

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	49.09409942	99.96	0.0001	0.49113729
YEARDUMM	-0.72141336	-2.32	0.0309	0.31062250

General Linear Models Procedure

Dependent Variable: TEEN_BLA Teen Black

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	2.82674789	2.82674789	1.96	0.1770
Error	20	28.86259514	1.44312976		
Corrected Total	21	31.68934303			

R-Square	C.V.	Root MSE	TEEN_BLA Mean
0.089202	4.571223	1.2013033	26.27969317

Source	DF	Type I SS	Mean Square	F Value	Pr > F
YEARDUMM	1	2.82674789	2.82674789	1.96	0.1770

Source	DF	Type III SS	Mean Square	F Value	Pr > F
YEARDUMM	1	2.82674789	2.82674789	1.96	0.1770

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	27.35505212	33.78	0.0001	0.80991856
YEARDUMM	-0.71690596	-1.40	0.1770	0.51223747

General Linear Models Procedure

Dependent Variable: TEEN_BL1 Teen Black Male

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	25.21642815	25.21642815	11.23	0.0032
Error	20	44.90818047	2.24540902		
Corrected Total	21	70.12460862			
	R-Square	C.V.	Root MSE	TEEN_BL1 Mean	
	0.359595	6.066388	1.4984688	24.70117088	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
YEARDUMM	1	25.21642815	25.21642815	11.23	0.0032
Source	DF	Type III SS	Mean Square	F Value	Pr > F
YEARDUMM	1	25.21642815	25.21642815	11.23	0.0032

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	27.91299458	27.63	0.0001	1.01026752
YEARDUMM	-2.14121580	-3.35	0.0032	0.63894928

General Linear Models Procedure

Dependent Variable: TEEN__BL Teen Black Female

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	2.40893273	2.40893273	0.89	0.3561
Error	20	53.98660481	2.69933024		
Corrected Total	21	56.39553754			

R-Square	C.V.	Root MSE	TEEN__BL Mean
0.042715	5.906415	1.6429638	27.81660036

Source	DF	Type I SS	Mean Square	F Value	Pr > F
YEARDUMM	1	2.40893273	2.40893273	0.89	0.3561

Source	DF	Type III SS	Mean Square	F Value	Pr > F
YEARDUMM	1	2.40893273	2.40893273	0.89	0.3561

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	26.82389069	24.22	0.0001	1.10768601
YEARDUMM	0.66180644	0.94	0.3561	0.70056214

General Linear Models Procedure

Dependent Variable: TOTAL

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	2.38541756	2.38541756	75.96	0.0001
Error	20	0.62810828	0.03140541		
Corrected Total	21	3.01352584			
	R-Square	C.V.	Root MSE	TOTAL Mean	
	0.791570	0.279913	0.1772157	63.31089851	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
YEARDUMM	1	2.38541756	2.38541756	75.96	0.0001
Source	DF	Type III SS	Mean Square	F Value	Pr > F
YEARDUMM	1	2.38541756	2.38541756	75.96	0.0001

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	62.32304597	521.62	0.0001	0.11947882
YEARDUMM	0.65856836	8.72	0.0001	0.07556504

CONTENTS PROCEDURE

Data Set Name:	CARL22.EPOPDUMY	Observations:	22
Member Type:	DATA	Variables:	9
Engine:	V612	Indexes:	0
Created:	15:43 Thursday, December 16, 1993	Observation Length:	76
Last Modified:	15:43 Thursday, December 16, 1993	Deleted Observations:	0
Protection:		Compressed:	NO
Data Set Type:		Sorted:	NO
Label:			

-----Engine/Host Dependent Information-----

Data Set Page Size:	16384
Number of Data Set Pages:	1
File Format:	607
First Data Page:	1
Max Obs per Page:	215
Obs in First Data Page:	22

-----Alphabetic List of Variables and Attributes-----

#	Variable	Type	Len	Pos	Format	Informat	Label
2	MONTH	Char	12	8			
4	TEEN	Num	8	28	BEST12.	12.	
8	TEEN__BL1	Num	8	60	BEST10.	10.	Teen Black Male
7	TEEN__BLA	Num	8	52	BEST12.	12.	Teen Black
5	TEEN__WHI	Num	8	36	BEST12.	12.	Teen White
9	TEEN__BL	Num	8	68	BEST11.	11.	Teen Black Female
6	TEEN__WH	Num	8	44	BEST9.	9.	Teen White Male
3	TOTAL	Num	8	20	BEST12.	12.	
1	YEARDUMM	Num	8	0	BEST12.	12.	YearDummy

CONTENTS PROCEDURE

Data Set Name:	CARL2.EPOPDUMY	Observations:	22
Member Type:	DATA	Variables:	9
Engine:	V612	Indexes:	0
Created:	15:43 Thursday, December 16, 1993	Observation Length:	76
Last Modified:	15:43 Thursday, December 16, 1993	Deleted Observations:	0
Protection:		Compressed:	NO
Data Set Type:		Sorted:	NO
Label:			

-----Engine/Host Dependent Information-----

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-----Alphabetic List of Variables and Attributes-----

#	Variable	Type	Len	Pos	Format	Informat	Label
2	MONTH	Char	12	8			
1 4	TEEN	Num	8	28	BEST12.	12.	
2 8	TEEN_BL1	Num	8	60	BEST10.	10.	Teen Black Male
3 7	TEEN_BLA	Num	8	52	BEST12.	12.	Teen Black
4 5	TEEN_WHI	Num	8	36	BEST12.	12.	Teen White
5 9	TEEN__BL	Num	8	68	BEST11.	11.	Teen Black Female
6 6	TEEN__WH	Num	8	44	BEST9.	9.	Teen White Male
3	TOTAL	Num	8	20	BEST12.	12.	
1	YEARDUMM	Num	8	0	BEST12.	12.	YearDummy

The chamber of commerce letter sites a study by the Employment Policies Institute as saying that the minimum wage increase caused over one-hundred thousand teenage jobs, disproportionately minorities and that the benefits did not go to low income families.

Claims Jobs lost

The Employment Policies Institute claims that 128,000 teen jobs were lost and 380,000 jobs overall. They arrive at these numbers through several steps.

- They begin by citing an research that according to EPI says that teen employment closely tracks aggregate employment.
- Then they observe that the employment-to-population ratio grew by 0.70 % between the 11 month period October 1995-August 1996 prior to the first minimum wage increase and the period October 1996-August 1997 after the minimum wage increase.
- They observe that the employment rate for teen workers fell by 0.14 percent and for teen males fell 0.60 percent.
- They claim that the difference between the employment rate gains of the total population and the employment rate losses of teen workers can be completely explained by the rise in the minimum wage. They calculate that if the teen employment increased by the same 0.70 percentage points of all workers, there would have been 107,000 more teen jobs.
- Then they claim that teen employment actually declined by 21,000 to arrive at a total of 128,000 teen jobs “lost”.
- Finally, they say that since teen workers account for only one in three minimum wage workers, a approximately 380,000 jobs were lost ($3 \times 128,000 = 384,000$).

Response

-

Who benefits

- The employment policies institute sites data to claim that more than 70% of the gains went to families in the upper four income quintiles.

Without rechecking their numbers, their claim even based on the numbers they use is misleading.

Most importantly, one can describe their same numbers to say that almost 85% of the gains went to lower income families in the bottom four income quintiles. The lowest

quintile was the single group that benefited most by receiving almost one-third of all the benefits.

filename: mwcrit.wpd

1.622

CPU-U Annual Average 1982-84=100 Not Seasonally Adjusted						
Nominal Value	Index	1997 Inflator	1982 Deflator	1997 Dollars	1982 Dollars	
1997	160.5	1.00000	0.60125	0.00	0.00	
1996	156.9	0.97757	0.61504	0.00	0.00	
1995	152.4	0.97132	0.63320	102.95	63.32	
1994	148.2	0.97244	0.65115	0.00	0.00	
1993	144.5	0.97503	0.66782	0.00	0.00	
1992	140.3	0.97093	0.68781	0.00	0.00	
1991	136.2	0.97078	0.70852	0.00	0.00	
1990	130.7	0.95962	0.73833	0.00	0.00	
1989	124.0	0.94874	0.77823	0.00	0.00	
1988	118.3	0.95403	0.81572	0.00	0.00	
1987	113.6	0.96027	0.84947	0.00	0.00	
1986	109.6	0.96479	0.88047	0.00	0.00	
1985	107.6	0.98175	0.89684	0.00	0.00	
1984	103.9	0.96561	0.92878	0.00	0.00	
1983	99.6	0.95861	0.96888	0.00	0.00	
1982	100.00	0.96888	1.00000	103.21	100.00	
1981	90.9	0.94197	1.06161	0.00	0.00	
1980	82.4	0.90649	1.17112	0.00	0.00	
1979	72.6	0.88107	1.32920	0.00	0.00	
1978	65.2	0.89807	1.48006	0.00	0.00	
1977	60.6	0.92945	1.59241	0.00	0.00	
1976	56.9	0.93894	1.69596	0.00	0.00	
1975	53.8	0.94552	1.79368	0.00	0.00	
1974	49.3	0.91636	1.95740	0.00	0.00	
1973	44.4	0.90061	2.17342	0.00	0.00	
1972	41.8	0.94144	2.30861	0.00	0.00	
1971	40.5	0.96890	2.38272	0.00	0.00	
1970	38.8	0.95802	2.48711	0.00	0.00	
1969	36.7	0.94588	2.62943	0.00	0.00	
1968	34.8	0.94823	2.77299	0.00	0.00	
1967	33.4	0.95977	2.88922	0.00	0.00	
1966	32.4	0.97006	2.97840	0.00	0.00	
1965	31.5	0.97222	3.06349	0.00	0.00	
1964	31.0	0.98413	3.11290	0.00	0.00	
1963	30.6	0.98710	3.15359	0.00	0.00	
1962	30.2	0.98693	3.19536	0.00	0.00	
1961	29.9	0.99007	3.22742	0.00	0.00	
1960	29.6	0.98997	3.26014	0.00	0.00	
1959	29.1	0.98311	3.31615	0.00	0.00	
1958	28.9	0.99313	3.33910	0.00	0.00	
1957	28.1	0.97232	3.43416	0.00	0.00	
1956	27.2	0.96797	3.54779	0.00	0.00	
1955	26.8	0.98529	3.60075	0.00	0.00	
1954	26.9	1.00373	3.58736	0.00	0.00	
1953	26.7	0.99257	3.61423	0.00	0.00	
1952	26.5	0.99251	3.64151	0.00	0.00	
1951	26.0	0.98113	3.71154	0.00	0.00	
1950	24.1	0.92692	4.00415	0.00	0.00	
1949	23.8	0.98755	4.05462	0.00	0.00	
1948	24.1	1.01261	4.00415	0.00	0.00	
1947	22.3	0.92531	4.32735	0.00	0.00	
1946	19.5	0.87444	4.94872	0.00	0.00	
1945	18.0	0.92308	5.36111	0.00	0.00	
1944	17.6	0.97778	5.48295	0.00	0.00	
1943	17.3	0.98295	5.57803	0.00	0.00	

Old Dollars to New Dollars	
Label	
1979 Old CPI	72.6
1997 New CPI	160.5
Inflator	0.452
New Dollars	

New Dollars to Old Dollars	
Label	
1979 Old CPI	72.6
1997 New CPI	160.5
Deflator	0.452
Old Dollars	

			CPU-U			Label			Old Dollars to New			Label			New Dollars to		
			Monthly			Jul-98			Old CPI			Jul-98			Old CPI		
			1982-84=100			Jan-98			New CPI			Jan-98			New CPI		
			Seasonally Adjusted						Inflator						Deflator		

The Number of Firms, Establishments, Employment, Annual Payroll, and Estimated Receipts by Industrial Division and Enterprise Employment Size for 1993

Annual Payroll (\$1,000)	Total	<20	20-99	100-499	500+
ALL INDUSTRIES	2,363,208,106	415,254,636	385,005,072	316,183,732	1,246,764,666
Service	745,774,734	178,127,317	124,205,069	113,177,516	330,264,832
Manufacturing	575,961,849	31,891,719	67,962,240	79,563,844	396,544,046
Retail Trade	265,297,525	54,121,824	56,067,857	29,860,185	125,247,659
Fin., Ins., Real Estate	232,099,601	33,337,441	27,468,544	26,840,302	144,453,314
Wholesale Trade	200,757,826	45,258,821	47,073,040	29,234,135	79,191,830
Trans., Comm., Pub. Util	182,117,612	14,419,585	17,353,437	15,167,419	135,177,171
Construction	125,518,445	49,292,448	39,706,863	18,722,204	17,796,930
Mining	24,620,409	2,233,822	2,813,806	2,766,129	16,806,652
Ag. Serv., For., Fishing	10,255,107	5,816,341	2,322,283	834,251	1,282,232
Unclassified	804,998	755,318	31,933	17,747	0
Payroll per Establishment					

Emp as % Grand Total	Total	<20	20-99	100-499	500+
ALL INDUSTRIES	100	20	18	15	47
Service	34	8	6	6	14
Retail Trade	21	5	4	2	10
Manufacturing	19	1	3	3	12
Fin., Ins., Real Estate	7	1	1	1	4
Wholesale Trade	7	2	2	1	2
Trans., Comm., Pub. Util	6	1	1	1	4
Construction	5	2	1	1	1
Mining	1	0	0	0	0
Ag. Serv., For., Fishing	1	0	0	0	0
Unclassified	0	0	0	0	0

Emp as % Sector Total	Total	<20	20-99	100-499	500+
ALL INDUSTRIES	100	20	18	15	47
Ag. Serv., For., Fishing	100	57	25	9	9
Construction	100	46	31	13	11
Fin., Ins., Real Estate	100	18	14	12	56
Manufacturing	100	7	15	16	61
Mining	100	13	15	12	59
Retail Trade	100	22	21	11	46
Service	100	23	18	18	42
Trans., Comm., Pub. Util	100	12	13	10	64
Unclassified	100	88	11	1	0
Wholesale Trade	100	26	26	15	32

Emp/ Est	Total	<20	20-99	100-499	500+
ALL INDUSTRIES	15	4	28	48	60
Manufacturing	47	6	38	106	240
Mining	21	4	30	51	76
Trans., Comm., Pub. Util	21	4	28	44	64
Service	14	4	28	60	107
Retail Trade	13	4	25	26	29
Wholesale Trade	12	5	23	34	33
Fin., Ins., Real Estate	11	3	20	27	30
Construction	8	4	35	113	120
Ag. Serv., For., Fishing	6	4	33	87	56
Unclassified	1	1	28	66	#DIV/0!

Emp/ Firm	Total	<20	20-99	100-499	500+
ALL INDUSTRIES	18	4	39	193	3,039
Manufacturing	55	6	41	182	2,397
Trans., Comm., Pub. Util	29	4	38	156	2,226
Mining	27	4	37	139	866
Retail Trade	18	5	37	167	3,257

Fin., Ins., Real Estate	16	3	38	141	1,278
Service	16	4	39	183	1,678
Wholesale Trade	16	5	36	122	632
Construction	8	4	36	157	774
Ag. Serv., For., Fishing	6	4	34	140	425
Unclassified	1	1	28	176	#DIV/0!

Employment	Total	<20	20-99	100-499	500+
ALL INDUSTRIES	94,773,913	19,070,191	17,420,634	13,825,238	44,457,850
Service	32,262,429	7,272,399	5,647,481	5,654,129	13,688,420
Retail Trade	19,778,588	4,379,299	4,124,692	2,103,512	9,171,085
Manufacturing	18,183,981	1,345,715	2,659,299	2,997,298	11,181,669
Fin., Ins., Real Estate	6,891,117	1,242,772	948,190	837,300	3,862,855
Wholesale Trade	6,258,484	1,614,012	1,649,739	964,972	2,029,761
Trans., Comm., Pub. Util	5,621,889	685,168	753,953	572,682	3,610,086
Construction	4,525,346	2,065,951	1,391,296	567,837	500,262
Mining	608,309	80,156	93,517	75,306	359,330
Ag. Serv., For., Fishing	588,556	336,195	146,305	51,674	54,382
Unclassified	55,214	48,524	6,162	528	0

Establishments	Total	<20	20-99	100-499	500+
ALL INDUSTRIES	6,401,233	4,737,778	631,873	285,184	746,398
Service	2,294,559	1,870,988	201,782	94,225	127,564
Retail Trade	1,554,437	988,191	167,969	82,457	315,820
Fin., Ins., Real Estate	609,492	401,771	48,575	31,441	127,705
Construction	600,299	551,853	39,240	5,047	4,159
Wholesale Trade	509,604	348,762	70,333	28,377	62,132
Manufacturing	387,337	242,992	69,342	28,398	46,605
Trans., Comm., Pub. Util	267,175	170,535	26,800	13,147	56,693
Ag. Serv., For., Fishing	100,685	94,654	4,474	593	964
Unclassified	49,075	48,844	223	8	0
Mining	28,570	19,188	3,135	1,491	4,756

Estimated Receipts (\$1,000)	Total	<20	20-99	100-499	500+
ALL INDUSTRIES	14,098,572,034	2,468,807,589	2,394,813,062	1,816,354,667	7,418,596,716
Wholesale Trade	3,403,745,666	828,186,341	870,676,504	503,055,546	1,201,827,275
Manufacturing	3,143,374,173	143,614,738	314,334,903	426,743,372	2,258,681,160
Retail Trade	2,029,104,606	450,697,184	466,609,241	238,499,522	873,298,659
Service	1,904,405,317	523,384,308	316,071,485	280,856,292	784,093,232
Fin., Ins., Real Estate	1,903,897,876	179,866,873	157,641,638	195,524,513	1,370,864,852
Trans., Comm., Pub. Util	947,892,983	67,931,098	73,304,180	67,490,045	739,167,660
Construction	573,697,679	236,934,897	171,950,151	85,440,246	79,372,385
Mining	156,155,475	17,051,646	17,621,445	15,515,804	105,966,580
Ag. Serv., For., Fishing	31,537,012	16,663,751	6,421,587	3,126,761	5,324,913
Unclassified	4,761,247	4,476,753	181,928	102,566	0

Firms	Total	<20	20-99	100-499	500+
ALL INDUSTRIES	5,193,642	4,661,601	445,900	71,512	14,629
Service	2,030,895	1,845,796	146,082	30,857	8,160
Retail Trade	1,090,076	963,573	111,069	12,618	2,816
Construction	594,187	551,596	38,318	3,627	646
Fin., Ins., Real Estate	426,778	392,925	24,895	5,936	3,022
Wholesale Trade	397,233	340,062	46,051	7,909	3,211
Manufacturing	328,167	242,465	64,607	16,430	4,665
Trans., Comm., Pub. Util	193,203	168,210	19,708	3,663	1,622
Ag. Serv., For., Fishing	99,397	94,593	4,308	368	128
Unclassified	49,070	48,844	223	3	0
Mining	22,486	19,002	2,526	543	415

Payroll as % Grand Total	Total	<20	20-99	100-499	500+
ALL INDUSTRIES	100	18	16	13	53
Service	31.55772579	8	5	5	14
Manufacturing	24.37203256	1	3	3	17
Retail Trade	11.22616008	2	2	1	5
Fin., Ins., Real Estate	9.821377999	1	1	1	6
Wholesale Trade	8.49513953	2	2	1	3
Trans., Comm., Pub. Util	7.706372178	1	1	1	6
Construction	5.311358093	2	2	1	1
Mining	1.041821452	0	0	0	1
Ag. Serv., For., Fishing	0.433948537	0	0	0	0
Unclassified	0.03406378	0	0	0	0

Payroll as % Sector Total	Total	<20	20-99	100-499	500+
ALL INDUSTRIES	100	18	16	13	53
Ag. Serv., For., Fishing	100	57	23	8	13
Construction	100	39	32	15	14
Fin., Ins., Real Estate	100	14	12	12	62
Manufacturing	100	6	12	14	69
Mining	100	9	11	11	68
Retail Trade	100	20	21	11	47
Service	100	24	17	15	44
Trans., Comm., Pub. Util	100	8	10	8	74
Unclassified	100	94	4	2	0
Wholesale Trade	100	23	23	15	39*

Payroll/ Receipts	Total	<20	20-99	100-499	500+
ALL INDUSTRIES	0.17	0.17	0.16	0.17	0.17
Service	0.39	0.34	0.39	0.40	0.42
Ag. Serv., For., Fishing	0.33	0.35	0.36	0.27	0.24
Construction	0.22	0.21	0.23	0.22	0.22
Trans., Comm., Pub. Util	0.19	0.21	0.24	0.22	0.18
Manufacturing	0.18	0.22	0.22	0.19	0.18
Unclassified	0.17	0.17	0.18	0.17	#DIV/0!
Mining	0.16	0.13	0.16	0.18	0.16
Retail Trade	0.13	0.12	0.12	0.13	0.14
Fin., Ins., Real Estate	0.12	0.19	0.17	0.14	0.11
Wholesale Trade	0.06	0.05	0.05	0.06	0.07

Receipts as % Grand Total	Total	<20	20-99	100-499	500+
ALL INDUSTRIES	100	18	17	13	53
Wholesale Trade	24.14248519	6	6	4	9
Manufacturing	22.29569183	1	2	3	16
Retail Trade	14.39227037	3	3	2	6
Service	13.50778868	4	2	2	6
Fin., Ins., Real Estate	13.50418944	1	1	1	10
Trans., Comm., Pub. Util	6.723326169	0	1	0	5
Construction	4.069189969	2	1	1	1
Mining	1.107597809	0	0	0	1
Ag. Serv., For., Fishing	0.223689406	0	0	0	0
Unclassified	0.033771129	0	0	0	0

Receipts as % Sector Total	Total	<20	20-99	100-499	500+
ALL INDUSTRIES	100	18	17	13	53
Ag. Serv., For., Fishing	100	53	20	10	17
Construction	100	41	30	15	14
Fin., Ins., Real Estate	100	9	8	10	72
Manufacturing	100	5	10	14	72
Mining	100	11	11	10	68
Retail Trade	100	22	23	12	43
Service	100	27	17	15	41
Trans., Comm., Pub. Util	100	7	8	7	78
Unclassified	100	94	4	2	0
Wholesale Trade	100	24	26	15	35

Haacke Carl

From: Rosenblum Jay
Sent: Thursday, March 12, 1998 9:43 AM
To: Dandridge Myra; Fillichio Carl; Haacke Carl; Healy Monica; Jackson Linda,PWBA; Maroney Kevin; Waddell Howard; Watson Sharon,PWBA; 'Schub.Judy@pbgc.gov'
Subject: FW: SAVER Working Group Weekly Meeting -- Friday, March 13 -- CHANGE

Our previously scheduled 3:00 meeting on Friday has been changed to 3:30pm, and will still take place in the ASP conference room. Please let me know if you will be unable to attend.

Thanks.

From: Rosenblum Jay
Sent: Wednesday, March 11, 1998 3:43 PM
To: Dandridge Myra; Fillichio Carl; Haacke Carl; Healy Monica; Jackson Linda,PWBA; Maroney Kevin; Waddell Howard; Watson Sharon,PWBA; 'Schub.Judy@pbgc.gov'
Subject: SAVER Working Group Weekly Meeting -- Friday, March 13

We will be having our weekly SAVER Summit meeting at **3:00pm** on Friday, March 13th, in the ASP Conference Room. Please let me know if you will be unable to attend.

**TO BE UPDATED TO INCLUDE OUR PROPOSED LEGISLATIVE LANGUAGE ON
NONDISPLACEMENT**

SPECTER

WELFARE REFORM DISPLACEMENT

Question:

What risk are we running of displacing the working poor with welfare recipients?

Answer:

- o A robust economy has generated nearly 12 million new jobs over the past four years showing that with the right policies in place, a significant number of new jobs can be created.
- o With the unemployment rate hitting the lowest rate in 24 years, concerns over displacement are mitigated.
- o Historically, this country has handled large increases in the supply of workers without increasing the unemployment of others:
 - Immigrants in the 1980's and 1990's (about one million a year);
 - The baby boom generation;
 - Women in the 1970's and 1980's; and
 - Teens entering the job market each summer.
- o To the degree there is an effect on the working poor, it will occur over the short-term, and that is why the President has proposed that Congress pass the Welfare-to-Work Jobs Challenge, the enhanced Work Opportunity Tax Credit and the Welfare-to-Work Tax Credit -- all efforts to stimulate demand in the low wage labor market.
- o I understand your concern and plan to closely monitor this situation, and will work with you to address any identified problems. It was clearly not the President's intention in signing the welfare reform legislation that the working poor would be displaced by welfare recipients.

Total and Teens

Regression Output:

Constant 66.53702
Std Err of Y Est 0.437605
R Squared 0.015699
No. of Observations 37
Degrees of Freedom 35

X Coefficient(s) -0.073852
Std Err of Coef. 0.098845
T -0.747154

Total and White Teens

Regression Output:

Constant 67.16911
Std Err of Y Est 0.435066
R Squared 0.027087
No. of Observations 37
Degrees of Freedom 35

X Coefficient(s) -0.080193
Std Err of Coef. 0.081239
T -0.987128

Total and Teen White Male

Regression Output:

Constant 68.91085
Std Err of Y Est 0.42171
R Squared 0.085902
No. of Observations 37
Degrees of Freedom 35

X Coefficient(s) -0.115293
Std Err of Coef. 0.063572
T -1.813591

Total and Black

Regression Output:

Constant 62.42993
Std Err of Y Est 0.439056
R Squared 0.00916
No. of Observations 37
Degrees of Freedom 35

X Coefficient(s) 0.033648
Std Err of Coef. 0.059152
T 0.568842

Total and Black Male

Regression Output:

Constant 65.36837
Std Err of Y Est 0.417299
R Squared 0.104928
No. of Observations 37
Degrees of Freedom 35

X Coefficient(s) -0.083548
Std Err of Coef. 0.041247
T -2.025582

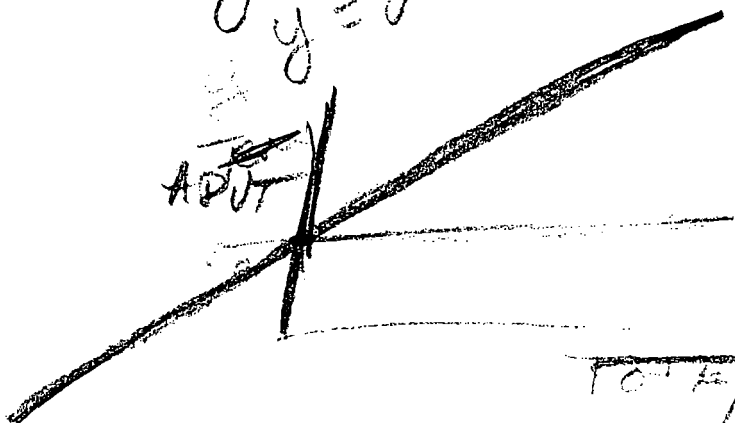
$$\frac{\partial y}{\partial x} - \hat{\beta} = 1$$

$$y = XB$$

$$y = \alpha + \beta x$$

$$y = \alpha + x$$

$$\hat{\beta} = 1$$



$$\text{Teen} = \alpha + \beta \text{Adult}$$

$$\text{Teen} = 66.53 + -0.07 \text{Adult}$$

$$60 = 66.53 + -0.07(45.0)$$

$$= 3.65$$

$$45 = 62$$

$$60 = (66.53 - 0.07(50))$$

$$= 5.5$$

	Average Monthly POP		Average Monthly EP			SE on EP	SE on EP	SE on Change
	10/95-8/96	10/96-8/97	10/95-8/96	10/96-8/97		10/95-8/96	10/96-8/97	
All Workers, 16-64	199,974,000	202,417,000	63		64	0.106	0.105	0.130
Workers, 16-19	14,806,000	15,285,000	43		43	0.370	0.364	0.451
Males(M) 16-19	7,529,000	7,786,000	43		43	0.519	0.510	0.632
Females(F) 16-19	7,278,000	7,499,000	43		44	0.528	0.521	0.644
White 16 -19	9,940,000	10,136,000	50		50	0.456	0.452	0.558
White(M) 16 -19	5,081,000	5,176,000	50		49	0.638	0.632	0.780
White(F) 16 -19	4,859,000	4,961,000	51		51	0.653	0.646	0.798
Black 16-19	2,293,000	2,349,000	27		27	0.904	0.893	1.104
Black(M) 16-19	1,133,000	1,157,000	25		24	1.263	1.233	1.532
Black(F) 16-19	1,160,000	1,192,000	28		29	1.293	1.287	1.584
Hispanic 16-19	1,925,000	2,074,000	32		33	1.197	1.161	1.448
Hispanic(M) 16-19	981,000	1,084,000	36		36	1.726	1.645	2.068
Hispanic(F) 16-19	944,000	990,000	28		29	1.635	1.625	2.002

Haacke Carl

From: Duff Martha,BLS
Sent: Tuesday, March 10, 1998 10:59 AM
To: Haacke Carl
Subject: Standard Error files



Haacke.xls

<<Haacke.xls>>

Carl,

There are good reasons why you were not able to follow what I did.

1. For ages 16-19 from Table 1-H I modified the factor given for Yearly averages to account for the fact that we were using 11 months instead of 12. I used .57 instead of .54.

2. I forgot that line #1 was not teens and used the wrong factor from table 1-H, I'm very sorry. I have revised this in the version that is attached and used .67 again, I adjusted it from the .65 given for a yearly average to account for the fact that we have an 11 month average.

Martha Duff



**Office of Employment and
Unemployment Statistics
Facsimile Cover Sheet**

**Room 4945, Postal Square Building
2 Massachusetts Avenue, NE
Washington, DC 20212**

To: Carl Haacke

Organization: DOL
Phone:
Fax: (202) 219-4902

From: Martha Duff
Title:
Office Phone:
Office Fax: 202--606-6425

Date: 3/9/98
**Pages including this
cover page:** 2

Comments:

For non-hispanic categories, GUF parameters for the
total ie total white or total black were used.

