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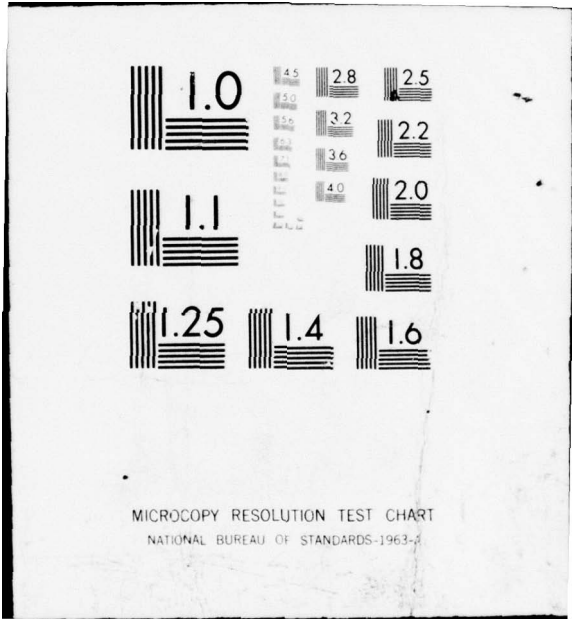
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THE MINIMUM WAGE RECONSIDERED,

⑩ Duran Bell

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THE MINIMUM WAGE RECONSIDERED*

Duran Bell

The Rand Corporation, Santa Monica, California ✓

SUMMARY

We have shown that [↓]even on purely theoretical grounds, the effect of the minimum wage upon wage rates and employment is far from clear when coverage is incomplete, and [→]we have pointed out that the only firm evidence regarding the disemployment effects of the minimum wage indicates a substitution of adults for teenagers as the major consequence. That is, the minimum wage enables low income adult workers to better compete with teenagers and college students.

But even if there exists an adverse employment effect, fragmentary evidence suggests that the elasticity of demand for low wage workers is quite inelastic. This suggests that such workers would be better off (with higher income and more leisure) if there is a mechanism for "fairly" allocating the higher level of unemployment among the workers. The data suggest that such an allocative mechanism exists. ↑

*Presented at the Third College Symposium on the Minimum Wage at the Economics Department, University of California at San Diego, on April 27, 1974.

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INTRODUCTION

On March 28, 1974, Congress finally cleared for the President's signature Senate bill S2747, raising the minimum wage and extending coverage to an additional 7 million workers. Although a similar bill was vetoed in 1973, the President is expected to sign this time because the bill already has more than enough votes to override a veto.

The bill increases the minimum wage for most non-farm employees to \$2.00 on May 1, \$2.10 on January 1, 1975 and \$2.30 on January 1, 1976. Workers who were not covered by minimum wage legislation prior to 1966 receive increases at a somewhat slower rate; and those farm workers who were previously covered shall experience wage increases from the current \$1.30 per hour to \$1.60 on May 1, and by 1978 to \$2.30 per hour. Also of special note is the coverage for the first time of those domestic servants who earn more than \$50 per calendar quarter, or who work more than eight hours per week. Finally, of great importance is the special lower wage rate (85 percent of the normal rate) which is applicable to full time students. This special provision is highly structured, however, so as to reduce the possibility that students displace adult workers.

This legislation is several years overdue. Given the extremely high rates of inflation experienced since 1966, it is hardly proper that the minimum wage should remain unchanged for so long. Normally, the minimum wage is set at roughly 50 percent of the industrial average wage, but by now inflation has reduced the minimum wage to about 37 percent of the industrial average. The legislated increase in the minimum wage will still fall short of the 50 percent benchmark.

The fact that the new legislation is long overdue explains the large margin by which it passed. The great majority of the public endorses the principle that no one should be pressed into labor at substandard wages. Exactly what "substandard" means is difficult to specify, and has no clear denotation in economic theory, but in practice seems to be related to the maximum acceptable wage differential which should exist among lesser skilled workers. The wage differentials

which are adjudged "fair" need not define an above poverty income to those who earn least. Rather, it is derived from customs and conventions which change only slowly over time.

