

50 Years of Research on the Minimum Wage

Introduction

For many years it has been a matter of conventional wisdom among economists that the minimum wage causes fewer jobs to exist than would be the case without it. This is simply a matter of price theory, taught in every economics textbook, requiring no elaborate analysis to justify. Were this not the case, there would be no logical reason why the minimum wage could not be set at \$10, \$100, or \$1 million per hour.

Historically, defenders of the minimum wage have not disputed the disemployment effects of the minimum wage, but argued that on balance the working poor were better off. In other words, the higher incomes of those with jobs offset the lower incomes of those without jobs, as a result of the minimum wage [[See, for example, Levitan and Belous, \(1979\)](#)].

Now, the Clinton Administration is advancing the novel economic theory that modest increases in the minimum wage will have no impact whatsoever on employment. This proposition is based entirely on the work of three economists: David Card and Alan Krueger of Princeton, and Lawrence Katz of Harvard. Their studies of increases in the minimum wage in California, Texas and New Jersey apparently found no loss of jobs among fast food restaurants that were surveyed before and after the increase [[See Card \(1992b\)](#), [Card and Krueger \(1994\)](#), and [Katz and Krueger \(1992\)](#)].

While it is not yet clear why Card, Katz and Krueger got the results that they did, it is clear that their findings are directly contrary to virtually every empirical study ever done on the minimum wage. These studies were exhaustively surveyed by the Minimum Wage Study Commission, which concluded that a 10% increase in the minimum wage reduced teenage employment by 1% to 3%.

The following survey of the academic research on the minimum wage is designed to give nonspecialists a sense of just how isolated the Card, Krueger and Katz studies are. It will also indicate that the minimum wage has wide-ranging negative effects that go beyond unemployment. For example, higher minimum wages encourage employers to cut back on training, thus depriving low wage workers of an important means of long-term advancement, in return for a small increase in current income. For many workers this is a very bad trade-off, but one for which the law provides no alternative.

Summary of Research on the Minimum Wage

- The minimum wage reduces employment.

Currie and Fallick (1993), Gallasch (1975), Gardner (1981), Peterson (1957), Peterson and Stewart (1969).

- The minimum wage reduces employment more among teenagers than adults.

Adie (1973); Brown, Gilroy and Kohen (1981a, 1981b); Fleisher (1981); Hammermesh (1982); Meyer and Wise (1981, 1983a); Minimum Wage Study Commission (1981); Neumark and Wascher (1992); Ragan (1977); Vandenbrink (1987); Welch (1974, 1978); Welch and Cunningham (1978).

- The minimum wage reduces employment most among black teenage males.

Al-Salam, Quester, and Welch (1981), Iden (1980), Mincer (1976), Moore (1971), Ragan (1977), Williams (1977a, 1977b).

- The minimum wage helped South African whites at the expense of blacks.

Bauer (1959).

- The minimum wage hurts blacks generally.

Behrman, Sickles and Taubman (1983); Linneman (1982).

- The minimum wage hurts the unskilled.

Krumm (1981).

- The minimum wage hurts low wage workers.

Brozen (1962), Cox and Oaxaca (1986), Gordon (1981).

- The minimum wage hurts low wage workers particularly during cyclical downturns.

Kosters and Welch (1972), Welch (1974).

- The minimum wage increases job turnover.

Hall (1982).

- The minimum wage reduces average earnings of young workers.

Meyer and Wise (1983b).

- The minimum wage drives workers into uncovered jobs, thus lowering wages in those sectors.

Brozen (1962), Tauchen (1981), Welch (1974).

- The minimum wage reduces employment in low-wage industries, such as retailing.

Cotterman (1981), Douty (1960), Fleisher (1981), Hammermesh (1981), Peterson (1981).

- The minimum wage hurts small businesses generally.

Kaun (1965).

- The minimum wage causes employers to cut back on training.

Hashimoto (1981, 1982), Leighton and Mincer (1981), Ragan (1981).

- The minimum wage has long-term effects on skills and lifetime earnings.

Brozen (1969), Feldstein (1973).

- The minimum wage leads employers to cut back on fringe benefits.

McKenzie (1980), Wessels (1980).

- The minimum wage encourages employers to install labor-saving devices.

Trapani and Moroney (1981).

- The minimum wage hurts low-wage regions, such as the South and rural areas.

Colberg (1960, 1981), Krumm (1981).

- The minimum wage increases the number of people on welfare.

Brandon (1995), Leffler (1978).

- The minimum wage hurts the poor generally.

Stigler (1946).

- The minimum wage does little to reduce poverty.

Bonilla (1992), Brown (1988), Johnson and Browning (1983), Kohen and Gilroy (1981), Parsons (1980), Smith and Vavrichek (1987).

- The minimum wage helps upper income families.

