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## Minimum Wage Laws: Are They Overrated?

Charles Brown

Since the Fair Labor Standards Act was passed in 1938, the minimum wage has averaged a bit less than half of average hourly earnings. Typically, the minimum has been fixed in nominal terms at about 55 percent of the current average wage. Rising wages in the rest of the economy gradually erode the real minimum wage and eventually the process is repeated. Sometimes the increase in the nominal minimum is accompanied by a (permanent) reduction in those businesses exempted from the law. Proposals for a lower minimum wage for young workers or to index the minimum wage to the average wage have been debated but not adopted.

The minimum wage was last increased (to \$3.35) in 1981. Since then, average hourly wages have risen by 25 percent, eliminating any momentum for a lower minimum wage for youth but reviving proposals for another increase in the nominal minimum.

Economists are fascinated by the minimum wage because we have strong theoretical predictions about the direction of the effect of the minimum wage on employment, and fairly widely accepted methods to estimate the size of that impact. (It probably didn't hurt that the earliest (and later) estimates lined up well with the predictions.) But that is not the only reason for our fascination with the topic. Depending on whether we include those who say they earn *less* than the minimum wage, "minimum wage workers" account for 6 to 12 percent of those employed (Gilroy, 1981, p. 157) and less than 5 percent of wage and salary income. The minimum wage gives economists a relatively rare opportunity to study the impact of an exogenous increase in the price of labor, and thus a chance to refine our thinking about labor markets more generally.

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I think there is a reasonably high degree of agreement in studies of the impact of the minimum wage on employment, unemployment, and the distribution of income. For example, Eccles and Freeman (1982) pointed out the striking agreement between research sponsored by the “liberal” Minimum Wage Study Commission and the “conservative” American Enterprise Institute (their characterizations) on the minimum wage. I will also point to a few areas where further work could refine our understanding of labor markets, and perhaps even change the prevailing view of the impact of the minimum wage.

### The Textbook Minimum Wage Theory

An introductory textbook without a discussion of minimum wage laws might not be like a day without sunshine, but would certainly rank with a morning without caffeine. With relatively few refinements, that simple model—in which a minimum wage above the free-market equilibrium wage for “unskilled” labor moves the economy back along the demand curve for such labor, reducing employment—really does summarize the heart of the matter.<sup>1</sup> Because we’re moving *along* the demand curve, the proportional change in employment in response to a change in the minimum wage is simply equal to the elasticity of demand for unskilled labor times the proportional wage increase. Earnings of unskilled workers as a group rise if demand is inelastic, and fall if it is elastic. But it’s important to be careful about a few details in the simple textbook model.

As always, the “prediction” of reduced employment is an other-things-equal claim; one who reads even a tiny sample of public discussion is likely to be amazed how often this point is missed. During the 1977 Congressional hearings on the minimum wage, for example, much was made of the fact that, in the year following previous increases in the minimum wage, employment had risen and unemployment had fallen or remained constant (Subcommittee on Labor Standards, 1977, p. 34, 51). Ten years later, matters were even more confused in testimony before the Subcommittee on Labor Standards (1987, p. 9): “. . . the arguments that were put forth [in 1977] were, ‘There will be a loss of jobs. People will go out of business. It is an unfair imposition.’ Again, history and experience point out clearly that there is no basis for that argument. More than 11 million new jobs have been created since 1981 and productivity is up 6 percent—all of this with a 27 percent increase in private wages.” Unfortunately for this line of argument, the real minimum wage had been *falling since 1981!*

A few other simple clarifications should be stressed. The reduction in employment predicted in the standard model is not necessarily accomplished by that number (or any number) of workers being discharged; since turnover rates in minimum wage jobs are on the order of 12.5 percent *per month* (Converse et al., 1981, p. 264), attrition is a

<sup>1</sup>The textbook exception of the monopsonist whose employment rises in response to a skillfully set minimum wage has little impact on the minimum wage literature outside of textbooks, in large part because the company town is not (if it ever was) the context of most minimum wage employment. I’m not sure how to summarize the attitude of the “typical” dual labor market economist on the minimum wage, but I *think* most agree it is likely to reduce employment.

speedy method of adjustment.<sup>2</sup> That turnover rate also suggests that one should be careful about contrasting “those lucky enough to work at a higher wage” with “those who are unable to find work;” with high turnover rates, the two groups *may* be composed of largely the same people at different moments.