FAX TRANSMITTAL SHEET
U.S. Department of Labor
Office of the Chief Economist

Date:

To: Ed Robinson 606 - 6425
From: Carl Hlaacke

Page Number one of pages

Messages:

Here is the data we have.
We would like the standard errors
for each group ~~to have~~ in the time
periods listed.

Transmitter Telecopier: (202) 219-4902

If you have questions or problems regarding this fax call 202-219-5108.

All workers	62.89	63.59	0.70
Teen	43.27	43.13	-0.14 →
Diff-in-Diff	19.62	20.46	0.84
Male Teen	43.34	42.74	-0.60 →
Diff-in-Diff	19.55	20.85	1.30
Female Teen	43.19	43.54	0.35 →
Diff-in-Diff	19.70	20.05	0.35
White	50.20	49.95	-0.25
Diff-in-Diff	12.69	13.64	0.95
Male	49.80	49.25	-0.55
Diff-in-Diff	13.09	14.34	1.25
Female	50.62	50.68	0.06
Diff-in-Diff	12.27	12.91	0.64
Black	26.70	26.64	-0.06
Diff-in-Diff	36.19	36.95	0.76
Male	25.21	24.21	-1.00
Diff-in-Diff	37.68	39.38	1.70
Female	28.17	29.00	0.83
Diff-in-Diff	34.72	34.59	-0.13
Hispanic	32.09	32.98	0.89
Diff-in-Diff	30.80	30.61	-0.19
Male	36.49	36.46	-0.03
Diff-in-Diff	26.40	27.13	0.73
Female	27.52	29.18	1.66
Diff-in-Diff	35.37	34.41	-0.96

Shail
Butani

606 - 6347

Ed Robinson

606 - 6425f.

The chamber of commerce letter sites a study by the Employment Policies Institute as saying that the minimum wage increase caused over one-hundred thousand teenage jobs, disproportionately minorities and that the benefits did not go to low income families.

Jobs lost

The Employment Policies Institute claims that 128,000 teen jobs were lost and 380,000 jobs overall. They arrive at these numbers through several steps.

- They begin by citing a research that according to EPI says that teen employment closely tracks aggregate employment.
- Then they observe that the employment-to-population ratio grew by 0.70 % between the 11 month period October 1995-August 1996 prior to the first minimum wage increase and the period October 1996-August 1997 after the minimum wage increase.
- They observe that the employment rate for teen workers fell by 0.14 percent and for teen males fell 0.60 percent.
- They claim that the difference between the employment rate gains of the total population and the employment rate losses of teen workers can be completely explained by the rise in the minimum wage. They calculate that if the teen employment increased by the same 0.70 percentage points of all workers, there would have been 107,000 more teen jobs.
- Then they claim that teen employment actually declined by 21,000 to arrive at a total of 128,000 teen jobs “lost”.
- Finally, they say that since teen workers account for only one in three minimum wage workers, a approximately 380,000 jobs were lost ($3 \times 128,000 = 384,000$).

Who benefits

- The employment policies institute sites data to claim that more than 70% of the gains went to families in the upper four income quintiles.

Without rechecking their numbers, their claim even based on the numbers they use is misleading.

Most importantly, one can describe their same numbers to say that almost 85% of the gains went to lower income families in the bottom four income quintiles. The lowest quintile was the single group that benefited most by receiving almost one-third of all the benefits.

COALITION FOR JOB OPPORTUNITIES

MINIMUM WAGE INCREASE: THE REAL STORY

- **Whether you believe it or not a minimum wage increase costs jobs.** It's basic "Economics 101" when you increase the cost of something you get less of it. By arbitrarily mandating a minimum wage increase the federal government will force many businesses, especially small businesses with narrow profit margins, to either pass on the increase to consumers by increasing prices, cut back on an employees' hours or layoff employees.

Stat: According to the Employment Policies Institute (EPI), 380,000 jobs were lost due to the minimum wage increase in 1996.

A survey by the American Economic Association indicates that nearly 77% of economists believe wage hikes cost jobs.

- **Few workers actually support families on minimum wage.** Proponents of a minimum wage increase like to fudge the numbers and make it appear that a vast majority of workers on the minimum wage support a family. In reality a majority of minimum wage workers are teenagers or the secondary breadwinner.

Stat: Of those who would benefit from the President's proposed increase, 84% either live with their parents, are single and childless living alone or have a working spouse. Only 16% are sole earners with children many of whom also are eligible for the Earned Income Tax Credit. (EPI)

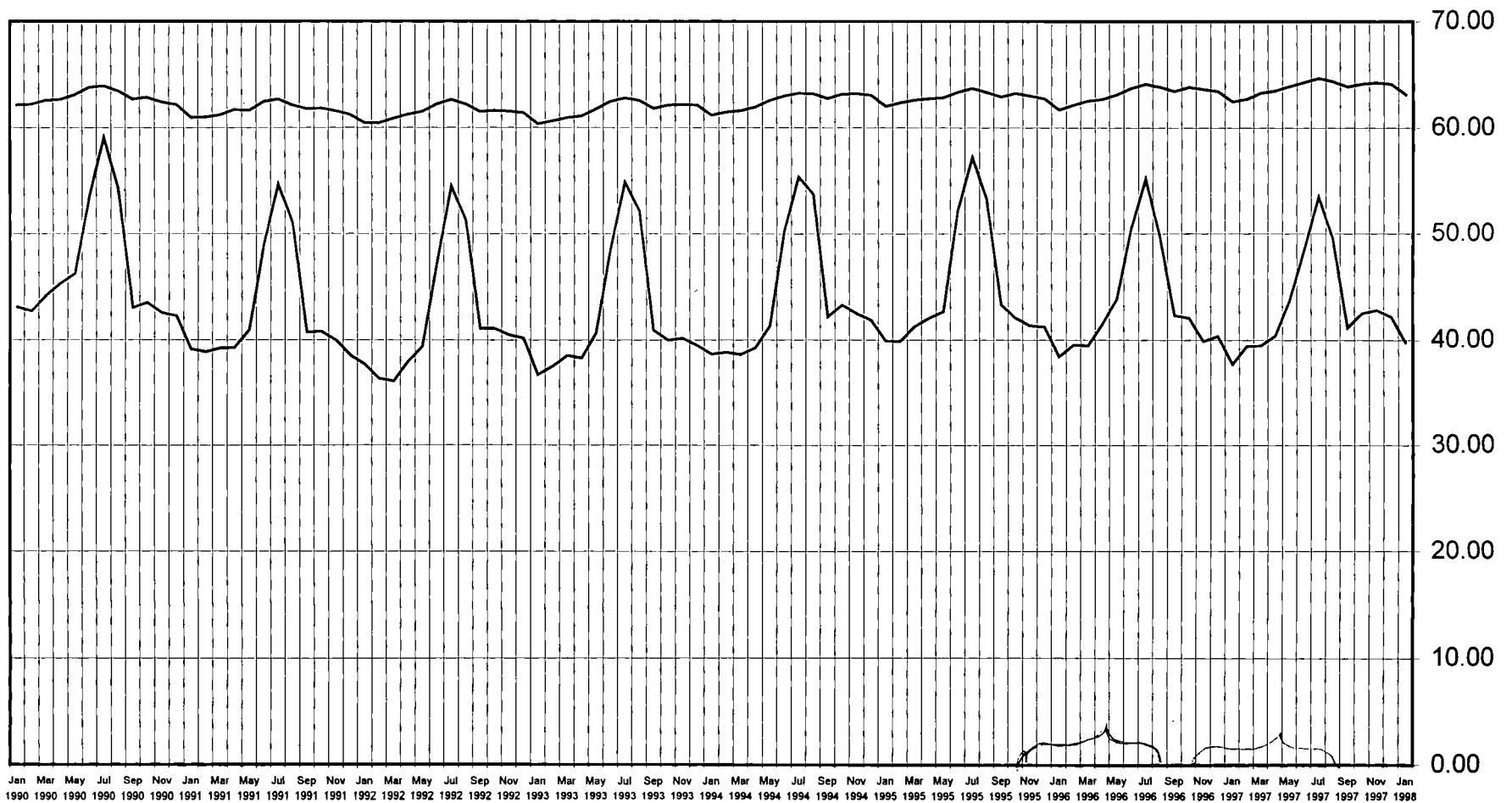
- **Increasing the minimum wage is a failed poverty fighting tool.** By increasing the minimum wage you price the low-skilled worker out of the market denying them an opportunity to get a job and gain valuable experience. There are many other poverty fighting tools that would benefit the working poor and allow them to find gainful employment.

Stat: The average family income of an employee who benefited from the 1996 minimum wage hike is \$36,428. Because the minimum wage is so poorly targeted, it is not an effective anti-poverty tool. (EPI)

- **The minimum wage is at a 10 year high.** The minimum wage continues to exceed the pace of inflation over the last ten years.

Stat: Since 1989 the minimum wage has increased 42% while average wages have only increased 22%.

EPOP - Not seasonally adjusted



— Total EPOP — EPOP Males 16-19

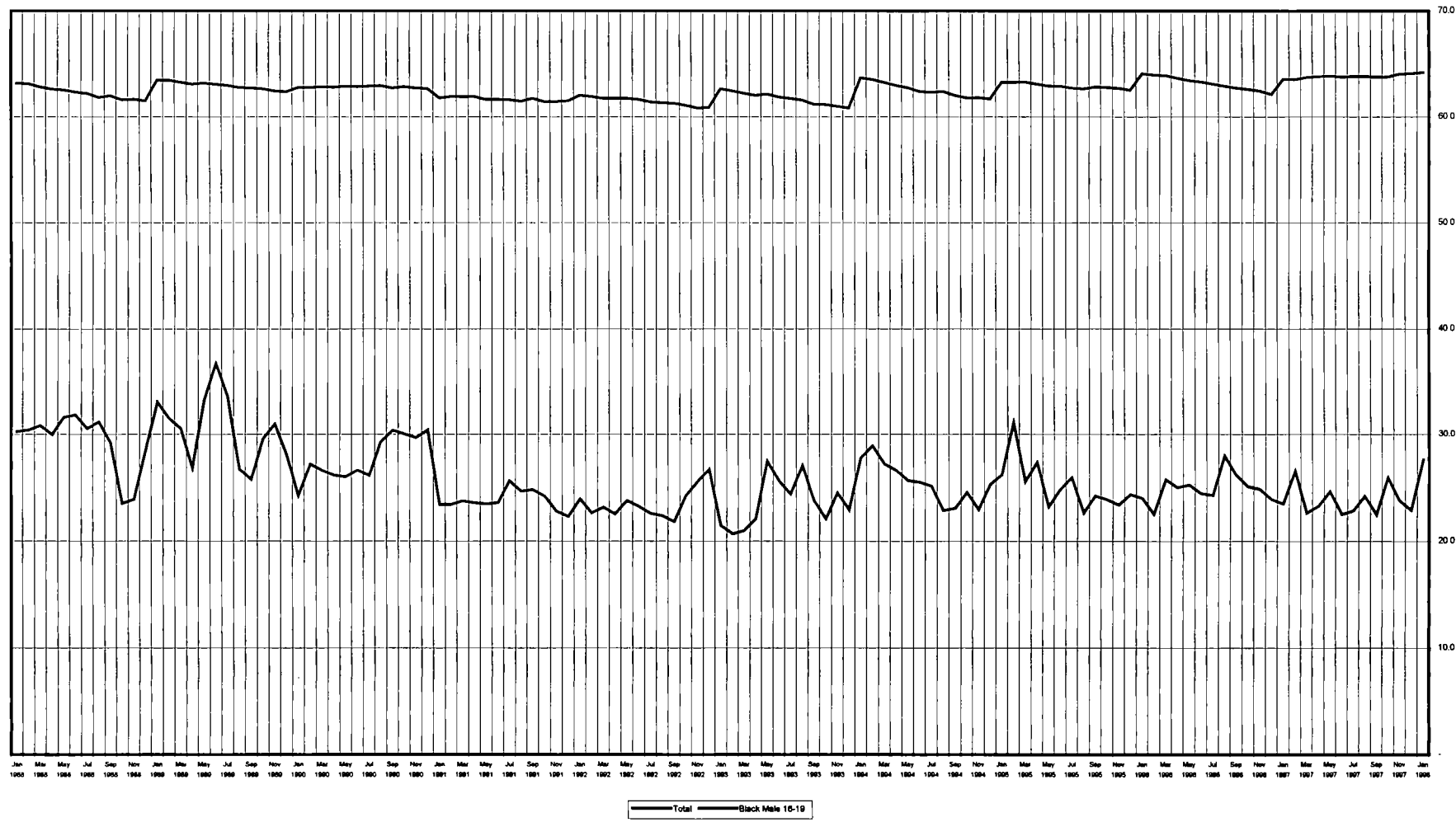
EPOP

\$3.80

\$4.25

\$4.75

\$5.15





HISTORY OF FEDERAL MINIMUM WAGE RATES UNDER THE FAIR LABOR STANDARDS ACT, 1938 - 1996

The table of federal minimum wage rates under the Fair Labor Standards Act, 1938 - 1996 is also available in a [PDF Version](#). In order to view and/or print PDF documents you must have a PDF viewer (e.g., [Amber](#) or [Acrobat Reader](#)) available on your workstation.

Minimum hourly wage of workers in jobs first covered by --

Effective Date	1938 Act ¹	1961 Amendments ²	1966 and Subsequent Amendments ³	
			Nonfarm	Farm
Oct 24, 1938	\$0.25			
Oct 24, 1939	\$0.30			
Oct 24, 1945	\$0.40			
Jan 25, 1950	\$0.75			
Mar 1, 1956	\$1.00			
Sep 3, 1961	\$1.15	\$1.00		
Sep 3, 1963	\$1.25			
Sep 3, 1964		\$1.15		
Sep 3, 1965		\$1.25		
Feb 1, 1967	\$1.40	\$1.40	\$1.00	\$1.00
Feb 1, 1968	\$1.60	\$1.60	\$1.15	\$1.15
Feb 1, 1969			\$1.30	\$1.30
Feb 1, 1970			\$1.45	
Feb 1, 1971			\$1.60	
May 1, 1974	\$2.00	\$2.00	\$1.90	\$1.60
Jan. 1, 1975	\$2.10	\$2.10	\$2.00	\$1.80
Jan 1, 1976	\$2.30	\$2.30	\$2.20	\$2.00
Jan 1, 1977			\$2.30	\$2.20
Jan 1, 1978		\$2.65 for all covered, nonexempt workers		
Jan 1, 1979		\$2.90 for all covered, nonexempt workers		
Jan 1, 1980		\$3.10 for all covered, nonexempt workers		
Jan 1, 1981		\$3.35 for all covered, nonexempt workers		
Apr 1, 1990 ⁴		\$3.80 for all covered, nonexempt workers		
Apr 1, 1991		\$4.25 for all covered, nonexempt workers		
Oct 1, 1996 ⁵		\$4.75 for all covered, nonexempt workers		
Sep 1, 1997		\$5.15 for all covered, nonexempt workers		

¹ The 1938 Act was applicable generally to employees engaged in interstate commerce or in the production of goods for interstate commerce.

² The 1961 Amendments extended coverage primarily to employees in large retail and service enterprises as well as to local transit, construction, and gasoline service station employees.

³ The 1966 Amendments extended coverage to State and local government employees of hospitals, nursing homes, and schools, and to laundries, dry cleaners, and large hotels, motels, restaurants, and farms. Subsequent amendments extended coverage to the remaining Federal, State and local government employees who were not protected in 1966, to certain workers in retail and service trades previously exempted, and to certain domestic workers in private household employment.

⁴ Grandfather clause - Employees who do not meet the tests for individual coverage, and whose employers were covered by the FLSA on March 31, 1990, and fail to meet the increased annual dollar volume (ADV) test for enterprise coverage, must continue to receive at least \$3.35 an hour.

⁵ A subminimum wage -- \$4.25 an hour -- is established for employees under 20 years of age during their first 90 consecutive calendar days of employment with an employer.



[DOL Home Page](#)



[ESA Home Page](#)



[Top of Document](#)

CORREL

See Also

Returns the correlation coefficient of the array1 and array2 cell ranges. Use the correlation coefficient to determine the relationship between two properties. For example, you can examine the relationship between a location's average temperature and the use of air conditioners.

Syntax

CORREL(array1,array2)

Array1 is a cell range of values.

Array2 is a second cell range of values.

Remarks

- The arguments must be numbers, or names, arrays, or references that contain numbers.
- If an array or reference argument contains text, logical values, or empty cells, those values are ignored; however, cells with the value zero are included.
- If array1 and array2 have a different number of data points, CORREL returns the #N/A error value.
- If either array1 or array2 is empty, or if s (the standard deviation) of their values equals zero, CORREL returns the #DIV/0! error value.
- The equation for the correlation coefficient is:

$$\rho_{X,Y} = \frac{Cov(X,Y)}{\sigma_X \cdot \sigma_Y}$$

where:

$$-1 \leq \rho_{XY} \leq 1$$

and:

$$Cov(X,Y) = \frac{1}{n} \sum_{j=1}^n (x_j - \mu_X)(y_j - \mu_Y)$$

Example

CORREL({3,2,4,5,6},{9,7,12,15,17}) equals 0.997054
-2+2+1+1 -2+5+3+2

(301) 763-8576

Go to Historical Income Tables - Persons
Go to Historical Income and Poverty Tables
Go to Income Statistics

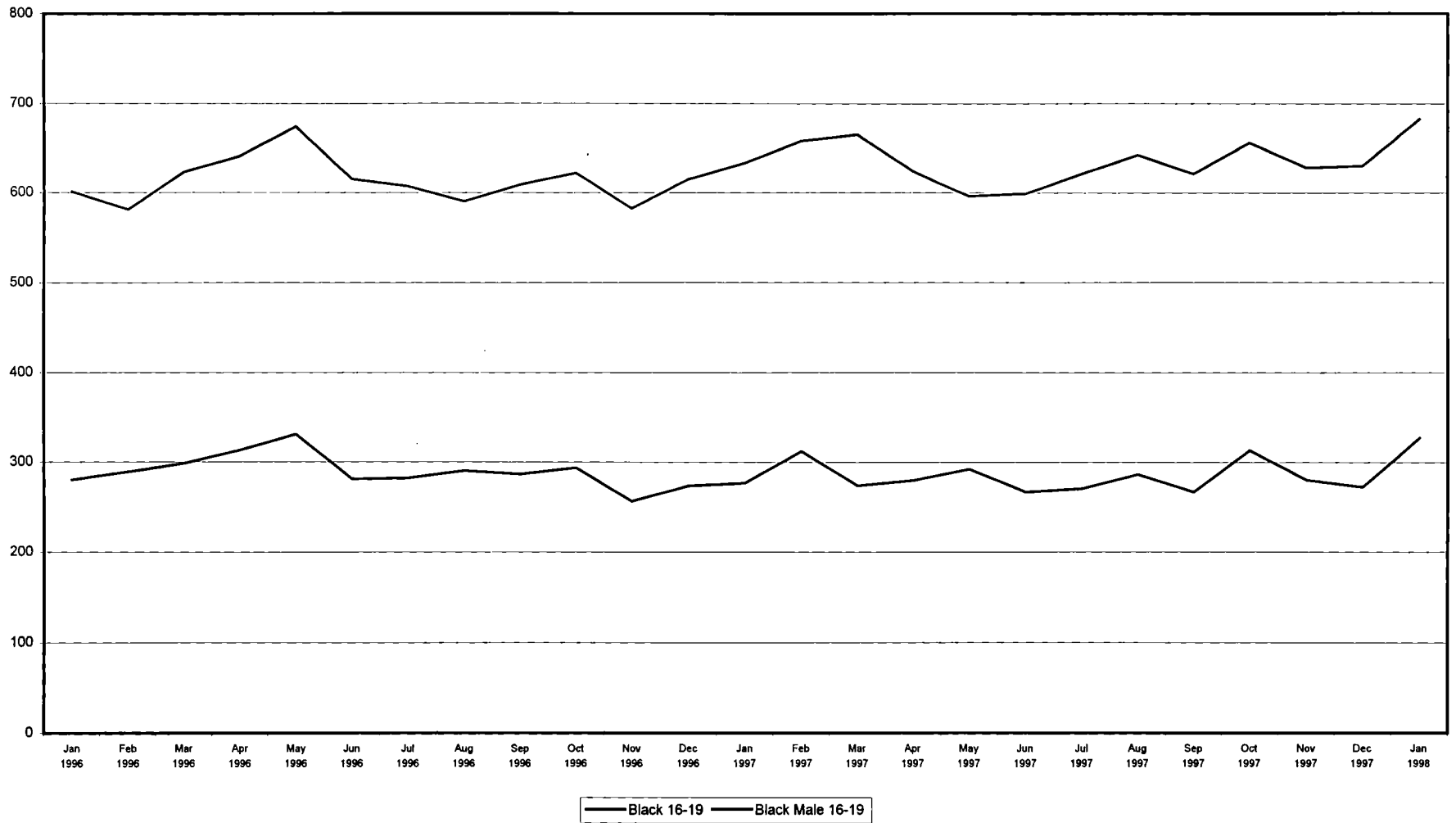
**Census
Home**

Last Revised: Friday, 07-Nov-97 08:18:16

Employment Rates of Out-of-School youth Ages 16-24

<u>Years</u>	<u>White Males</u>	<u>White Females</u>	<u>Black Males</u>	<u>Black Females</u>
1962				
1963				
1964	85.0%	47.3%	80.5%	48.0%
1965	88.7%	49.2%	84.8%	48.8%
1966	90.1%	51.1%	83.9%	44.6%
1967				
1968	87.5%	52.9%	78.2%	49.0%
1969	88.1%	55.1%	82.5%	50.6%
1970	83.8%	54.8%	70.0%	46.2%
1971	83.7%	54.5%	72.6%	45.5%
1972	85.3%	56.8%	75.3%	44.9%
1973	87.8%	60.0%	75.9%	46.2%
1974	85.4%	60.2%	72.2%	46.9%
1975	81.2%	58.3%	62.5%	41.0%
1976	83.1%	60.0%	60.5%	43.3%
1977	86.0%	62.6%	64.2%	43.1%
1978	86.9%	66.2%	68.2%	46.8%
1979				
1980				
1981				
1982				
1983				
1984	82.6%	67.3%	60.7%	47.2%
1985	82.8%	69.1%	60.4%	43.2%
1986	84.3%	68.8%	61.1%	47.7%
1987	84.7%	69.2%	63.8%	50.0%
1988	84.4%	70.0%	64.8%	50.1%
1989	85.4%	67.4%	66.2%	50.4%
1990	83.9%	69.1%	65.5%	44.8%
1991	80.6%	65.6%	62.3%	40.7%
1992	82.1%	66.3%	58.1%	42.5%
1993	83.4%	66.4%	62.5%	49.4%
1994	83.8%	66.1%	62.4%	49.4%
1995	82.5%	65.2%	61.1%	51.3%
1996	83.2%	67.3%	58.0%	51.0%
1997	83.2%	69.0%	60.5%	53.9%

Employment



e/p rates for nonenrolled 16 - 24 year old men

	H.S. graduate		H.S. Dropouts	
	White	Black	White	Black
1964	0.865	0.758	0.761	0.703
1965				
1966				
1967				
1968				
1969	0.881	0.816	0.747	0.727
1970				
1971				
1972				
1973				
1974				
1975				
1976	0.87	0.673	0.711	0.504
1977				
1978				
1979				
1980				
1981				
1982				
1983				
1984	0.864	0.670	0.686	0.404
1985	0.851	0.651	0.698	0.445
1986	0.870	0.645	0.709	0.385
1987	0.874	0.697	0.704	0.449
1988	0.875	0.690	0.722	0.474
1989	0.880	0.697	0.746	0.458
1990	0.866	0.687	0.729	0.446
1991	0.834	0.680	0.686	0.404
1992	0.835	0.579	0.713	0.366
1993	0.836	0.638	0.742	0.398
1994	0.852	0.644	0.716	0.472
1995	0.829	0.674	0.713	0.340
1996	0.844	0.648	0.703	0.291
1997	0.858	0.633	0.702	0.423

LFU 11002030 BIK 16-19
 LFU 11000830 EPO 16-19
 LFU 1600030 EPO 16-19
 LFU 1600830 EPO 16-19
 LFU 21000030 WE BIK 16-19
 LFU 21000830

LFU 21002030
 WE Rate
 20-24

LFU 600030
 LPR 16-19
 LFU 600830 16-19

Total and Teens

Regression Output:

Constant	42.04064
Std Err of slope	2.194471
R Squared	0.001807
No. of Observations	313
Degrees of Freedom	311

X Coefficient(s)	0.04088
Std Err of Coef.	0.054487
Tk	0.750269

Not

Total and White Teens

Regression Output:

Constant	38.1745
Std Err of Y Est	2.089237
R Squared	0.034396
No. of Observations	313
Degrees of Freedom	311

X Coefficient(s)	0.172657
Std Err of Coef.	0.051874
T	3.328414 Significant

Total and White Male Teens

Regression Output:

Constant	74.86912
Std Err of Y Est	2.858922
R Squared	0.094089
No. of Observations	313
Degrees of Freedom	311

X Coefficient(s)	-0.403431
Std Err of Coef.	0.070984
T	-5.683387

Total Black Teens

Regression Output:

Constant	-9.252218
Std Err of Y Est	2.438049
R Squared	0.21505
No. of Observations	313
Degrees of Freedom	311

X Coefficient(s)	0.558768
Std Err of Coef.	0.060534
T	9.230583

Total Black Male Teens

Regression Output:

Constant	33.23695
Std Err of Y Est	3.582286
R Squared	0.005212
No. of Observations	313
Degrees of Freedom	311