Bell (1981), Datcher and Loury (1981), Johnson and Browning (1981), Kohen and Gilroy (1981).

- The minimum wage helps unions.

Linneman (1982), Cox and Oaxaca (1982).

- The minimum wage lowers the capital stock.

McCulloch (1981).

- The minimum wage increases inflationary pressure.

Adams (1987), Brozen (1966), Gramlich (1976), Grossman (1983).

- The minimum wage increases teenage crime rates.

Hashimoto (1987), Phillips (1981).

- The minimum wage encourages employers to hire illegal aliens.

Beranek (1982).

- Few workers are permanently stuck at the minimum wage.

Brozen (1969), Smith and Vavrichek (1992).

- The minimum wage has had a massive impact on unemployment in Puerto Rico.

Freeman and Freeman (1991), Rottenberg (1981b).

- The minimum wage has reduced employment in foreign countries.

Canada: Forrest (1982); Chile: Corbo (1981); Costa Rica: Gregory (1981); France: Rosa (1981).

- Characteristics of minimum wage workers

Employment Policies Institute (1994), Haugen and Mellor (1990), Kniesner (1981), Mellor (1987), Mellor and Haugen (1986), Smith and Vavrichek (1987), Van Giezen (1994).

Bibliography

Adams, F. Gerard. 1987. Increasing the Minimum Wage: The Macroeconomic Impacts. *Briefing Paper*, Economic Policy Institute (July).

Finds that an increase in the minimum wage from \$3.35 to \$4.65 over three years would increase the unemployment rate by less than 0.1% and the inflation rate by 0.2%.

Adie, Douglas K. 1973. Teen-Age Unemployment and Real Federal Minimum Wages. *Journal of Political Economy*, vol. 81 (March/April): 435-441.

Finds that the minimum wage is responsible for a considerable amount of teenage unemployment.

Al-Salam, Nabeel; Quester, Aline; and Welch, Finis. 1981. Some Determinants of the Level and Racial Composition of Teenage Employment. In Rottenberg (1981a): 124-154.

Notes that in 1954, black teenage males were more likely to be employed than white teenage males. Since that time, the proportion of black teenage males employed has fallen sharply, while employment for white teenage males has risen. Expansion of coverage of the minimum wage appears to be a major factor in this trend. Further notes that more than half of all teenagers would earn more in the absence of a minimum wage.

Bauer, P.T. 1959. Regulated Wages in Under-developed Countries. In *The Public Stake in Union Power*, ed. Philip D. Bradley. Charlottesville, VA: University of Virginia Press, 324-349.

Argues that the negative effects of minimum wage laws in LDCs is even greater than in industrialized countries, because there is greater diversity of supply and demand for labor in LDCs. Also points out that in South Africa minimum wages helped whites at the expense of blacks.

Behrman, Jere R.; Sickles, Robin C.; and Taubman, Paul. 1983. The Impact of Minimum Wages on the Distributions of Earnings for Major Race-Sex Groups: A Dynamic Analysis. *American Economic Review*, vol. 73 (September): 766-778.

Finds that the minimum wage has helped white males and females while hurting black males and females.

Bell, Carolyn Shaw. 1981. Minimum Wages and Personal Income. In Rottenberg (1981a): 429-458.

Finds that increases in the minimum wage would benefit few families with incomes below the poverty level. Much of the benefit would accrue to upper income families with secondary earners, such as wives and children.

Beranek, William. 1982. The Illegal Alien Work Force, Demand for Unskilled Labor, and the Minimum Wage. *Journal of Labor Research*, vol. 3 (Winter): 89-99.

Finds that the minimum wage increases the employment demand for illegal aliens, who are less likely than legal residents to report violations of the labor laws.

Betsey, Charles L., and Dunson, Bruce H. 1981. Federal Minimum Wage Laws and the Employment of Minority Youth. *American Economic Review*, vol. 71 (May): 379-384.

Argues that employment losses from higher minimum wages have been overstated and that much of the higher unemployment among minority youth has been due to cyclical factors.

Bonilla, Carlos E. 1992. *Higher Wages, Greater Poverty*. Washington: Employment Policies Institute.

Finds that the 1991 increase in the federal minimum wage actually reduced the income of some single parents, after welfare and taxes are taken into account.

Brandon, Peter D. 1995. *Jobs Taken by Mothers Moving from Welfare to Work and the Effects of Minimum Wages on this Transition*. Washington: Employment Policies Institute Foundation.

Finds a decrease in work by women on welfare in states raising their minimum wages and an increase in time on welfare in such states.

Brown, Charles. 1988. Minimum Wage Laws: Are They Overrated? *Journal of Economic Perspectives*, vol. 2 (Summer): 133-145.

Finds that the employment impact of the minimum wage and its impact on reducing poverty are both less than generally believed.