Finally, unemployment due to the minimum wage as it would be measured in official statistics cannot be represented simply in the typical textbook diagram: those who would like to work at the minimum wage but are not employed may (if they actively look for work in the previous month) or may not (if they don't) be counted as unemployed by the Bureau of Labor Statistics.

A simple extension of the textbook model assumes that, while the number employed depends on the wage, the number of labor force participants (those working or looking for work) depends on the wage and the proportion of such participants who are in fact employed. Since employment also depends upon the minimum wage, the model can be solved for labor force as a function of the minimum wage alone. In general, an increase in the minimum can either increase or reduce the number of labor force participants and the unemployment (the difference between labor force and employment) which results can be either greater or less than the reduction in employment.

The simple response of the market for unskilled labor described so far leads to changes in other markets as well. Employers have an incentive to use more of other inputs, such as more skilled labor, if those inputs are substitutes for the now more expensive unskilled labor. This leads to greater employment and higher wages for such inputs when the general equilibrium response to the minimum wage is completed. Of course, the reverse occurs for inputs which are complements for unskilled workers.

### Complications: Partial Coverage and Heterogeneous Workers

To interpret the empirical estimates of the effect of the minimum wage correctly, it is important to recognize two complications. First, the Fair Labor Standards Act has exempted some employers (generally small ones) from the minimum wage, with the standards of “smallness” gradually being tightened over time. In 1950, half of all private non-farm non-supervisory wage and salary workers were subject to the minimum wage; since 1977, about 5/6 have been subject. Today, the uncovered sector consists mostly of small retail trade and service employers.

Models of the impact of the minimum wage with partial coverage assume that employment in the covered sector is determined by demand, so the proportional reduction in employment in that sector is the elasticity of demand times the proportional change in the wage in the covered sector. Even if there is no response in the uncovered sector (a simple but unlikely case), the proportional change in total

<sup>2</sup>I stress this point because failure to see such discharges when the minimum wage is raised makes the untutored citizen skeptical of our wisdom on the subject. Sometimes, even the tutored are misled: see, for example, U.S. Department of Labor (1965, p. 6), where considerable stress is placed on the tiny number of reports of layoffs and plant closings following the 1961 increase in the minimum wage.

employment (the dependent variable in the typical empirical study) will be smaller than the proportional change in employment in the covered sector.

Modeling the response of the uncovered sector to the minimum wage is complicated by the variety of ways in which workers (all of whom would prefer to work at the higher covered-sector wage) may get sorted into covered- and uncovered-sector jobs.<sup>3</sup> One assumption is that all those willing to work at the minimum wage apply for jobs in the covered sector, employers choose among them, and those not chosen work in the uncovered sector (if their reservation wage is less than the wage there) or do not work (if their reservation wage is greater than the wage in the uncovered sector). In this case, one can show that the minimum wage leads some of those who would otherwise have found jobs in the covered sector to be employed in the uncovered sector. This cushions the employment loss in the covered sector. Such a process, however, has distributional drawbacks (wages in the uncovered sector fall) and efficiency costs (too much labor is allocated to the uncovered sector, too little to the covered sector). Moreover, one can no longer deduce the impact of an increase in the minimum wage on the earnings of unskilled workers from a comparison of the proportional change in employment and the proportional change in the minimum wage, since the proportional increase in the average hourly wage of (both covered and uncovered) workers is less than the proportional increase in the minimum wage.