In my view the minimum wage legislation within the Fair Labor Standards Act of 1938 was incredibly well conceived. One should recall that the desire of industrial workers to unionize and thereby improve their earnings and working conditions was greatly facilitated by the social legislation of the 1930's and especially by the Fair Labor Standards Act of 1938. Hence, not only skilled workers but semi-skilled industrial workers were to have a mechanism by which to protect their earnings and their earnings differentials against the forces of inflation, short term changes in market conditions and monopolistic exploitation.

Of course, unskilled and casual labor also has had the *right* to organize, but the ability to organize and the potential effectiveness of labor organizations tend to diminish as the level of work-skill decreases. For this reason, the legislators of the 1930's were wise to seek a method of protecting the relative positions of those at the bottom of the labor pyramid. In its effort to capture the benefits of increased productivity and avoid the pains of inflation, the unionized sector tends to attenuate--create an ever growing gap--between the wages of different skill levels; and by giving renewed force to the efforts of workers to unionize, Congress was also providing the source of greater potential discrepancies between actual and "acceptable" wage differentials. Hence, by maintaining a governmentally controlled minimum wage rate, Congress sought to reduce the inequities which arise from the differential bargaining power of labor groups.

In this connection, it is interesting to note that considerable evidence suggests that the effect of union wage bargaining has been almost entirely upon wage differentials among workers, and not on the division of product between workers and capitalists. Johnson and Mieszkowski* have shown that "about 83 percent of the gains of unionized blue collar workers and white collar workers are at the expense of

* H. C. Johnson and Peter Mieszkowski, "The Effect of Unionization on the Distribution of Income: A General Equilibrium Approach," *Quarterly Journal of Economics*, 84, No. 4, November 1970, pp. 539-561.

nonunionized blue collar workers" (p. 559). Hence, the effect of the minimum wage is not only to reduce the likelihood of blatant forms of labor exploitation by capitalists, but also reduces the burden which union activity by skilled workers places upon less skilled workers.

Another matter of equal importance is the usefulness of minimum wage legislation in eliminating degrading, sweat-shop conditions in the American economy. The tendency of the minimum wage to accomplish this feat has been severely compromised by the fact that most low wage employment was initially exempted from coverage by the Act and only gradually has such coverage been extended.

The imposition of a floor upon wage rates in a given work-activity may have the effect of reducing the amount of such work and the associated employment; it may stimulate the use of higher capital-labor ratios and raise the marginal productivity of any given level of employment; and it may stimulate technical change in such a way that (given a positive output effect) total employment may increase over time.

The consequences of minimum wages are complicated since those consequences involve the shifting of labor from one occupation and/or industry to another, the adoption of new modes of industrial operation, and the development of new technology. For these reasons one should exercise great care in assessing the minimum wage as it impacts upon various classes of workers.

Among those who support the minimum wage, the AFL-CIO has a notable reputation for enumerating a long list of factors which indicate positive, desirable consequences for higher minima and extended coverage. Their arguments are plausible, but usually lacking in the kind of analytical and empirical foundation which is the standard of economic analysis. Moreover, there are many who would question the motives of organized labor in seeking higher wages for those whom they have failed to organize.

On the other hand, economists from whom standards of analytical excellence may be anticipated have relied upon exceedingly single minded conceptions of the "consequences" of wage minima--focusing almost

entirely upon short-run disemployment effects. This rather narrow focus is made more unfortunate by a presumption that the discussion of short-run "adverse employment effects" constitutes an analysis of the impact of the minimum wage. Or, more precisely, that such effects represent a *sufficient* condition for denying its desirability.