Brown, Charles; Gilroy, Curtis; and Kohen, Andrew. 1981a. Effects of the Minimum Wage on Youth Employment and Unemployment. In *Minimum Wage Study Commission (1981)*, vol. 5, pp. 1-26.

Finds that a 10% increase in the minimum wage will reduce teenage employment by 1% to 3%.

Brown, Charles; Gilroy, Curtis; and Kohen, Andrew. 1981b. Time-Series Evidence of the Effect of the Minimum Wage on Teenage Employment and Unemployment. In *Minimum Wage Study Commission (1981)*, vol. 5, pp. 103-127.

Finds that a 10% increase in the minimum wage will reduce teenage employment by 1%.

Brown, Charles; Gilroy, Curtis; and Kohen, Andrew. 1982. The Effect of the Minimum Wage on Employment and Unemployment. *Journal of Economic Literature*, vol. 20 (June): 487-528.

Summarizes a large volume of research on the minimum wage.

Brozen, Yale. 1962. Minimum Wage Rates and Household Workers. *Journal of Law and Economics*, vol. 5 (October): 103-109.

Found that increases in the minimum wage drove low-wage workers into uncovered occupations, such as household work. Predicts that broadening of coverage to such occupations will increase structural unemployment.

Brozen, Yale. 1966. Wage Rates, Minimum Wage Laws, and Unemployment. *New Individualist Review*, vol. 4 (Spring): 24-33.

Points out a contradiction between the Johnson Administration's desire to hold wage increases to the rate of productivity growth, in order to reduce inflationary pressures, and its support for a higher minimum wage.

Brozen, Yale. 1969. The Effect of Statutory Minimum Wage Increases on Teen-age Employment. *Journal of Law and Economics*, vol. 12 (April): 109-122.

Finds that increases in the minimum wage only speed up wage increases that would have occurred over time. However, in the interval between an increase and the time when productivity catches up to it results in higher unemployment and business failures. In the case of teenagers, many who are barred from jobs suffer long-term effects from the failure to gain job skills, thus injuring them permanently.

Card, David. 1992a. Using Regional Variation in Wages to Measure the Effects of the Federal Minimum Wage. *Industrial and Labor Relations Review*, vol. 46 (October): 22-37.

Finds no evidence that the April, 1990 increase in the minimum wage reduced teenage employment, but does find evidence that it led to higher wages.

Card, David. 1992b. Do Minimum Wages Reduce Employment? A Case Study of California, 1987-89. *Industrial and Labor Relations Review*, vol. 46 (October): 38-54.

Finds no evidence that an increase in the California state minimum wage in July, 1988 led to any loss in teenage employment, but does find evidence of higher wages.

Card, David, and Krueger, Alan B. 1994. Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania. *American Economic Review*, vol. 84 (September): 772-793.

Finds no evidence of reduced employment from an increase in the New Jersey state minimum wage in April, 1992.

Colberg, Marshall R. 1960. Minimum Wage Effects on Florida's Economic Development. *Journal of Law and Economics*, vol. 3 (October): 106-117.

Finds that after an increase in the minimum wage unemployment increased most in the areas where wages were lowest and least in areas where wages were highest beforehand.

Colberg, Marshall. 1981. Minimum Wages and the Distribution of Economic Activity. In Rottenberg (1981a): 247-263.

Examines votes on the minimum wage and finds heavy support for it in high wage states of the North and opposition from low wage states in the South. This suggests that the North was attempting to reduce the South's competitive advantage in wages.

Corbo, Vittorio. 1981. The Impact of Minimum Wages on Industrial Employment in Chile. In Rottenberg (1981a): 340-356.

Finds substantial job losses from the minimum wage in Chile.

Cotterill, Philip. 1981. Differential Legal Minimum Wages. In Rottenberg (1981a): 296-316.

Favors differential minimum wages to reduce the impact of the minimum wage.

Cotterman, Robert F. 1981. The Effects of Federal Minimum Wages on the Industrial Distribution of Teenage Employment. In Rottenberg (1981a): 42-60.

Finds that minimum wages have altered the distribution of teenage employment. Teenagers are less likely to be employed in low wage industries, such as retailing, and increase employment in high wage industries, such as manufacturing.

Cox, James C., and Oaxaca, Ronald L. 1981. The Determinants of Minimum Wage Levels and Coverage in State Minimum Wage Laws. In Rottenberg (1981a): 403-428.

Finds that union support for the minimum wage is significant politically.

Cox, James C., and Oaxaca, Ronald L. 1982. The Political Economy of Minimum Wage Legislation. *Economic Inquiry*, vol. 20 (October): 533-555.

Explains why unions support minimum wages.