An alternative approach to modeling the allocation of workers across sectors is to assume that workers choose their sector. Those working in the uncovered sector earn  $W_u$  and have no difficulty finding work at that wage (because the uncovered sector wage is assumed flexible). Those working in the covered sector earn  $W_m$  when employed, but have some probability  $P < 1$  of having such a job, equal to the ratio of covered sector employment to covered sector participants (employed plus unemployed). Ignoring risk aversion, transfer payments to the unemployed, and the distinction between new entrants and incumbents (that is, assuming unskilled jobs turn over frequently),<sup>4</sup> workers choose their sector based on expected earnings (wage times probability of having a job). They work in the covered sector if  $PW_m > W_u$ , and in the uncovered sector if  $PW_m < W_u$ . Equilibrium requires that  $W_u = PW_m$ .

Since workers care about expected earnings, and these are equal in the two sectors, the number of labor force participants is a function of  $W_u$  or, equivalently,  $PW_m$ . The total number of participants must in equilibrium equal the number employed (in both sectors) plus the number unemployed (looking for jobs in the covered sector).

As the preceding discussion implies, allowing workers to choose their sector considerably complicates the analysis. It does, however, maintain the theoretical link between the minimum wage and that unemployment which comes from queuing for minimum wage jobs. Moreover, it points out the possibility that workers will flow *from* the uncovered sector *to* the covered sector. If covered sector demand is inelastic, and workers' sectors and  $W_u$  are temporarily frozen, the minimum wage raises expected

<sup>3</sup>The classic two sector models of the minimum are Gramlich (1976), Mincer (1976) and Welch (1976).

<sup>4</sup>For treatments of more complicated cases, see Gramlich (1970), Mincer (1976), and Brown, Gilroy, and Kohen (1982).

earnings in the covered sector ( $PW_m > W_u$ ). Equilibrium can be restored only if some workers "migrate" to the covered sector, raising  $W_u$  and reducing  $P$  until  $PW_m = W_u$ .

Whatever model one chooses, the *basic* message for empirical work remains: one must account for the extent of coverage, and the elasticity of total unskilled employment with respect to the minimum will be smaller than the elasticity of demand.

The second complication for empirical work arises from the fact that minimum wage workers bear no unique identifying mark besides their wage rate. While being young, black, female, or poorly educated, or living in a low wage area will increase one's chances, any available data series on employment will combine minimum wage and higher-paid workers. Employment of higher-paid workers is not directly reduced by an increase in the minimum wage; if, for example, better-paid teenagers are substitutes for minimum wage teenagers, an increase in the minimum wage would increase better-paid teens' employment. Even if their employment is not affected at all, the elasticity of total teenage employment with respect to the minimum wage is equal to the elasticity of demand for minimum wage teens' labor times their share of teenage employment.

A more interesting and complex view emerges if labor quality or skill is modelled as continuously variable. Suppose the minimum wage rises from \$3.35 to \$3.85 per hour. Those previously earning \$3.90 per hour, who are presumably good substitutes for those who used to earn \$3.85 or less, enjoy an increase in demand for their labor. This raises their wage somewhat and suggests an upward "ripple effect" on even better-paid workers. Apart from Pettengill's (1981) work, neither proponents nor opponents of the minimum wage have given such ripples careful theoretical attention in analyzing the effect of the minimum wage on employment.

Assume a continuous distribution of workers' skills, and thus a continuous wage distribution in the absence of a minimum wage. What will happen to the wage distribution if a minimum wage is now imposed?

I suspect most readers answered that the minimum wage leads to the disappearance of the portion of the wage distribution below the new minimum, as employers discharge (or refuse to hire) those with value of marginal product below the minimum. I know I would have given that answer.

