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**Article**

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## Research Summaries

### Raising Incomes by Mandating Higher Wages

David Neumark\*

A number of policy proposals and initiatives have been used in the United States in an attempt to reduce poverty, or more generally to assist low-income families, by increasing the incomes of families at the bottom end of the income distribution. My research over the recent past has focused on studying the effectiveness of two such policies that mandate higher wages for low-wage workers: minimum wages and living wages.<sup>1</sup>

Minimum wages first were established on a national level with the Fair Labor Standards Act of 1938. While initial coverage was originally quite restrictive, coverage is now nearly universal. The federal minimum currently stands at \$5.15. Numerous states have at times imposed higher minimum wages, typically for the same workers covered by the federal minimum, but with some exceptions. The highest state minimum wages currently are in California and Massachusetts (\$6.75) and Washington (\$6.90).

Living wage ordinances are a much more recent innovation. Baltimore was the first city to pass such legislation, in 1994, and approximately 50 cities and a number of other jurisdictions have followed suit. Living wage laws have three central features. First, they impose a wage floor that is higher — and often much higher — than traditional federal and state minimum wages. Second, living wage levels are often explicitly pegged to the wage level needed for a family to reach the federal poverty line. Third, coverage by living wage ordi-

nances is highly restricted. Frequently, cities impose wage floors only on companies under contract (generally including non-profits) with the city. Other cities also impose the wage floor on companies receiving business assistance from the city, in almost every case in addition to coverage of city contractors. Finally, a still smaller number of cities also impose the requirement on themselves and pay city employees a legislated living wage.

It is fair to say that the goal of both minimum wages and living wages is to raise incomes of low-wage workers so as to reduce poverty. Senator Edward Kennedy, a perennial sponsor of legislation to increase the minimum wage, has been quoted as saying “The minimum wage was one of the first — and is still one of the best — anti-poverty programs we have.”<sup>2</sup> Similarly, the Economic Policy Institute, while noting that other anti-poverty tools are needed, argues that “the living wage is a crucial tool in the effort to end poverty.”<sup>3</sup> Thus, while there is generally no single measure with which the distributional effects of a policy can be assessed unambiguously, and while overall welfare effects are much more complicated, evaluating the impact of mandated wage floors on poverty is quite relevant to the policy debate.

While mandating higher wages for low-wage workers would appear to a non-economist as a natural way to fight poverty, there are two reasons why it may not help to achieve this goal. First, standard economic theory predicts that a mandated wage floor will discourage the use of low-skilled labor, essentially operating as a tax on the use of such labor. Thus, whatever wage gains accrue to workers whose employment is not affected must be

offset by the potential earnings losses for some other workers. Second, mandated wage floors may target low-income families ineffectively. Broadly speaking, low-wage workers in the United States belong to two groups. The first is very young workers who have not yet acquired labor market skills, but who are likely to escape low-wage work as skills are acquired. The second is low-skilled adults who are likely to remain mired in low-wage work,<sup>4</sup> and who — as adults — are much more likely to be in poor families. To the extent that the gains from mandated wage floors accrue to low-wage adults and the losses fall on low-wage, non-poor teenagers, mandated wage floors may well reduce poverty. But there is no theoretical reason to believe that this outcome is more likely than the reverse, with concomitant adverse outcomes for low-income families. The distributional effect of mandated wage floors is a purely empirical question.

#### Minimum Wages

Labor economists have written innumerable papers testing the prediction that minimum wages reduce employment. Earlier studies used aggregate time-series data for the United States to estimate the effects of changes in the national minimum wage. The consensus view from these “first generation” studies was that the elasticity of employment of low-skilled (young) workers with respect to minimum wages was most likely between -0.1 and -0.2; that is, for every ten-percent increase in the minimum wage, employment of low-skilled individuals falls by one to two percent.<sup>5</sup>