X Coefficient(s)	-0.11354
Std Err of Coef.	0.088945
T	-1.27652

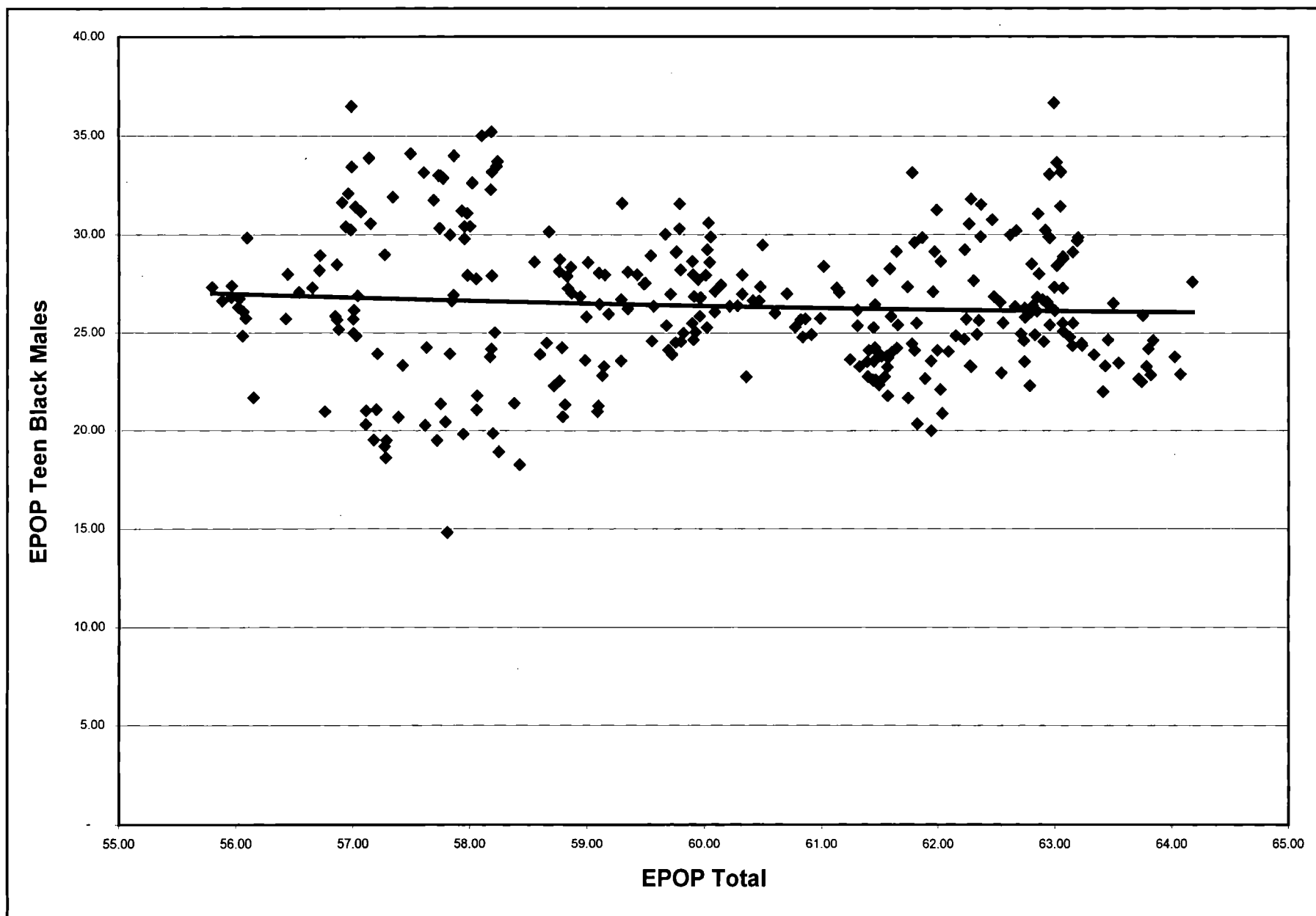
Not

Total Black Women Teens

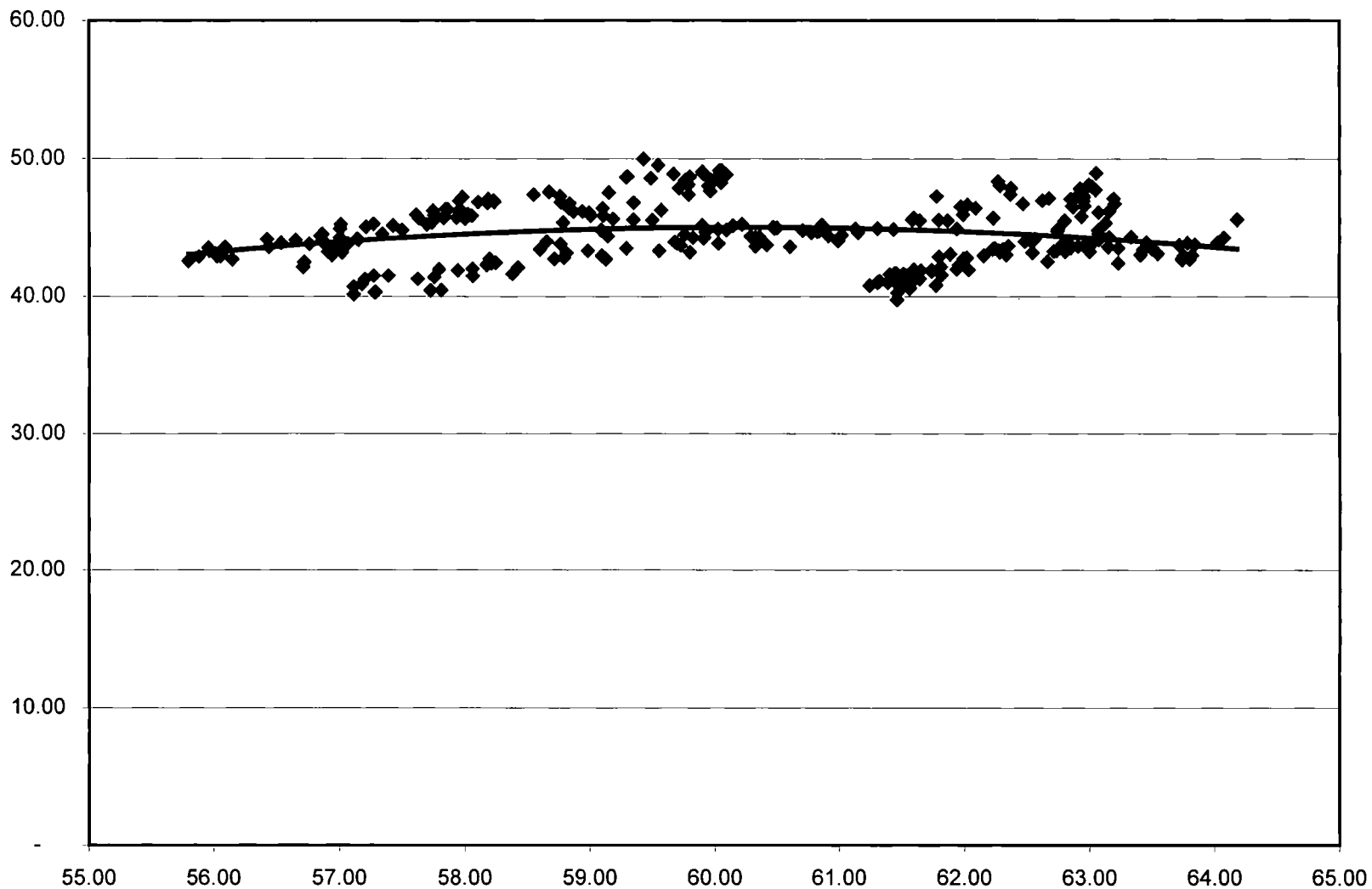
Regression Output:

Constant	-48.93865
Std Err of Y Est	2.132039
R Squared	0.617647
No. of Observations	313
Degrees of Freedom	311

X Coefficient(s)	1.186515
Std Err of Coef.	0.052937
T	22.41392



Teen EPOP



Total EPOP



Statistics On Women Business Ownership

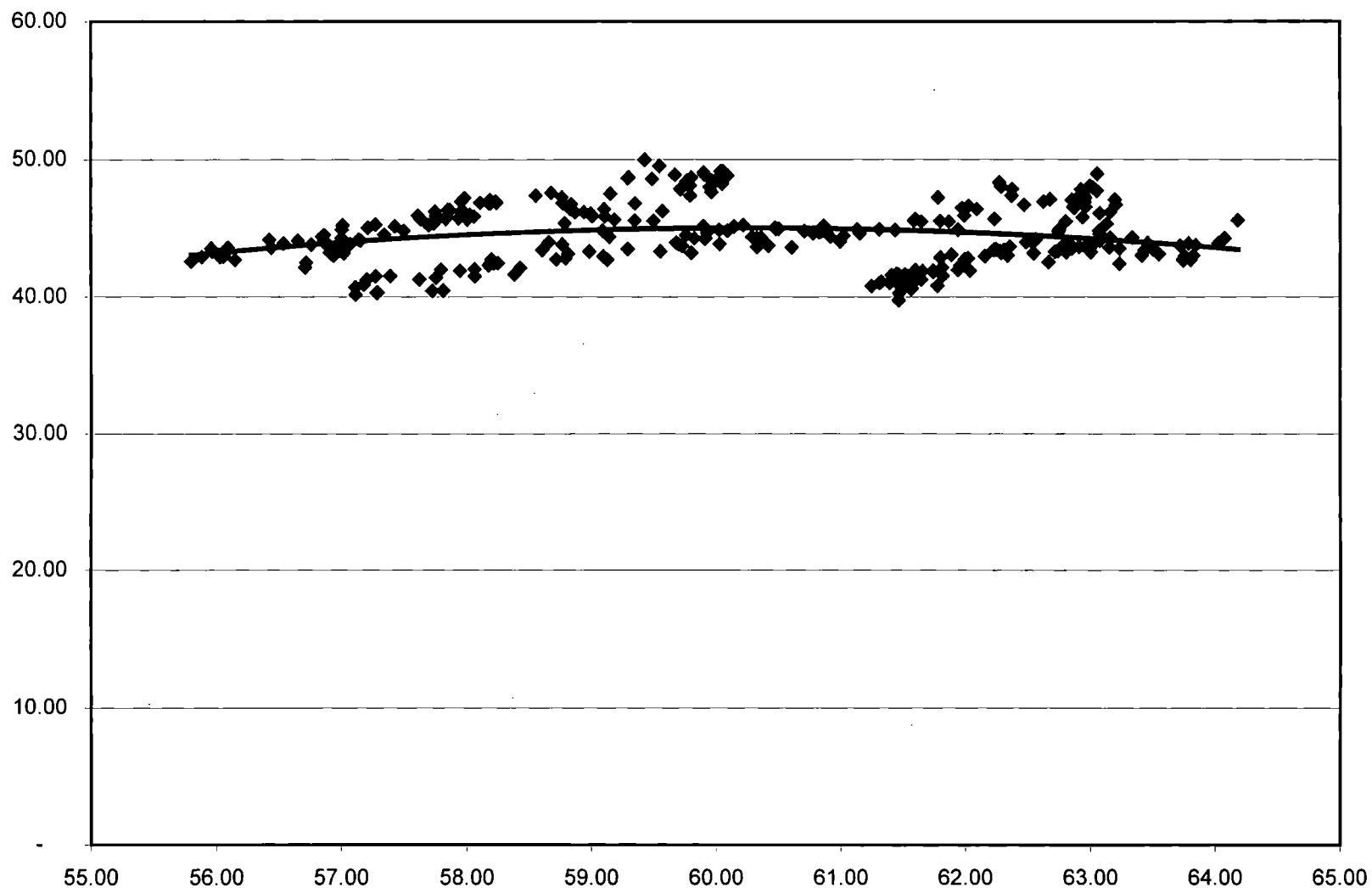
Women are changing the face of America's economy. Women-owned businesses are increasing in number, range, diversity and earning power. As women business owners expand their companies, they contribute to the economic success of our national economy.

- o Women-owned businesses contribute more than \$2.38 trillion annually in revenues to the economy, more than the gross domestic product of most countries. (National Foundation for women Business Owners).
 - o The latest U.S. Census data indicates women owned 6.4 million businesses in 1992; current calculations indicate that women now own almost 8 million firms (including C corps)---one-third of all firms.
 - o Employment by women-owned firms rose by more than 100 percent from 1987-1992, compared to a 38 percent increase in employment by all firms. For women-owned companies with 100 or more workers, employment increased by 158 percent--more than double the rate for all U.S. firms of similar size.
 - o Employment growth in women-owned businesses exceeds the national average in nearly every region of the country and in nearly every major industry.
 - o Women-owned businesses employ one out of every five U.S. workers--a total of 18.5 million employees.
 - o The top growth industries for women-owned businesses between 1987 and 1996 were: construction; wholesale trade; transportation; communications; agribusiness; and manufacturing.
 - o Women-owned businesses are more likely to remain in business than the average U.S. firm. Nearly 3/4 of women-owned firms in business in 1991 were still in business 3 years later, compared to 2/3 of all U.S. firms.
 - o Women entrepreneurs are taking their firms into the global marketplace at the same rate as all U.S. business owners. As of 1992, 13 percent of women-owned firms were involved in international trade.
 - o Nearly all (96 percent) of women-owned businesses use computers; the smaller businesses owned by women are more likely to use computers than all U.S. firms.
 - o Home-based businesses owned by women are making a substantial economic contribution. These businesses provide full or part-time employment for 14 million people.
- The U.S. Small Business Administration is a partner in the success story that is women's business ownership:
- o Total number of SBA loans made to women in FY 95 - 13,397 or 24 percent of the total number of SBA loans made.
 - o Total dollar amount of SBA loans made to women in FY 95 - \$1.445 billion or 18 percent of a total of \$8.255 billion.
 - o Between FY 94 and FY 95 alone, there was an increase of 87 percent in the number of SBA loans made to women.
 - o The SBA's Office of Women's Business Ownership provides business skills training, counseling, mentoring, education and outreach to America's women entrepreneurs.
 - o The Women's Business Ownership Home page -- an interactive, multimedia, electronic guide which includes material on SBA programs and services; "hotlinks" to women's organizations, services to women by other federal agencies and topical information of interest to the woman entrepreneur. The home page address on the web is:
<http://www.sba.gov/womeninbusiness>.

Compiled from data provided by:
U.S. Small Business Administration
U.S. Bureau of the Census
The National Foundation for Women Business Owners

Updated: 11/96

Teen EPOP



Total EPOP

LINEST

See Also

Calculates the statistics for a line by using the "least squares" method to calculate a straight line that best fits your data, and returns an array that describes the line. Because this function returns an array of values, it must be entered as an array formula. For more information about array formulas, click [this link](#).

The equation for the line is:

$y = mx + b$ or $y = m_1x_1 + m_2x_2 + \dots + b$ (if there are multiple ranges of x-values)

where the dependent y-value is a function of the independent x-values. The m-values are coefficients corresponding to each x-value, and b is a constant value. Note that y, x, and m can be vectors. The array that LINEST returns is {mn,mn-1,...,m1,b}. LINEST can also return additional regression statistics.

Syntax

LINEST(known_y's,known_x's,const,stats)

Known_y's is the set of y-values you already know in the relationship $y = mx + b$.

- If the array known_y's is in a single column, then each column of known_x's is interpreted as a separate variable.
- If the array known_y's is in a single row, then each row of known_x's is interpreted as a separate variable.

Known_x's is an optional set of x-values that you may already know in the relationship $y = mx + b$.

- The array known_x's can include one or more sets of variables. If only one variable is used, known_y's and known_x's can be ranges of any shape, as long as they have equal dimensions. If more than one variable is used, known_y's must be a vector (that is, a range with a height of one row or a width of one column).
- If known_x's is omitted, it is assumed to be the array {1,2,3,...} that is the same size as known_y's.

Const is a logical value specifying whether to force the constant b to equal 0.

- If const is TRUE or omitted, b is calculated normally.
- If const is FALSE, b is set equal to 0 and the m-values are adjusted to fit $y = mx$.

Stats is a logical value specifying whether to return additional regression statistics.

- If stats is TRUE, LINEST returns the additional regression statistics, so the returned array is {mn,mn-1,...,m1,b;sen,sen-1,...,se1,seb;r2,sey;F,df;ssreg,ssresid}.
- If stats is FALSE or omitted, LINEST returns only the m-coefficients and the constant b.

The additional regression statistics are as follows.

Statistic	Description
se1,se2,...,sen	The standard error values for the coefficients m1,m2,...,mn.
Seb	The standard error value for the constant b (seb = #N/A when const is FALSE).
r2	The coefficient of determination. Compares estimated and actual y-values, and ranges in value from 0 to 1. If it is 1, there is a perfect correlation in the sample — there is no difference between the estimated y-value and the actual y-value. At the other extreme, if the

coefficient of determination is 0, the regression equation is not helpful in predicting a y-value. For information about how r² is calculated, see "Remarks" later in this topic.

sey	The standard error for the y estimate.
F	The F statistic, or the F-observed value. Use the F statistic to determine whether the observed relationship between the dependent and independent variables occurs by chance.
df	The degrees of freedom. Use the degrees of freedom to help you find F-critical values in a statistical table. Compare the values you find in the table to the F statistic returned by LINEST to determine a confidence level for the model.
ssreg	The regression sum of squares.
ssresid	The residual sum of squares.

The following illustration shows the order in which the additional regression statistics are returned.

	A	B	C	D	E	F
1	m _n	m _{n-1}	...	m ₂	m ₁	b
2	se _n	se _{n-1}	...	se ₂	se ₁	se _b
3	r ²	sey				
4	F	df				
5	ssreg	ssresid				

Remarks

- You can describe any straight line with the slope and the y-intercept:

Slope (m):

To find the slope of a line, often written as m, take two points on the line, (x₁,y₁) and (x₂,y₂); the slope is equal to (y₂ - y₁)/(x₂ - x₁).

Y-intercept (b):

The y-intercept of a line, often written as b, is the value of y at the point where the line crosses the y-axis.

The equation of a straight line is y = mx + b. Once you know the values of m and b, you can calculate any point on the line by plugging the y- or x-value into that equation. You can also use the TREND function. For more information, see TREND.

- When you have only one independent x-variable, you can obtain the slope and y-intercept values directly by using the following formulas:

Slope:

INDEX(LINEST(known_y's,known_x's),1)

Y-intercept:

INDEX(LINEST(known_y's,known_x's),2)

- The accuracy of the line calculated by LINEST depends on the degree of scatter in your data. The more linear the data, the more accurate the LINEST model. LINEST uses the method of least squares for determining the best fit for the data. When you have only one independent x-variable, the calculations for m and b are based on the following formulas:

$$m = \frac{n(\sum xy) - (\sum x)(\sum y)}{n(\sum x^2) - (\sum x)^2}$$

$$b = \frac{(\sum y)(\sum (x^2)) - (\sum x)(\sum xy)}{n(\sum (x^2)) - (\sum x)^2}$$

- The line- and curve-fitting functions LINEST and LOGEST can calculate the best straight line or exponential curve that fits your data. However, you have to decide which of the two results best fits your data. You can calculate TREND(known_y's,known_x's) for a straight line, or GROWTH(known_y's, known_x's) for an exponential curve. These functions, without the new_x's argument, return an array of y-values predicted along that line or curve at your actual data points. You can then compare the predicted values with the actual values. You may want to chart them both for a visual comparison.
- In regression analysis, Microsoft Excel calculates for each point the squared difference between the y-value estimated for that point and its actual y-value. The sum of these squared differences is called the residual sum of squares. Microsoft Excel then calculates the sum of the squared differences between the actual y-values and the average of the y-values, which is called the total sum of squares (regression sum of squares + residual sum of squares). The smaller the residual sum of squares is, compared with the total sum of squares, the larger the value of the coefficient of determination, r², which is an indicator of how well the equation resulting from the regression analysis explains the relationship among the variables.
- Formulas that return arrays must be entered as array formulas. For more information about entering array formulas, click [here](#).
- When entering an array constant such as known_x's as an argument, use commas to separate values in the same row and semicolons to separate rows. Separator characters may be different depending on your country settings.
- Note that the y-values predicted by the regression equation may not be valid if they are outside the range of the y-values you used to determine the equation.

Example 1 Slope and Y-Intercept

LINEST({1, 9, 5, 7}, {0, 4, 2, 3}) equals {2,1}, the slope = 2 and y-intercept = 1

Example 2 Simple Linear Regression

Suppose a small business has sales of \$3,100, \$4,500, \$4,400, \$5,400, \$7,500, and \$8,100 during the first six months of the fiscal year. Assuming that the values are entered in the range B2:B7, respectively, you can use the following simple linear regression model to estimate sales for the ninth month.

SUM(LINEST(B2:B7)*{9,1}) equals SUM({1000,2000}*{9,1}) equals \$11,000

In general, SUM({m,b}*{x,1}) equals mx + b, the estimated y-value for a given x-value. You can also use the TREND function.

Example 3 Multiple Linear Regression

Suppose a commercial developer is considering purchasing a group of small office buildings in an established business district.

The developer can use multiple linear regression analysis to estimate the value of an office building in a given area based on the following variables.

Variable	Refers to the
y	Assessed value of the office building
x1	Floor space in square feet
x2	Number of offices

x3 Number of entrances
x4 Age of the office building in years

This example assumes that a straight-line relationship exists between each independent variable (x1, x2, x3, and x4) and the dependent variable (y), the value of office buildings in the area.

The developer randomly chooses a sample of 11 office buildings from a possible 1,500 office buildings and obtains the following data.

	A	B	C	D	E
	x1	x2	x3	x4	y
1	Floor Space	Offices	Entrances	Age	Value
2	2,310	2	2	20	\$142,000
3	2,333	2	2	12	\$144,000
4	2,356	3	1.5	33	\$151,000
5	2,379	3	2	43	\$150,000
6	2,402	2	3	53	\$139,000
7	2,425	4	2	23	\$169,000
8	2,448	2	1.5	99	\$126,000
9	2,471	2	2	34	\$142,900
10	2,494	3	3	23	\$163,000
11	2,517	4	4	55	\$169,000
12	2,540	2	3	22	\$149,000

"Half an entrance" means an entrance for deliveries only. When entered as an array, the following formula:

`LINEST (E2:E12, A2:D12, TRUE, TRUE)`

returns the following output.

	A	B	C	D	E
14	-234.23716	2553.21066	12529.7682	27.6413874	52317.8305
15	13.2680115	530.669152	400.066838	5.42937404	12237.3616
16	0.99674799	970.578463	#N/A	#N/A	#N/A
17	459.753674	6	#N/A	#N/A	#N/A
18	1732393319	5652135.32	#N/A	#N/A	#N/A

The multiple regression equation, $y = m1*x1 + m2*x2 + m3*x3 + m4*x4 + b$, can now be obtained using the values from row 14:

$$y = 27.64*x1 + 12,530*x2 + 2,553*x3 + 234.24*x4 + 52,318$$

The developer can now estimate the assessed value of an office building in the same area that has 2,500 square feet, three offices, and two entrances and is 25 years old, by using the following equation:

$$y = 27.64*2500 + 12530*3 + 2553*2 - 234.24*25 + 52318 = \$158,261$$

You can also use the TREND function to calculate this value. For more information, see TREND.

Example 4 Using The F And R2 Statistics

In the previous example, the coefficient of determination, or r2, is 0.99675 (see cell A16 in the output for LINEST), which would indicate a strong relationship between the independent variables and the sale price. You can use the F statistic to determine whether these results, with such a high r2 value, occurred by chance.

Assume for the moment that in fact there is no relationship among the variables, but that you have drawn a rare sample of 11 office buildings that causes the statistical analysis to demonstrate a strong relationship. The term "Alpha" is used for the probability of erroneously concluding that there is a relationship.

There is a relationship among the variables if the F-observed statistic is greater than the F-critical value. The F-critical value can be obtained by referring to a table of F-critical values in many statistics textbooks. To read the table, assume a single-tailed test, use an Alpha value of 0.05, and for the degrees of freedom (abbreviated in most tables as v_1 and v_2), use $v_1 = k = 4$ and $v_2 = n - (k + 1) = 11 - (4 + 1) = 6$, where k is the number of variables in the regression analysis and n is the number of data points. The F-critical value is 4.53.

The F-observed value is 459.753674 (cell A17), which is substantially greater than the F-critical value of 4.53. Therefore, the regression equation is useful in predicting the assessed value of office buildings in this area.

Example 5 Calculating The T-Statistics

Another hypothesis test will determine whether each slope coefficient is useful in estimating the assessed value of an office building in example 3. For example, to test the age coefficient for statistical significance, divide -234.24 (age slope coefficient) by 13.268 (the estimated standard error of age coefficients in cell A15). The following is the t-observed value:

$$t = m_4 \div se_4 = -234.24 \div 13.268 = -17.7$$

If you consult a table in a statistics manual, you will find that t-critical, single tail, with 6 degrees of freedom and $\alpha = 0.05$ is 1.94. Because the absolute value of t , 17.7, is greater than 1.94, age is an important variable when estimating the assessed value of an office building. Each of the other independent variables can be tested for statistical significance in a similar manner. The following are the t-observed values for each of the independent variables.

Variable	t-observed value
Floor space	5.1
Number of offices	31.3
Number of entrances	4.8
Age	17.7

These values all have an absolute value greater than 1.94; therefore, all the variables used in the regression equation are useful in predicting the assessed value of office buildings in this area.

OBS	CIVILIAN	CIVILIA1	CIVILIA2	CIVILIA3	CIVILIA4	CIVILIA5	CIVILIA6	CIVILIA7
81	96790	7695	7078	3816	500	259	241	395
82	97851	7922	7261	3855	551	302	249	437
83	97788	7800	7125	3729	557	292	265	383
84	97669	7826	7118	3645	581	304	276	420
85	96201	7452	6802	3565	527	265	262	393
86	96536	7341	6677	3423	531	275	256	423
87	97282	7516	6840	3550	546	301	246	410
88	97478	7594	6932	3680	534	286	248	424
89	98057	7731	7082	3783	523	318	206	455
90	99800	9111	8322	4581	619	356	263	446

OBS	CIVILIA8	CIVILIA9	MONTH	TOTAL	_6_19_YR	_6_19_Y1	_6_19_Y2
81	239	164	M09	162502	16693	14060	7037
82	241	180	M10	162783	16685	14055	7038
83	252	164	M11	163017	16684	14046	7035
84	238	188	M12	163272	16685	14035	7028
85	262	153	M01	163516	16673	14018	7007
86	314	181	M02	163726	16669	14011	6998
87	285	158	M03	164027	16682	14022	7006
88	248	186	M04	164162	16673	14014	7004
89	244	199	M05	164459	16664	14001	7000
90	262	185	M06	164721	16656	13987	6996

OBS	_6_19_Y3	_6_19_Y4	_6_19_Y5	MONTH_1	TOTAL 1	_6_19_Y6	_6_19_Y7
81	2270	1098	1173	M09	59.562343848	46.097166477	50.341394026
82	2276	1096	1180	M10	60.111313835	47.479772251	51.661330487
83	2281	1106	1175	M11	59.986381788	46.751378566	50.726185391
84	2285	1105	1179	M12	59.819809888	46.904405154	50.716066975
85	2277	1103	1175	M01	58.832774774	44.695015894	48.523327151
86	2275	1101	1174	M02	58.96192419	44.039834423	47.655413604
87	2283	1108	1175	M03	59.308528474	45.054549814	48.780487805
88	2283	1110	1173	M04	59.379149864	45.546692257	49.464820893
89	2279	1109	1170	M05	59.623979229	46.393422948	50.582101278
90	2276	1101	1175	M06	60.587296095	54.701008646	59.498105384

OBS	_6_19_Y8	_6_19_Y9	_6_19_Y10	_6_19_Y11
81	54.22765383	22.026431718	23.588342441	20.545609548
82	54.774083546	24.20913884	27.554744526	21.101694915
83	53.006396588	24.419114423	26.401446655	22.553191489
84	51.863972681	25.426695842	27.511312217	23.409669211
85	50.877693735	23.144488362	24.025385313	22.29787234
86	48.913975422	23.340659341	24.97729337	21.805792164
87	50.670853554	23.915900131	27.166064982	20.936170213
88	52.541404911	23.390275953	25.765765766	21.142369991
89	54.042857143	22.948661694	28.674481515	17.606837607
90	65.480274443	27.196836555	32.334241599	22.382978723

OBS	CIVILIAN	CIVILIA1	CIVILIA2	CIVILIA3	CIVILIA4	CIVILIA5	CIVILIA6	CIVILIA7
91	100814	9987	8960	4898	821	444	377	533
92	100174	9264	8302	4497	771	458	312	508
93	99533	7626	6982	3750	488	272	216	440
94	100120	7756	7114	3739	506	277	229	416
95	99907	7758	7086	3670	534	275	260	432
96	100013	7859	7176	3722	544	262	282	459
97	98111	7304	6680	3493	487	247	240	489
98	98235	7100	6497	3419	472	235	238	462
99	98527	7272	6650	3587	488	264	225	486
100	98569	7280	6653	3568	495	278	217	509

OBS	CIVILIA8	CIVILIA9	MONTH	TOTAL	_6_19_YR	_6_19_Y1	_6_19_Y2
91	278	220	M07	164970	16662	13987	7007
92	260	223	M08	165198	16653	13985	7012
93	292	191	M09	165431	16644	13983	7015
94	286	174	M10	165813	16649	13990	7024
95	312	171	M11	166051	16644	13977	7019
96	321	182	M12	166300	16619	13950	6997
97	307	198	M01	166544	16621	13937	6981
98	339	176	M02	166759	16615	13927	6968
99	341	174	M03	166984	16612	13924	6965
100	309	188	M04	167197	16597	13912	6959

OBS	_6_19_Y3	_6_19_Y4	_6_19_Y5	MONTH_1	TOTAL_1	_6_19_Y6	_6_19_Y7
91	2270	1095	1175	M07	61.11050494	59.938782859	64.059483806
92	2267	1090	1178	M08	60.638748653	55.629616285	59.363603861
93	2269	1091	1178	M09	60.165869758	45.818312906	49.932060359
94	2276	1100	1176	M10	60.38127288	46.585380503	50.850607577
95	2278	1102	1176	M11	60.166454884	46.611391492	50.697574587
96	2276	1093	1182	M12	60.140108238	47.289247247	51.440860215
97	2281	1100	1180	M01	58.909957729	43.944407677	47.929970582
98	2283	1106	1177	M02	58.908364766	42.732470659	46.650391326
99	2284	1108	1175	M03	59.003856657	43.775583915	47.759264579
100	2284	1110	1174	M04	58.95380898	43.863348798	47.822024152

OBS	_6_19_Y8	_6_19_Y9	_6_19_10	_6_19_11
91	69.901527044	36.167400881	40.547945205	32.085106383
92	64.132915003	34.009704455	42.018348624	26.485568761
93	53.456878118	21.507271926	24.931255729	18.336162988
94	53.231776765	22.23198594	25.181818182	19.472789116
95	52.28665052	23.441615452	24.954627949	22.108843537
96	53.194226097	23.901581722	23.970722781	23.85786802
97	50.035811488	21.350284963	22.454545455	20.338983051
98	49.067164179	20.674551029	21.247739602	20.220900595
99	51.500358938	21.366024518	23.826714801	19.14893617
100	51.271734445	21.672504378	25.045045045	18.483816014

OBS	CIVILIAN	CIVILIA1	CIVILIA2	CIVILIA3	CIVILIA4	CIVILIA5	CIVILIA6	CIVILIA7
101	98732	7426	6765	3613	525	300	225	470
102	99830	8650	7880	4274	624	363	261	511
103	100665	9576	8579	4632	803	445	358	576
104	100202	8831	7949	4269	701	375	326	552
105	99334	7247	6635	3455	476	266	210	473
106	99999	7354	6753	3496	476	268	208	501
107	99850	7207	6568	3340	518	296	222	484
108	99579	7274	6646	3351	503	259	244	483
109	98139	6811	6187	3213	496	250	246	443
110	98401	6647	6084	3135	457	239	218	441

OBS	CIVILIA8	CIVILIA9	MONTH	TOTAL	_6_19_YR	_6_19_Y1	_6_19_Y2
101	303	175	M05	167407	16583	13895	6954
102	287	204	M06	167643	16571	13876	6949
103	285	237	M07	167932	16565	13864	6946
104	306	211	M08	168103	16530	13838	6937
105	271	163	M09	168297	16499	13817	6930
106	254	198	M10	168503	16467	13788	6917
107	280	197	M11	168695	16442	13756	6902
108	281	198	M12	168883	16417	13722	6881
109	311	172	M01	169104	16397	13677	6836
110	300	187	M02	169280	16363	13652	6821

OBS	_6_19_Y3	_6_19_Y4	_6_19_Y5	MONTH_1	TOTAL_1	_6_19_Y6	_6_19_Y7
101	2286	1112	1173	M05	58.977223175	44.780799614	48.686577906
102	2293	1115	1178	M06	59.549161015	52.199625852	56.788699914
103	2297	1119	1179	M07	59.943905867	57.808632659	61.879688402
104	2293	1110	1184	M08	59.607502543	53.424077435	57.443272149
105	2295	1110	1185	M09	59.023036655	43.923874174	48.02055439
106	2291	1106	1185	M10	59.34553094	44.659015	48.977371628
107	2294	1109	1185	M11	59.189661816	43.832867048	47.746437918
108	2294	1111	1183	M12	58.963305957	44.307729792	48.433173007
109	2297	1111	1186	M01	58.034700539	41.538086235	45.236528478
110	2294	1109	1185	M02	58.129135161	40.622135305	44.564898916