A look at an actual wage distribution gives a quite different view. Rather than being truncated at the minimum wage, there is an obvious spike at that point. As noted above, 6 percent of those employed in 1980 reported a wage equal to (actually, within five cents of) the minimum wage. If one focuses on a low-wage group, the spike is more pronounced; for example, just over a third of teenagers in retail trade and service industries earned the minimum wage in 1978 (Fritsch, 1981, p. 24), including a fifth of those working in establishments not legally subject to the minimum wage.<sup>5</sup>

Explaining this spike has not received much attention in the literature, and at first glance it is puzzling. Suppose workers are measured by "efficiency units," where a worker's efficiency units equal the wage that should be received in the absence of a

<sup>5</sup>In 1980, the minimum wage was \$3.10, and those earning \$3.05 to \$3.15 were counted as receiving the minimum. In 1978, the minimum wage was \$2.65, and those earning \$2.65-\$2.69 were counted as receiving the minimum. The count of those earning the minimum is therefore *not* boosted by counting the relatively large number of workers reporting round-dollar amounts like \$3.00.

minimum wage. Now a minimum wage of \$3.35 is imposed, and a spike appears in the wage distribution at that point. This means that workers who earned different wages in the absence of the minimum wage (and hence embody different numbers of efficiency units of labor) are earning the same wage. But if employers find it profitable to employ the worst of these workers at \$3.35, they would prefer instead to hire the best at slightly more than \$3.35. If so, to mix a metaphor, the spike should unravel.

One plausible explanation is that employers *are* paying the best of these workers more than the worst, but they are using non-wage forms of compensation. The hidden bonus (to the best) or hidden penalty (on the worst) could take several forms; changes in on-the-job training, fringes, workweek, or effort have all been suggested as possible consequences of the minimum wage, though not necessarily in the context of “the spike.” Suppose, however, that employers do require greater effort from those with fewer efficiency units of labor, so that the marginal products of all those paid the minimum wage in the covered sector were equal. Why would a significant fraction of employers not bound by the law choose to pay the minimum wage, as the evidence suggests they do?<sup>6</sup> Whether a complicated market clearing explanation or a simpler appeal to fairness (with the minimum wage essentially defining what is fair) provides a better answer needs to be explored.

## Estimated Impact on Employment and Unemployment

If policy makers are not completely certain about the size of the effect of the minimum wage on employment and unemployment, it is not for lack of trying on the part of economists—there have been over two dozen time series studies of the effect of the minimum wage on teenagers, and nearly as many other studies focused on slightly different issues, primarily cross-sectional studies of youth, low-wage areas, and low wage industries. (For a survey, see Brown, Gilroy, and Kohen, 1982.) I will focus here primarily on the time series studies of teenagers.

A typical study of this genre regresses either the employment-to-population ratio or the unemployment rate of teenagers on a minimum wage variable, an indicator of aggregate economic conditions (like the adult male unemployment rate), a time trend, and perhaps other variables such as the fraction of youth in the armed forces or the size of the teenage population relative to the entire population of labor force age.

While for convenience one refers to “the” minimum wage, quite often there are two minimum wages. When the coverage of the law is increased, and the minimum wage raised, a lower minimum wage  $W_m^*$  is sometimes introduced for the newly covered employers, which then rises toward the “basic” minimum  $W_m$  until the latter applies to all covered employers. Most studies combine the coverage and level of the minimum wage into a single minimum wage index, by weighting  $W_m^*$  and  $W_m$  by the proportion of workers to which they apply—proportions which sum to less than one

<sup>6</sup>Holzer, Katz, and Kruger (1987) are investigating whether the minimum wage creates a queue of jobseekers, as would be expected if attempts to offset the minimum wage by increasing effort and so on were only partially successful.

because no minimum wage applies to some workers—and dividing by the average wage.