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More recent studies have used panel data covering multiple states over time, exploiting differences across states in minimum wages. This approach permits researchers to abstract from aggregate economic changes that may coincide with changes in the national minimum wage and hence make difficult untangling the effects of minimum wages in aggregate time-series data.<sup>6</sup> Evidence from these “second generation” studies has spurred considerable controversy regarding whether or not minimum wages reduce employment of low-skilled workers, with some researchers arguing that the predictions of the standard model are wrong, and that minimum wages do not reduce and may even increase employment. The most prominent and often-cited such study uses data collected from a telephone survey of managers or assistant managers in fast-food restaurants in New Jersey and Pennsylvania before and after a minimum wage increase in New Jersey.<sup>7</sup> Not only do these data fail to indicate a relative employment decline in New Jersey, but rather they show that employment rose sharply there (with positive employment elasticities in the range of 0.7).

On the other hand, much recent evidence using similar sorts of data tends to confirm the prediction that minimum wages reduce employment of low-skilled workers;<sup>8</sup> so does earlier work with a much longer panel of states.<sup>9</sup> Moreover, an approach to estimating the employment effects of minimum wages that focuses more explicitly on whether minimum wages are high relative to an equilibrium wage for affected workers reveals two things: first, disemployment effects appear when minimum wages are more likely to be binding (because the equilibrium wage absent the minimum is low); second, some of the small or zero estimated disemployment effects in other studies appear to be from regions or periods in which minimum wages were much less likely to have been binding.<sup>10</sup> Finally, a re-examination of the New Jersey-Pennsylvania study that I conducted, based on payroll records collected from fast-food establishments, finds that the original telephone survey

data were plagued by severe measurement error, and that the payroll data generally point to negative employment elasticities.<sup>11</sup>

Across this array of more recent evidence, the estimated effects often parallel the earlier time-series research indicating that the elasticity of employment of low-skilled workers with respect to the minimum wage is in the -0.1 to -0.2 range, with estimates for teenagers (who have often been the focus of minimum wage research) closer to -0.1. As further evidence, a leading economics journal recently published a survey including economists’ views of the best estimates of minimum wage effects. Results of this survey, which was conducted in 1996 — after most of the recent research on minimum wages was well-known to economists — indicated that the median “best estimate” of the minimum wage elasticity for teenagers was -0.1, while the mean estimate was -0.21.<sup>12</sup> Thus, although there may be some outlying perspectives, economists’ views of the effects of the minimum wage are centered in the range of the earlier estimates, and many of the more recent estimates, of the disemployment effects of minimum wages.

While the research on disemployment effects appears to settle (for many, at least) a question regarding the labor demand effects of mandated wage floors, it does not answer the question of whether minimum wages raise incomes of low-wage workers, or more importantly of poor or low-income families.<sup>13</sup> Turning first to low-wage workers, I recently examined the effects of minimum wages on employment, hours, wages, and ultimately labor income of workers at different points in the wage distribution.<sup>14</sup> This research indicates that workers initially earning near the minimum wage are on net adversely affected by minimum wage increases while, not surprisingly, higher-wage workers are little affected. While wages of low-wage workers increase (although by considerably less than pure contemporaneous effects indicate), their hours and employment decline, and the combined effect of these changes is a decline in earned income.<sup>15</sup>

Finally, while there are few poor or low-income families with high-wage workers, there are many high-income families with low-wage workers.<sup>16</sup> Thus, knowing the effects of minimum wages on low-wage workers does not lead to any firm prediction regarding the effects of minimum wages on poor or low-income families. However, evidence from my recent research utilizing a non-parametric approach to estimating the impact of the minimum wage on the distribution of family income indicates that raising the minimum wage does not reduce the proportion of families living in poverty and, if anything, instead increases it, thus raising the poverty rate.<sup>17</sup> Thus, the combined evidence indicates that minimum wages do not appear to accomplish their principal policy goal of raising incomes of low-wage workers or of poor or low-income families.