OBS	_6_19_Y8	_6_19_Y9	_6_19_10	_6_19_11
101	51.955708944	22.965879265	26.978417266	19.181585678
102	61.505252554	27.213257741	32.556053812	22.156196944
103	66.685862367	34.958641707	39.767649687	30.364715861
104	61.539570419	30.571303969	33.783783784	27.533783784
105	49.855699856	20.740740741	23.963963964	17.721518987
106	50.542142547	20.776953296	24.231464738	17.552742616
107	48.391770501	22.580645161	26.690712353	18.734177215
108	48.69931696	21.926765475	23.312331233	20.625528318
109	47.001170275	21.593382673	22.502250225	20.741989882
110	45.961002786	19.921534438	21.550946799	18.396624473

OBS	CIVILIAN	CIVILIA1	CIVILIA2	CIVILIA3	CIVILIA4	CIVILIA5	CIVILIA6	CIVILIA7
111	99364	6766	6184	3216	465	260	205	451
112	100345	7046	6407	3388	496	261	235	468
113	100855	7143	6475	3429	538	299	239	461
114	101419	8025	7341	3948	548	309	239	488
115	102612	9038	8114	4370	726	388	338	530
116	102152	8574	7791	4149	601	334	267	506
117	100389	6758	6228	3289	428	241	187	416
118	101028	6778	6260	3337	410	220	190	438
119	100502	6614	6050	3139	443	239	204	439
120	99562	6503	5934	3012	455	243	212	429

OBS	CIVILIA8	CIVILIA9	MONTH	TOTAL	_6_19_YR	_6_19_Y1	_6_19_Y2
111	292	171	M03	169453	16341	13639	6808
112	252	187	M04	169641	16305	13615	6806
113	252	178	M05	169829	16270	13572	6779
114	247	177	M06	170042	16249	13541	6774
115	240	230	M07	170246	16213	13493	6754
116	272	214	M08	170399	16169	13461	6745
117	242	164	M09	170593	16131	13460	6741
118	230	186	M10	170809	16093	13415	6731
119	248	191	M11	170996	16037	13353	6695
120	255	189	M12	171166	15995	13316	6684

OBS	_6_19_Y3	_6_19_Y4	_6_19_Y5	MONTH_1	TOTAL_1	_6_19_Y6	_6_19_Y7
111	2296	1113	1183	M03	58.638088438	41.40505477	45.34056749
112	2293	1111	1182	M04	59.151384394	43.213738117	47.05839148
113	2291	1111	1180	M05	59.386206125	43.902888752	47.708517536
114	2294	1115	1179	M06	59.643499841	49.387654625	54.213130493
115	2291	1113	1178	M07	60.272781739	55.745389502	60.134884755
116	2287	1111	1176	M08	59.948708619	53.027398107	57.878315133
117	2285	1111	1174	M09	58.847080478	41.894488872	46.270430906
118	2281	1109	1172	M10	59.146766271	42.117690922	46.664181886
119	2274	1105	1169	M11	58.774474257	41.24212758	45.308170449
120	2270	1103	1167	M12	58.166925674	40.656455142	44.562931811

OBS	_6_19_Y8	_6_19_Y9	_6_19_10	_6_19_11
111	47.238542891	20.25261324	23.360287511	17.328825021
112	49.77960623	21.631051025	23.492349235	19.881556684
113	50.582681811	23.483195111	26.912691269	20.254237288
114	58.28166519	23.888404534	27.713004484	20.271416455
115	64.702398579	31.689218682	34.860736748	28.692699491
116	61.512231282	26.27896808	30.063006301	22.704081633
117	48.790980567	18.730853392	21.692169217	15.928449744
118	49.576585946	17.974572556	19.837691614	16.211604096
119	46.885735624	19.481090589	21.628959276	17.45081266
120	45.062836625	20.044052863	22.030825023	18.166238218

MONTH	Frequency	Percent	Cumulative Frequency	Cumulative Percent
M01	27	8.6	27	8.6
M02	26	8.3	53	16.9
M03	26	8.3	79	25.2
M04	26	8.3	105	33.5
M05	26	8.3	131	41.9
M06	26	8.3	157	50.2
M07	26	8.3	183	58.5
M08	26	8.3	209	66.8
M09	26	8.3	235	75.1
M10	26	8.3	261	83.4
M11	26	8.3	287	91.7
M12	26	8.3	313	100.0

CONTENTS PROCEDURE

Data Set Name:	CARL.EPOP72	Observations:	313
Member Type:	DATA	Variables:	26
Engine:	V612	Indexes:	0
Created:	15:43 Thursday, December 16, 1993	Observation Length:	234
Last Modified:	15:43 Thursday, December 16, 1993	Deleted Observations:	0
Protection:		Compressed:	NO
Data Set Type:		Sorted:	NO
Label:			

-----Engine/Host Dependent Information-----

Data Set Page Size:	16384
Number of Data Set Pages:	5
File Format:	607
First Data Page:	1
Max Obs per Page:	69
Obs in First Data Page:	54

-----Alphabetic List of Variables and Attributes-----

#	Variable	Type	Len	Pos	Format	Informat	Label
2	CIVILIA1	Num	8	8	BEST10.	10.	Civilian labor force 16-19 yrs.
3	CIVILIA2	Num	8	16	BEST9.	9.	Civilian labor force 16-19 yrs. White
4	CIVILIA3	Num	8	24	BEST9.	9.	Civilian labor force 16-19 yrs. White Ma
5	CIVILIA4	Num	8	32	BEST9.	9.	Civilian labor force 16-19 yrs. Black
6	CIVILIA5	Num	8	40	BEST9.	9.	Civilian labor force 16-19 yrs. Black Ma
7	CIVILIA6	Num	8	48	BEST9.	9.	Civilian labor force 16-19 yrs. Black Fe
8	CIVILIA7	Char	14	56			Civilian labor force 16-19 yrs. Hispanic
9	CIVILIA8	Char	14	70			Civilian labor force 16-19 yrs. Hispanic
10	CIVILIA9	Char	14	84			Civilian labor force 16-19 yrs. Hispanic
1	CIVILIAN	Num	8	0	BEST11.	11.	Civilian labor force
11	MONTH	Char	12	98			
19	MONTH_1	Char	12	166			
12	TOTAL	Num	8	110	BEST12.	12.	
20	TOTAL_1	Num	8	178	BEST12.	12.	
25	_6_19_10	Num	8	218	BEST12.	12.	16-19 yrs. Black Male_1
26	_6_19_11	Num	8	226	BEST12.	12.	16-19 yrs. Black Female_1
14	_6_19_Y1	Num	8	126	BEST12.	12.	16-19 yrs. White
15	_6_19_Y2	Num	8	134	BEST12.	12.	16-19 yrs. White Male
16	_6_19_Y3	Num	8	142	BEST12.	12.	16-19 yrs. Black
17	_6_19_Y4	Num	8	150	BEST12.	12.	16-19 yrs. Black Male
18	_6_19_Y5	Num	8	158	BEST12.	12.	16-19 yrs. Black Female
21	_6_19_Y6	Num	8	186	BEST12.	12.	16-19 yrs._1
22	_6_19_Y7	Num	8	194	BEST12.	12.	16-19 yrs. White_1
23	_6_19_Y8	Num	8	202	BEST12.	12.	16-19 yrs. White Male_1
24	_6_19_Y9	Num	8	210	BEST12.	12.	16-19 yrs. Black_1
13	_6_19_YR	Num	8	118	BEST12.	12.	16-19 yrs.

OBS	CIVILIAN	CIVILIA1	CIVILIA2	CIVILIA3	CIVILIA4	CIVILIA5	CIVILIA6	CIVILIA7
121	97831	6066	5532	2850	416	225	191	419
122	97946	5937	5407	2778	409	213	196	402
123	98471	6043	5542	2855	390	203	187	415
124	98858	6183	5704	2931	351	189	162	454
125	99957	6504	5979	3166	398	216	182	444
126	100683	7355	6805	3568	403	210	193	448
127	101490	8206	7394	3855	633	340	293	431
128	101177	7830	7054	3690	594	325	269	431
129	99851	6152	5647	2861	382	195	187	343
130	99825	6182	5663	2873	380	196	184	374

OBS	CIVILIA8	CIVILIA9	MONTH	TOTAL	_6_19_YR	_6_19_Y1	_6_19_Y2
121	253	177	M01	171335	15955	13262	6652
122	231	172	M02	171489	15913	13215	6635
123	244	167	M03	171667	15902	13219	6634
124	196	199	M04	171844	15861	13169	6609
125	210	199	M05	172026	15820	13123	6584
126	202	195	M06	172190	15794	13105	6566
127	189	200	M07	172364	15753	13070	6549
128	229	187	M08	172511	15702	13009	6523
129	180	147	M09	172690	15671	12982	6506
130	211	164	M10	172881	15625	12948	6488

OBS	_6_19_Y3	_6_19_Y4	_6_19_Y5	MONTH_1	TOTAL_1	_6_19_Y6	_6_19_Y7
121	2266	1101	1165	M01	57.099250007	38.019429646	41.713165435
122	2261	1098	1163	M02	57.115033617	37.309118331	40.915626182
123	2263	1102	1161	M03	57.361636191	38.001509244	41.92450261
124	2259	1100	1159	M04	57.527757734	38.982409684	43.313843116
125	2255	1098	1157	M05	58.105751456	41.112515803	45.561228378
126	2255	1100	1155	M06	58.472036704	46.568317082	51.926745517
127	2251	1098	1153	M07	58.881204892	52.09166508	56.572302984
128	2245	1095	1150	M08	58.649593359	49.866259075	54.22399877
129	2243	1095	1148	M09	57.820950837	39.257226725	43.498690495
130	2238	1093	1145	M10	57.742030645	39.5648	43.736484399

OBS	_6_19_Y8	_6_19_Y9	_6_19_10	_6_19_11
121	42.844257366	18.358340688	20.435967302	16.394849785
122	41.868877167	18.089341	19.398907104	16.852966466
123	43.035875791	17.233760495	18.421052632	16.106804479
124	44.348615524	15.537848606	17.181818182	13.977566868
125	48.086269745	17.649667406	19.672131148	15.730337079
126	54.340542187	17.871396896	19.090909091	16.70995671
127	58.863948694	28.120835184	30.965391621	25.411968777
128	56.569063314	26.458797327	29.680365297	23.391304348
129	43.974792499	17.030762372	17.808219178	16.289198606
130	44.281750925	16.979445934	17.932296432	16.069868996

OBS	CIVILIAN	CIVILIA1	CIVILIA2	CIVILIA3	CIVILIA4	CIVILIA5	CIVILIA6	CIVILIA7
131	99379	6089	5579	2785	383	184	199	380
132	98849	6037	5504	2736	397	181	217	377
133	97262	5709	5225	2622	373	191	182	359
134	97265	5539	5082	2571	349	177	172	390
135	97994	5601	5134	2589	375	200	175	384
136	98840	5753	5303	2736	360	187	173	409
137	99543	5948	5457	2903	398	199	198	407
138	101813	7341	6720	3612	478	271	207	469
139	103273	8159	7332	3903	653	361	291	520
140	103167	7737	6992	3660	570	297	273	506

OBS	CIVILIA8	CIVILIA9	MONTH	TOTAL	_6_19_YR	_6_19_Y1	_6_19_Y2
131	217	178	M11	173058	15579	12906	6455
132	242	188	M12	173199	15580	12897	6474
133	285	180	M01	173354	15525	12866	6462
134	317	179	M02	173505	15478	12819	6449
135	313	167	M03	173656	15429	12773	6427
136	252	166	M04	173794	15389	12753	6417
137	246	158	M05	173953	15342	12699	6381
138	239	185	M06	174125	15303	12640	6347
139	228	204	M07	174306	15257	12583	6304
140	248	193	M08	174440	15204	12547	6306

OBS	_6_19_Y3	_6_19_Y4	_6_19_Y5	MONTH_1	TOTAL_1	_6_19_Y6	_6_19_Y7
131	2232	1089	1143	M11	57.425256272	39.084665255	43.227955989
132	2261	1107	1154	M12	57.072500419	38.748395379	42.676591455
133	2253	1101	1152	M01	56.106002746	36.77294686	40.610912483
134	2248	1098	1150	M02	56.058903202	35.786277297	39.644278025
135	2242	1095	1147	M03	56.429953471	36.301769395	40.194159555
136	2238	1093	1145	M04	56.871928835	37.383845604	41.582372775
137	2233	1091	1142	M05	57.224077768	38.769391214	42.97188755
138	2230	1091	1139	M06	58.471213209	47.970986081	53.164556962
139	2225	1088	1137	M07	59.248103909	53.477092482	58.269093221
140	2218	1084	1134	M08	59.141825269	50.88792423	55.726468479

OBS	_6_19_Y8	_6_19_Y9	_6_19_10	_6_19_11
131	43.144848954	17.159498208	16.896235078	17.41032371
132	42.261353105	17.558602388	16.350496838	18.804159445
133	40.575673166	16.555703506	17.347865577	15.798611111
134	39.866645992	15.524911032	16.120218579	14.956521739
135	40.283180333	16.726137377	18.264840183	15.257192677
136	42.636746143	16.085790885	17.108874657	15.109170306
137	45.494436609	17.823555755	18.240146654	17.338003503
138	56.9087758	21.434977578	24.8395967	18.173836699
139	61.913071066	29.348314607	33.180147059	25.593667546
140	58.039961941	25.698827773	27.398523985	24.074074074

OBS	CIVILIAN	CIVILIA1	CIVILIA2	CIVILIA3	CIVILIA4	CIVILIA5	CIVILIA6	CIVILIA7
141	102366	6075	5611	2922	335	170	165	412
142	102659	5991	5515	2835	347	202	144	408
143	103018	6093	5565	2851	385	215	169	408
144	102803	6159	5649	2832	375	192	183	401
145	101270	5739	5271	2594	345	180	165	437
146	101961	5693	5202	2630	384	182	202	425
147	102770	5778	5324	2730	363	212	151	431
148	103628	6012	5499	2818	409	226	183	457
149	105096	6238	5686	2992	419	251	168	463
150	106812	7548	6809	3606	579	316	263	482

OBS	CIVILIA8	CIVILIA9	MONTH	TOTAL	_6_19_YR	_6_19_Y1	_6_19_Y2
141	213	160	M09	174602	15154	12498	6283
142	221	162	M10	174779	15120	12458	6262
143	235	169	M11	174951	15072	12422	6222
144	251	173	M12	175121	15022	12414	6222
145	290	224	M01	175533	14981	12363	6202
146	319	204	M02	175679	14931	12319	6203
147	294	197	M03	175824	14880	12278	6194
148	244	206	M04	175969	14828	12221	6163
149	247	203	M05	176123	14778	12165	6136
150	249	191	M06	176284	14728	12128	6089

OBS	_6_19_Y3	_6_19_Y4	_6_19_Y5	MONTH_1	TOTAL_1	_6_19_Y6	_6_19_Y7
141	2211	1080	1131	M09	58.628194408	40.088425498	44.895183229
142	2208	1080	1128	M10	58.736461474	39.623015873	44.268742976
143	2202	1077	1125	M11	58.883916068	40.425955414	44.799549187
144	2195	1074	1121	M12	58.703981818	40.999866862	45.505074915
145	2194	1072	1122	M01	57.692855474	38.308524131	42.635282698
146	2187	1068	1119	M02	58.038240199	38.12872547	42.227453527
147	2181	1065	1116	M03	58.45049595	38.830645161	43.362111093
148	2174	1061	1113	M04	58.889918111	40.544915026	44.996317814
149	2168	1059	1109	M05	59.671933819	42.211395317	46.740649404
150	2161	1055	1106	M06	60.590864741	51.249321021	56.142810026

OBS	_6_19_Y8	_6_19_Y9	_6_19_10	_6_19_11
141	46.506445965	15.151515152	15.740740741	14.588859416
142	45.273075695	15.71557971	18.703703704	12.765957447
143	45.821279331	17.484105359	19.962859796	15.022222222
144	45.515911283	17.08428246	17.877094972	16.32471008
145	41.825217672	15.724703737	16.791044776	14.705882353
146	42.398839271	17.55829904	17.041198502	18.051831993
147	44.074911204	16.643741403	19.906103286	13.53046595
148	45.724484829	18.81324747	21.300659755	16.442048518
149	48.761408083	19.326568266	23.701605288	15.148782687
150	59.221547052	26.793151319	29.952606635	23.779385172

CONTENTS PROCEDURE

Data Set Name:	CARL.EPOP72	Observations:	313
Member Type:	DATA	Variables:	26
Engine:	V612	Indexes:	0
Created:	15:43 Thursday, December 16, 1993	Observation Length:	234
Last Modified:	15:43 Thursday, December 16, 1993	Deleted Observations:	0
Protection:		Compressed:	NO
Data Set Type:		Sorted:	NO
Label:			

-----Engine/Host Dependent Information-----

Data Set Page Size:	16384
Number of Data Set Pages:	5
File Format:	607
First Data Page:	1
Max Obs per Page:	69
Obs in First Data Page:	54

-----Alphabetic List of Variables and Attributes-----

#	Variable	Type	Len	Pos	Format	Informat	Label
2	CIVILIA1	Num	8	8	BEST10.	10.	Civilian labor force 16-19 yrs.
3	CIVILIA2	Num	8	16	BEST9.	9.	Civilian labor force 16-19 yrs. White
4	CIVILIA3	Num	8	24	BEST9.	9.	Civilian labor force 16-19 yrs. White Ma
5	CIVILIA4	Num	8	32	BEST9.	9.	Civilian labor force 16-19 yrs. Black
6	CIVILIA5	Num	8	40	BEST9.	9.	Civilian labor force 16-19 yrs. Black Ma
7	CIVILIA6	Num	8	48	BEST9.	9.	Civilian labor force 16-19 yrs. Black Fe
8	CIVILIA7	Char	14	56			Civilian labor force 16-19 yrs. Hispanic
9	CIVILIA8	Char	14	70			Civilian labor force 16-19 yrs. Hispanic
10	CIVILIA9	Char	14	84			Civilian labor force 16-19 yrs. Hispanic
1	CIVILIAN	Num	8	0	BEST11.	11.	Civilian labor force
11	MONTH	Char	12	98			
19	MONTH_1	Char	12	166			
12	TOTAL	Num	8	110	BEST12.	12.	
20	TOTAL_1	Num	8	178	BEST12.	12.	
25	_6_19_10	Num	8	218	BEST12.	12.	16-19 yrs. Black Male_1
26	_6_19_11	Num	8	226	BEST12.	12.	16-19 yrs. Black Female_1
14	_6_19_Y1	Num	8	126	BEST12.	12.	16-19 yrs. White
15	_6_19_Y2	Num	8	134	BEST12.	12.	16-19 yrs. White Male
16	_6_19_Y3	Num	8	142	BEST12.	12.	16-19 yrs. Black
17	_6_19_Y4	Num	8	150	BEST12.	12.	16-19 yrs. Black Male
18	_6_19_Y5	Num	8	158	BEST12.	12.	16-19 yrs. Black Female
21	_6_19_Y6	Num	8	186	BEST12.	12.	16-19 yrs._1
22	_6_19_Y7	Num	8	194	BEST12.	12.	16-19 yrs. White_1
23	_6_19_Y8	Num	8	202	BEST12.	12.	16-19 yrs. White Male_1
24	_6_19_Y9	Num	8	210	BEST12.	12.	16-19 yrs. Black_1
13	_6_19_YR	Num	8	118	BEST12.	12.	16-19 yrs.

14:35 Wednesday, March 4, 1998

CONTENTS PROCEDURE

Data Set Name:	Z.EPOP72	Observations:	313
Member Type:	DATA	Variables:	26
Engine:	V612	Indexes:	0
Created:	15:43 Thursday, December 16, 1993	Observation Length:	234
Last Modified:	15:43 Thursday, December 16, 1993	Deleted Observations:	0
Protection:		Compressed:	NO
Data Set Type:		Sorted:	NO
Label:			

-----Engine/Host Dependent Information-----

Data Set Page Size:	16384
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#	Variable	Type	Len	Pos	Format	Informat	Label
2	CIVILIA1	Num	8	8	BEST10.	10.	Civilian labor force 16-19 yrs.
3	CIVILIA2	Num	8	16	BEST9.	9.	Civilian labor force 16-19 yrs. White
4	CIVILIA3	Num	8	24	BEST9.	9.	Civilian labor force 16-19 yrs. White Ma
5	CIVILIA4	Num	8	32	BEST9.	9.	Civilian labor force 16-19 yrs. Black
6	CIVILIA5	Num	8	40	BEST9.	9.	Civilian labor force 16-19 yrs. Black Ma
7	CIVILIA6	Num	8	48	BEST9.	9.	Civilian labor force 16-19 yrs. Black Fe
8	CIVILIA7	Char	14	56			Civilian labor force 16-19 yrs. Hispanic
9	CIVILIA8	Char	14	70			Civilian labor force 16-19 yrs. Hispanic
10	CIVILIA9	Char	14	84			Civilian labor force 16-19 yrs. Hispanic
1	CIVILIAN	Num	8	0	BEST11.	11.	Civilian labor force
11	MONTH	Char	12	98			
19	MONTH_1	Char	12	166			
12	TOTAL	Num	8	110	BEST12.	12.	
20	TOTAL_1	Num	8	178	BEST12.	12.	
25	_6_19_10	Num	8	218	BEST12.	12.	16-19 yrs. Black Male_1
26	_6_19_11	Num	8	226	BEST12.	12.	16-19 yrs. Black Female_1
14	_6_19_Y1	Num	8	126	BEST12.	12.	16-19 yrs. White
15	_6_19_Y2	Num	8	134	BEST12.	12.	16-19 yrs. White Male
16	_6_19_Y3	Num	8	142	BEST12.	12.	16-19 yrs. Black
17	_6_19_Y4	Num	8	150	BEST12.	12.	16-19 yrs. Black Male
18	_6_19_Y5	Num	8	158	BEST12.	12.	16-19 yrs. Black Female
21	_6_19_Y6	Num	8	186	BEST12.	12.	16-19 yrs._1
22	_6_19_Y7	Num	8	194	BEST12.	12.	16-19 yrs. White_1
23	_6_19_Y8	Num	8	202	BEST12.	12.	16-19 yrs. White Male_1
24	_6_19_Y9	Num	8	210	BEST12.	12.	16-19 yrs. Black_1
13	_6_19_YR	Num	8	118	BEST12.	12.	16-19 yrs.

Thursday, February 05, 1998

The following are approximate standard errors for change in employment rate between the periods of Oct. 1995-Aug. 1996 and Oct. 1996-Aug. 1997. Employment Policies Institute's figures are approximated as closely as possible. The formula to calculate standard errors for estimated percentages and rates (Employment and Earnings, BLS, Dec. 1997, p. 159) are applied by treating entire period changes as month-to-month changes, as a result, the estimated standard errors are approximations. Furthermore, the standard errors are multiplied by factors used to compute approximate standard errors for levels, rates, and percentages, table 1-H.

An approximate standard error of an estimated percentage, $S_{y,p}$ can be obtained using the formula,

$$S_{y,p} = \sqrt{(b/y)(p)(100-p)},$$

where y is the estimated number of persons in the base,

p is the estimated percentage

b is a parameter for computation of standard errors for estimates of month-to-month change in levels.

Standard Errors

1. All workers 16+:

Period 1 (Oct. 1995-Aug. 1996)

average employment = 125,947,360

average population = 199,973,545

average employment rate = 62.98%

b = 2985.26 (Table 1-F)

The standard error for this estimated average rate is 0.19%. Multiplying by the yearly average factor of 0.65 (table 1-H), the approximate standard error is 0.12%.

Period 2 (Oct. 1996-Aug. 1997)

average employment = 128,820,000

average population = 202,417,730

average employment rate = 63.64%

period-to-period change = 0.66%

average y = 201195637.5

average p = 63.31%

b = 2001.12 (Table 1-G)

The standard error for the percentage change is 0.15%, and multiplying by the change in 11-month averages factor of 0.76, the approximate standard error is 0.114%. This implies that the change is significant at the 90% level.

2. Workers Aged 16-19:

Period 1 (Oct. 1995-Aug. 1996)

average employment = 6,431,000

average population = 14,803,364

average employment rate = 43.44%

b = 2544.62 (Table 1-F)

standard error = $0.65\% \times 0.65 = 0.27$.

0.09 = 9 marks.
0.01 = 1 mark.
79 → 70 interpolate.
add
yewhy
70
71

Period 2(Oct. 1996- Aug. 1997)

average employment = 6,619,550
 average population = 15,267,636
 average employment rate = 43.36%

period-to-period change = -0.08%
 average y = 15,035,500
 average p = 43.4%
 b ≈ 2616.54

The standard error for the change is 0.47% ($=0.62\% \times 0.76$). Since the 90% confidence interval covers zero, one can not assert at this level of confidence that any real change has occurred in the teenage employment rate.

3. Workers 16-19 Male:Period I (Oct. 1995 -Aug. 1996)

average employment = 3,263,069
 average population = 7,529,000
 average employment rate = 43.34%
 b = 2764.05 (Table 1-F)

standard error = $0.95\% \times 0.65 = 0.62\%$.

Period 2(Oct. 1996- Aug. 1997)

average employment = 3,327,736
 average population = 7,786,000
 average employment rate = 42.74%

period-to-period change = -0.60%
 average y = 7,657,500
 average p = 43.04%
 b = 1500.99 (Table 1-G)

The standard error is 0.52% ($=0.69\% \times 0.76$). Since the 90% confidence interval covers zero, one can not assert at this level of confidence that any real change has occurred in the teenage males' employment rate.

4. Workers 16-19 Female:Period I (Oct. 1995 -Aug. 1996)

average employment = 3,143,368
 average population = 7,278,000
 average employment rate = 43.19%
 b = 2529.99 (Table 1-F)

standard error = $0.92\% \times 0.65 = 0.598\%$.

Period 2(Oct. 1996- Aug. 1997)

average employment = 3,265,065
 average population = 7,499,000
 average employment rate = 43.54%

period-to-period change = 0.35%

average $y = 7,388,500$

average $p = 43.36\%$

$b = 1689.99$ (Table 1-G)

The standard error is 0.57% ($= 0.75\% \times 0.76$). At the 90% level, the observed change in female teen employment is not significant.

Michael Mamo

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Questions and Answers

minimum wage employee profile

Who earns the minimum wage?

Because the minimum wage is traditionally paid to people just entering the work force, the overwhelming majority of minimum wage employees are young, single and childless.

According to U.S. Census Bureau data, young people living with their parents account for 37.6% of those who benefited from the 1996 minimum wage hike, making this group the largest segment of minimum wage employees. The same data show that 85.1% either live with their parents (37.6%), are single and live alone (17.1%), have a working spouse (21.5%), or are extended family members and non-relatives (8.9%).

How many minimum wage employees provide the sole support for their families?

Only 5.5% of minimum wage earners are single parents and only 7.8% are in married, single-earner families (where the household may or may not include children).

Advocates of higher minimum wages often contend that 40% of minimum wage employees are supporting families. This is a deceiving statistic. This number is correct only when proponents count single, childless individuals living by themselves as "families." By that reckoning, an individual working at a minimum wage position while attending college is the sole breadwinner in his "family."

Do people often get stuck at the minimum wage?

No. The average income of minimum wage employees increases 30%⁶ within one year of employment. This traditional growth out of entry-level employment explains why only 2.8% of employees above the age of 30 are working at the minimum wage.⁷

What role do minimum wage jobs play for those who subsequently move on?

Most working Americans entered the work force via jobs paying at or near the minimum wage. Upon gaining marketable skills, these employees quickly move into higher paying jobs. Many — such as high school and college students, senior citizens and some with working spouses — work in minimum wage jobs as a way of supplementing a family income or earning extra spending money.

These individuals are either using their minimum wage job as a stepping stone to higher-paying work, or they choose to work where they do for a variety of economic and noneconomic reasons, including location, scheduling, convenience, camaraderie, or simply enjoyment.

1995 ARG CPS

There are more than **550,000 teens** working at the minimum wage who live in households where family income exceeds \$30,000.²

Only **44% of minimum wage employees work full time**.³ The majority of minimum wage employees could increase their income simply by working more hours.

Single parents with three or more children account for only 1% of the minimum wage work force, and only 57% of these single parents work full time.⁴

891 analysis of 92-94 CPS

Questions and Answers

minimum wage employee profile continued

When New Jersey raised its minimum to \$5.05 in 1992, the average beneficiary resided in a family earning almost \$40,000 annually.⁸

Who benefits from a minimum wage increase?

The beneficiaries of a minimum wage hike — those who do not lose their jobs, lose benefits, experience demands for increased productivity, or see their hours cut — are rarely from poor families. Moreover, beneficiaries rarely receive more than a token increase in family income. Those who are helped tend to be young, single and part of middle- and upper- income families.⁹

Research shows that when New Jersey raised its minimum wage from \$4.25 to \$5.05 in 1992, the annual family income of minimum wage employees increased by an average of just one percent. Moreover, a full 70% of the "beneficiaries" were in families making more than \$20,000 a year. The average beneficiary of an increase lived in a family with an annual income of \$38,873.¹⁰

*Macpherson
NJ study
ECI 1996*

Those Who Stay at the Minimum Wage

Who is "stuck" at the minimum wage?

The small percentage of employees who do not advance tend to be the least skilled, the least educated, and the least experienced members of the work force. For instance, more than 44% of working men and 64% of working women who dropped out of high school make less than \$6.25 an hour.¹¹

Neal, ECI 1996

What differentiates those who advance beyond the minimum wage from those who do not?