If one asks of the two dozen time series studies, “What is the estimated impact of a 10 percent increase in the minimum wage on teenage employment?” the answer comes back, “It falls by 1 to 3 percent.” If one focuses on studies which include a time trend and control for coverage (either as a separate variable or in the combined form discussed above<sup>7</sup>) the estimates are 1 to 2 percent. This effect translates into an estimated increase in the teenage unemployment rate in a range from zero to 3 percentage *points*. More recent studies which include the 1970s, and studies which control for the teenage population share, produce estimates of a rise in teenage unemployment rates of .75 percentage points or less. As noted above, however, unemployment may increase most sharply in precisely the situation (inelastic covered sector demand) where average earnings of the unskilled as a group rise. So the unemployment rate deserves less focus than it gets in public discussions.

Together, the employment and unemployment effects estimated by the typical study suggest a reduction in labor force participation due to the imposition of a minimum wage. If one accepts the idea that labor force participation is an increasing function of the average rewards from participating in the labor force, it appears these rewards are reduced for teenagers by the minimum wage. However, the reduction in labor force participation does not show up as an increase in “discouraged workers,” those who are not officially counted as unemployed because they have given up active job search, so the labor force withdrawal is somewhat puzzling.

If the minimum wage has negative effects on teenage employment, one would almost certainly expect to find larger (proportional) effects on employment of non-white teenagers, because a larger proportion of non-white teenagers are working at the minimum wage. Studies which address this question show very mixed results, with blacks more adversely affected than whites only about as often as the reverse, and in any case with large standard errors for the effects on blacks. If one looks to the theory for signs but the data for magnitudes, one probably should conclude that the effect of a minimum wage on black teenagers is worse than that on white teenagers, but not dramatically so.

Thus, my reading of the time series estimates is that they are not negligible—especially when 30 percent increases in the minimum wage are under discussion in Congress—but one should look elsewhere (and I am not sure where) for the primary causes of high unemployment rates in the youth labor market, particularly for black youth.

There appear to be no published studies of the consequences of the gradual repeal of the minimum wage (as rising wages elsewhere eroded a fixed nominal minimum) since 1981. An imperfect alternative, which ignores changes in age

<sup>7</sup>When coverage is entered separately, its effect tends to be imprecisely estimated—perhaps because, as noted above, there is some tendency for uncovered employers to match the minimum wage. But it's hard to see an *a priori* case for excluding it altogether, as some studies with relatively large estimates of the impact of the level of the minimum wage have done. The most detailed treatment of coverage is Al-Salam, Quester, and Welch's (1981) paper.

*Table 1*  
**Teenage Labor Market in the 1980s**

<i>Variable</i>	<i>1980</i>	<i>1981</i>	<i>1982</i>	<i>1983</i>	<i>1984</i>	<i>1985</i>	<i>1986</i>
Minimum Wage	\$3.10	\$3.35	\$3.35	\$3.35	\$3.35	\$3.35	\$3.35
Average Hourly Earnings (all ages)	\$6.66	\$7.25	\$7.67	\$8.20	\$8.33	\$8.57	\$8.76
MW/AHE (%)	46.5	46.2	43.7	41.7	40.2	39.1	38.2
Unemployment Rate Aggregate (%)	7.1	7.6	9.7	9.6	7.5	7.2	7.0
Unemployment Rate Males age 20 + (%)	5.9	6.3	8.8	8.9	6.6	6.2	6.1
Employment-Population Ratio Teenagers (%)	46.6	44.6	41.5	41.5	43.7	44.4	44.6
Unemployment Rate Teenagers (%)	17.8	19.6	23.2	22.4	18.9	18.6	18.3
Employment-Population Ratio Black Teenagers (%)	23.8	21.9	19.0	18.7	21.9	24.6	25.1
Unemployment Rate Black Teenagers (%)	38.5	41.4	48.0	48.5	42.7	40.2	39.3