Hence, my difficulty, as an economist, in discussing this issue arises from the fact that the tools with which one should analyze the broad set of issues which are properly relevant to an adequate analysis are obscure, complex or non-existent. Economic analysis is far more facile in its analysis of stationary equilibrium systems than on other matters, and a discussion of the minimum wage is not uniquely appropriate for the correction of this imbalance.

A more limited form of discussion shall be adopted here. To wit: we shall focus upon short run partial equilibrium aspects of the questions and ascertain the implications of current research. To my surprise such a limited examination suffices to dismiss the cavalier posture which so many of my colleagues have adopted.

Let me say that I shall not dispute the evidence which indicates an "adverse employment effect" associated with increases in the minimum wage. However, we shall show (rather easily actually) that such an adverse effect is by no means an intelligent basis for opposing minimum wages. Rather, there is an optimal level of employment from the point of view of low wage workers which is different from the equilibrium level of employment, and that the benefits of forcing poor workers to work at market clearing wage rates may be greater for the non-poor than for the poor.

Various Models of the Employment Effect

Most discussions of the minimum wage have neglected a very important fact: that not all workers are covered by minimum wage legislation. Some industries and firms are required to adhere to the minimum wage and others are not; and those industries in which low wage workers are most prevalent are precisely those which have tended to be exempted from coverage.

Finis Welch has demonstrated the theoretical and empirical significance of incomplete coverage to the character and extent of the employment effect of minimum wage rates.* For example, if we defined two sectors of the economy, the covered and the uncovered, then the displacement of persons from the covered sector to the uncovered sector will give rise to an equilibrating adjustment in wage rates in the two sectors: wages rising in the covered sector and falling in the uncovered sector. And if product demand and labor supply elasticities are the same in both sectors, and if aggregate labor supply remains unchanged, then the wage increase in the covered sector will be matched by the wage decrease in the uncovered sector, leaving average wages unchanged and total employment unchanged. But if employment falls in the uncovered sector due to the withdrawal from the labor force of persons who do not wish to work for the lower wage in the uncovered sector, then the fall in wages in the uncovered sector will not fully compensate for the rise in covered wages, and the aggregate wage bill will rise. *But given the existence of an uncovered sector, unemployment does not arise, only a redistribution of employment.*

Furthermore, if factor intensities are correlated with the incidence of coverage, some very interesting things may happen: Assume that the covered sector is capital intensive (has a high capital-labor ratio) and the uncovered sector is labor intensive. Then if the output effect exceeds the substitution effect, the displacement of labor from the covered sector may lead to a decrease in the *amount* of capital in the covered sector and capital will flow to the uncovered sector, increasing its capital-labor ratio, increasing the marginal product of labor and, hence, increasing the wage rates in the uncovered sector. In this case, therefore, capital losses and workers in both sectors gain higher wages. And, again, there is no unemployment.

The point which the examples are to illustrate should be clear: that with incomplete coverage, the familiar textbook analysis of the

*Finis Welch, *Minimum Wage Legislation in the United States*, The Rand Corporation, P-5145, December 1973, p. 41.

effect of the minimum wage tends to lose its relevance. With incomplete coverage, those workers who are displaced by the higher minimum wage not only have some place to go, but they may even be better off after making the transition.

Even more to the point, perhaps, is the fact that the conventional and most unambiguous argument regarding the adverse employment effect is an argument which rests upon a overly simple (one variable input) production function. In the case where there is only one variable input, the marginal product function evaluated at current product prices is the demand function for the input. Given the generally accepted assumption of diminishing marginal products, the adverse employment effect is seen immediately.

The problem with all of this is that almost no production process can be so described. Most processes have at least two different types of labor input which are variable in the short run, so that only the multi-variable case is deserving of serious discussion. What do we find when more than one input is variable in the production function? Is the demand curve for the input always downward sloping?