One qualification to keep in mind is that this research tends to focus on the short-run effects of minimum wages, typically looking at effects at most a year after minimum wage increases. I am presently working on estimating the longer-run distributional effects of minimum wages. But two sets of existing findings point to some potentially longer-lasting adverse effects of minimum wages — effects that extend beyond disemployment effects, to those who work. First, minimum wages tend to reduce school enrollments of teenagers, at least where these enrollments are not constrained by compulsory schooling laws.<sup>18</sup> Second, extending earlier research on the relationship between minimum wages and on-the-job training, I find in a recent study that minimum wages reduce training that is intended to improve skills on the current job.<sup>19</sup> Thus, minimum wages may reduce the human capital accumulation that leads to higher wages and incomes.

## Living Wages

I have recently completed a monograph and a set of papers that analyze many of these same questions with regard to living wage laws.<sup>20</sup> In these papers, paralleling the strategy used in much of the new research on mini-

mum wages, I identify the effects of living wages by comparing changes in labor market outcomes in cities that pass living wages with changes in cities that do not pass such laws.

I begin by asking whether living wage laws may lead to detectable increases in wages at the lower end of the wage or skill distribution. While such effects are readily detectable with respect to minimum wages, the question arises with respect to living wages because of the low fraction of workers covered, and because of questions about enforcement.<sup>21</sup> The evidence points to sizable effects of living wage ordinances on the wages of low-wage workers in the cities in which these ordinances are enacted. In fact, the magnitudes of the estimated wage effects (elasticities of approximately 0.07 for workers in the bottom tenth of the wage distribution) are much larger than would be expected based on the apparently limited coverage of city contractors by most living wage laws. Additional analyses that help reconcile these large effects indicate that the effects are driven by cities in which the coverage of living wage laws is more broad, that is, cities that impose living wages on employers receiving business assistance from the city.<sup>22</sup>

As with minimum wages, the potential gains from higher wages may be offset by reduced employment opportunities. Overall, evidence of disemployment effects is weaker than the evidence of positive wage effects. Nonetheless, disemployment effects tend to appear precisely for the type of living wage laws that generate positive wage effects, in particular, for low-skill workers covered by the broader laws that apply to employers receiving business assistance. Thus, as economic theory would lead us to expect, living wage laws present a trade-off between wages and employment.

This sets the stage for weighing these competing effects, in particular examining the effect of living wage laws on poverty in the urban areas in which they are implemented. Overall, the evidence suggests that living wages may be modestly successful at reducing urban poverty in the cities that have adopted such legislation. In particular, the probability that families

have incomes below the poverty line falls in relative terms in cities that pass living wage laws.<sup>23</sup> Paralleling the findings for wage and employment effects, the impact on poverty arises only for the broader living wage laws that cover employers receiving business assistance from cities.

In interpreting this evidence, it is important to keep two things in mind. First, while economic theory predicts that raising mandated wage floors will lead to some employment reductions, it makes no predictions whatsoever regarding the effects of living wages on the distribution of family incomes, or on poverty specifically. The distributional effects depend on both the magnitudes of the wage and employment effects, and on their incidence throughout the family income distribution. Second, and following from this same point, there is no contradiction between the evidence that living wages reduce poverty and that minimum wages increase poverty. The gains and losses from living wages may be of quite different magnitudes, and fall at different points in the distribution of family income than do the gains and losses from minimum wages; this depends in part on the types of workers who are affected by these alternative mandated wage floors. Obviously, though, an important area for future research is to parse out the wage and employment effects of minimum wages and living wages at different points in the distribution of family incomes.

Of course a finding that living wage laws reduce poverty does not necessarily imply that these laws increase economic welfare overall (or vice versa). Living wage laws, like all tax and transfer schemes, generally entail some inefficiencies that may reduce welfare relative to the most efficient such scheme. Finally, there is another reason to adopt a cautious view regarding living wages. As already noted, the effects of living wages appear only for broader living wage laws covering employers receiving business or financial assistance. The narrower contractor-only laws have no detectable effects. This raises a puzzle. Why, despite the anti-poverty rhetoric of living wage campaigns, do they

often result in passage of narrow contractor-only laws that may cover a very small share of the workforce?