structure of the population, the availability of training for those not employed, and other factors held constant in more formal studies, is simply to look at what has happened to the youth labor market over this period. Some relevant figures are presented in Table 1. The first three lines show that the erosion of the minimum wage has been substantial. The next two lines show the aggregate and adult male unemployment rates, two alternative measures of the state of the overall labor market, which must be held constant in looking for effects of the minimum wage. The overall unemployment rate suggests comparing 1984 to 1981 and 1985-86 to 1980, while the adult male rate suggests treating 1984-86 and 1981 as comparable. But regardless of the comparison, this quick look at the evidence provides little support for the idea that the 20 percent reduction in the relative minimum wage had major positive effects on teenage employment; indeed, the employment-population ratio for teens is lower afterwards than it was before the minimum wage cut, while the unemployment rate comparisons are mixed and show uniformly small changes.<sup>8</sup> There is some improvement in the employment of black teens (depending on one's choice of the right comparison, it is up by as much as two points or 9 percent), though the unemployment numbers of black teens are less cheering.

The thrust of the preceding paragraphs is that the effects of the minimum wage on teenage employment and unemployment are smaller than one might have guessed (certainly smaller than I would have guessed). Less numerous studies of 20- to 24-year-olds suggest smaller proportional effects for "older youth," as one would expect from the fact that a smaller proportion of workers in this age bracket are

<sup>8</sup>Research in progress by Alison Wellington suggests that the impact of the minimum wage on youth looks less severe when the sample period is extended to include the 1980s.

minimum wage workers. However, two strands of evidence do suggest more noteworthy effects of the minimum wage on youth labor markets.

The first strand is the somewhat fragmentary evidence that minimum wages increase the proportion of employed teenagers who are part-time workers (Gramlich, 1976).<sup>9</sup> The evidence is fragmentary because time series of youth employment by part- and full-time status began about ten years after the beginning of the all-teen time series used in other studies. Perhaps as a result, the size of the shift to part-time work in response to the minimum wage bounces around according to the particular estimating equation (Brown, Gilroy, and Kohen, 1983). There is complementary evidence (Mattila, 1981) that increases in the minimum wage increase school enrollment, perhaps because they increase the difference in expected earnings between dropouts and high school graduates. Since existing studies of the part-time issue used time series running from 1963 to the mid- or late 1970s, the 6 to 10 years additional data now available justify an update.

The second piece of evidence suggesting larger disemployment effects is a cross-section study by Meyer and Wise (1983).<sup>10</sup> In this model, the wages of young workers in the absence of the minimum wage depend on their personal characteristics and an error term. For those who would otherwise earn less than the minimum, passage of a minimum wage can do one of three things: cost them their job, leave them unaffected (if their job is not covered, or if their employer ignores the law), or result in their wage being raised up to the minimum.<sup>11</sup> (Recall the wage distribution's discernable spike at the minimum wage.) Loosely speaking, Meyer and Wise estimate the parameters of the wage distribution from the segment of the distribution above the minimum wage, and extrapolate that distribution back below the minimum to predict the number of young workers who would be employed at each wage below the actual minimum if there were no minimum. The difference between fitted and actual distributions below the minimum measures the extent of disemployment.<sup>12</sup> Their simulations suggest a 10 percent increase in the minimum wage reduces teenage

<sup>9</sup>The finding that higher minimum wages reduce workweeks raises an interesting theoretical issue. Employers pay higher wages to full-time than to part-time workers, suggesting that value of output per hour is higher on full-time schedules. If the observed change in workweek is a response by employers to the higher minimum wage, they should be increasing the workweek to raise the average value of output produced per hour up to the new minimum wage (Barzel, 1973). But if firms raise average output per hour by limiting on-the-job leisure ("coffee breaks"), paid hours per week would fall.

<sup>10</sup>I place less weight on the more traditional cross-section studies, which try to explain cross-state differences in youth employment-population ratios by a cross-state minimum wage index. With a national minimum wage (admittedly, with some variation in proportion covered due to differences in industrial structure and state minimum wage laws), most of the variation in the coverage-weighted relative minimum comes from variation in average wages across states. We might expect more youth to work in states where average wages are higher, which would produce a negative coefficient for the minimum wage variable in these studies, even if the minimum wage had no effect.