The answer is no! C. E. Ferguson's discussion^{*} clearly shows that if the supply functions of the inputs "are 'too' concave from below," (p. 185) "the results for the 'usual' case are reversed." Ferguson suggests that the usual case will tend to obtain in almost all cases where the inputs are *produced* by other firms, and that unionization will remove the likelihood of concave supply functions for most laboring groups. He concludes by saying, "one is tempted to conclude that the entrepreneurial supply function is the only one likely to cause trouble; and this possibility seems remote in the United States" (p. 186).

Ferguson fails to consider the fact that many workers are not unionized and that those who labor at the bottom of the labor pyramid are well known to exhibit a peculiar response to the labor market options available to them. In particular, it can be argued that such workers have lost hope of escaping poverty through work and often seek

^{*}C. E. Ferguson, *The Neoclassical Theory of Production and Distribution*, Cambridge University Press, 1971, Chapter 8.

to maintain a minimal ("target") standard of living. Such a "perverse" labor market response to disagreeable, poverty-maintaining jobs could imply a supply function whose second derivative were negative and, hence, for which the input demand function were upward sloping. This means that theoretical economists should not dismiss the possibility of a positively sloping demand curve without first conducting the unpleasant exercise of examining the nature of low wage labor markets.

The Job Rationing Process

As economists we are trained to bow to the altar of economic equilibrium. In so doing, we are fully justified, in that under certain assumptions about factor mobility, production and demand relationships, it can be shown that the level of national output is maximal when all markets are in equilibrium. With respect to labor markets, equilibrium implies maximal employment at some wage rate, say π_e . But suppose that for some set of wage rates above π_e the total wage bill would be larger. Is it possible that workers as a group would prefer a wage rate above π_e ?

This is by no means a purely academic query, for if we take seriously the results of a number of econometric analyses of the minimum wage, the elasticity of demand for low wage labor is considerably less than unity. Hence, if there were some way for low wage workers to spread the remaining employment around on an equitable basis, then they would be much better off--with higher incomes and more unemployment--with the imposition of a minimum wage.

Adie* has estimated the effect of an increase in the minimum wage upon the level of unemployment of teenagers. He finds that a 10 percent increase in the minimum wage would increase teenager unemployment by 3.62 percent of the prevailing rate of unemployment. "In December 1965, the unemployment rate for all teens was 12.9, so if the minimum were raised 10 percent in this month, the unemployment rate would increase initially by 0.47 due to this increase in the minimum wage"

*Douglas K. Adie, "Teen-Age Unemployment and Real Federal Minimum Wages," *Journal of Political Economy*, 81, (2), Part I, March/April 1973.

(p. 439). The employment effect found by Adie was the basis of his plea that teenagers be exempted from coverage by the minimum wage legislation.

We shall discuss the teenager problem later. I mention Adie's study only because it gives us an upper bound for the demand elasticity applicable to adults. That is, we know that the adverse employment effect for adults is much less than for teenagers--in fact the effect may be positive, not negative. Hence, if I apply the teenage effect to adults I will be certainly exaggerating the negative effects which minimum wage legislation has upon them.

Adie's figures suggest a very inelastic demand for low wage labor (.362) and when applied to the rate of unemployment then prevailing among teenagers, they suggest that the wages received by each teenager would increase from \$2,787 to \$3,049 if teenagers sought to work full time, year-round, and divided up the required unemployment. In other words, assume that before the increase in the minimum wage each teenager worked 87.1 percent of the time (because of the 12.9 percent unemployment rate), but after the 10 percent increase in wages, they worked 86.63 percent of the time. Then the increase in money wages would more than compensate for the loss of hours on the job.

The problem with this example is that teenagers are not likely to divide up the remaining employment equitably, because most of them only want part-time, part-year work in the first place. Hence, even at low wages they may be willing to work all summer long rather than, say, 87 percent of the summer. As I see it, this failure to divide up the work is the only reason why we may need to concern ourselves with the special effect of minimum wages upon teenagers, because clearly, *the total amount of money received by teenagers increases with increases in the minimum.*

Unlike teenagers, however, adults tend to divide up the remaining employment, and hence, low wage adult workers in general benefit from the increased leisure and increased earnings associated with the higher minimum wages. Yet, the obvious fact of job rationing among low wage adult workers has been consistently denied by economists who consider the consequences of minimum wage legislation upon the welfare of low wage workers.