Cox, James C., and Oaxaca, Ronald L. 1986. Minimum Wage Effects With Output Stabilization. *Economic Inquiry*, vol. 24 (July): 443-453.

Finds that the minimum wage causes unskilled wages to be 15.7% higher than they otherwise would be, and that this causes employment to be 11.2% lower than it otherwise would be.

Cunningham, James. 1981. The Impact of Minimum Wages on Youth Employment, Hours of Work, and School Attendance: Cross-sectional Evidence from the 1960 and 1970 Censuses. In Rottenberg (1981a): 88-123.

Finds that minimum wages discourage part-time work and lowers school attendance.

Currie, Janet, and Fallick, Bruce. 1993. A Note on the New Minimum Wage Research. National Bureau of Economic Research Working Paper No. 4348 (April).

Finds that employed individuals affected by the increases in the minimum wage in 1979 and 1980 were 3% to 4% less likely to be employed a year later. Since the methodology employed is similar to that in Card (1992a and 1992b), it casts doubt on any generalization of his conclusions.

Datcher, Linda P., and Loury, Glenn C. 1981. The Effect of Minimum Wage Legislation on the Distribution of Family Earnings Among Blacks and Whites. In Minimum Wage Study Commission (1981), vol. 7, pp. 125-146.

Finds that an increase in the minimum wage increases white family incomes more than black family incomes. Also, middle- and high-income families benefit more than low-income families.

Douty, H.M. 1960. Some Effects of the \$1.00 Minimum Wage in the United States. *Economica*, vol. 27 (May): 137-147.

Finds that the increase in the minimum wage from 75 cents to \$1.00 in 1956 did lead to an increase in pay for many workers, but at the cost of jobs. Long-term employment losses by industry ranged from 3.2% to 15%.

Ehrenberg, Ronald G., and Schumann, Paul L. 1981. The Overtime Pay Provisions of the Fair Labor Standards Act. In Rottenberg (1981a): 264-295.

Opposes restrictions on mandatory overtime.

Employment Policies Institute. 1994. *The Low-Wage Workforce*. Washington: Employment Policies Institute.

Presents data on characteristics of workers earning the minimum wage.

Feldstein, Martin. 1973. The Economics of the New Unemployment. *The Public Interest* (Fall): 14-15.

Argues that the minimum wage prevents many young people from accepting jobs that would provide them with on-the-job training, thus contributing to long-term unemployment.

Fleisher, Belton M. 1981. *Minimum Wage Regulation in Retail Trade*. Washington: American Enterprise Institute.

Extension of the minimum wage to retail trade lowered employment in that industry by as much as 500,000, with the main impact on teenagers. Also finds that higher minimum wages led to a scale-back of fringe benefits and training.

Forrest, David. 1982. Minimum Wages and Youth Unemployment: Will Britain Learn from Canada? *Journal of Economic Affairs*, vol. 2 (July): 247-250.

Estimates that 40% of the increase in teenage unemployment in Canada since the 1950s is due to higher minimum wages.

Freeman, Alida Castillo, and Freeman, Richard B. 1991. Minimum Wages in Puerto Rico: Textbook Case of a Wage Floor? National Bureau of Economic Research Working Paper No. 3759 (June).

Finds that the minimum wage has had a massive impact on the labor market in Puerto Rico.

Gallasch, H.F., Jr. 1975. Minimum Wages and the Farm Labor Market. *Southern Economic Journal*, vol. 41 (January): 480-491.

Finds that the 1967 extension of the minimum wage to the farm labor market, which had previously been uncovered, led to an increase in wages and a reduction in employment.

Gardner, Bruce. 1981. What Have Minimum Wages Done in Agriculture? In Rottenberg (1981a): 210-232.

Finds that extension of the minimum wage to farm workers has increased wages but reduced employment.

Gordon, Kenneth. 1981. The Impact of Minimum Wages on Private Household Workers. In Rottenberg (1981a): 191-209.

Finds that the minimum wage has led to a dramatic reduction in household workers. Also notes that the policy of enforcement of labor laws by complaint converts the minimum wage from an instrument of public policy to a tool of private disputes.

Gramlich, Edward M. 1976. Impact of Minimum Wages on Other Wages, Employment, and Family Incomes. *Brookings Papers on Economic Activity* (No. 2): 409-461.

Finds that raising the minimum wage above 40 to 50 percent of median wages leads to increased compliance costs, higher unemployment, workers forced to leave full-time work for part-time work, more benefits for high-income families, and inflationary effects on prices.

Gregory, Peter. 1981. Legal Minimum Wages as an Instrument of Social Policy in Less Developed Countries, with Special Reference to Costa Rica. In Rottenberg (1981a): 377-402.

Finds that the minimum wage has been ineffective in reducing income inequality.

Grossman, Jean B. 1983. The Impact of the Minimum Wage on Other Wages. *Journal of Human Resources*, vol. 18 (Summer): 359-378.