One hypothesis I explore is that municipal unions work to pass living wage laws as a form of rent-seeking.<sup>24</sup> Specifically, by forcing up the wage for contractor labor, living wage laws reduce (or eliminate) the incentive of cities to contract out work done by their members, and in so doing increase the bargaining power and raise the wages of municipal union workers. There is ample indirect evidence consistent with this, as municipal unions are strong supporters of living wage campaigns. As further evidence, I explored the impact of living wage laws on the wages of lower-wage unionized municipal workers (excluding teachers, police, and firefighters, who do not face competition from contractor labor). The results indicate that these workers' wages are indeed boosted by living wages. In contrast, living wages do not increase the wages other groups of workers whose wages — according to the rent-seeking hypothesis — should not be affected (such as other city workers, or teachers, police, and firefighters). Thus, even if living wage laws have some beneficial effects on the poor, this last evidence suggests that they may well be driven by motivations other than most effectively reducing urban poverty. While this does not imply that living wages cannot be an effective anti-poverty policy, it certainly suggests that they deserve closer scrutiny before strong conclusions are drawn regarding their effectiveness.

<sup>1</sup> Most of my research on minimum wages was done in collaboration with William Wascher, and more recently with Mark Schweitzer as well. Most of my work on living wages was done in collaboration with Scott Adams.

<sup>2</sup> A. Clymer, Edward M. Kennedy: A Biography, New York: William Morrow & Co, 1999.

<sup>3</sup> See [www.epinet.org/Issueguides/living-wage/livingwagefaq.html](http://www.epinet.org/Issueguides/living-wage/livingwagefaq.html).

<sup>4</sup> See W. J. Carrington and B. C. Fallick, "Do Some Workers Have Minimum Wage Careers?" Monthly Labor Review, (May 2001) pp. 17-27.

<sup>5</sup> For a review of the earlier time-series stud-

ies, see C. Brown, C. Gilroy, and A. Kohen "The Effect of the Minimum Wage on Employment and Unemployment," *Journal of Economic Literature*, 20 (2) (June 1982), pp. 487-528. Results extending this research through the mid-1980s and finding more modest effects are reported in A. J. Wellington, "Effects of the Minimum Wage on the Employment Status of Youths: An Update," *Journal of Human Resources*, 26 (1) (Winter 1991), pp. 27-46. A more recent time-series study using data through 1993 and employing more sophisticated tools of time-series analysis finds stronger disemployment effects; see N. Williams and J. A. Mills, "The Minimum Wage and Teenage Employment: Evidence from Time Series," *Applied Economics*, 33 (3) (February 2001), pp. 285-300.

<sup>6</sup> See, for example, D. Card, "Using Regional Variation in Wages to Measure the Effects of the Federal Minimum Wage," NBER Working Paper No. 4058, April 1992, and in *Industrial and Labor Relations Review*, 46 (1) (October 1992), pp. 22-37; D. Card, "Do Minimum Wages Reduce Employment? A Case Study of California, 1987-1989," NBER Working Paper No. 3710, May 1991, and in *Industrial and Labor Relations Review*, 46 (1) (October 1992), pp. 38-54; N. Williams, "Regional Effects of the Minimum Wage on Teenage Employment," *Applied Economics*, 25 (12) (December 1993), pp. 1517-28; and D. Neumark and W. Wascher, "Employment Effects of Minimum and Subminimum Wages: Panel Data on State Minimum Wage Laws," NBER Working Paper No. 3859, October 1991, and in *Industrial and Labor Relations Review*, 46 (1) (October 1992), pp. 55-81.

<sup>7</sup> See D. Card and A. B. Krueger, "Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania," NBER Working Paper No. 4509, October 1993, and in *American Economic Review*, 84 (4) (September 1994), pp. 772-93.

<sup>8</sup> See R. V. Burkhauser, K. A. Couch, and D. C. Wittenburg, "A Reassessment of the New Economics of the Minimum Wage Literature with Monthly Data from the Current Population Survey," *Journal of Labor Economics*, 18 (4) (October 2000), pp. 653-80; and M. Zavodny, "The Effect of the Minimum Wage on Employment and Hours," *Labour Economics*, 7 (6) (November 2000), pp. 729-50.