<sup>11</sup>The Meyer and Wise approach therefore abstracts from any effect of the minimum wage on wages below the minimum, or the possibility of upward "ripples" above the minimum.

<sup>12</sup>Meyer and Wise are keenly aware of the fact that their method leans heavily on the assumed functional form of the earnings function and particularly the error term. In addition to some sensitivity tests, they also estimate the wage distribution in a year with a high minimum wage and use the parameters to estimate the effect of the minimum in a low minimum wage year. The estimates line up well with what one gets using the "fuller" wage distribution from the low minimum wage year directly.

employment by somewhat more than the 1 to 2 percent in the time series studies.<sup>13</sup> One weakness in the Meyer and Wise study for our purposes is that their estimates apply to out-of-school youth. Mattila's (1981) time series evidence suggests disemployment effects are particularly large for that group.

## A Lower Minimum Wage for Teenagers?

If the ideal law for defenders of the minimum wage is an indexed minimum that cannot be eroded by increases in nominal wages throughout the economy, the constrained optimum for some opponents is to enact a lower minimum wage for youth. Curiously, while economists have few good things to say about minimum wage laws and support for a differential minimum wage for young workers tends to come from opponents of higher minimum wages, there seems to be little evidence of widespread enthusiasm among economists for a youth "subminimum."

The basic issues are fairly straightforward. Traditional minimum wage legislation changes the relative price of minimum wage workers, both youth and adults, relative to better-paid youth and adults. A subminimum, however, reduces the price of low wage teenagers compared to low-wage adults as well as better-paid workers of all ages. Thus, the subminimum should increase teenage employment, for the usual reasons: it makes output produced by low-wage teenagers cheaper (scale effect), and encourages employers to substitute low-wage teens for other inputs (substitution effect).

While there is little solid evidence on the point, it seems plausible that low-wage teenagers and low-wage adults are good substitutes. Perhaps they are not perfect substitutes—for example, they probably have different constraints on the hours they will work and perhaps different combinations of ability and reliability—but overall it is hard to see *a priori* how they could fail to be good substitutes. Thus, *part of* the gains of low-wage teenagers might be expected to come at the expense of low-wage adults (with the remainder coming from the scale effect and substitution against other inputs).<sup>14</sup> Moreover, past changes in the minimum wage law do not offer the natural experiment needed to estimate with confidence the relative size of the adult loss relative to the teen gain.

If one finds a proposal which encourages substituting low-wage teens for low-wage adults (who are at least somewhat more likely to be poor) to be ironic, one should not overlook the irony of the present law. The Fair Labor Standards Act has permitted, on a gradually more liberal basis, employers to hire full-time students working during

<sup>13</sup>They report that holding the nominal minimum wage at \$1.60 would have increased teenage employment by 5 percent. Since the minimum wage averaged \$2.21 over the four years they studied, they were in effect considering a 28 percent reduction. However, this brings the minimum wage well below the historical range compared to average hourly earnings, and the elasticity of employment with respect to the minimum falls in absolute value as one considers successively lower values of the minimum.

<sup>14</sup>Whether a youth subminimum is efficient (given a minimum wage in the first place) is unclear. While it reduces the underutilization of unskilled youth, it intensifies the underutilization of unskilled adults.

the summer (or part-time during the school year) at 85 percent of the minimum wage. Here, the substitution which seems to be encouraged is to hire (advantaged?) youth still in school instead of (less advantaged?) dropouts. Mercifully, even in 1979 (a high-use year) students hired under this subminimum accounted for less than 5 percent of student employment, and there is no evidence of substitution effects exceeding scale effects for non-student youth (Freeman, Gray, and Ichniowski, 1981).