Finds that an increase in the minimum wage increases wages of those above the minimum wage for two reasons. First, workers above the minimum will want to restore their relative wage position, and second there will be increased demand for workers above the minimum to do the work previously done by those below the minimum.

Grossman, Jonathan. 1978. Fair Labor Standards Act of 1938: Maximum Struggle for a Minimum Wage. *Monthly Labor Review*, vol. 101 (June): 22-30.

Reviews the legislative history of passage of the first federal minimum wage law. Notes the limited coverage of the initial legislation.

Hall, Robert E. 1982. The Minimum Wage and Job Turnover in Markets for Young Workers. In *The Youth Labor Market Problem: Its Nature, Causes, and Consequences*, ed. Richard B. Freeman and David A. Wise, pp. 475-497. Chicago: University of Chicago Press.

Finds that the higher unemployment among youth resulting from the minimum wage is primarily due to higher job turnover.

Hammermesh, Daniel S. 1981. Employment Demand, the Minimum Wage and Labor Costs. In *Minimum Wage Study Commission (1981)*, vol. 5, pp. 27-84.

Finds that a 10% increase in the minimum wage will reduce teenage employment by 1.2% overall, with smaller declines in services and retail trade and a higher impact in manufacturing.

Hammermesh, Daniel S. 1982. Minimum Wages and the Demand for Labor. *Economic Inquiry*, vol. 20 (July): 365-380.

Finds that a minimum wage reduces teenage employment.

Hashimoto, Masanori. 1981. *Minimum Wages and On-the-Job Training*. Washington: American Enterprise Institute.

Finds that minimum wage laws lead to a curtailment of training by employers.

Hashimoto, Masanori. 1982. Minimum Wage Effects on Training on the Job. *American Economic Review*, vol. 72 (December): 1070-1087.

Finds that minimum wages reduce training, first because workers lose job opportunities, and hence on the job training, and second because employers will no longer be able to afford to give such training.

Hashimoto, Masanori. 1987. The Minimum Wage Law and Youth Crimes: Time-Series Evidence. *Journal of Law and Economics*, vol. 30 (October): 443-464.

Suggests that increases in the minimum wage may be responsible for increases in teenage crime rates.

Haugen, Steven E., and Mellor, Earl F. 1990. Estimating the Number of Minimum Wage Workers. *Monthly Labor Review*, vol. 113 (January): 70-74.

Estimates that two-fifths of workers reporting wage rates at or below the minimum wage in 1988 had supplements raising their wage rates above the minimum. However, some 1.5 million salaried workers may also make the minimum wage or less on an hourly rate.

Holcombe, Randall G., and Metcalf, John G. 1977. The Appeal of Minimum Wage Laws: A Dynamic Analysis. *Public Choice*, vol. 29 (Spring): 139-141.

Explains the popularity of minimum wage laws even among those who lose their jobs as a result as stemming from the high turnover in the low-wage market. Although a worker may initially lose his job because of an increase in the minimum wage, he will expect to get other jobs in the future that will pay more.

Iden, George. 1980. The Labor Force Experience of Black Youth: A Review. *Monthly Labor Review*, vol. 103 (August): 10-16.

Concedes that the minimum wage has had a significant negative effect on teenage employment, especially for blacks.

Johnson, William R., and Browning, Edgar K. 1981. Minimum Wages and the Distribution of Income. In *Minimum Wage Study Commission (1981)*, vol. 7, pp. 31-58.

Finds that much of the benefits of a higher minimum wage accrue to high-income families and that many low-income families benefit at the expense of other low-income families.

Johnson, William R., and Browning, Edgar K. 1983. The Distributional and Efficiency Effects of Increasing the Minimum Wage: A Simulation. *American Economic Review*, vol. 73 (March): 204-211.

Finds that a 22% increase in the minimum wage in 1976 would have increased the incomes of the lowest 10% of households by just \$200 million.

Katz, Lawrence F., and Krueger, Alan B. 1992. The Effect of the Minimum Wage on the Fast-Food Industry. *Industrial and Labor Relations Review*, vol. 46 (October): 6-21.

Finds evidence that an increase in the minimum wage led to an increase in employment in Texas.

Kaun, David E. 1965. Minimum Wages, Factor Substitution and the Marginal Producer. *Quarterly Journal of Economics*, vol. 79 (August): 478-486.

The minimum wage hurts small businesses.

Keech, William R. 1977. More on the Vote Winning and Vote Losing Qualities of Minimum Wage Laws. *Public Choice*, vol. 29 (Spring): 133-137.

Suggests that support for the minimum wage even among those adversely affected may result from those benefiting having a clearer perception of the benefits than those who are harmed have of the negative effects.