The employment difficulties of low wage workers do not lie in the scarcity of jobs which pay the minimum wage. While not all who are unemployed would be able to find work at that wage if, suddenly, they sought to do so, it remains a fact that job vacancies exist and that these jobs are rejected as unpleasant and/or low paying by disadvantaged workers. Martin Feldstein, who seems strangely unable to draw logical conclusions from his data, has pointed out* that an effort to employ 15,000 disadvantaged adults in Boston failed in spite of the existence of jobs, most of which were above the minimum wage: "nearly half of the jobs--45 percent--were rejected. Of those who did accept work, less than half remained on the job for one month...lowering the rate of unemployment requires steps to bring the characteristics of the actual jobs and the standards of the acceptable jobs closer together."

Surveys of job attitudes have shown that 45 percent of the job quits--voluntary separation--are in response to wage rates. No other factor explains a notable percentage of job quits. Chances for promotion, working conditions, chances to learn on the job and a long list of similar factors have each a negligible influence on job stability. And the importance of wages as a factor in job satisfaction (or dissatisfaction) increases as wage rates decrease. Hence, I would conjecture that if 45 percent of all job quits are for better wages that the overwhelming majority of quits by low wage workers are for that reason. The difficulty, then, for low wage workers is not in finding a job, the difficulty is that they can not find jobs which pay well enough to induce year-round effort. Anyone who has worked with low wage workers knows this.

Indeed, the incidence of voluntary separation is widespread throughout the labor force. Feldstein has pointed out that even during a year of high unemployment, 1971, only 46 percent of the unemployed had lost a previous job and in 1969 only 36 percent had lost the previous job. In fact, quits have exceeded lay-offs for each of the five years prior to 1971.

*Martin S. Feldstein, "The Economics of the New Unemployment," *Public Interest*, (33), Fall 1973, pp. 3-42.

What we see is a job sharing system, where there are not enough jobs at the minimum wage to employ everyone, but not everyone works year-round employment at low wages anyway. From the point of view of low wage workers--and that's the point of view that I have adopted for this discussion--the minimum wage is definitely too low so long as labor turnover is so high. In fact, it may be deduced from our earlier analysis that any minimum wage which does not create some *truly involuntary* unemployment is too low.

If the reader is not yet convinced, consider the following: If the higher unemployment which is presumed to follow (in the short run) from higher minimum wage rates is to prove disadvantageous to workers, given the inelasticity of demand, then some set of workers must suffer *long term* unemployment as a consequence of the higher market wage rates. Only an analysis of unemployment *by duration* can purport to address the question at issue. And available evidence suggests that long term unemployment is not the cardinal problem of low wage workers.

Who Are the Low Productivity Workers?

We have now shown that low wage workers, as a group, will enjoy greater earnings and more leisure when the minimum wage is increased. This may not be true when the minimum wage is equal to \$3.50 per hour, but in the neighborhood of current minimum wage rates, available econometric work tells us that such workers would be better off with higher wages and less employment.

All economists agree that those workers who continue to work after wages are raised will be better off. But there is the rather explicit assumption that the best workers will continue to work without unemployment and the poorest workers--those with lower productivity--will not work at all. The elementary lesson to be learned, they say, is that *you can not legislate higher productivity*, and if you place wages above the level of a person's productivity, you will simply legislate his unemployment.

The notion that the poorest workers are not able to command employment at higher wage rates is the essential element in the argument

against the minimum wage. This argument is false. It is not true that you can not legislate higher productivity. The marginal productivity of a worker is not defined by the characteristics of the worker himself. A person's marginal product depends upon the amount of capital and other complementary factors with which he works, and it depends on the number of substitutes with which he works.