There is a further irony in the debate over a differential minimum wage for youth. Earlier, I noted that an absence of evidence of widespread discharges following minimum wage increases had led some supporters of the minimum to doubt that it was causing any significant loss of employment. The same logical error seems to have crept into the thinking of those critics of the minimum wage who support a youth differential. To respond to charges that a youth differential will lead employers to substitute now-cheaper youth for adults, proposed youth differential bills invariably include a provision making it illegal for employers to discharge adults in order to hire teenagers. The existing subminimum for students has a similar provision, and it is a "dead letter" (Freeman, Gray, and Ichniowski, 1981, p. 309).

### Effect of the Minimum Wage on the Income Distribution

If the minimum wage is increased by 10 percent, roughly a quarter of teenagers (closer to half if one counts those below the minimum) get a 10 percent increase in their wage, while (according to the time series estimates) 1 to 2 percent are no longer employed. Unless wages fall precipitously in the uncovered sector, or hours reductions are large, teens as a group seem to gain.<sup>15</sup> If one can get past these qualifications, and assumes that, proportionally, things work about the same for low-wage adults as for teenagers, one might see an iffy case for an increase in the minimum wage to reduce poverty.

One of the more surprising findings in the minimum wage literature is that, even under the most favorable assumption that the minimum wage had *no* disemployment effect, its effect on poverty or the income distribution is not very large. The reason is the surprisingly weak relationship between being a worker whose hourly wage is low and being a member of a family whose annual income is low.<sup>16</sup> Many poor families have no earners at all, or earners whose wage is above the minimum but cannot work enough hours per year. While there are a number of ways of expressing this correlation, Johnson and Browning's (1983) simulation is perhaps the most dramatic. They find that in 1976, when the minimum wage was \$2.30, earnings of workers making less than \$2.80 per hour accounted for only 11 percent of the after-tax, after transfer income of the poorest fifth of all households. Consequently, even a 22 percent

<sup>15</sup>Meyer and Wise show that, assuming work weeks and wages below the minimum are unaffected, their (high-side) effects on employment leave teenagers' earnings unaffected by the minimum wage.

<sup>16</sup>Some evidence on the weakness of this correlation was first presented by Stigler (1946). More recent studies, with more broad-based samples, include Kelly (1976), Gramlich (1981), Bell (1981), and Knieser (1981). Burkhauser and Finegan (1987) show that the correlation was once considerably stronger.

increase in the minimum wage with no loss of employment raises the income of these households by less than one percent.

To be fair, the finding that low-wage workers are often not members of low-income households ought to temper the claims of opponents of the minimum wage that it is a particularly bad idea for the poor. But if one is to overcome an economist's natural reluctance to mess with markets by pointing to distributional gains, the limited nature of these gains under even favorable assumptions about employment effects leaves one grasping (and perhaps gasping) for other tools emphasizing regular full-time employment and/or direct transfers.

## Conclusions and Regrets

And what, after these pages of findings and qualifications, do I think we've learned? The effects of the minimum wage on employment are smaller than I would have supposed. Part of this small effect is due to the fallacy of the inflated denominator: with incomplete coverage and the fact that most workers in nearly any demographic group earn more than the minimum wage, the effect on any such group's employment will be smaller (in proportional terms) than it would be if impacts on those directly affected could be isolated. If one comes to the issue willing to suffer some efficiency loss for a real distributional gain—at least until someone isolates a lump-sum grant—than the real surprise is not the disemployment effects but the very tenuous connection of the minimum wage to poverty. It is hard for me to see evidence that minimum wage increases have benefits which would overcome an economist's aversion to interfering with reasonably competitive markets. But the case against the minimum wage seems to me to rest more upon that aversion than on the demonstrated severity of any harm done to those directly affected.

A short paper like this one must skip some issues. In a longer paper, the short literatures on whether low-wage employers reduce the training they provide in response to the minimum, on how effectively the minimum wage is enforced, on whether the minimum wage in fact has an appreciable upward ripple effect on other wages, and on who supports and opposes minimum-wage legislation—and why—would deserve more attention. But answers to those questions do not seem likely to change the basic conclusion that the minimum wage is overrated: by its critics as well as its supporters.

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