Like all employees, those earning the minimum wage would like to earn more money. And in most cases, they soon do. After all, more than 97% of all American employees move beyond the minimum wage by age 30.¹² What differentiates the 2.8% who fail to move on?

95 C15

Almost always, it's a question of skills and motivation. This small percentage do not offer the skills — or even the willingness to learn them — to justify a higher wage. They are the last to get a raise and the first to lose their jobs following a minimum wage hike.

Does the current minimum wage bring a full-time employee above the poverty level?

A single, childless person working full time at the new federal (September 1997) minimum wage of \$5.15 an hour earns \$10,712 a year, 34% above the 1996 poverty level of \$7,992 for a single, childless adult.¹³

How about those supporting others on the minimum wage?

For a few employees — those supporting another adult or supporting one or more children — income from a job paying the current minimum wage does not match the poverty level. These individuals represent, at most, 13.3%¹⁴ of the minimum wage work force. But these families have access to special assistance that, unlike the minimum wage, is designed to target employees in their situation.

95 ORG



Even if they are a small segment of the minimum wage population, how can people support families on just the minimum wage?

They don't. The few minimum wage employees who are sole breadwinners do not depend solely on that income. Every one of them qualifies for financial assistance directly from the federal government in the form of an Earned Income Tax Credit (EITC), a "reverse income tax."

This program helps families until the breadwinners gain enough work experience to increase their pay to levels where they become self-sufficient. The benefit of the EITC program is that it targets those relatively few minimum wage employees who are trying to support a family and supplements their incomes as long as they continue to work.

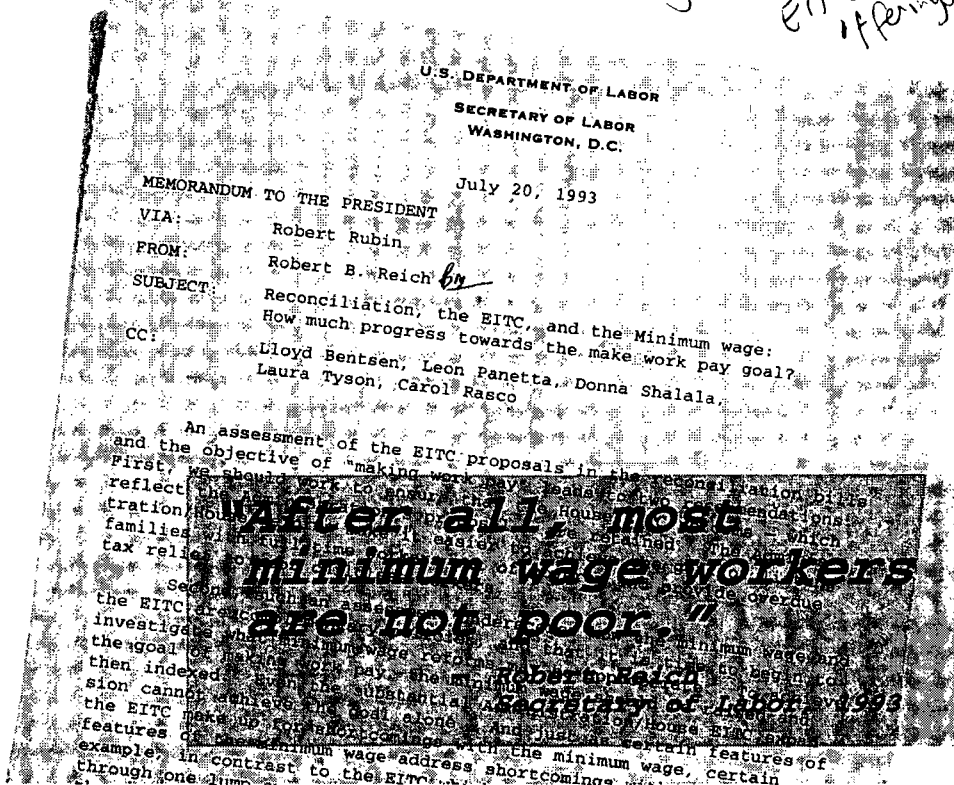
While most who benefit from minimum wage hikes have no children or reside in relatively high-income families, EITC recipients have demonstrated need for the extra resources. For instance, in 1998 a single parent of two children would earn \$10,712 in wages working at the minimum wage, but would actually take home approximately \$14,000 after taking advantage of the EITC.¹⁵

In his 1992 campaign, then-candidate Bill Clinton promised to increase the EITC, arguing that it was a better way to address the needs of the working poor than a hike in the minimum wage.¹⁶ Former Secretary of Labor Robert Reich stated in a memo to President Clinton that "the EITC program poses no threat to employment opportunities and can be better targeted to families in need" than a minimum wage hike.¹⁷

"the EITC program poses no threat to employment opportunities and can be better targeted to families in need"

**Robert Reich,
Secretary of Labor, 1993**

*How much mw change
just EITC
offerings?*



B Questions and Answers

the minimum wage and job loss

"[I]ncreases in minimum wages ... raise the probability that more-skilled teenagers leave school and displace lower-skilled workers from their jobs."

— Dr. David Neumark,
Michigan State University

"Increases in minimum wages may further disadvantage these women [on welfare] if employers are more likely to select teenagers possessing a high school diploma."

— Dr. Peter Brandon,
University Of Wisconsin

"[M]inimum wage increases induced a shift towards teenagers and students and away from non-students and adults... . The competition from higher quality workers makes low-skilled workers worse off."

— Dr. Kevin Lang,
Boston University

Do higher minimum wages lead to job loss, and if so, who are the first to lose their jobs?

B1

It is well known among economists and lawmakers that a higher minimum wage leads to job losses, and the economic evidence supporting this conclusion is outlined below. But it is also important to focus on exactly who suffers job loss following a minimum wage hike. Recent research¹⁸ strongly suggests job loss is concentrated among low-skilled adults.

Lang, EP, 95.

If the unemployment rate remains steady, how can you argue that a minimum wage hike causes job loss?

B2

Although a hike can affect the job prospects of a large number of minimum wage workers, this effect is often subsumed in the official unemployment rate, which is based on the entire national work force. Secondly, the issue is not only how many minimum wage jobs "survive" the wage hike (or how many are not created), but who gets and keeps those jobs — and who doesn't. The composition of the minimum wage work force changes after a wage hike, and that change creates winners and losers.

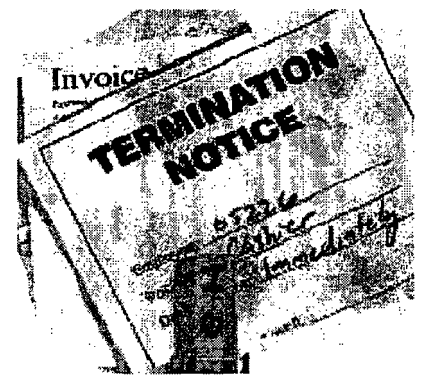
Research from Boston University shows that low-skilled adults are often crowded out of the job market by teens and students following a mandated wage hike.¹⁹ A study from Michigan State University suggests that even among teens, those who are perceived as having the lowest skills are marginalized, while more "attractive" teens get the available entry-level jobs following a minimum wage increase.²⁰ A report from the Institute for Research on Poverty at the University of Wisconsin shows that welfare mothers are more likely to secure employment before a minimum wage hike than after. Once the wage standard rises, welfare recipients have a much more difficult time competing for entry-level jobs.²¹

Lang.
Neumark, EP, 95.

Brandon, EP, 95



Each of the studies quoted above to the left examines what can be called the "riptide effect." Even if the overall unemployment rate remains steady, certain groups of people experience an "under the surface" dynamic reducing job opportunities after a mandated wage hike.



What evidence exists showing higher minimum wages cause job loss?

B3

The economic evidence proving that higher minimum wages result in lost jobs is overwhelming. Opinions among economists vary as to the severity of the impact, but since the minimum wage first went into effect, research has shown that it causes job loss among the least skilled. In the nearly 50 years since the U.S. instituted its first minimum wage, more than 80 studies — in addition to scores of articles and economic textbooks — have demonstrated a link between higher minimum wages and job loss. Every student of economics is taught that if you increase the price of something (low skilled labor), you decrease the demand. Despite claims to the contrary, the laws of economics haven't changed. The following represent but a few of the scores of studies, reports and expert analyses conducted over the years proving this point:

- An exhaustive 1993 study from an economist at Carnegie Mellon University examined data from 64 sectors of the retail industry in California following that state's 1988 minimum wage hike. This study showed that even though California's retail sales were growing at almost twice the national rate, the state's retail employment grew much more slowly than national retail employment. Moreover, the most significant negative employment effects were found in low-wage counties — where employers felt the most impact.²²
- A 1995 report from economists at the University of Chicago and Texas A&M University revealed significant reductions in teenage employment nationwide after the federal minimum wage increase of 1990-91. Employment of teenage males fell 5% after the wage hike, while employment of teen women fell 7%.²³
- In 1978, Congress created the Minimum Wage Study Commission to analyze the impact of the minimum wage on U.S. employment. The Commission determined every 10% increase in the minimum wage results in a 1% to 3% job loss for teenagers.²⁴
- In 1983, the General Accounting Office found "virtually total agreement that employment is lower than it would have been if no minimum wage existed. This is the case even during periods of substantial economic growth."²⁵
- A 1988 Congressional Budget Office (CBO) study found a proposal to increase the minimum wage 51% would result in the loss of as many as 500,000 jobs.²⁶
- In 1988, the Council of Economic Advisers estimated job loss associated with a minimum wage of \$4.65 (up from the 1988 wage of \$3.35) would be concentrated among younger, less skilled, and minority workers.²⁷
- A 1995 study showed that low-skilled adults in states which raise their minimum wage are often crowded out of the job market by teens and students.²⁸
- A 1995 study discovered that mothers in states that raise their minimum wage remain on public assistance an average of 44% longer than their peers in states where the minimum wage remains unchanged.²⁹
- A 1995 study showed that high-skilled teens, or those who are perceived as more "desirable" employees, often displace low-skilled teens in minimum wage jobs after a mandated wage hike. A higher minimum wage increases the number of "idle" teens (those who neither work nor attend school) by as much as 20%.³⁰

Every student of economics is taught that if you increase the price of something (low skilled labor), you decrease the demand (jobs). Despite claims to the contrary, the laws of economics haven't changed.

B Questions and Answers

the minimum wage and job loss continued

A survey of members of the American Economic Association reveals that 77% of economists believe a minimum wage hike causes job loss.³¹

Do economists still believe that minimum wage hikes are associated with job loss?

B4

Minimum wage proponents occasionally cite a list of 101 economists who support a minimum wage hike. But this group represents a tiny minority in the economics profession. The results of a much more comprehensive survey of the American Economic Association indicates that 77% of economists — or nearly 17,000 economists — believe wage hikes cause job loss.³²

Does job loss take more than one form?

B5

Entry-level employees can experience lost work even when they keep their jobs. If an employer decreases total hours of employment per day following a wage hike, there is measurable decline in employment even if no employee actually "loses his job."

Another aspect of job loss which is very difficult to measure is the loss of opportunities in the long run. Faced with higher labor costs, some employers who had been planning to expand their operations decide to forgo this investment and attendant job creation. Others redesign their establishments so they can operate with fewer employees and more self-service. Still others purchase machinery that can do the work employees used to do.

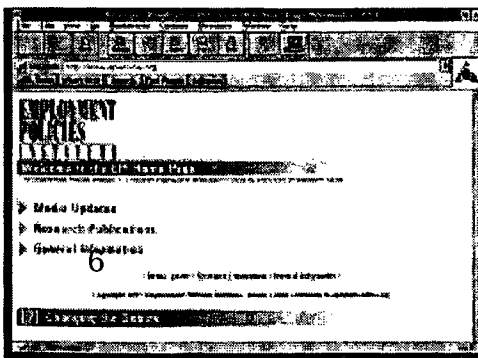
These points are particularly important in the face of welfare reform, through which state and local governments nationwide are seeking to create more jobs. (For more information on the interaction of mandated wage hikes and welfare reform, see section D.)

Did a recent study of New Jersey's 1992 minimum wage hike prove that employment did not decline?

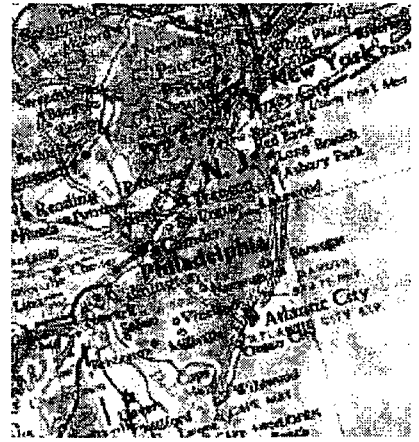
B6

No. While the New Jersey fast food study³³ received attention from the media and lawmakers, the study turned out to be meaningless: the input data used in the analysis were grossly inaccurate. Not only were the employment numbers used in the New Jersey study proven wrong by payroll records, but the correct numbers suggest that employment declined following the mandated wage hike.

The Employment Policies Institute has prepared a complete analysis of the numerous problems in the New Jersey fast food study. To obtain a copy of this analysis, contact EPI or visit our home page at <http://www.epionline.org>.



the New Jersey fast food study



What specifically was wrong with the New Jersey fast food study?

B7

The New Jersey fast food study was conducted by two Princeton researchers and published in a reputable academic journal. The researchers claimed their study showed employment increased in New Jersey relative to neighboring Pennsylvania following a minimum wage hike.³⁴ But when they made their data public, independent analysts noticed unrealistic swings in the employment numbers for individual restaurants in the data set. (This data, obtained via telephone interviews, would later prove inconsistent with the restaurants' actual payroll records.)

For instance, according to the study, a Burger King outlet in New Jersey had six full-time workers in February 1992, but by November, it had added 23 more full-time workers — an implausible increase of more than 300%. Another Burger King in Pennsylvania reportedly went from 50 full-time workers in February to 15 in November, and from 35 part-time employees in February to just 18 in November — a truly radical shift. A Wendy's in Pennsylvania had 30 full-time people on staff in February, but by November all full-timers had apparently quit or been terminated without replacements — zero were reported in the study. A

New Jersey Wendy's had zero full-time employees in February, but by November had hired 35 full-time workers without any change in the number of part-timers on staff.³⁵

Once these apparent flaws were identified, other researchers collected payroll records from the restaurants examined in the New Jersey study. The payroll records confirmed that the "observations" reported above were grossly inaccurate. In addition, when employment numbers from payroll records were used for the same calculations upon which the New Jersey study was based, they showed that employment declined in New Jersey following the mandated wage hike.³⁶

Restaurant/Zip Code	Feb. '92 Emp. Full/Part Time	Nov. '92 Emp. Full/Part Time
Burger King in 076XX	0/35	29/14
Wendy's in 072XX	0/30	35/30
Kentucky Fried Chicken in 077XX	13/12	1/10
Burger King in 080XX	6.5/20	30/25
Kentucky Fried Chicken in 082XX	0/11	22/4
Burger King in 078XX	3/60	0/15
Wendy's in 185XX	30/10	0/30
Kentucky Fried Chicken in 075XX	0/7	14/0
Roy Rogers in 189XX	27/12	0/30
Burger King in 190XX	50/35	15/18

The Fair Labor Standards Act of 1938 cautioned the Administrator of the Wage and Hour Board to set minimum wages at a level "which will not substantially curtail employment."³⁹ Just one year later, the government attributed job loss to the new minimum wage. In 1939, the Labor Department reported that "workers who had been receiving less than [the new minimum wage] ... had been laid off and replaced by more efficient workers."⁴⁰

Why were the numbers in the New Jersey study so flawed?

Rather than seek payroll records or authoritative estimates of employment from restaurant owners, the authors of the New Jersey fast food study chose to collect their data through cold-call telephone interviews with managers and assistant managers who did not have payroll records in front of them. In addition, the study authors used only one poorly-constructed question on employment levels that could not be clearly or consistently interpreted by those who participated in these cold-call interviews.

B8

Why do people still talk about the New Jersey study?

The New Jersey study was one of the few economic reports ever to conclude that employment does not decline following mandated wage hikes. Thus, it was highly publicized — and defended — by those who support a wage hike. After the flaws in the New Jersey study were made public more than two years ago, many of those who support higher minimum wages continued to cite the study, ignoring the new facts and evidence and misleading the public by maintaining that the New Jersey study was simply being debated by "dueling economists."

B9

Are there other studies that have reached conclusions similar to those of the New Jersey fast food study?

One of the economists who worked on the New Jersey study also conducted a similar exercise in Texas,³⁷ with similar conclusions. However, as with the New Jersey study, the Texas report was based on cold-call telephone interviews that could not have produced reliable data.

The other economist who worked on the New Jersey study did research in California³⁸ which was not based on the fast food industry. He concluded that California experienced no ill effects when that state's minimum wage rose above the federal standard in 1988.

This study has also been widely challenged. The study's author compared California job growth to four other states and reached his conclusions based on these comparisons. However, at the time of the study, California's economy was growing at least one-third faster than any of the other states in the study — a factor that was not accounted for in the study. Because the analysis was keyed off interstate comparisons, the negative impact of the minimum wage was masked by the growing California economy.

B10

Are there "more than a dozen studies" that show a higher minimum wage does not result in job loss?

Former Secretary of Labor Robert Reich popularized a list of studies he claimed showed no job loss. However, even a cursory examination of the short list shows that among the "dozen" studies are the discredited New Jersey and Texas fast food studies, the heavily questioned California study (see material above), three studies from foreign countries, two studies from the 1970s, one "study" that is simply a compilation of other research, and one study that concludes low-skilled adults are displaced from their jobs when the minimum wage rises.

B11

Questions and Answers **B**

the minimum wage and job loss continued

Should the minimum wage be linked to inflation or average wages?

B12

Indexing the minimum wage to the national inflation rate assumes that all parts of the country share a similar experience in their inflation rates and economic strength. Variations in economic vitality in different parts of the country would concentrate the negative employment effects of a higher minimum wage in regions with the weakest labor markets.

Additionally, policies which tie the minimum wage to inflation inherently assume that the productivity of minimum wage employees is increasing at a pace commensurate with the economy and the work force as a whole. This is rarely the case. Generally, highly-skilled employees have the ability and the opportunity to push up their productivity — and along with it, their compensation — at a much higher rate than their less-skilled counterparts.

Legally mandating that labor intensive, minimum wage positions be compensated for productivity gains in other sectors of the economy violates the fundamental “skills equal wages” equation. Policies which tie the minimum wage to inflation are not cost free. Rather, they carry the same negative consequences as any minimum wage increase.

Finally, in testimony before Congress in early 1995, Federal Reserve Chairman Alan Greenspan reported that the Consumer Price Index may overstate inflation by as much as 1.5%,⁴¹ — almost half of 1996’s inflation rate of 3.3%. Since then, several other highly respected studies have reached similar conclusions.

What effects do minimum wage hikes have on poverty?

B13

Advocates of a higher minimum wage often maintain that an increase will reduce poverty. When economists at the University of South Carolina studied this claim, they found no measurable decrease in the poverty rates of the groups most likely to be affected — junior high school dropouts, young adults, etc.⁴²

As former Secretary of Labor Reich has stated, “most minimum wage workers are not poor.”⁴³ In fact, the average family income of an employee who benefitted from the 1996 minimum wage hike is \$36,428.⁴⁴ Because the minimum wage is so poorly targeted, it is not an effective anti-poverty tool.

Questions and Answers

wages, welfare reform and skills

Lacking the most basic skills demanded by employers, these individuals have trouble reading the dosage on an aspirin bottle, filling out a simple form, or completing a bank deposit slip.

Will welfare reform move individuals from welfare to work?

No, on its own, welfare reform will only add to the number of applicants in the hiring pool. Employers will be left with the responsibility for moving individuals from dependence to independence. Welfare reform will give many people an incentive to apply for jobs, but their skills, experience and "trainability" will determine whether or not they are hired. Employers must deal with the very simple question, "Will this applicant be productive enough to justify the wage I must pay him to perform this job?"

What are the skill levels of the welfare population?

According to studies sponsored by the U.S. Department of Education, 34% to 44% of welfare recipients⁴⁵ and approximately one-third of those with no income source are functionally illiterate.⁴⁶ Lacking the most basic skills demanded by employers, these individuals have trouble reading the dosage on an aspirin bottle, filling out a simple form, or completing a bank deposit slip.

According to a study commissioned by the Education Testing Service, "levels of literacy and degrees of success in the labor market are closely linked. This is true in the general population and it is true among those on welfare."⁴⁷

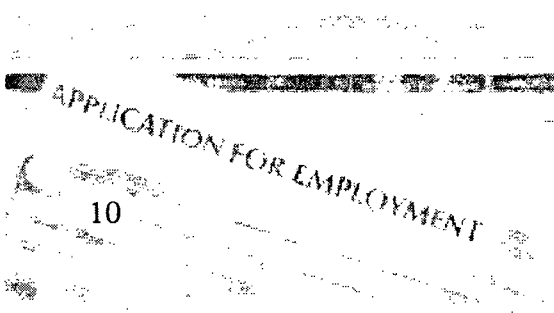
What challenges do employers face in hiring welfare recipients?

More than one-third of AFDC and food stamp recipients are functionally illiterate.⁴⁸ Most lack meaningful education, with approximately one quarter not having completed high school,⁴⁹ and few have substantial work experience. Employers who hire members of these groups take huge risks.

Training costs are substantial, since the lowest-skilled workers take the most time to train and generally have the highest "fall-out" rate. Customers get frustrated with new, untrained, often inefficient personnel. And unhappy customers lead to lost business.

Each time the minimum wage rises, employers have a renewed incentive to seek more energetic, more skilled, experienced employees. Welfare recipients who fail to establish such a profile get further shut out of job opportunities.

A full 34% to 44% of welfare recipients test as functionally illiterate — they cannot fill out a simple job application.



For what types of jobs are welfare recipients qualified after leaving public assistance?

Two-thirds of those receiving benefits from the Aid to Families with Dependent Children (AFDC) program spent at least eight years on the welfare rolls.⁵⁰ In 1994, fewer than 7% of AFDC recipients engaged in work at all and fewer than 3% engaged in work full time.⁵¹ (Data on AFDC's successor programs are not yet available.)

With such limited exposure to the workplace, most welfare recipients have not developed the experience or skills to justify high wages. Generally, entry-level jobs represent the only opportunities for which welfare recipients are qualified.

Since the employers creating entry-level positions are most often found in the retail and service sectors, it is no surprise a majority of jobs taken after a period of public assistance are found in either retail trade (28%) or services (46%).⁵²

What impact do mandated wage hikes have on welfare reform?

Minimum wage hikes change the composition of the low-wage work force. According to research from Boston University,⁵³ young people and those who are perceived as having more skills are hired for entry-level jobs following a wage hike, while low-skilled adults are less likely to be hired following a mandated wage increase. "The competition from higher quality workers," the report says, "makes low-skilled workers worse off."

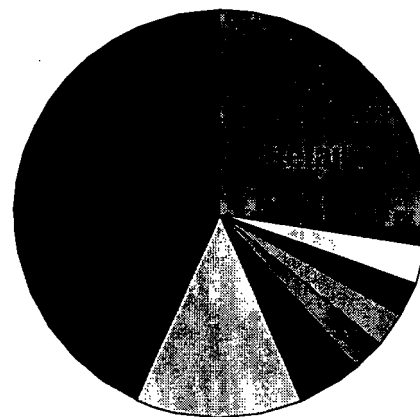
Another study, from the University of Wisconsin, found that welfare mothers in states that raise their minimum wage remain on public assistance 44% longer than their peers in states where the minimum wage remains unchanged. Why? Their skills do not allow them to compete effectively with other job applicants who are attracted to those jobs by the higher minimum wage.⁵⁴

By changing the composition of the low-wage work force, mandated wage hikes seriously undermine the goals of welfare reform.

Should entry-level wages replace welfare benefits?

This question concerns whether employees should be paid based on need. Should a mother of two children coming off welfare be paid more than a teenager to do the same job? The realities of entry-level work are that the job may provide a greater benefit as a training opportunity. These jobs often give employees the skills to subsequently obtain higher paying jobs. Rather than raising the income of the least skilled individuals, mandated wage hikes lock them out of these training experiences, eliminating any possibility that they will be able to move on to higher paying positions.

Where do people work after leaving welfare?



- Retail 28%
- Professional Services 25%
- Business/Personal Services 19%
- Manufacturing 13%
- Public Administration 3%
- Construction 3%
- Entertainment and Recreation 3%
- Transportation/Communication/Utilities 3%
- Agriculture 2%
- Wholesale Trade 2%

Source: March 1995 Current Population Survey

Figures do not add to 100% due to rounding



Can the value of a minimum wage job be quantified?

If only pay is considered, the value of entry-level employment is greatly underestimated. The true value of a first or second job lies in the skills and experience gained while working. In many ways, entry-level employment is equivalent to being paid to go to school.

According to U.S. Census Bureau data, minimum wage employees increase their earnings an average of 30% after 12 months (see question A3).

Research also indicates that students who work while in school show increased rates of labor force participation along with lower rates of unemployment over time. Of those with the heaviest work schedules while in school (as measured in weeks of employment per year), 87% were employed and only 4% unemployed 12 years later (the rest were not in the labor force). Those with moderate work hours had an 81% employment rate and 5% unemployment rate. In contrast, only 72% of those with no in-school work were employed and 7% were unemployed.⁵⁵

There are also substantial differences in income. More than half of those with heavy work schedules while in school were earning \$20,000 or more a dozen years later, while only about a third who did not work while in school earned at these income levels.⁵⁶

Do you need to know how to read to "flip burgers"?

Employers are relying more on technology to help them control labor costs in the face of stiff consumer resistance to higher prices. Consequently, the employment options today for illiterate individuals are severely limited. Even if an illiterate employee can get a janitorial restaurant job, he will have trouble moving up to the cash register if he can't read the menu or make change. Moving up to shift manager will be impossible if he can't read the training manual.

Research from the University of Chicago demonstrates that a significant portion of the entry-level work force would be denied entry to the Armed Forces due to poor performance on basic skills tests. Remarkably, nearly 70% of men earning below \$6.25 per hour score below average on the Armed Forces Qualifying Test.⁵⁷

Questions and Answers

the "living wage" campaign

Since 1995, "living wage" campaigns have sprung up in nearly three dozen cities and states, from New York City to Los Angeles, from New Orleans to Montana. Financial disclosure forms and the media report the same labor unions and advocacy organizations are behind the efforts in each jurisdiction. The "living wage" effort is a nationally orchestrated campaign.

What is the "living wage" campaign?

In an effort to circumvent a fiscally conservative Congress, wage-hike advocates devised a strategy whereby they would mandate minimum wage increases via ballot initiatives or city council ordinances. Led by national labor unions and ACORN (the Association of Community Organizations for Reform Now), the "living wage" campaign seemed to spring up overnight in more than a dozen cities and states in 1996.

According to its proponents, a "living wage" is defined as approximately 50% of the average wages in the location it is being advocated — generally about \$7.70 an hour. Some "living wage" proposals go as high as \$8.00 and \$9.00 an hour.

All such living wage movements are based on a philosophy of paying potential employees on the basis of need rather than skills or qualifications. "Living wage" campaigns assume that anybody who claims to need \$10.00 an hour has the skills to justify that amount to an employer.



This map shows just a few of the wage levels that have been discussed in living wage campaigns during 1996 through early 1997.

Questions and Answers

the “living wage” campaign continued

How much would a “living wage” mandate cost city and state governments?

From food to janitorial services, city and state governments contract with companies employing thousands of entry-level workers. These contracts can collectively add up to sizable budget impacts. For instance, the 1996 ballot initiative to raise Missouri’s minimum wage to \$6.50 per hour was defeated in part because its estimated cost to the state government was more than \$100 million.⁵⁸

Consider that a \$1.50 hike in the minimum wage would cost a state government more than \$300,000 per year for each 100 minimum wage workers under its direct or indirect employment. In budget-strapped localities all over the country, such added costs mean higher taxes or fewer services.

D3

There are two basic types of living wage proposals: the ballot initiative proposal, which would increase the minimum wage for all entry-level workers of a given state or city; and the city ordinance proposal, which increases the minimum wage of people working for companies which do business with, or which have “benefited” from a relationship with, a city.

- **Ballot Initiative Proposal**
- **City Ordinance Proposal**

How much would a “living wage” mandate cost an employer?

A standard living wage proposal is \$7.70 an hour. How does one measure the impact of such a proposal?

One way to “grasp” the impact of a living wage proposal is to ask how much it would cost an employer with 10 minimum wage employees currently being paid the federal minimum wage. The math is simple — $\$7.70 - \$5.15 = \$2.55$ additional per hour $\times 10$ employees $\times 40$ hours $\times 52$ weeks per year = \$53,040 per year in increased labor costs. Most small business owners don’t have an extra \$53,000; in fact, most small business owners don’t earn \$53,000 themselves. This means they must use every available means to reduce labor costs — cutting employees, hiring only the most productive workers, reducing hours, automating, shifting to more self-service, etc.

Do "living wage" advocates acknowledge the negative impacts of the policies they propose?

At least one of the leading proponents of living wages — the Association of Community Organizations for Reform Now (ACORN) — readily admitted in a court case that higher minimum wages lead to job loss. In 1995, ACORN sued the state of California in an effort to secure an exemption from that state's minimum wage laws for its own employees. In the incredible legal brief supporting its case, ACORN clearly stated, "... the more that ACORN must pay each individual outreach worker — either because of minimum wage or overtime requirements — the fewer outreach workers it will be able to hire."⁵⁹ ACORN also stated that "California's minimum wage laws ... affect the quality and quantity of staff" the organization can hire.