Hence, if an employer reduces the number of workers hired when the minimum wage increases, the marginal product of the remaining workers will increase. This is true even if all workers are absolutely identical in intrinsic characteristics. This means, then, that you *can* legislate a higher marginal product. The only adverse effect is that there must be fewer workers working *at any one point in time*. Therefore, if the value of the marginal product of 100 workers were equal to \$1.60, an increase in the minimum wage would require that each of these workers work fewer hours per year--spreading around the work loss--so that the value of their marginal contribution could rise to the higher wage. All that we require in order to get this result is that marginal product curves be downward sloping--and this we all assume to be true--and that some job sharing scheme be worked out--and this, we have shown, already exists.

Teenage Employment and the Minimum Wage

There has been considerable discussion in the literature regarding teenagers. The reason for this preoccupation is that teenagers are the only low wage group for which fairly good unemployment statistics are available. As far as I know, there is no other justification for the emphasis on teenagers. After all, most teenagers are not disadvantaged and, moreover, their unemployment problems are due almost entirely to their desire to hold part-time, or part-year, marginal jobs.

Feldstein pointed out that teenagers, not unlike adults, are not unemployed due to the absence of vacancies. While not all of them can work in the existing vacancies, many of them simply reject the available jobs. Moreover, two-thirds of teenage unemployment is due to persons having quit their previous job, or having just entered the labor force.

The data show that in 1971 those males who are 16 to 24 years old and who are "household heads" had an unemployment rate of only 6.4 percent, as compared with 16 percent for all males in that age group. Hence, the teenage unemployment problem pertains primarily to those who are students, or who have nice alternatives to market work. What, then, is the problem being addressed by the econometricians?

The problem is: The existence of the minimum wage causes persons who require low skilled workers to hire adults, or no one at all, rather than non-self-supporting teenagers.

My difficulty in relating to this problem comes from two sources: (a) any adult who takes a job from a teenager should be encouraged to do so, because he probably needs the money more desperately. And (b) a college student who has serious financial needs does not have time to work at substandard wages.

Finis Welch, whose work on this subject is among the best, has shown that the minimum wage and its gradually extended coverage has had the effect of driving teenagers out of covered into uncovered industries: from industry to retail trade and services and since 1961 out of these latter industries as well.* Welch concluded: "The available evidence refers almost exclusively to teenagers. For them the evidence can be summarized as: (1) minimum wage legislation has reduced employment...(2) minimum wage legislation has heightened the vulnerability of teenage employment to vagaries of the business cycle...(3) minimum wages have had very large effects on the industrial distribution of teenage employment" (p. 43).

These represent the findings of empirical research. The only other factor worth mentioning is the tentative finding of Hashimoto and Mincer** to the effect that 20 to 24 year-old non-whites also suffer an adverse employment effect. But since this work is currently being redone, we may delay evaluating it.

*Finis Welch, op. cit., p. 41.

**Masanori Hashimoto and Jacob Mincer, "Employment and Unemployment Effects of Minimum Wages" (unpublished manuscript, NBER), April 1970.

Do these results suggest that the minimum wage should be abandoned? Do they suggest (more modestly) that special exemptions be applied to teenagers (or to full-time students)? My answer is "no" on both counts.

If the minimum wage is at all effective, it *should* reduce the prevalence of low wage, casual, sweat-shop employment in the economy. The existence of teenagers in such employment represents no social problem, but as work places for adults, such employment represents the destructive cul-de-sacs of economic serfdom to which the minimum wage was addressed in the first place.

Yet, those college students who are largely self-supporting do deserve serious consideration. Having been entirely self-supporting myself throughout my college years, I have a full appreciation of the difficulties of finding part-time jobs which do not conflict with class schedules, etc. But I also know that as a full-time student, you don't have *time* to work at substandard wages. Surely, there must be some way to address ourselves to the needs of self-supporting students without prolonging the penury of disadvantaged adults.