<sup>9</sup> See D. Neumark and W. Wascher, "Employment Effects of Minimum and Subminimum Wages: Panel Data on State Minimum Wage Laws." See also the exchange on the evidence in this paper in D. Card, L. F. Katz, and A. B. Krueger, "Comment on David Neumark and William Wascher, Employment Effects of Minimum and Subminimum Wages: Panel Data on State Minimum Wage Laws," *Industrial and Labor Relations Review*, 47 (3) (April 1994), pp. 487-96; and D. Neumark and W. Wascher, "Employment Effects of Minimum and Subminimum Wages: Reply to Card, Katz, and Krueger," NBER Working Paper No. 4570, December 1993, and in *Industrial and Labor Relations Review*, 47 (3) (April 1994), pp. 497-512.

<sup>10</sup> D. Neumark and W. Wascher, "State-Level Estimates of Minimum Wage Effects: New Evidence and Interpretations from Disequilibrium Methods," *Journal of Human Resources*, 37 (1) (Spring 2002), pp. 35-62.

<sup>11</sup> See D. Neumark and W. Wascher, "Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania: Comment," *American Economic Review*, 90 (5) (December 2000), pp. 1362-96; and the reply in D. Card and A. B. Krueger, "Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania: Reply," *American Economic Review*, 90 (5) (December 2000), pp. 1397-420.

<sup>12</sup> V. R. Fuchs, A. B. Krueger, and J. M. Poterba, "Economists' Views About Parameters, Values, and Policies: Survey Results in Labor and Public Economics," *Journal of Economic Literature*, 36 (3) (September 1998), pp. 1387-425.

<sup>13</sup> It is often argued that an employment elasticity as small as -0.1 or -0.2 implies that raising minimum wages raises incomes of low-wage workers, because the elasticity is much smaller (in absolute value) than -1. However, these elasticity estimates do not necessarily capture the relevant parameter, which is the elasticity of the demand for minimum wage labor with respect to the minimum. For example, these estimates ignore the possibility that the employment effects are sharpest for those at the minimum wage, pay no regard to possible hours effects, and use the legislated minimum wage change — rather than the typically smaller actual change — in the dominator.

In the other direction, this calculation also ignores possible wage increases for workers above the minimum wage.

<sup>14</sup> D. Neumark, M. Schweitzer, and W. Wascher, "Minimum Wage Effects Throughout the Wage Distribution," NBER Working Paper No. 7519, February 2000.

<sup>15</sup> For minimum wage workers, the hours elasticities are in the range of -0.2 to -0.25, the employment elasticities in the range of -0.12 to -0.17, and the earned income elasticity is approximately -0.6. Whatever one makes of the precise estimates, clearly the evidence does not support the conclusion that minimum wage increases raise the earnings of minimum wage workers.

<sup>16</sup> R.V. Burkhauser, K. A. Couch, and D. C. Wittenburg, 1996, "Who Gets What from Minimum Wage Hikes: A Re-Estimation of Card and Krueger's Distributional Analysis in Myth and Measurement: The New Economics of the Minimum Wage," *Industrial and Labor Relations Review*, 49 (3) (April 1996), pp. 547-52.

<sup>17</sup> The estimated elasticity of the proportion poor with respect to the minimum wage is approximately 0.4. See D. Neumark, M. Schweitzer, and W. Wascher, "The Effects of Minimum Wages on the Distribution of Family Incomes: A Non-Parametric Analysis," NBER Working Paper No. 6536, April 1998. For a recent complementary parametric approach, see A. Golan, J. M. Perloff, and X. Wu, "Welfare Effects of Minimum Wage and Other Government Policies," (mimeo) University of California, Berkeley (2001).

<sup>18</sup> See D. Neumark and W. Wascher, "Minimum Wages and Skill Acquisition: Another Look at Schooling Effects," forthcoming in *Economics of Education Review*; D. Chaplin, M. D. Turner, and A. D. Pape, "Minimum Wages and School Enrollment of Teenagers: A Look at the 1990s," forthcoming in *Economics of Education Review*; and D. Neumark and W. Wascher, "Minimum-Wage Effects on School and Work Transitions of Teenagers," *American Economic Review*, 85 (2) (May 1995), pp. 244-9.