Kniesner, Thomas J. 1981. The Low-Wage Workers: Who Are They? In *Rottenberg (1981a)*: 459-481.

Finds that 60% of low-wage workers are women and less than 40% are teenagers. Also finds that low wages are not strongly associated with poverty. Less than 25% of low wage workers are heads of households, and only 30% live in families with incomes below the poverty level.

Kohen, Andrew I., and Gilroy, Curtis L. 1981. The Minimum Wage, Income Distribution, and Poverty. In Minimum Wage Study Commission (1981), vol. 7, pp. 1-30.

Since many low-wage workers live in high-income families, increasing the minimum wage is an ineffective way of increasing the incomes of poor families.

Kosters, Marvin, and Welch, Finis. 1972. The Effects of Minimum Wages on the Distribution of Changes in Aggregate Employment. *American Economic Review*, vol. 62 (June): 323-332.

Finds that increases in the minimum wage have a significant effect on employment patterns, especially for nonwhite teenagers. As a consequence, teenagers are less able to find jobs during periods of normal employment growth and are more likely to lose their jobs during cyclical downturns.

Krumm, Ronald J. 1981. *The Impact of the Minimum Wage on Regional Labor Markets*. Washington: American Enterprise Institute.

Finds that lower-skilled workers tend to be disemployed when minimum wages are applied uniformly, leading to higher wages for higher-skilled workers. Also, because the cost of living varies from region to region, the real minimum wage will also vary.

Lang, Kevin. 1995. *Minimum Wage Laws and the Distribution of Employment*. Washington: Employment Policies Institute Foundation.

Finds that increases in the minimum wage leads fast food establishments to replace adult workers with younger workers, and to replace full-time workers with part-time workers.

Leffler, Keith B. 1978. Minimum Wages, Welfare, and Wealth Trans-fers to the Poor. *Journal of Law and Economics*, vol. 21 (October): 345-358.

Finds that increases in the minimum wage lead to increases in welfare rolls. Argues that advocates for the poor may favor higher minimum wages in order to increase the number of people on welfare, because welfare benefits may exceed the income from work.

Leighton, Linda, and Mincer, Jacob. 1981. The Effects of Minimum Wages on Human Capital Formation. In Rottenberg (1981a): 155-173.

Finds that minimum wages discourage on-the-job training.

Levitan, Sar, and Belous, Richard S. 1979. The Minimum Wage Today: How Well Does It Work? *Monthly Labor Review*, vol. 102 (July): 17-21.

Argues that the benefits of the minimum wage outweigh its costs.

Linneman, Peter. 1982. The Economic Impacts of Minimum Wage Laws: A New Look at an Old Question. *Journal of Political Economy*, vol. 90 (June): 443-469.

Finds that the disemployment effects of the minimum wage fall mainly on blacks, females, restricted individuals, residents of small cities, those with low education, the old, and non-union members. Beneficiaries of the minimum wage mainly are males and union members.

Mattila, J. Peter. 1981. The Impact of Minimum Wages on Teenage Schooling and on the Part-Time/Full-Time Employment of Youths. In Rottenberg (1981a): 61-87.

Finds that the disemployment effects of the minimum wage have encouraged youths to stay in school. Also, youths have shifted out of full-time work and into part-time work, in order to accommodate schooling.

McCulloch, J. Huston. 1981. Macroeconomic Implications of the Minimum Wage. In Rottenberg (1981a): 317-326.

Finds negligible effects from the minimum wage on inflation. However, it may reduce the size of the capital stock by reducing profitability in covered industries, thereby leading to lower wages in the long run.

McKee, Michael, and West, Edwin G. 1984. Minimum Wage Effects on Part-Time Employment. *Economic Inquiry*, vol. 22 (July): 421-428.

Finds that the minimum wage discourages part-time employment in favor of full-time jobs.

McKenzie, Richard B. 1980. The Labor Market Effects of Minimum Wage Laws: A New Perspective. *Journal of Labor Research*, vol. 1 (Fall): 255-264.

Argues that increases in the minimum wage, which apply only to money wages, will lead to a reduction in non-money wages, such as fringe benefits. Thus employers can respond to a higher minimum wage by lowering benefits by the same amount.

Mellor, Earl F. 1987. Workers at the Minimum Wage or Less: Who They Are and the Jobs They Hold. *Monthly Labor Review*, vol. 110 (July): 34-38.

Finds that those earning at the minimum wage or less consist largely of young persons and women. The majority worked part-time in services or sales. Since many of these people probably also received commissions or tips, the number of workers earning the minimum wage or less may be overstated.

Mellor, Earl F., and Haugen, Steven E. 1986. Hourly Paid Workers: Who They Are and What They Earn. *Monthly Labor Review*, vol. 109 (February): 20-26.