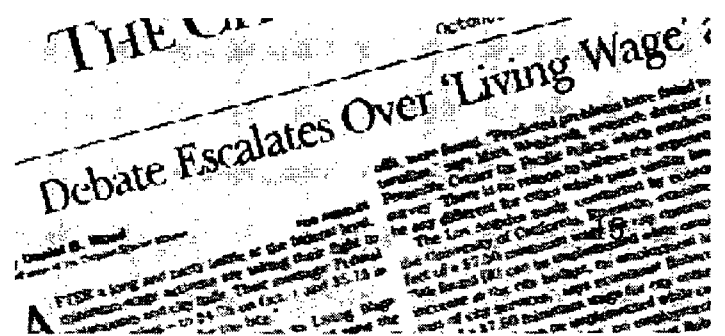
Are there special problems with the "living wage" concept?

Opponents of living wage laws raise a number of objections:

- Living wage laws place the cities or states affected at a competitive disadvantage with neighboring areas, where mandated wage rates are likely much lower.
- The job losses associated with living wage laws are significant. The wage hike is higher and so is the job loss resulting from its implementation.
- Costs to state and local governments (i.e., taxpayers) can run into the tens of millions of dollars due to higher costs of state/city contracts.

For updated information on the living wage campaign, see the Employment Policies Institute's home page at <http://www.epionline.org> or call our office.

In 1995, ACORN sued the state of California in an effort to secure an exemption from that state's minimum wage laws for its own employees.



Questions and Answers

economic realities

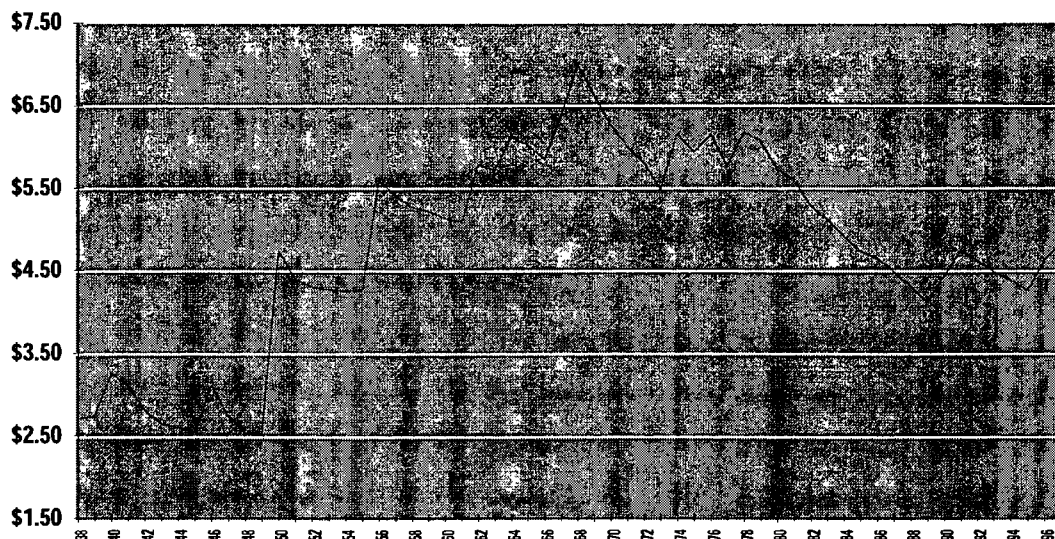
Why do surveys show that a majority of Americans support an increase in the minimum wage?

Surveys show strong support for a minimum wage hike — until the survey respondents learn about the impact a wage hike would have. In a 1996 survey conducted by the Opinion Research Corporation, 76% of those surveyed said they favored a hike in the minimum wage. Yet, in most cases these were uninformed opinions. A full 78% of the group did not know what the minimum wage was.⁶⁰

Has inflation eroded the minimum wage?

Today, the vast majority of workers affected by minimum wage rates are employed in the retail and service industries. When the wage standard was first implemented, unskilled retail and service workers were not covered by the minimum wage law. In 1938 and for many years thereafter, it was a minimum wage that covered mostly manufacturing, mining and transportation — it was a minimum *skilled* wage.

Up through the early 1960s, only 4% of retail workers and fewer than 1% of restaurant workers were covered by the minimum wage. Employees in movie theaters, laundries, small newspapers, domestic service and most dry cleaners were exempt altogether — their minimum wage was \$0.00. As Congress expanded the reach of the minimum wage law, the wage standard became irrelevant to skilled workers (they were paid much more than the minimum rate). It became a minimum *unskilled* wage — and Congress allowed the value of the wage to fall in line with the types of employees it was now covering.



Does a higher minimum wage benefit local businesses by stimulating the economy?

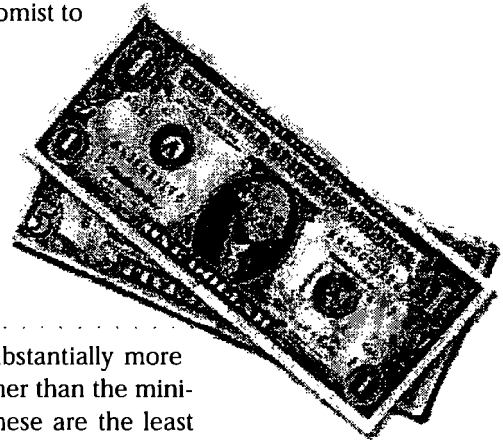
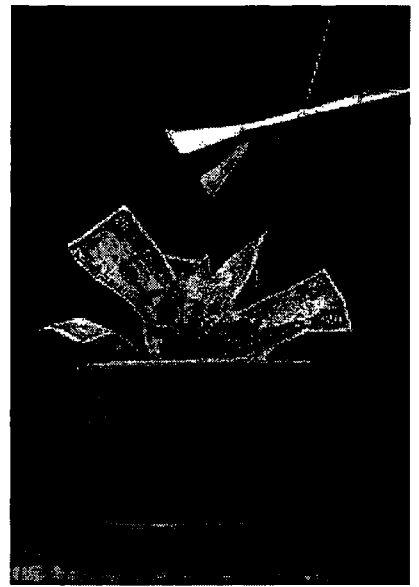
After a mandated wage hike, employers may be able to keep labor costs relatively even by reducing their work force, automating their operations, or cutting customer service.

If employers cannot reduce costs or raise prices, and they must absorb the new labor costs, the money likely comes out of investment and expansion. Employers who planned to add a second store on the other side of town may re-think their expansion — and their plans to hire the employees they would need in the new store.

The most powerful argument against the notion that raising the minimum wage “pumps more money into the economy” is drawn from common sense: if this notion were true, advocates of a higher minimum wage would push for an increase to \$25 per hour, the economy would expand overnight, and every business in the country would benefit tremendously. It doesn't take a trained economist to know this doesn't make sense.

In some areas, low-wage employers already pay \$6.00 an hour. Why not mandate by law this prevailing wage rate?

Even in places where many entry-level employees are making substantially more than the minimum wage (i.e., their skills equate to a wage rate higher than the minimum wage), a small number continue to make the minimum. These are the least skilled members of the work force — many of whom would not have gotten jobs at all had they lived in a less prosperous economy. In short, if their skills don't justify a wage higher than the existing minimum wage, they won't be hired.



Businesses require a certain number of employees to operate. Even with a minimum wage hike, how can businesses suddenly reduce employment?

The Wall Street Journal *summed up the real impact of a minimum wage hike in November 1996, a few weeks after the federal minimum wage rose 50 cents per hour. The Journal reported companies were tightening their labor-cost belts. The hike prompted employers to start "carefully scrutinizing who they hire," even doing "assessment profiles" to make sure they were not "wasting the extra 50 cents on unreliable help."*⁶¹

Employers facing higher mandated labor costs have a range of options for cutting costs — and none of these options are particularly attractive to low-skilled workers. In addition to cutting back on the number of people employed in a given community:

Employers can hire more skilled employees rather than taking a chance on someone with a spotty work record or no work record at all.

Employers do "raise the bar" for job applicants after a wage hike. They may replace unproductive employees immediately, or they may hire better workers as current employees leave. In either case, the lowest-skilled workers are either out of a job or have more difficulty getting hired.

Employers can cut the hours of their entry-level work force and ask managers to pick up the slack. A manager may wind up working the cash register on a slow night, building displays in a retail establishment, or helping clean up the workplace before closing — all jobs that were once handled by minimum wage employees who saw their hours cut after the mandated wage hike.

Employers can automate numerous functions in the workplace. Higher mandated wages give employers a big incentive to purchase new equipment that requires less human

labor to operate. Self-serve soda fountains and gas stations are now as common as automated tellers — three examples of jobs being replaced by automation.

Employers can reduce customer service. It is common today for guests in a fast food establishment to clean their own tables. In some supermarkets customers bag their own groceries. And nearly every American

driver now pumps his/her own gas — all jobs that were once performed by entry-level employees.

Employers can demand higher productivity from their current employees. After a mandated wage hike, managers may tell cashiers that they must ring through five more customers per hour in order to "make the grade." Employees may be required

to produce an extra ten "widgets" per hour. Employers may cut the number of allowable errors — increasing the pressure on employees to get every order right. Or companies may give stocking crews just four hours instead of five to restock every shelf in the store. Any increase in productivity demands spells bad news for the lowest-skilled employees — they have a tougher time keeping up, and if they don't "make the grade," they are replaced with faster or more productive workers.



Questions and Answers

economic realities continued

Can employers recover the cost of minimum wage hikes by increasing prices?

In an extremely competitive retail environment, successful businesses are the ones that are stabilizing and even cutting prices. Consumers are extremely resistant to higher prices in a non-inflationary economy. Even in the wealthiest neighborhoods, people buy self-serve gasoline to avoid paying a few extra cents for full service. Television commercials constantly advertise falling prices and "value meals." Sunday newspapers are filled with coupons for as little as "10 cents off." Telephone companies engage in expensive advertising battles over long distance rates that often vary by one or two pennies a minute. If these marketing strategies didn't appeal to consumers, businesses wouldn't use them.

Simple logic dictates that if businesses *could* raise prices, they would. Yet policymakers who lack this basic understanding of the marketplace sometimes view the costs of minimum wage hikes in a vacuum. They don't see why consumers would care about paying a nickel more for each gallon of gas, or 50 cents more for each meal in a restaurant.

In short, when the government demands that employers pay employees higher wages, one rarely hears mention of the other important player in this equation — the consumer. With their purchasing decisions, consumers determine how much a business can charge for its products or services and, accordingly, how much that business can afford to pay its employees.

"a lousy 90 cents"

In supporting a 21% hike in the minimum wage, former White House Chief of Staff Leon Panetta described the mandated jump as "a lousy 90 cents." What he failed to grasp is that "a lousy 90 cents" will cost an employer with 10 minimum wage employees almost **\$20,000** a year in additional labor costs. How will this small business come up with the extra **\$20,000**?

Endnotes

"Legislators are right to search for ways to help the working poor, but wrong to think that raising the minimum wage is one of them."

The New York Times

- 1 Compiled from 1995 ORG Current Population Survey. Sample weights used for analysis. Sample consists of wage and salary workers age 16 and over.
- 2 Compiled from 1995 Current Population Survey. Based on workers making \$4.25 an hour or less in 1995.
- 3 *ibid.*
- 4 *ibid.*
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- 30 Neumark.
- 31 University of New Hampshire Survey Center, "Health Insurance Benefits and Income Support for Poor Families: Report on National Survey of Leading Economists," Submitted to the Employment Policies Institute by Dr. R. Kelly Myers (Durham, New Hampshire, June 1993).
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- 34 Alan Krueger, testimony before the Joint Economic Committee of the United States Congress, February 22, 1995.

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- 36 David Neumark and William Wascher, "The Effect of New Jersey's Minimum Wage Increase on Fast-Food Employment: A Re-Evaluation Using Payroll Records," Photocopies, January 1996.
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- 38 David Card, "Do Minimum Wages Reduce Employment? A Case Study of California, 1987-1989," *Industrial and Labor Relations Review*, October 1992.
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"A higher minimum will further reduce the employment opportunities of workers with few skills."

Gary Becker
1992 Nobel Laureate,
Economics

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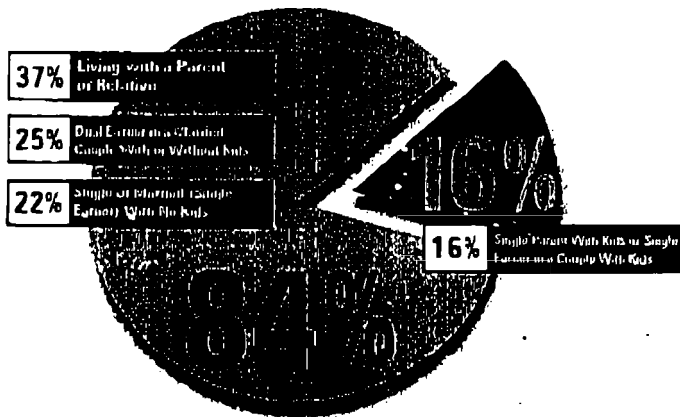
The Employment Policies Institute is a non-profit research organization dedicated to studying public policy issues surrounding employment growth. In particular, EPI research focuses on issues that affect entry-level employment. Among other issues, EPI research has quantified the impact of new labor costs on job creation, explored the connection between entry-level employment and welfare reform, and analyzed the demographic distribution of mandated benefits. EPI sponsors nonpartisan research which is conducted by independent economists at major universities around the country.

The Minimum Wage Debate

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Minimum Wage

Who's Getting It?



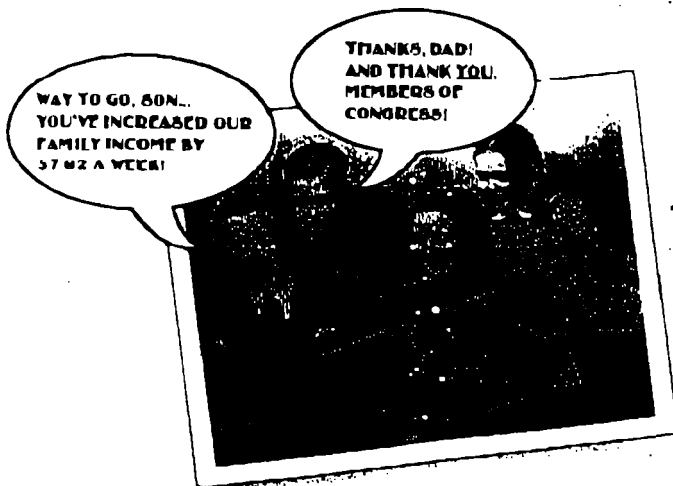
Fully 84% of employees whose wages would be increased by President Clinton's proposed minimum wage hike either live with their parents or another relative, live alone, or have a working spouse.

Who's Paying for It?



Recent research projected that the '96-'97 wage hike would increase the number of teens who are out of school and unemployed by more than 25%.

Who Wins?



The average family income of minimum wage workers is in excess of \$35,000 a year.

Who Loses?

128,000

Despite a booming economy, the first half of the 1996 minimum wage increase resulted in 128,000 fewer teenage jobs, according to US Department of Labor data.

Ever thought about it this way before?

For the full story on the minimum wage, call us at 202.463.7650 or visit our web site, www.epionline.org.

**EMPLOYMENT
POLICIES
INSTITUTE**

Top Ten Reasons to Raise the Minimum Wage

(and why they're wrong)

You can't support a family on the minimum wage.

Only one in ten minimum wage earners is trying to support a family, and these people all qualify for the Earned Income Tax Credit, which helps raise their income well above the minimum wage. See questions A2 and A10.

More than 40 percent of minimum wage earners are the sole breadwinners of their families.

Since only one in ten minimum wage earners supports a family, the only way wage hike proponents could arrive at this figure is by counting single people living alone as supporting a "family" of themselves. See question A2.

People who work hard and play by the rules deserve a wage they can live on.

People are paid based on their skills, not on their needs. People who lack the skills or experience needed to earn higher wages will be among the first people who lose their jobs when the wage goes up. See question B1.

The minimum wage is at a 40-year low.

Forty years ago, the minimum wage applied to skilled and semi-skilled jobs in the transportation, mining and manufacturing industries. Retail and service jobs — which make up the vast majority of minimum wage jobs today — were not covered by the minimum wage 40 years ago. The effective minimum wage for those jobs was \$0.00. See question I2.

More than a dozen studies show that there is no negative impact of a minimum wage increase. And research shows that a higher minimum wage may actually increase employment.

Despite public relations campaigns to the contrary, 100 years of economic theory remains intact. See questions B6 B11

101 economists support an increase in the minimum wage.

An unprecedented 17,000 economists, however, believe that it will result in reduced employment, according to a survey of the American Economic Association. See question B4.

A higher minimum wage will lure people off welfare and into the work force.

Any welfare recipient who has the skills needed to earn more than the minimum wage is free to apply for that job. Unfortunately, the vast majority of people on welfare simply lack the skills needed even for entry-level jobs. See questions C1 and C5.

The majority of Americans support an increase in the minimum wage.

It's true that 76% of Americans said they favored a hike in the minimum wage. Yet 78% of the same surveyed population admitted they didn't know what the minimum wage was — one reason why important policy decisions aren't usually made by popular vote. See question E1.

In many cities employers are already paying well above the minimum wage.

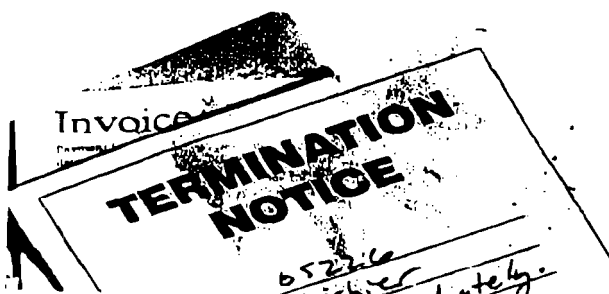
And in those same cities thousands of entry-level workers are being hired at the current minimum wage. Many applicants are being denied jobs at the current minimum wage. Raising the wage will only lock more low-skilled workers out of the work force. See question E4.

With CEO salaries rising fast, a higher minimum will help balance inequality in America.

CEO compensation has very little to do with the value of an entry-level employee. In fact, the vast majority of entry-level jobs are created by small businesses owned by people taking great personal financial risk for annual pay that averages between \$30,000 and \$35,000 a year. Forcing these small businesses to absorb a 20% hike in labor costs as a way of "getting back" at well-paid CEOs is a counterproductive tactic, especially when it results in fewer job opportunities for people just entering the work force. See questions B13 & D4.

*This document contains fact-based responses to each of the statements listed above, and many more. **The Minimum Wage Debate** is the most comprehensive summary of information on the minimum wage available today.*

The Minimum Wage Debate



FFPS
Debate Escalates Over Living Wage

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the minimum wage debate

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I ntroduction

Today the debate is being transformed by wage proponents into questions of living wages — how much employees need, rather than how much their skills justify.

The current debate over the minimum wage is far more complex than it was ten years ago. It is now a year-round, multi-front conflict where those who do not recognize key changes in the legislative environment will be left behind.

The minimum wage debate once centered almost solely on skill levels and job loss: how many jobs would be lost in order to give unskilled workers a raise? Today the debate is being transformed by wage proponents into questions of living wages: how much employees need, rather than how much their skills are valued.

The need argument is presented in the context of **welfare reform**. With federal and state laws mandating that many leave the welfare rolls, wage proponents are calling for wage increases to be included in programs aimed at moving welfare recipients to self-sufficiency.

The debate is also driven by renewed **union activity**. Labor unions have "upped the ante" with an organizing campaign centered around the slogan, "America Needs a Raise."

The debate is also being driven by the perception of growing **wage inequality**. Some economists (clearly not all) have measured a growing gap between "the rich" and "the poor." The oft-heard prescription for this malady: mandated "living wages."

The issue is also sustained by widespread **economic illiteracy** among well-meaning citizens. This is precisely why supporters of high minimum wages take their proposals "straight to the people," bypassing legislators who are often more informed on labor market economics.

Today, more than ever, there is a critical need to understand that a mandated wage hike is a double-edged sword. The combination of welfare reform and higher minimum wages freezes low-skilled job

applicants out of the private sector job market, denying them work experience and on-the-job training while providing others with a raise.

The current debate over the minimum wage goes far beyond job loss. Understanding the minimum wage requires insight into how businesses function, why skills are valued, and which segments of the population are most likely to lose employment opportunities following an increase in the minimum wage.

Never have the skills of the entry level work force been more relevant to the debate. Yet never has the role of skills been ignored to a greater extent. A staggering 34 to 44% of current welfare recipients are functionally illiterate. In a free labor market, individuals with such limited skills cannot and will not command high wages.

In the midst of all the changing factors in the minimum wage debate, one principle remains constant: skills equal wages. Individuals who use entry-level jobs to gain basic skills move on to higher paying work. By contrast, the unskilled employees who are supposed to "benefit" from a government-required pay raise often face fewer employment opportunities as a result of it. Government has the power to mandate minimum wages, but despite the best intentions, it cannot force employers to hire the unskilled and inexperienced at that wage.

This book explains the principles surrounding the modern minimum wage and living wage debates. It is presented as a tool for anyone interested in understanding the minimum wage or explaining it to others.

Questions and Answers **A**

minimum wage employee profile

Who earns the minimum wage?

Because the minimum wage is traditionally paid to people just entering the work force, the overwhelming majority of minimum wage employees are young, single and childless.

According to U.S. Census Bureau data, young people living with their parents account for 37.6% of those who benefited from the 1996 minimum wage hike, making this group the largest segment of minimum wage employees. The same data show that 85.1% either live with their parents (37.6%), are single and live alone (17.1%), have a working spouse (21.5%), or are extended family members and non-relatives (8.9%).¹

How many minimum wage employees provide the sole support for their families?

Only 5.5% of minimum wage earners are single parents and only 7.8% are in married, single-earner families (where the household may or may not include children).

Advocates of higher minimum wages often contend that 40% of minimum wage employees are supporting families. This is a deceiving statistic. This number is correct only when proponents count single, childless individuals living by themselves as "families." By that reckoning, an individual working at a minimum wage position while attending college is the sole breadwinner in his "family."

Do people often get stuck at the minimum wage?

No. The average income of minimum wage employees increases 40% within one year of employment. This traditional growth out of entry-level employment explains why only 2.8% of employees above the age of 30 are working at the minimum wage.

What role do minimum wage jobs play for those who subsequently move on?

Most working Americans entered the work force via jobs paying at or near the minimum wage. Upon gaining marketable skills, these employees quickly move into higher-paying jobs. Many — such as high school and college students, senior citizens and some with working spouses — work in minimum wage jobs as a way of supplementing a family income or earning extra spending money.

These individuals are either using their minimum wage job as a stepping stone to higher-paying work, or they choose to work where they do for a variety of economic and noneconomic reasons, including location, scheduling, convenience, camaraderie, or simply enjoyment.

Who is earning the minimum wage?

There are more than **550,000 teens** working at the minimum wage who live in households where family income exceeds \$30,000.²

Only 44% of minimum wage employees work full time.³ The majority of minimum wage employees could increase their income simply by working more hours.

Single parents with three or more children account for only 1% of the minimum wage work force, and only 57% of these single parents work full time.⁴

A Q estions and Answers

minimum wage employee profile continued

When New Jersey raised its minimum to \$5.05 in 1992, the average beneficiary resided in a family earning almost \$40,000 annually.⁸

Who benefits from a minimum wage increase?

The beneficiaries of a minimum wage hike — those who do not lose their jobs, lose benefits, experience demands for increased productivity, or see their hours cut — are rarely from poor families. Moreover, beneficiaries rarely receive more than a token increase in family income. Those who are helped tend to be young, single and part of middle- and upper- income families.⁹

Research shows that when New Jersey raised its minimum wage from \$4.25 to \$5.05 in 1992, the annual family income of minimum wage employees increased by an average of just one percent. Moreover, a full 70% of the "beneficiaries" were in families making more than \$20,000 a year. The average beneficiary of an increase lived in a family with an annual income of \$38,873.¹⁰

Those Who Stay at the Minimum Wage

Who is "stuck" at the minimum wage?

The small percentage of employees who do not advance tend to be the least skilled, the least educated, and the least experienced members of the work force. For instance, more than 44% of working men and 64% of working women who dropped out of high school make less than \$6.25 an hour.¹¹

What differentiates those who advance beyond the minimum wage from those who do not?

Like all employees, those earning the minimum wage would like to earn more money. And in most cases, they soon do. After all, more than 97% of all American employees move beyond the minimum wage by age 30.¹² What differentiates the 2.8% who fail to move on?

Almost always, it's a question of skills and motivation. This small percentage do not offer the skills — or even the willingness to learn them — to justify a higher wage. They are the last to get a raise and the first to lose their jobs following a minimum wage hike.

Does the current minimum wage bring a full-time employee above the poverty level?

A single, childless person working full time at the new federal (September 1997) minimum wage of \$5.15 an hour earns \$10,712 a year, 34% above the 1996 poverty level of \$7,992 for a single, childless adult.¹³

How about those supporting others on the minimum wage?

For a few employees — those supporting another adult or supporting one or more children — income from a job paying the current minimum wage does not match the poverty level. These individuals represent, at most, 13.3%¹⁴ of the minimum wage work force. But these families have access to special assistance that, unlike the minimum wage, is designed to target employees in their situation.

Even if they are a small segment of the minimum wage population, how can people support families on just the minimum wage?

They don't. The few minimum wage employees who are sole breadwinners do not depend solely on that income. Every one of them qualifies for financial assistance directly from the federal government in the form of an Earned Income Tax Credit (EITC) — a "reverse income tax."

This program helps families until the breadwinners gain enough work experience to increase their pay to levels where they become self-sufficient. The benefit of the EITC program is that it targets those relatively few minimum wage employees who are trying to support a family and supplements their incomes as long as they continue to work.

While most who benefit from minimum wage hikes have no children or reside in relatively high-income families, EITC recipients have demonstrated need for the extra resources. For instance, in 1998 a single parent of two children would earn \$10,712 in wages working at the minimum wage, but would actually take home approximately \$14,000 after taking advantage of the EITC.¹²

In his 1992 campaign, then-candidate Bill Clinton promised to increase the EITC, arguing that it was a better way to address the needs of the working poor than a hike in the minimum wage.¹³ Former Secretary of Labor Robert Reich stated in a memo to President Clinton that "the EITC program poses no threat to employment opportunities and can be better targeted to families in need" than a minimum wage hike.

**"the EITC
program poses
no threat to
employment
opportunities and
can be better
targeted to
families in need"**

**Robert Reich,
Secretary of Labor, 1993**

U.S. DEPARTMENT OF LABOR
SECRETARY OF LABOR
WASHINGTON, D.C.
July 20, 1993
MEMORANDUM TO THE PRESIDENT
VIA Robert Rubin
FROM: Robert B. Reich *RB*
SUBJECT: Reconciliation, the EITC, and the Minimum Wage.
How much progress towards the make work pay goal.
Lloyd Bentsen, Leon Panetta, Donna Shalala,
Laura Tyson, Carol Rasco

An assessment of the EITC proposals in the
and the objective of making work pay.
First, we should

**"After all, most
minimum wage workers
are not poor."**

**— Robert Reich
Secretary of Labor, 1993**



B Questions and Answers

the minimum wage and job loss

"[I]ncreases in minimum wages ... raise the probability that more-skilled teenagers leave school and displace lower-skilled workers from their jobs."

— Dr. David Neumark,
Michigan State University

"Increases in minimum wages may further disadvantage these women [on welfare] if employers are more likely to select teenagers possessing a high school diploma."

— Dr. Peter Brandon,
University Of Wisconsin

"[M]inimum wage increases induced a shift towards teenagers and students and away from non-students and adults.... The competition from higher quality workers makes low-skilled workers worse off."

— Dr. Kevin Lang,
Boston University

Do higher minimum wages lead to job loss, and if so, who are the first to lose their jobs?

It is well known among economists and lawmakers that a higher minimum wage leads to job losses, and the economic evidence supporting this conclusion is outlined below. But it is also important to focus on exactly who suffers job loss following a minimum wage hike. Recent research¹⁸ strongly suggests job loss is concentrated among low-skilled adults.

B1

If the unemployment rate remains steady, how can you argue that a minimum wage hike causes job loss?

B2

Although a hike can affect the job prospects of a large number of minimum wage workers, this effect is often subsumed in the official unemployment rate, which is based on the entire national work force. Secondly, the issue is not only how many minimum wage jobs "survive" the wage hike (or how many are not created), but who gets and keeps those jobs — and who doesn't. The composition of the minimum wage work force changes after a wage hike, and that change creates winners and losers.

Research from Boston University shows that low-skilled adults are often crowded out of the job market by teens and students following a mandated wage hike.¹⁹ A study from Michigan State University suggests that even among teens, those who are perceived as having the lowest skills are marginalized, while more "attractive" teens get the available entry-level jobs following a minimum wage increase.²⁰ A report from the Institute for Research on Poverty at the University of Wisconsin shows that welfare mothers are more likely to secure employment before a minimum wage hike than after. Once the wage standard rises, welfare recipients have a much more difficult time competing for entry-level jobs.²¹



Each of the studies quoted above to the left examines what can be called the "rip tide effect." Even if the overall unemployment rate remains steady, certain groups of people experience an "under the surface" dynamic reducing job opportunities after a mandated wage hike.

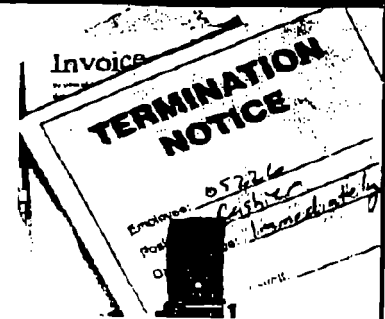
What evidence exists showing higher minimum wages cause job loss?