<sup>19</sup> D. Neumark and W. Wascher, "Minimum Wages and Training Revisited," NBER Working Paper No. 6651, July 1998, and in *Journal of Labor Economics*, 19 (3) (2001) pp. 563-95.

<sup>20</sup> See D. Neumark, How Living Wages Affect Low-Wage Workers and Low-

Income Families, San Francisco: Public Policy Institute of California, 2002; D. Neumark and S. Adams, "Do Living Wage Ordinances Reduce Urban Poverty?" NBER Working Paper No. 7606, March 2000, forthcoming in Journal of Human Resources; and D. Neumark and S. Adams, "Detecting Effects of Living Wage Laws," forthcoming in Industrial Relations.

<sup>21</sup> For preliminary information on enforcement of living wage laws, see R. Sander and S. Lokey, "The Los Angeles Living Wage: The First Eighteen Months," (mimeo) UCLA and the Fair Housing Institute, Los Angeles (1998).

<sup>22</sup> For these business assistance living wage

laws, the estimated elasticity of wages with respect to living wages in the bottom decile of the wage distribution is approximately 0.1, while for contractor-only living wage laws the estimated elasticity is indistinguishable from zero. While the 0.1 elasticity may suggest a small impact, it is an average wage increase experienced by low-wage workers, whereas the actual consequence would most likely be a much larger increase concentrated on a smaller number of workers directly affected by the living wage law.

<sup>23</sup> The estimates imply an elasticity of the proportion of poor families with respect to the living wage of about -.19. This seems like a large effect, given a wage elasticity for low-wage workers of approximately 0.1. Of

course no one is claiming that living wages lift a family from well below the poverty line to well above it. But living wages may help nudge a family over the poverty line, and we have to recall that these average wage effects will in fact be manifested as much larger gains concentrated on a possibly quite small number of workers and families. Thus, even coupled with some employment reductions, living wages can lift a detectable number of families above the poverty line.

<sup>24</sup> See D. Neumark, "Living Wages: Protection For or Protection From Low-Wage Workers?" NBER Working Paper No. 8393, July 2001.

## Monetary Policy

Christina D. Romer\*

Actions by the Federal Reserve are commonly thought to be a key determinant of short-run macroeconomic fluctuations. Much of my recent research analyzes this crucial link between monetary policy and economic activity. Some of the papers look directly at the effects of Federal Reserve actions on output, prices, and interest rates. Other papers look at the motivation behind Federal Reserve actions — why has the Federal Reserve done what it has done at various times? In all of the papers there is an element of economic history. Some of the papers look specifically at monetary policymaking in the past. However,

even the papers with a modern focus use some of the techniques of economic history, such as an analysis of narrative evidence and other non-standard sources.

### Federal Reserve Information and the Behavior of Interest Rates

In one paper with my co-author, David Romer, I analyze the response of interest rates to Federal Reserve actions.<sup>1</sup> In particular, we investigate why interest rates at all horizons typically rise when the Federal Reserve tightens and fall when the Federal Reserve loosens. While simple portfolio theory can explain why short-term rates rise when the Federal Reserve sells bonds, the similar behavior of longer-term rates documented in a

number of studies is more puzzling. A tightening by the Federal Reserve presumably should lower inflation in the future; therefore longer-term nominal rates plausibly should fall rather than rise. Our research suggests that interest rates at all horizons respond to Federal Reserve actions because the Federal Reserve has private or superior information about the future behavior of inflation and output which is revealed by monetary policy actions.

Our evidence that the Federal Reserve possesses private information is the most important finding of the paper. This analysis uses the Federal Reserve's internal forecasts: the "Greenbook" forecasts. These forecasts have been produced by the staff of the Board of Governors for every meeting of the Federal Open Market Committee since the mid-1960s. We think of a person with access to several private forecasts and the Federal Reserve's internal forecast trying to

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