Finds that 60% of those earning the minimum wage or less are under age 25 and one-third were teenagers.

Meyer, Robert H., and Wise, David A. 1981. Discontinuous Distributions and Missing Persons: The Minimum Wage and Unemployed Youth. In Minimum Wage Study Commission (1981), vol. 5, pp. 175-201.

Finds that abolition of the minimum wage would increase employment by out-of-school youth by 6%.

Meyer, Robert H., and Wise, David A. 1983a. The Effects of the Minimum Wage on the Employment and Earnings of Youth. *Journal of Labor Economics*, vol. 1 (January): 66-100.

Estimates that abolition of the minimum wage would have led to significantly higher employment among youth, especially black youth. Finds no evidence of higher earnings from the minimum wage.

Meyer, Robert H., and Wise, David A. 1983b. Discontinuous Distributions and Missing Persons: The Minimum Wage and Unemployed Youth. *Econometrica*, vol. 51 (November): 1677-1698.

Finds that if the minimum wage did not exist in 1978, employment among out-of-school young men would have been 7% higher. Also, the average earnings of youth would have been higher.

Mincer, Jacob. 1976. Unemployment Effects of Minimum Wages. *Journal of Political Economy*, vol. 84 (August): S87-S104.

Finds that the negative effects of a minimum wage increase are greatest for nonwhite teenagers. Moreover, the disemployment effects on the size of the labor force are greater than the effects on the unemployment rate.

Mincy, Ronald B. 1990. Raising the Minimum Wage: Effects on Family Poverty. *Monthly Labor Review*, vol. 113 (July): 18-25.

Finds a significant impact on reducing poverty from an increase in the minimum wage. This is because the disemployment impact falls mainly on teenagers, whose contribution to family income is small.

Minimum Wage Study Commission. 1981. *Report*, 7 vols. Washington: U.S. Government Printing Office.

Concludes that a 10% increase in the minimum wage will reduce teenage employment by 1%-3%.

Moore, Thomas G. 1971. The Effect of Minimum Wages on Teenage Unemployment Rates. *Journal of Political Economy*, vol. 79 (July/August): 897-902.

Finds that the minimum wage increases unemployment primarily for nonwhite teenagers.

Neumark, David, and Wascher, William. 1992. Employment Effects of Minimum and Subminimum Wages: Panel Data on State Minimum Wage Laws. *Industrial and Labor Relations Review*, vol. 46 (October): 55-81.

Finds that a 10% increase in the minimum wage reduces teenage employment by 1% to 2%, and a decline of 1.5% to 2% among young adults.

Parsons, Donald O. 1980. *Poverty and the Minimum Wage*. Washington: American Enterprise Institute.

Finds that the minimum wage mainly reallocates income among low-wage workers, benefiting adult females and hurting teenagers of both sexes.

Peterson, John M. 1957. Employment Effects of Minimum Wages, 1938-50. *Journal of Political Economy*, vol. 65 (October): 412-430.

One of the first empirical studies to show that minimum wages reduce employment.

Peterson, John M. 1981. *Minimum Wages: Measures and Industry Effects*. Washington: American Enterprise Institute.

Calculates the impact of the minimum wage on different industries. The negative employment effects primarily impact low-wage industries such as retailing.

Peterson, John M., and Stewart, Charles T., Jr. 1969. *Employment Effects of Minimum Wage Rates*. Washington: American Enterprise Institute.

Summarizes a large number of studies finding negative employment effects from minimum wages.

Phillips, Llad. 1981. Some Aspects of the Social Pathological Behavior Effects of Unemployment among Young People. In Rottenberg (1981a): 174-190.

Finds that primary impact of minimum wage is on young males, especially black males. This has encouraged continued school enrollment and entry into the armed forces. However, it has also encouraged "illegitimate" alternatives to employment, such as crime.

Ragan, James F., Jr. 1977. Minimum Wages and the Youth Labor Market. *Review of Economics and Statistics*, vol. 59 (May): 129-136.

Confirms that higher minimum wage rates reduce youth employment and increases youth unemployment rates, especially for nonwhite males.

Ragan, James F., Jr. 1981. The Effect of a Legal Minimum Wage on the Pay and Employment of Teenage Students and Nonstudents. In Rottenberg (1981a): 11-41.

Because the minimum wage reduces employment for teenagers, government funds spent on job training for teenagers must be counted as part of the cost of the minimum wage.

Rosa, Jean-Jacques. 1981. The Effect of Minimum Wage Regulation in France. In Rottenberg (1981a): 357-376.

Finds that the minimum wage reduces employment of youth in France, especially males.

Rottenberg, Simon. 1981a. *The Economics of Legal Minimum Wages*. Washington: American Enterprise Institute.

Collection of papers.

Rottenberg, Simon. 1981b. Minimum Wages in Puerto Rico. In Rottenberg (1981a): 327-339.