R3

The economic evidence proving that higher minimum wages result in lost jobs is overwhelming. Opinions among economists vary as to the severity of the impact, but since the minimum wage first went into effect, research has shown that it causes job loss among the least skilled. In the nearly 60 years since the U.S. instituted its first minimum wage, more than 80 studies — in addition to scores of articles and economic textbooks

have demonstrated a link between higher minimum wages and job loss. Every student of economics is taught that if you increase the price of something (low skilled labor), you decrease the demand. Despite claims to the contrary, the laws of economics haven't changed. The following represent but a few of the scores of studies, reports and expert analyses conducted over the years proving this point:

- An exhaustive 1993 study from an economist at Carnegie-Mellon University examined data from 64 sectors of the retail industry in California following that state's 1988 minimum wage hike. This study showed that even though California's retail sales were growing at almost twice the national rate, the state's retail employment grew much more slowly than national retail employment. Moreover, the most significant negative employment effects were found in low-wage counties — where employers felt the most impact.²⁴
- A 1995 report from economists at the University of Chicago and Texas A&M University revealed significant reductions in teenage employment nationwide after the federal minimum wage increase of 1990-91. Employment of teenage males fell 5% after the wage hike, while employment of teen women fell 7%.²⁵
- In 1978, Congress created the Minimum Wage Study Commission to analyze the impact of the minimum wage on U.S. employment. The Commission determined every 10% increase in the minimum wage results in a 1% to 3% job loss for teenagers.²⁶
- In 1983, the General Accounting Office found "virtually total agreement that employment is lower than it would have been if no minimum wage existed. This is the case even during periods of substantial economic growth."²⁷
- A 1988 Congressional Budget Office (CBO) study found a proposal to increase the minimum wage 51% would result in the loss of as many as 500,000 jobs.²⁸
- In 1988, the Council of Economic Advisers estimated job loss associated with a minimum wage of \$4.65 (up from the 1988 wage of \$3.35) would be concentrated among younger, less skilled, and minority workers.²⁹
- A 1995 study showed that low-skilled adults in states which raise their minimum wage are often crowded out of the job market by teens and students.³⁰
- A 1995 study discovered that mothers in states that raise their minimum wage remain on public assistance an average of 44% longer than their peers in states where the minimum wage remains unchanged.³¹
- A 1995 study showed that high skilled teens, or those who are perceived as more "desirable" employees, often displace low-skilled teens in minimum wage jobs after a mandated wage hike. A higher minimum wage increases the number of "idle" teens (those who neither work nor attend school) by as much as 20%.³²



Every student of economics is taught that if you increase the price of something (low skilled labor), you decrease the demand (jobs). Despite claims to the contrary, the laws of economics haven't changed.

B Questions and Answers

the minimum wage and job loss continued

A survey of
members of the
American
Economic
Association
reveals that 77%
of economists
believe a
minimum wage
hike causes job
loss.³¹

Do economists still believe that minimum wage hikes are associated with job loss?

B4

Minimum wage proponents occasionally cite a list of 101 economists who support a minimum wage hike. But this group represents a tiny minority in the economics profession. The results of a much more comprehensive survey of the American Economic Association indicate that 77% of economists — or nearly 17,000 economists — believe wage hikes cause job loss.³²

Does job loss take more than one form?

B5

Entry level employees can experience lost work even when they keep their jobs. If an employer decreases total hours of employment per day following a wage hike, there is measurable decline in employment even if no employee actually "loses his job."

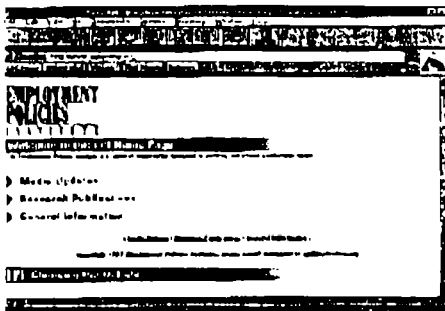
Another aspect of job loss which is very difficult to measure is the loss of opportunities in the long run. Faced with higher labor costs, some employers who had been planning to expand their operations decide to forgo this investment and attendant job creation. Others redesign their establishments so they can operate with fewer employees and more self-service. Still others purchase machinery that can do the work employees used to do.

These points are particularly important in the face of welfare reform, through which state and local governments nationwide are seeking to create more jobs. (For more information on the interaction of mandated wage hikes and welfare reform, see section C.)

Did a recent study of New Jersey's 1992 minimum wage hike prove that employment did not decline?

B6

No. While the New Jersey fast food study³³ received attention from the media and lawmakers, the study turned out to be meaningless: the input data used in the analysis were grossly inaccurate. Not only were the employment numbers used in the New Jersey study proven wrong by payroll records, but the correct numbers suggest that employment declined following the mandated wage hike.



The Employment Policies Institute has prepared a complete analysis of the numerous problems in the New Jersey fast food study. To obtain a copy of this analysis, contact EPI or visit our home page at <http://www.epionline.org>

37

Once these apparent flaws were identified, other researchers collected payroll records from the restaurants examined in the New Jersey study. The payroll records confirmed that the "observations" reported above were grossly inaccurate. In addition, when employment numbers from payroll records were used for the same calculations upon which the New Jersey study was based, they showed that employment declined in New Jersey following the mandated wage hike.¹⁶

Restaurant/Zip Code	Feb. '92 Emp. Full/Part Time	Nov. '92 Emp. Full/Part Time
Burger King in 070XX	0/30	29/10
Wendy's in 072XX	0/30	26/30
Kentucky Fried Chicken in 073XX	13/12	11/10
Burger King in 080XX	65/20	30/25
Kentucky Fried Chicken in 082XX	50/13	22/3
Burger King in 079XX	3/60	0/15
Wendy's in 085XX	30/10	17/30
Kentucky Fried Chicken in 076XX	0/7	14/0
Howe's in 083XX	20/20	14/0
Burger King in 140XX	50/35	15/13

Why were the numbers in the New Jersey study so flawed?

Rather than seek payroll records or authoritative estimates of employment from restaurant owners, the authors of the New Jersey fast food study chose to collect their data through cold-call telephone interviews with managers and assistant managers who did not have payroll records in front of them. In addition, the study authors used only one poorly-constructed question on employment levels that could not be clearly or consistently interpreted by those who participated in these cold-call interviews.

Why do people still talk about the New Jersey study?

The New Jersey study was one of the few economic reports ever to conclude that employment does not decline following mandated wage hikes. Thus, it was highly publicized — and defended — by those who support a wage hike. After the flaws in the New Jersey study were made public more than two years ago, many of those who support higher minimum wages continued to cite the study, ignoring the new facts and evidence and misleading the public by maintaining that the New Jersey study was simply being debated by “dueling economists.”

Are there other studies that have reached conclusions similar to those of the New Jersey fast food study?

One of the economists who worked on the New Jersey study also conducted a similar exercise in Texas,¹² with similar conclusions. However, as with the New Jersey study, the Texas report was based on cold-call telephone interviews that could not have produced reliable data.

The other economist who worked on the New Jersey study did research in California¹³ which was not based on the fast food industry. He concluded that California experienced no ill effects when that state's minimum wage rose above the federal standard in 1988.

This study has also been widely challenged. The study's author compared California job growth to four other states and reached his conclusions based on these comparisons. However, at the time of the study, California's economy was growing at least one-third faster than any of the other states in the study — a factor that was not accounted for in the study. Because the analysis was keyed off interstate comparisons, the negative impact of the minimum wage was masked by the growing California economy.

Are there “more than a dozen studies” that show a higher minimum wage does not result in job loss?

Former Secretary of Labor Robert Reich popularized a list of studies he claimed showed no job loss. However, even a cursory examination of the short list shows that among the “dozen” studies are the discredited New Jersey and Texas fast food studies, the heavily questioned California study (see material above), three studies from foreign countries, two studies from the 1970s, one “study” that is simply a compilation of other research, and one study that concludes low-skilled adults are displaced from their jobs when the minimum wage rises.

Questions and Answers **B**

the minimum wage and job loss continued

Should the minimum wage be linked to inflation or average wages?

B12

Indexing the minimum wage to the national inflation rate assumes that all parts of the country share a similar experience in their inflation rates and economic strength. Variations in economic vitality in different parts of the country would concentrate the negative employment effects of a higher minimum wage in regions with the weakest labor markets.

Additionally, policies which tie the minimum wage to inflation inherently assume that the productivity of minimum wage employees is increasing at a pace commensurate with the economy and the work force as a whole. This is rarely the case. Generally, highly-skilled employees have the ability and the opportunity to push up their productivity — and along with it, their compensation — at a much higher rate than their less-skilled counterparts.

Legally mandating that labor intensive, minimum wage positions be compensated for productivity gains in other sectors of the economy violates the fundamental "skills equal wages" equation. Policies which tie the minimum wage to inflation are not cost free. Rather, they carry the same negative consequences as any minimum wage increase.

Finally, in testimony before Congress in early 1995, Federal Reserve Chairman Alan Greenspan reported that the Consumer Price Index may overstate inflation by as much as 1.5% — almost half of 1996's inflation rate of 3.3%. Since then, several other highly respected studies have reached similar conclusions.

What effects do minimum wage hikes have on poverty?

B13

Advocates of a higher minimum wage often maintain that an increase will reduce poverty. When economists at the University of South Carolina studied this claim, they found no measurable decrease in the poverty rates of the groups most likely to be affected — junior high school dropouts, young adults, etc.

As former Secretary of Labor Reich has stated, "most minimum wage workers are not poor."¹ In fact, the average family income of an employee who benefitted from the 1996 minimum wage hike is \$36,428.² Because the minimum wage is so poorly targeted, it is not an effective anti-poverty tool.

© Questions and Answers

wages, welfare reform and skills

Lacking the most basic skills demanded by employers, these individuals have trouble reading the dosage on an aspirin bottle, filling out a simple form, or completing a bank deposit slip.

Will welfare reform move individuals from welfare to work?

No, on its own, welfare reform will only add to the number of applicants in the hiring pool. Employers will be left with the responsibility for moving individuals from dependence to independence. Welfare reform will give many people an incentive to apply for jobs, but their skills, experience and "trainability" will determine whether or not they are hired. Employers must deal with the very simple question, "Will this applicant be productive enough to justify the wage I must pay him to perform this job?"

What are the skill levels of the welfare population?

According to studies sponsored by the U.S. Department of Education, 34% to 44% of welfare recipients¹¹ and approximately one-third of those with no income source are functionally illiterate.¹² Lacking the most basic skills demanded by employers, these individuals have trouble reading the dosage on an aspirin bottle, filling out a simple form, or completing a bank deposit slip.

According to a study commissioned by the Education Testing Service, "levels of literacy and degrees of success in the labor market are closely linked. This is true in the general population and it is true among those on welfare."¹³

What challenges do employers face in hiring welfare recipients?

More than one-third of AFDC and food stamp recipients are functionally illiterate.¹⁴ Most lack meaningful education, with approximately one quarter not having completed high school,¹⁵ and few have substantial work experience. Employers who hire members of these groups take huge risks.

Training costs are substantial, since the lowest-skilled workers take the most time to train and generally have the highest "fall-out" rate. Customers get frustrated with new, untrained, often inefficient personnel. And unhappy customers lead to lost business.

Each time the minimum wage rises, employers have a renewed incentive to seek more energetic, more skilled, experienced employees. Welfare recipients who fail to establish such a profile get further shut out of job opportunities.

Depending on the specific skills measured (e.g., reading, math), up to 44% of welfare recipients test as functionally illiterate — they cannot fill out a simple job application.

APPLICATION FOR EMPLOYMENT

For what types of jobs are welfare recipients qualified after leaving public assistance?

Two-thirds of those receiving benefits from the Aid to Families with Dependent Children (AFDC) program spent at least eight years on the welfare rolls.²¹ In 1994, fewer than 7% of AFDC recipients engaged in work at all and fewer than 3% engaged in work full time.²² (Data on AFDC's successor programs are not yet available.)

With such limited exposure to the workplace, most welfare recipients have not developed the experience or skills to justify high wages. Generally, entry-level jobs represent the only opportunities for which welfare recipients are qualified.

Since the employers creating entry-level positions are most often found in the retail and service sectors, it is no surprise a majority of jobs taken after a period of public assistance are found in either retail/trade (28%) or services (46%).

What impact do mandated wage hikes have on welfare reform?

Minimum wage hikes change the composition of the low-wage work force. According to research from Boston University,²³ young people and those who are perceived as having more skills are hired for entry-level jobs following a wage hike, while low-skilled adults are less likely to be hired following a mandated wage increase. "The competition from higher quality workers," the report says, "makes low-skilled workers worse off."

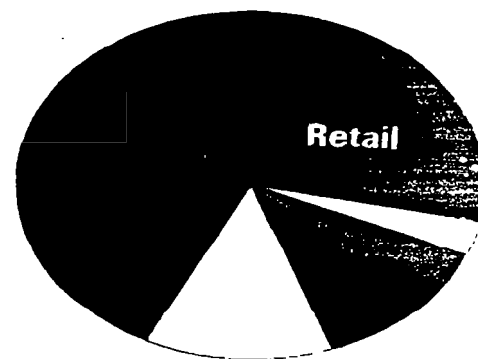
Another study, from the University of Wisconsin, found that welfare mothers in states that raise their minimum wage remain on public assistance 44% longer than their peers in states where the minimum wage remains unchanged. Why? Their skills do not allow them to compete effectively with other job applicants who are attracted to those jobs by the higher minimum wage.²⁴

By changing the composition of the low-wage work force, mandated wage hikes seriously undermine the goals of welfare reform.

Should entry-level wages replace welfare benefits?

This question concerns whether employees should be paid based on need, the cost of raising two children coming off welfare, be paid more than a person would to do the same job? The realities of entry-level work are that the job may provide a greater benefit as a training opportunity. These jobs often give employees the skills to subsequently obtain higher paying jobs. Rather than taking the income of the least skilled individuals, mandated wage hikes lock them out of these training experiences, eliminating any possibility that they will be able to move on to higher paying positions.

Where do people work after leaving welfare?



- Retail 28%
- Professional Services 25%
- Business/Personal Services 19%
- Manufacturing 13%
- Public Administration 3%
- Construction 3%
- Entertainment and Recreation 3%
- Transportation/Communication/Utilities 3%
- Agriculture 2%
- Wholesale Trade 2%

Source: March 1995 Current Population Survey
Figure does not add to 100% due to rounding



Can the value of a minimum wage job be quantified?

If only pay is considered, the value of entry-level employment is greatly underestimated. The true value of a first or second job lies in the skills and experience gained while working. In many ways, entry-level employment is equivalent to being paid to go to school.

According to U.S. Census Bureau data, minimum wage employees increase their earnings an average of 30% after 12 months (see question A3).

Research also indicates that students who work while in school show increased rates of labor force participation along with lower rates of unemployment over time. Of those with the heaviest work schedules while in school (as measured in weeks of employment per year), 87% were employed and only 4% unemployed 12 years later (those rest were not in the labor force). Those with moderate work hours had an 81% employment rate and 5% unemployment rate. In contrast, only 72% of those with no in-school work were employed and 7% were unemployed.

There are also substantial differences in income. More than half of those with heavy work schedules while in school were earning \$20,000 or more a dozen years later, while only about a third who did not work while in school earned at these income levels.

Do you need to know how to read to "flip burgers"?

Employers are relying more on technology to help them control labor costs in the face of stiff consumer resistance to higher prices. Consequently, the employment options today for illiterate individuals are severely limited. Even if an illiterate employee can get a janitorial restaurant job, he will have trouble moving up to the cash register if he can't read the menu or make change. Moving up to shift manager will be impossible if he can't read the training manual.

Research from the University of Chicago demonstrates that a significant portion of the entry-level work force would be denied entry to the Armed Forces due to poor performance on basic skills tests. Remarkably, nearly 70% of men earning below \$6.00 per hour score below average on the Armed Forces Qualifying Test.

Questions and Answers

the "living wage" campaign

Since 1995, "living wage" campaigns have sprung up in nearly three dozen cities and states, from New York City to Los Angeles, from New Orleans to Montana. Financial disclosure forms and the media report the same labor unions and advocacy organizations are behind the efforts in each jurisdiction. The "living wage" effort is a nationally orchestrated campaign.

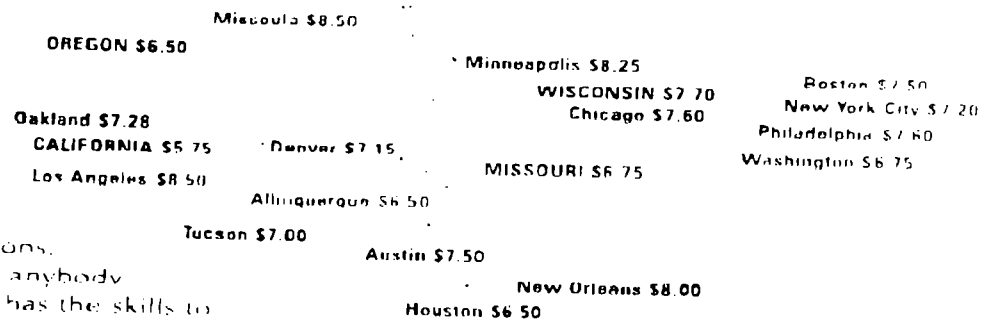
What is the "living wage" campaign?

In an effort to circumvent a fiscally conservative Congress, wage law advocates in many states, where they would mandate minimum wage increases via ballot initiative or city council ordinances. Led by national labor unions and ACORN (the Association of Community Organizations for Reform Now), the living wage campaign seemed to spring up overnight in more than a dozen cities and states in 1996.

According to its proponents, a living wage is defined as approximately \$10.00 an hour, the average wages in the United States being averaged —

and averaged — \$7.70 an hour. Living wage proposals go as high as \$8.00 and \$9.00 an hour.

Living wage movements seek to force employers to pay a wage to employees on the basis of cost, rather than skills or qualifications. As the wage campaigns assume that anybody who wants to need \$10.00 an hour has the skills to justify that amount to an employer.



This map shows just a few of the wage levels that have been discussed in living wage campaigns during 1996 through early 1997.

① Questions and Answers

the "living wage" campaign continued

How much would a "living wage" mandate cost city and state governments?

From food to janitorial services, city and state governments contract with companies employing thousands of entry-level workers. These contracts can collectively add up to sizable budget impacts. For instance, the 1996 ballot initiative to raise Missouri's minimum wage to \$6.50 per hour was defeated in part because its estimated cost to the state government was more than \$100 million.¹⁰

Consider that a \$1.50 hike in the minimum wage would cost a state government more than \$300,000 per year for each 100 minimum wage workers under its direct or indirect employment. In budget-strapped localities all over the country, such added costs mean higher taxes or fewer services.

How are "living wage" proposals pursued? ②

There are two basic types of living wage proposals: the ballot initiative proposal, which would increase the minimum wage for all entry-level workers of a given state or city; and the city ordinance proposal, which increases the minimum wage of people working for companies which do business with, or which have "benefited" from a relationship with, a city.

① Ballot Initiative Proposal

② City Ordinance Proposal

How much would a "living wage" mandate cost an employer?

A standard living wage proposal is \$7.70 an hour. How does one measure the impact of such a proposal?

One way to "grasp" the impact of a living wage proposal is to ask how much it would cost an employer with 10 minimum wage employees currently being paid the federal minimum wage. The math is simple: $\$2.70 - \$5.15 = \$2.55$ additional per hour $\times 10$ employees $\times 40$ hours $\times 52$ weeks per year $= \$53,040$ per year in increased labor costs. Most small business owners don't have an extra \$53,000; in fact, most small business owners don't earn \$53,000 themselves. This means they must use every available means to reduce labor costs — cutting employees, hiring only the most productive workers, reducing hours, automating, shifting to more self-service, etc.

Do "living wage" advocates acknowledge the negative impacts of the policies they propose?

At least one of the leading proponents of living wages — the Association of Community Organizations for Reform Now (ACORN) — readily admitted in a court case that higher minimum wages lead to job loss. In 1995, ACORN sued the state of California in an effort to secure an exemption from that state's minimum wage laws for its own employees. In the incredible legal brief supporting its case, ACORN clearly stated, "... the more that ACORN must pay each individual outreach worker — either because of minimum wage or overtime requirements — the fewer outreach workers it will be able to hire." ACORN also stated that "California's minimum wage laws ... affect the quality and quantity of staff" the organization can hire.

Are there special problems with the "living wage" concept?

Opponents of living wage laws raise a number of objections:

- Living wage laws place the cities or states affected at a competitive disadvantage with neighboring areas, where mandated wage rates are likely much lower.
- The job losses associated with living wage laws are significant. The wage hike is higher and so is the job loss resulting from its implementation.
- Costs to state and local governments (i.e., taxpayers) can run into the tens of millions of dollars due to higher costs of state/city contracts.

For updated information on the living wage campaign, see the Employment Policies Institute's home page at <http://www.epionline.org> or call our office.

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THE
Debate Escalates Over 'Living Wage'
October
... off, were found. "Predicted problems have often materialized," says Mark Sklarowski, research director at the Public Policy Center for Public Policy, which made the study. "There is no reason to believe the impact will be any different for cities which pass similar laws." The Los Angeles study, conducted by researchers at the University of California, Riverside, found that a \$7.50 minimum wage for city contractors would cost the city \$1.5 million annually. "We found that the fact of a \$7.50 minimum wage for city contractors would increase the city's budget, so contractors would have to pay more for city contracts," says Sklarowski. "We found that the fact of a \$7.50 minimum wage for city contractors would increase the city's budget, so contractors would have to pay more for city contracts," says Sklarowski. "We found that the fact of a \$7.50 minimum wage for city contractors would increase the city's budget, so contractors would have to pay more for city contracts," says Sklarowski.

E Questions and Answers

economic realities

Why do surveys show that a majority of Americans support an increase in the minimum wage?

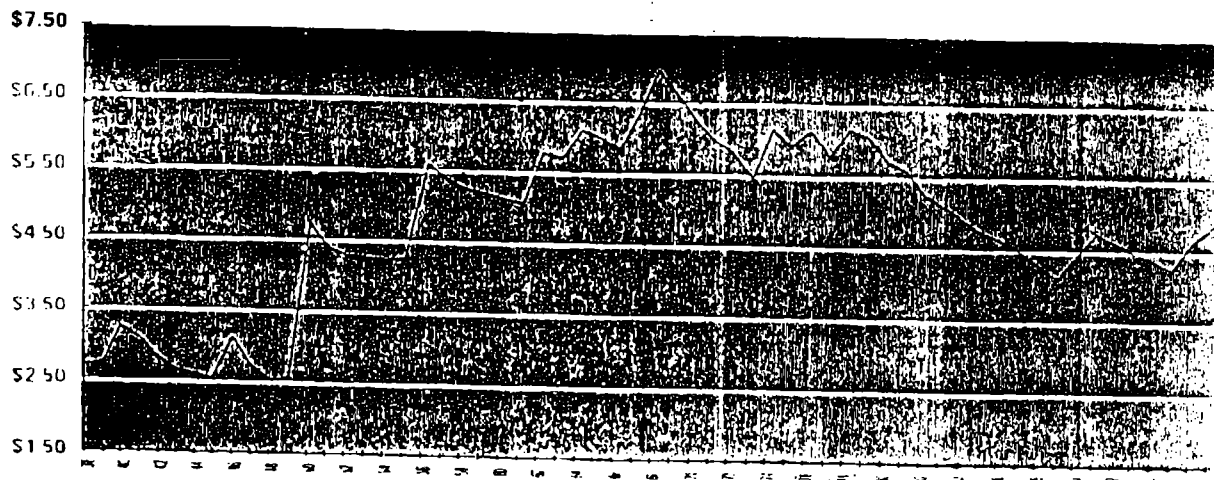
Surveys show strong support for a minimum wage hike -- until the survey respondents learn about the impact a wage hike would have. In a 1996 survey conducted by the Opinion Research Corporation, 76% of those surveyed said they favored a hike in the minimum wage. Yet, in most cases these were uninformed opinions. A full 78% of the group did not know what the minimum wage was.¹⁰¹

Has inflation eroded the minimum wage?

Today, the vast majority of workers affected by minimum wage rates are employed in the retail and service industries. When the wage standard was first implemented, unskilled retail and service workers were not covered by the minimum wage law. In 1938 and for many years thereafter, it was a minimum wage that covered mostly manufacturing, mining and transportation -- it was a minimum *skilled* wage.

Up through the early 1960s, only 4% of retail workers and fewer than 1% of restaurant workers were covered by the minimum wage. Employees in movie theaters, laundries, small newspapers, domestic service and most dry cleaners were exempt altogether -- their minimum wage was \$0.00. As Congress expanded the reach of the minimum wage law, the wage standard became irrelevant to skilled workers (they were paid much more than the minimum rate). It became a minimum *unskilled* wage -- and Congress allowed the value of the wage to fall in line with the types of employees it was now covering.

The Minimum Wage Adjusted for Inflation 1938-1997



Does a higher minimum wage benefit local businesses by stimulating the economy?

After a mandated wage hike, employers may be able to keep labor costs relatively even by reducing their work force, automating their operations, or cutting customer service.

If employers cannot reduce costs or raise prices, and they must absorb the new labor costs, the money likely comes out of investment and expansion. Employers who planned to add a second store on the other side of town may re-think their expansion — and their plans to hire the employees they would need in the new store.

The most powerful argument against the notion that raising the minimum wage "pumps more money into the economy" is drawn from common sense. If this notion were true, advocates of a higher minimum wage would push for an increase to \$25 per hour; the economy would expand overnight, and every business in the country would benefit tremendously. It doesn't take a trained economist to know this doesn't make sense.

In some areas, low-wage employers already pay \$6.00 an hour. Why not mandate by law this prevailing wage rate?

Even in places where many entry-level employees are making substantially more than the minimum wage (i.e., their skills equate to a wage rate higher than the minimum wage), a small number continue to make the minimum. These are the least skilled members of the work force — many of whom would not have gotten jobs at all had they lived in a less prosperous economy. In short, if their skills don't justify a wage higher than the existing minimum wage, they won't be hired.



The Wall Street Journal summed up the real impact of a minimum wage hike in November 1996, a few weeks after the federal minimum wage rose 50 cents per hour. The Journal reported companies were tightening their labor-cost belts. The hike prompted employers to start "carefully scrutinizing who they hire," even doing "assessment profiles" to make sure they were not "wasting the extra 50 cents on unreliable help."⁶¹

Businesses require a certain number of employees to operate. Even with a minimum wage hike, how can businesses suddenly reduce employment?

Employers facing higher mandated labor costs have a range of options for cutting costs — and none of these options are particularly attractive to low-skilled workers. In addition to cutting back on the number of people employed in a given community:

Employers can hire more skilled employees rather than taking a chance on someone with a spotty work record or no work record at all. Employers do "raise the bar" for job applicants after a wage hike. They may replace unproductive employees immediately, or they may hire better workers as current employees leave. In either case, the lowest-skilled workers are either out of a job or have more difficulty getting hired.

Employers can cut the hours of their entry-level work force, and ask managers to pick up the slack. A manager may wind up working the cash register on a slow night, building displays in a retail establishment, or helping clean up the workplace before closing — all jobs that were once handled by minimum wage employees who saw their hours cut after the mandated wage hike.

Employers can automate numerous functions in the workplace. Higher mandated wages give employers a big incentive to purchase new equipment that requires less human

labor to operate. Self-serve soda fountains and gas stations are now as common as automated tellers — three examples of jobs being replaced by automation.

Employers can reduce customer service. It is common today for guests in a fast food establishment to clean their own tables. In some supermarkets, customers bag their own groceries. And nearly every American

driver now pumps his/her own gas — all jobs that were once performed by entry-level employees.

Employers can demand higher productivity from their current employees. After a mandated wage hike, managers may tell cashiers that they must ring through five more customers per hour in order to "make the grade." Employees may be required

to produce an extra ten "widgets" per hour. Employers may cut the number of allowable errors — increasing the pressure on employees to get every order right. Or companies may give stocking crews just four hours instead of five to restock every shelf in the store. Any increase in productivity demands spells bad news for the lowest-skilled employees — they have a tougher time keeping up, and if they don't "make the grade," they are replaced with faster or more productive workers.

Automation Examples

- Automatic Teller Machines
- Self-Serve Gas Stations
- Self-Serve Soda Fountains
- Computerized Information Kiosks in Department Stores
- Automated Phone Operators
- Check-Out Price Scanners
- Self-Serve Car Washes

All jobs once performed by entry-level workers.

Questions and Answers

economic realities continued

Can employers recover the cost of minimum wage hikes by increasing prices?

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In an extremely competitive retail environment, successful businesses are the ones that are stabilizing and even cutting prices. Consumers are extremely resistant to higher prices in a non-inflationary economy. Even in the wealthiest neighborhoods, people buy self-serve gasoline to avoid paying a few extra cents for full service. Television commercials constantly advertise falling prices and "value meals." Sunday newspapers are filled with coupons for as little as "10 cents off." Telephone companies engage in expensive advertising battles over long distance rates that often vary by one or two pennies a minute. If these marketing strategies didn't appeal to consumers, businesses wouldn't use them.

Simple logic dictates that if businesses *could* raise prices, they would. Yet policymakers who lack this basic understanding of the marketplace sometimes view the costs of minimum wage hikes in a vacuum. They don't see why consumers would care about paying a nickel more for each gallon of gas, or 50 cents more for each meal in a restaurant.

In short, when the government demands that employers pay employees higher wages, one rarely hears mention of the other important player in this equation — the consumer. With their purchasing decisions, consumers determine how much a business can charge for its products or services and, accordingly, how much that business can afford to pay its employees.

"a lousy 90 cents"

In supporting a 21% hike in the minimum wage, former White House Chief of Staff Leon Panetta described the mandated jump as "a lousy 90 cents." What he failed to grasp is that "a lousy 90 cents" will cost an employer with 10 minimum wage employees almost **\$20,000** a year in additional labor costs. How will this small business come up with the extra **\$20,000**?

Endnotes

"Legislators are right to search for ways to help the working poor, but wrong to think that raising the minimum wage is one of them."

The New York Times

- 1 Compiled from 1995 ORG Current Population Survey. Sample weights used for analysis. Sample consists of wage and salary workers age 16 and over.
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- 3 *ibid.*
- 4 *ibid.*
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- 9 Macpherson.
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- 34 Alan Krueger, testimony before the Joint Economic Committee of the United States Congress, February 22, 1995.

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- 36 David Neumark and William Wascher, "The Effect of New Jersey's Minimum Wage Increase on Fast-Food Employment: A Re-Evaluation Using Payroll Records," Photocopies, January 1996.
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"A higher minimum will further reduce the employment opportunities of workers with few skills."

Gary Becker
1992 Nobel Laureate,
Economics

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The Employment Policies Institute is a non-profit research organization dedicated to studying public policy issues surrounding employment growth. In particular, EPI research focuses on issues that affect entry-level employment. Among other issues, EPI research has quantified the impact of new labor costs on job creation, explored the connection between entry-level employment and welfare reform, and analyzed the demographic distribution of mandated benefits. EPI sponsors nonpartisan research which is conducted by independent economists at major universities around the country.

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Congress of the United States
House of Representatives
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February 24, 1998

Dear Democratic Colleague:

As you know, last week the President joined Congressional leaders in setting forth a common set of Democratic principles for 1998. It is a unifying agenda which speaks to some of the core differences between our party and those on the other side of the aisle.

Among the list of priorities enumerated by the President, was a proposal to raise the minimum wage one dollar an hour by the year 2000. It is a modest increase, yet the 12 million workers currently earning less than \$6.15 an hour would see a direct increase in pay. Another 8 million earning between \$6.15 and \$7.15 would likely feel the positive impact of a minimum wage increase.

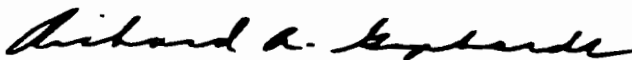
Our economy is the best it's been in decades. Yet, families working at the minimum wage haven't kept pace. A single mother with two children working full-time at a minimum wage job earns just \$10,700 a year — \$2,600 below the poverty line. An increase of just one dollar an hour would only partially restore some of the lost buying power that has occurred for minimum wage earners throughout the 1980s. That's important because that extra buying power gets spent at local small businesses --- the grocery store, hardware store and the family-owned restaurant.

The American people overwhelmingly support an increase in the minimum wage. Three polls taken since January, 1998 by the *Washington Post*, *Los Angeles Times* and Peter Hart Research consistently show support ranging from 76 -78%. Americans instinctively know that you can't raise a family on \$5.15 an hour.

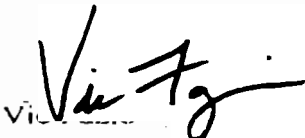
Recent studies have shown that the last increase in the minimum wage hasn't cost jobs. In fact, the economy has continued to grow. According to a new study released by economists David Card and Alan Krueger, employment in the fast-food industry in eastern Pennsylvania actually went up by 11% after the 1996 minimum wage increase. The Economic Policy Institute also recently released a study, entitled "The Sky Hasn't Fallen," which determined that employment was not adversely affected by the last increase.

Very soon, we will be introducing a new bill in the House to implement the increase endorsed by the President and Democratic Leadership. Our bill will raise the minimum wage by 50 cents an hour on January 1, 1999 and by another 50 cents on January 1, 2000. Please join us in raising the minimum wage to \$6.15 an hour by the year 2000. To cosponsor, please contact Erich Pfuehler with Rep. Bonior at x5-2106.

Sincerely,



Richard A. Gephardt

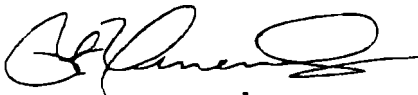

Vic Fazio

David E. Bonior

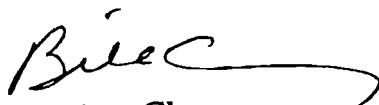

Barbara B. Kennelly

Please see additional cosigners on the reverse

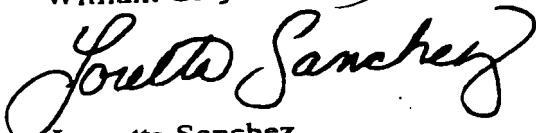
Rosa L. DeLauro



Robert Menendez



William Clay



Loretta Sanchez



Brad Sherman



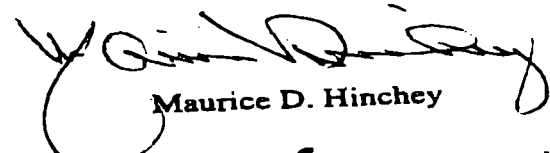
Martin Frost



John Lewis



Major R. Owens



Maurice D. Hinchey



Ted Strickland

Agenda
Skills Shortage Meeting
November 25, 1997

- More Detailed Data on Unemployment and Changes in Wage Rates (Barron and Montgomery)
 - Unemployment by occupation, wage level, skill level, region, age, race, and labor markets.
 - Changes in Wage Rates by Industry, Occupation, and region.
- Matrix of Training-Education Continuum -- Role of DOL Programs (Reed and Wandner)
- Immigration (Harris)

**SKILLS DEVELOPMENT/AQUISITION:
MATRIX OF POPULATIONS SERVED AND FUNDING OF MAJOR PROGRAM SERVICES**

Target Population

I. Youth

a. In-School

DOL	DoED	TREASURY	OTHER
JTPA IIB/Summer School to Work	Vocational Education Student Loans Pell Grants School to Work	Hope Scholarships Lifelong Learning Credits Tax Deduction for Student Loans	
JTPA IIC/Youth Training Job Corps Out-of-School Youth Initiatives (Kulick)	Adult Education (GED) Upward Bound		
Title III/Dislocated Workers TAA/NAFTA Training ES/1-Stop Labor Market Information	Adult Education Student Loans Pell Grants	Hope Scholarships Lifelong Learning Credits Tax Deduction for Student Loans	
Title IIA/Adult Workers WW Challenge Grants ES/1-Stop Labor Market Information	Adult Education Student Loans Pell Grants Vocational Rehabilitation	Hope Scholarships Lifelong Learning Credits Tax Deduction for Student Loans	TANF (HHS) Food Stamp Training (USDA) Community Services Block Grant (HHS)
ES/1-Stop Labor Market Information	Adult Education	Lifelong Learning Credits Sec. 127 Employer-provided Education (not related to job)	

b. Out-of School

II. Adults

**a. Unemployed/
Dislocated**

**b. Out of Labor
Force/Welfare
Disadvantaged
Disabled**

**c. Employed/
Incumbent
Workers**

Other

States/Locals	Private
Local K-12 Schools Community Colleges 4 Year Colleges Vocational education	4 year Colleges
Community Colleges 4 Year Colleges	
Community Colleges 4 Year Colleges Supplemental Welfare	
	Sec. 127 Employer- Provided Education Employer OJT Employer Training Programs and Schools

Center for Social Development at Washington University in St. Louis

WHAT WE KNOW ABOUT EFFECTS OF ASSET HOLDING: IMPLICATIONS FOR RESEARCH ON ASSET-BASED ANTI-POVERTY INITIATIVES

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Working Paper No. 96-1

1996

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Abstract

Asset accumulation programs have emerged at local and state levels to help poor people save for purposes such as education, homeownership, and microenterprise development. These anti-poverty programs are built in part on the suggestion that assets have a wide range of positive effects on well-being, and they frequently use a system of Individual Development Accounts (IDAs) to structure asset accumulation. In addition, federal legislation for an IDA demonstration has increasing support.

The emergence of asset accumulation programs at local and state levels, along with growing bipartisan support for a national IDA demonstration, makes applied research both possible and necessary. Studies that evaluate the implementation, performance, and impacts of IDAs and other asset-based anti-poverty initiatives will be critical in assessing the potential of domestic policy built in part on special savings accounts. In planning and implementing such evaluations, researchers can get some guidance from previous studies on effects of asset holding.

This paper summarizes findings from 25 studies addressing the personal and social effects of asset holding. The research reviewed here examines effects of asset holding on (1) personal well-being, (2) economic security, (3) civic behavior and community involvement, (4) women's status, and (5) well-being of children. Findings from the studies are briefly described and then summarized in tables (See Figures 1, 2, 3, 4, 5.) according to these general categories of effects. The paper ends with implications for research on asset-based anti-poverty initiatives.

Introduction

Proposals for Individual Development Accounts (IDAs) suggest that people will be better off when they accumulate assets. While this may seem obvious to most people, many economists view assets strictly as a storehouse for future consumption. Such views have shaped US anti-poverty policies over the years, resulting in programs which emphasize income and consumption but do not facilitate savings and investment among poor people.

In *Assets and the Poor*, Sherraden (1991) suggests that assets have a wide range of positive personal and social effects on well-being beyond consumption, and he envisions anti-poverty applications of asset-based policy. This work has generated local and state program initiatives to help poor people accumulate assets for purposes such as education, home

purchase, and microenterprise development (Edwards & Sherraden, 1995). Federal legislation for an IDA demonstration has bipartisan support; the current Senate bill is sponsored by Dan Coats (R, IN) and Carol Moseley-Braun (D, IL). It appears that a number of new IDA projects will be developed and implemented across the country over the next several years, serving a variety of different populations and using a range of different program designs.

The emergence of IDA programs at local and state levels, along with growing support for a national IDA demonstration, makes applied research both possible and necessary. Studies that evaluate the implementation, performance, and impacts of IDAs and other asset-based anti-poverty initiatives will be critical in assessing the potential of domestic policy built in part on individual savings accounts. In planning and implementing such studies, IDA evaluators can be guided in part by previous research on effects of asset holding.

Studies Addressing Personal and Social Effects of Asset Holding

This paper summarizes findings from 25 studies addressing the personal and social effects of asset holding. The research reviewed here examines effects of asset holding on: (1) personal well-being, (2) economic security, (3) civic behavior and community involvement, (4) women's status, and (5) well-being of children. Findings from the studies are briefly described and then summarized in tables (See Figures 1, 2, 3, 4, 5.) according to these general categories of effects.

The first group of studies focuses the relationship between assets and personal well-being (Table 1). These studies cumulatively suggest positive effects of assets on life satisfaction and self-efficacy and negative effects on depression and problematic alcohol use (Finn, 1994; Page-Adams & Vosler, 1995; Rohe & Stegman, 1994a; Yadama & Sherraden, 1996). Assets also appear to be associated with being self-directed, intellectually flexible, and future-oriented (Kohn, Naoi, Schoenbach, Schooler & Slomczynski, 1990; Yadama & Sherraden, 1996). However, the effect of assets on stress is not consistent from study to study, with some research suggesting a positive relationship between assets and stress for low-income families (Finn, 1994; Rocha, 1994). Stress is a problematic dependent variable because it may have both constructive and destructive features.

Research on the relationship between assets and economic security (Table 2) suggests positive outcomes for diverse groups of asset holders, and this holds true whether security is measured objectively or subjectively. For example, assets help reduce welfare receipt among low-income people with small businesses and reduce perceived economic strain among auto workers stressed by a plant closing (Page-Adams & Vosler, 1995; Raheim, 1995). Other studies in this group find that perceived economic security helps explain the nearly universal desire for homeownership among British military families, and that high rates of land and small business ownership in one's community of origin have positive effects on future economic security among immigrants to the US from Mexico (Chandler, 1989; Massey & Basem, 1992). Finally, asset accumulation in Singapore's Central Provident Fund has dramatically improved the economic well-being of CPF members, especially in terms of housing and health care (Sherraden, Nair, Vasoo, Liang & Sherraden, 1995). Overall, the evidence regarding economic security is solidly positive.

Evidence on the relationship between assets and civic behavior is mixed (Table 3). While some studies in this area suggest positive effects of assets on recycling behavior and involvement in block associations, others find limited asset effects on civic involvement beyond the neighborhood level (Oskamp, Harrington, Edwards, Sherwood, Okuda & Swanson, 1991; Perkins, Florin, Rich, Wandersman & Chavis, 1990; Rohe & Stegman, 1994b; Thompson, 1993). Further, if assets do have effects on civic behavior, these effects may not be direct. One of the studies in this group finds positive asset effects on community involvement, but this effect occurs almost entirely through cognition or knowledge about asset accumulation strategies (Cheng, Page-Adams & Sherraden, 1995). Thus, the Jeffersonian formulation of civic involvement based on property holding requires more research, and possibly greater specification in the future.

For women (Table 4), assets are associated with higher levels of social status in the home and in the larger community, increased contraceptive use, and improved material conditions of families (Noponen, 1992; Schuler & Hashemi, 1994). In addition, several studies point to a relationship between asset holding and lower levels of marital violence (Levinson, 1989; Page-Adams, 1995; Petersen, 1980; Schuler & Hashemi, 1994). This relationship seems to hold whether assets are measured at the individual level or at the household level, suggesting that both individual and joint ownership of assets increase safety from marital violence. The consistency of findings in this area is particularly noteworthy because domestic violence research in the US has been overwhelmingly focused on psychological, rather than economic, issues.

Cumulatively, studies addressing the relationship between parental assets and children's well-being (Table 5) find positive effects on self-esteem among adolescents (Whitbeck, Simmons, Conger, Lorenz, Huck & Elder, 1991); staying in school, avoiding early pregnancy, and facilitating saving among teens (Green & White, 1994; Pritchard, Myers & Cassidy, 1989); and homeownership among adult children (Henretta, 1984). Assets also appear to reduce vulnerability to poverty for children in white and African-American female-headed households (Cheng, 1995). In fact, some of the strongest and most consistent empirical evidence for the positive effects of assets come from studies involving outcomes for children. The evidence regarding positive effects of homeownership for children is particularly convincing. Many of these effects are largest for children from low income families.

In early theoretical work on asset holding, Sherraden (1991) suggested that assets positively affect outcomes such as

long-range planning, family stability, efforts to build and maintain assets, development of human capital, personal efficacy, social status, community involvement, and political participation. Not all of these general propositions are supported by the studies summarized here, but many are. Other asset effects -- particularly those involving the well-being of women -- appear to be very prominent as well.

The studies summarized here were chosen in a somewhat arbitrary "literature review" manner and, thus, provide only a first look at what we may learn about the personal and social effects of assets. Nonetheless, the general picture that emerges from this group of studies is that asset holding has multiple positive impacts in people's lives. Further, some studies point to particularly strong effects for people who are economically vulnerable. The potential implications of these findings for social policy are profound -- and heretofore largely ignored -- but applied research will be necessary to confirm or disconfirm positive outcomes in the context of purposeful asset-based policy demonstrations.

Implications for Research on Asset-Based Anti-Poverty Initiatives

Evaluators of IDAs and other asset building initiatives can benefit from previous theoretical and empirical work on asset effects. Turning first to theory, hypotheses regarding the personal and social effects of assets can center and focus asset-based evaluation efforts. These propositions hold that assets provide greater household stability, create long-term thinking and planning, lead to greater care and effort in maintaining assets, lead to greater development of human capital, provide a foundation for risk taking, increase personal efficacy, increase social status and influence, increase community involvement and political participation, and enhance the welfare of children (Sherraden, 1991; Sherraden, Page-Adams & Yadama, 1995). Evaluations of asset holding that measure these hypothesized outcomes will help build the knowledge base for policy. Since assets also appear to be positively associated with women's status in the home and in the larger community, researchers should pay attention to gender issues as well. All of these hypotheses are at this stage crudely stated and they are not organized into a larger coherent theory. A great deal of theoretical specification lies ahead.

Second, evaluations that identify the effects of assets at two or more points in time will be particularly helpful. Longitudinal designs are necessary because of the causal nature of the theoretical statements underlying asset-based policy proposals. For example, if IDA programs are built on the suggestion that asset holding at one point in time increases well-being at a later point in time, researchers would ideally collect evaluative information at those two points in time.

Third, the best evaluation designs will be those that address alternative explanations for findings that support the suggestion that assets have positive effects on well-being. There are two alternative explanations for such findings: 1) positive effects on well-being could result from income, rather than assets; and 2) certain personal and social characteristics indicative of well-being could be causes, rather than consequences, of asset accumulation. In other words, evaluations should determine the effects of asset accumulation on well-being while controlling for the effects of income, and test for reciprocal relationships between asset accumulation and well-being. These are not mutually exclusive explanations; all can be true simultaneously and in fact are likely to be so (Sherraden, 1991; Yadama & Sherraden, 1996). The key issue is whether asset effects exist, and how strong they are, after controlling for the alternative explanations.

Turning to guidance for evaluators from prior empirical work, findings from studies summarized above point to several potentially fruitful areas of inquiry regarding specific asset effects. First and foremost, evaluators will want to keep economic well-being at the center of their investigations given the consistency of previous findings suggesting positive economic effects of assets. In measuring such effects, it will be important to include both objective and subjective measures of economic well-being. One of the key questions to be answered about the effects of asset accumulation is also deceptively simple -- Are people better off when they are accumulating assets? Measuring this both on the basis of dollars in asset accounts and on the basis of how participants feel about their economic circumstances in light of those accounts will be central to understanding the economic effects of IDA programs.

A second implication that emerges from the findings of earlier studies involves the notable effects of assets on the well-being of both women and children. Sherraden, Page-Adams, and Yadama (1995) suggest that future studies of intra-family asset distribution may be particularly fruitful given gender and generational diversity within households. With these issues in mind, asset-based program evaluators will want to pay attention to the effects of asset accumulation for members of participants' households, as well as for the participants themselves. The best evaluations will gather information from various members of a household rather than from a single informant.

Previous studies also suggest the need for asset-based program and policy evaluations to include brief questions asking people directly to assess the effects of assets in their lives. Information from responses to such questions does not always completely parallel correlations based on standardized measures. While it may be that response bias plays a large role in this kind of discrepancy, it is also possible that some standardized measures of personal and social well-being are not entirely adequate for tracking asset effects. In either case, balancing standardized measures with questions that ask people for their direct assessments of asset effects will be a helpful approach in evaluations at this early stage.

A fourth implication that emerges on from this review of empirical literature is that evaluators should give some thought to multiple dimensions of personal well-being. Research suggests the possibility that asset accumulation has positive effects on some dimensions of personal well-being and negative effects on others. By way of example, it appears that homeownership increases both stress and self-efficacy for low-income people. Researchers will want to identify and clearly define specific dimensions of personal well-being that are of interest.

Turning to the effects of asset holding on social well-being, program and policy evaluators can be guided in part by previous studies on civic behavior and community involvement. One implication that emerges from this group of studies is the importance of assessing community involvement at several levels, including the immediate neighborhood. While several standardized measures have been used to assess community involvement in social research, many of them focus on connections with voluntary associations. Evaluators of IDAs and other asset-based programs will want to assess effects in the neighborhood, perhaps even at the block level. This will be of particular importance in programs involving homeownership and microenterprise. A second suggestion that emerges from the review of community involvement studies is that economic and program knowledge about asset accumulation may help explain the relationship between asset accumulation and civic behavior. Researchers will want to assess participants' knowledge about building assets and other aspects of economic literacy.

We close with a couple of thoughts about the research challenges that lie ahead. Asset-based policy is a new way of thinking about domestic policy, particularly anti-poverty policy, in Western welfare states. Previous policy has done little to encourage, and has often discouraged, asset accumulation among the poor. But asset-based policy is in the early stages of formation. There is little guidance about how to proceed in terms of policy development or implementation. Moreover, the concept of an IDA is very flexible; it invites innovation, creativity, and adaptation to many different populations and purposes.

In these circumstances, wide experimentation is desirable and is almost inevitable. A range of state and local programs with great variation is preferable to cookie-cutter replication of a fixed IDA design. But evaluation is challenging and messy in such circumstances. It will be important to learn as much as possible from every IDA demonstration and program, no matter how small. In the beginning, there is an important role for studies of implementation and preliminary information on outcomes. These may be accomplished through case studies, in-depth interviews, and focus groups (Sherraden, Page-Adams, Emerson, Beverly, Scanlon, Cheng, Sherraden & Edwards, 1995). Control or comparison group designs may be possible in some cases, and if so, they should be vigorously pursued. But a large sample, multi-site demonstration and evaluation will be possible only with major federal or private funding.

Finally, evaluations of IDAs and other asset building initiatives should do more than count asset accumulation. Asset-based policy interventions are theoretically driven. There are clearly stated hypotheses on economic, personal, and social effects of asset accumulation, and outcome evaluations should proceed from this basis. In this situation, there is no great separation between "basic research" and "applied research." There is a long-standing debate in the social sciences about whether social inquiry should be basic or applied, oriented toward fundamental questions of human interaction or toward pressing issues of the day. But when a policy intervention is carefully thought out, with hypothesized effects, the distinction between basic and applied social science should be minimal (see also Rossi, 1980).

In this vein, evaluators should be well aware that their work on investigating the effects of IDAs and other asset-based programs will likely impact a larger poverty research discussion. The overwhelming majority of studies addressing poverty in the US focus exclusively on income distribution and welfare reciprocity. Yet, the studies reviewed here suggest that assets have some of their strongest positive effects among economically vulnerable populations (i.e., single-parent families, workers facing unemployment, women, and children). More collaborative work in the future between traditional poverty researchers and evaluators of asset-based programs and policy would be highly desirable.

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Table 1. Effects of Asset Holding: Studies Addressing Personal Well-Being

Study	Purpose	Sample	Description	Findings
Finn (1994)	To describe empowerment experiences of low-income Habitat for Humanity participants.	22 low-income families in Cleveland area; 20 of the families were African-American.	Qualitative information about both the benefits and challenges of buying and keeping a home.	Homeowners reported personal and social benefits. Wanted on-going Habitat support.
Kohn, Naoi, Schoenbach, Schooler & Slomczynski (1990)	To test effects of ownership on the psychological well-being of men in 3 countries.	Representative samples of men employed in civilian jobs in United States, Japan, & Poland.	Class is conceptualized as ownership, control of means of production, control of labor power.	Ownership has significant positive effects on 3 of 4 measures of well-being.
Rocha (1994)	To explore role of saving and investment in explaining stress among two-parent families.	1500 randomly sampled women in two-parent families with dependent children from NSFH.1	Assets modeled as mediating relationships between income, number of children, and stress.	Stress increases as assets increase for working poor families, controlling for income and children.
Rohe & Stegman (1994a)	To test effects of home-owning on 3 measures of psych well-being among low-income people.	125 low-income homeowners and 101 Section 8 control group renters. 92% African-American.	Homeowning effects tested controlling for income, education, among other variables.	Homeowning positively effects life satisfaction, but not self-esteem or sense of control.
Yadama & Sherraden (1996)	To test effects of assets on efficacy, horizons, prudence, effort, and connectedness.	Data from 2871 PSID2 respondents in 1972, controlling for attitudes and behaviors in 1968.	Effects of assets (home value and amount of savings) tested, controlling for income.	Savings, but not home value, had positive effects on efficacy, horizons, and prudence.

Table 2. Effects of Asset Holding: Studies Addressing Economic Security

Study	Purpose	Sample	Description	Findings
Chandler (1989)	To explore transition from married quarters housing to homeownership among navy families.	30 British navy wives.	Content analysis of interviews to identify common themes. Qualitatively addressed perceived advantages and disadvantages of homeownership.	Desire to own universal, despite advantages of base housing. Perceived financial security.
Massey & Basem (1992)	To explore determinants of savings, remittances, and spending among Mexican immigrants.	Randomly selected households in four Mexican communities. Sample of 295 men.	Tested effects of owning and of being from a community with many land or business owners.	Saving and remitting higher among those from communities with many land & business owners.
Page-Adams & Vosler (1995)	To test effects of home-owning on stressed auto workers, controlling for income and education.	193 auto workers in midwestern city in 1992. Half laid off by plant closing.	Economic strain was one of four outcomes, in addition to social and emotional well-being.	Homeowning related to lower economic strain, alcoholism, and depression.
Raheim (1995)	To evaluate the first publicly-funded U.S. microenterprise program for low-income people.	Random sample of 120 SEID5 participants who started businesses. 68% single household heads.	Six year follow-up focused on economic well-being of participants and their businesses.	SEID businesses had high survival rates (79%), created jobs, and reduced welfare receipt.
Sherraden, Nair, Vasoo, Liang & Sherraden (1995)	To assess effects of asset accumulation through Singapore's Central Provident Fund (CPF).	Sample of 356 CPF active members, representative of CPF total population.	Explored impact of CPF asset accumulation on economic, social and psychological well-being.	CPF improves economic well-being, foremost through housing and health care.

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Table 3. Effects of Asset Holding: Studies Addressing Civic Behavior and Community Involvement

Study	Purpose	Sample	Description	Findings
Cheng, Page-Adams & Sherraden (1995)	To test effects of assets on human capital, home maintenance, and civic involvement outcomes.	Representative sample of 356 active members of Singapore's Central Provident Fund.	Focused on the role of knowledge about asset accumulation strategies in mediating effects.	Positive asset effects, (working through knowledge) on work, home & civic outcomes.
Oskamp, Harrington, Edwards, Sherwood, Okuda & Swanson (1991)	To investigate factors that encourage and discourage recycling in a suburban US city.	Survey of 221 randomly selected adults in city with new curbside recycling program.	Tested associations between demographics, attitudes, conservation knowledge and recycling.	Strongest predictors of recycling were living in a single-family house and owning one's own home.
Perkins, Florin, Rich, Wandersman & Chavis (1990)	To explore demographic and social correlates of participation in block associations.	Data from 48 blocks in New York City using observation, police records, and surveys.	Tested association between homeownership and civic involvement in block associations.	Homeownership positively associated with civic involvement in block associations.
Rohe & Stegman (1994b)	To test the impact of homeownership, controlling for other variables, on civic involvement.	125 low-income homeowners and 101 Section 8 control group renters.	Studied neighboring and civic involvement before and, again, 18 months after home purchase.	Homeowners had significant increase in neighborhood and block association involvement.
Thompson (1993)	To compare demographic and social characteristics of volunteers and the general population.	Survey of rural New York county done as part of the 1990 US census.	Explored differences between two groups to inform volunteer recruitment efforts.	Volunteers more likely to be self-employed and high-income. No more likely to own homes.

Table 4. Effects of Asset Holding: Studies Addressing Women's Status

Study	Purpose	Sample	Description	Findings
Levinson (1989)	To test an economic model of wife beating using data on small-scale and peasant societies.	90 societies selected from the HRAF PSF3 sample. Data from ethnographic reports.	Three of the four indicators of economic inequality are asset-based measures.	Suggest that "male control of wealth and property is the basic cause of wife beating."
Noponen (1992)	To evaluate economic and social effects of microenterprise loans to poor women in India.	Random sample of 300 women participants in a model loan program surveyed in 1980 & 85.	Explored effects of access to credit for both women and their families over a 5 year period.	Access to credit improved social status of women and material conditions of families.
Page-Adams (1995)	To test effect of home-ownership on marital violence, controlling for income and education.	2827 married women whose husbands also completed questionnaires for NSF4 in 1987-88.	Analysis was designed as one test of the theory of well-being based on assets.	Controlling for income, homeownership is negatively associated with violence.
Petersen (1980)	To explore relationships between several measures of household SES and wife abuse.	Random statewide telephone survey of 602 married women living in Maryland in 1977-78.	SES measures included homeownership in addition to husband's income, education, etc.	22% of women who rent, but only 2% of women who own, reported abuse.
Schuler & Hashemi (1994)	To test effects of credit on contraception and empowerment among Bangladeshi women.	1,305 women; 2 random samples of program members; 2 comparison group samples.	Both effects of access to credit and living in village served by credit program were tested.	Credit programs increase family support, leading to empowerment, leading to contraception.

Table 5. Effects of Asset Holding: Studies Addressing the Well-Being of Children

Study	Purpose	Sample	Description	Findings
Cheng (1995)	To test effects of parents' SES, education, and assets on poverty among adult daughters who have children.	836 female heads of household from NSFH. 548 white and 288 black single women with dependent children.	Tested effects of assets on adult daughters' SES, controlling for parents' SES and daughter's education.	Assets have positive economic effects for female-headed families, controlling for education and parents' SES.
Green & White (1994)	To test whether children of homeowners were less likely to drop out, have babies, and be arrested.	Four large, representative data sets. PSID, HSB, PUMS, and BYS. 7 17- and 18-year-olds.	Effects of parental homeownership tested controlling for parents' income and education.	Teens of homeowners less likely than those of renters to drop out and to have babies.
Henretta (1984)	To test effects of parents' homeownership and home value on same for adult children.	PSID8 cases containing data on a sample member who was a child in earlier wave (1968- 79).	Effects of parental homeownership and home value tested controlling for parental income & gifts.	Parents' homeownership associated with same for adult children, controlling for income and gifts.
Pritchard, Myers & Cassidy (1989)	To explore individual & family factors associated with saving and spending patterns among teens.	1619 employed teens and their parents from the 1982 sophomore cohort of the HSB9 survey.	Family factors included parent saving behaviors and whether they had saved for college.	Parents saving patterns and saving for college associated with teen saving patterns.
Whitbeck, Simmons, Conger, Lorenz, Huck & Elder (1991)	To test effects of economic hardship and parental support on adolescent self-esteem.	451 families recruited from cohort of 7th-graders living in mid-western state in 1989.	Debt-to-asset ratio is needed to measure hardship, controlling for income & work history.	Economic hardship lowers adolescent self-esteem by reducing parental support.