Finds that the minimum wage has caused massive disemployment in Puerto Rico and lowered the overall standard of living.

Smith, Ralph E., and Vavrichek, Bruce. 1987. The Minimum Wage: Its Relation to Incomes and Poverty. *Monthly Labor Review*, vol. 110 (June): 24-30.

Finds that 70% of workers earning the minimum wage in 1985 lived in families in which at least one other member held a job. Also, teenagers held almost one-third of all jobs paying the minimum wage.

Smith, Ralph E., and Vavrichek, Bruce. 1992. The Mobility of Minimum Wage Workers. *Industrial and Labor Relations Review*, vol. 46 (October): 82-88.

Examines a panel of workers earning the minimum wage in the mid-1980s and finds that over 60% were earning more than the minimum wage a year later, with gains averaging 20%.

Sowell, Thomas. 1977. *Minimum Wage Escalation*. Stanford, CA: Hoover Institution Press.

Argues that indexing the minimum wage would magnify its problems.

Steindl, Frank G. 1973. The Appeal of Minimum Wage Laws and the Invisible Hand in Government. *Public Choice*, vol. 14 (Spring): 133-136.

Argues that political support for the minimum wage results from the fact that those who benefit from a modest increase will outnumber those who lose.

Stigler, George J. 1946. The Economics of Minimum Wage Legislation. *American Economic Review*, vol. 36 (June): 358-365.

Argues that a minimum wage will reduce output and decrease the earnings of the poor.

Tauchen, George E. 1981. Some Evidence on Cross-Sector Effects of the Minimum Wage. *Journal of Political Economy*, vol. 89 (June): 529-547.

Finds that increases in the minimum wage tend to lower wages for those in uncovered sectors, because there is increased demand for uncovered jobs from those no longer employable at the minimum wage.

Taylor, Lowell J. 1993. *The Employment Effect in Retail Trade of a Minimum Wage: Evidence from California*. Washington: Employment Policies Institute.

Criticizes Card (1992b).

Trapani, John M., and Moroney, J.R. 1981. The Impact of Federal Minimum Wage Laws on Employment of Seasonal Cotton farm Workers. In Rottenberg (1981a): 233-246.

Finds that extension of the minimum wage to seasonal cotton workers in 1966 led to a substitution of mechanical processes for labor.

Vandenbrink, Donna C. 1987. The Minimum Wage: No Minor Matter for Teens. *Economic Perspectives*, Federal Reserve Bank of Chicago, vol. 11 (March/April): 19-28.

Finds large reductions in teenage employment from an increase in the minimum wage.

Van Giezen, Robert W. 1994. Occupational Wages in the Fast-Food Industry. *Monthly Labor Review*, vol. 117 (August): 24-30.

Shows that wages in the fast-food industry are closely tied to the minimum wage.

Welch, Finis. 1974. Minimum Wage Legislation in the United States. *Economic Inquiry*, vol. 12 (September): 285-318.

Finds that the minimum wage has reduced employment, especially among teenagers; it has made teenagers more vulnerable to the business cycle; and has forced teenagers out of covered occupations into those not covered by the minimum wage.

Welch, Finis. 1978. *Minimum Wages: Issues and Evidence*. Washington: American Enterprise Institute.

Finds that those primarily affected by the minimum wage are the aged, teenagers, and part-time workers.

Welch, Finis, and Cunningham, James. 1978. Effects of Minimum Wages on the Level and Age Composition of Youth Employment. *Review of Economics and Statistics*, vol. 60 (February): 140-145.

Finds that in 1970 the minimum wage reduced employment of 14-15 year olds by 46%, by 27% for those 16-17, and by 15% for those 18-19.

Wessels, Walter J. 1980. *Minimum Wages, Fringe Benefits, and Working Conditions*. Washington: American Enterprise Institute.

Finds that increases in the minimum wage lead to a reduction in fringe benefits and a deterioration of working conditions.

West, E.G. 1980. The Unsinkable Minimum Wage. *Policy Review* (Winter): 83-95.

Argues that economists should do a better job of explaining the negative effects of the minimum wage.

Williams, Walter. 1977a. Government Sanctioned Restraints that Reduce Economic Opportunities for Minorities. *Policy Review* (Fall): 7-30.

Argues that minimum wage laws have had a disproportionately negative effect on black teenagers.

Williams, Walter. 1977b. *Youth and Minority Unemployment*. Study prepared for the Joint Economic Committee, U.S. Congress. Joint Committee Print, 95th Congress, 1st session. Washington: U.S. Government Printing Office.

Points out that in 1947, prior to expansion of the minimum wage, black teenage unemployment was actually lower than white teenage unemployment, and that teenage unemployment generally was sharply lower than it is today.