

The Minimum Wage Debate: Politically Correct Economics?

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Abstract

Economists have long thought that an increase in minimum wage rates would lead to higher unemployment of unskilled workers. The higher minimum rates would cause employers to substitute other classes of labour or capital for unskilled labour and to contract output. Situations in which an increase in minimum wage rates will not increase unemployment do not seem to be practically relevant. The results of Card and Krueger have reopened this question. In their major study a survey of fast food outlets suggested that an increase in the minimum wage rate actually increased employment. Unfortunately, closer inspection of their results has not justified the attention paid to their study. The quality of their data is suspect and other data support the traditional view. In addition, the interpretation of their results is very questionable. The new material actually gives economists no reason to revise their traditional view on this subject.

Introduction

Most economists believe that, other things equal, an increase in the minimum wage rate leads to a fall in employment. Those who supported this type of regulation usually did so on social grounds (eg. arguing that minimum wage rates provide protection for lower income families) rather than on the basis of economic analysis. Since it was believed that the unintended consequence of this form of government regulation was to create unemployment, with all its related social and economic costs, the social

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justification for minimum wage legislation always seemed somewhat tenuous.

Now, however, the debate has been reawakened by a series of studies arguing that an increase in the minimum wage rate has a zero or even a positive effect on employment. The best known example is Card and Krueger (1994) which looks at the employment effects on fast food outlets in New Jersey of an increase in the minimum wage rate. The study uses similar outlets in Pennsylvania, where there was no increase in the minimum wage, as a 'control'.

Before examining the Card-Krueger study it would be useful to review the various ways in which an increase in the minimum wage rate affects employment. The discussion will be divided into two subsections, one covering the microeconomic and the other dealing with the macroeconomic effects of an increase in minimum wages. The first subsection will be further split into discussions of the impact of the increase in minimum wage rates on the demand for labour and an analysis of its impact on the supply of labour.

Traversing these preliminaries will allow us to consider how the conclusions obtained by Card and Krueger (1994) differ from those suggested by economic theory and many earlier studies and to subject their techniques and conclusions to a critical scrutiny. A final section is necessary to consider the implications of this discussion for Australia because we do not have simple minimum wage legislation.

Minimum Wage Rates – Microeconomic Effects¹

We will assume that a firm is producing its output with a number of factor inputs. Some of these are different classes of labour and one of these classes ('unskilled labour') is priced at the minimum wage. We will assume that the minimum wage rate is effective ie. the market clearing wage rate for this class of labour is not above the minimum wage rate. If it is above the minimum wage rate, an increase in the latter will not change employment. In such circumstances, there is no need for minimum wage requirements and it is unlikely that this case has any empirical relevance.

An increase in the cost of one class of labour will reduce the firm's demand for it in two ways. First, the *substitution effect* leads the firm to substitute other factors of production for the class of labour in question. Secondly, the *scale effect* leads the firm to reduce its level of production, thereby reducing its factor demands. The elasticity of the demand for unskilled labour is greater the lower the share of that form of labour in total cost and the higher the elasticity of demand for the final product.

The size of the substitution effect will depend on the substitutability in the production process of other factors for the one in question. If, for example, skilled labour can be easily substituted for unskilled, the skilled labour being more productive and now not as relatively costly, substitution will occur. In some cases, minimum wage legislation appears to have the objective of protecting the jobs of other workers by ensuring that they are not replaced by slightly less skilled but cheaper workers. For example, in Australia this objective appears to play a role in union support for minimum youth wage rates. However, it seems more likely that capital will be substituted for unskilled labour.

It is not impossible that the demand for some of the other factors will actually be increased by the increase in the minimum wage rate although the negative scale effect will often outweigh positive substitution effects (Hamermesh 1986, p. 432 and pp. 439-443). Hamermesh (1986, p. 461) reports that empirical studies suggest that whereas skilled labour and capital are complements unskilled labour and capital are substitutes.

As already noted the scale effect of an increase in the minimum wage rate depends on the elasticity of the demand for the firm's product. In addition, it will depend on what happens to the wage rates for other classes of labour. If they rise in concert with the minimum wage rate, the scale effect will be much greater although the strength of the substitution effect will be reduced.

The substitution process has an important time dimension. An increase in the price of unskilled labour will provide an incentive for the development of labour saving devices (eg. parking lot attendants will be replaced by automatic gates) and these innovations will usually be introduced over a lengthy period of time.

The conclusion from this analysis is that an increase in the minimum wage will reduce a firm's demand for the type of labour affected by it although this reduction could be small if the cost of unskilled labour is a large proportion of total costs, if the demand for the final product is inelastic, and if the substitutability of other factors for unskilled labour is low. The results of statistical studies surveyed by Hamermesh (1986) suggest that there is in fact a significant negative elasticity of the demand for labour with respect to changes in wage rates in general and for reasons already considered it is likely to be even higher for unskilled labour.

There are some well-known cases in which an increase in minimum wage rates will not reduce employment. First, if the employer is a monopsonist (single buyer) paying a wage equal to the marginal cost of labour, an increase in the minimum wage rate will actually increase employment so long as it is still below the competitive wage rate (Brown, Gilroy and Kohen

1982, p. 489). It is difficult to think of a real-life example of this effect and it certainly is not relevant to the fast food industry.

Sloan (1996) notes the possibility that the increase in wage rates leads businesses to become more efficient so that the demand for labour shifts upwards. This possibility is likely to be relevant to only a few industries at best. This is also the case with the suggestion that higher wages will lead labour to increase its productivity (Layard, Nickell and Jackman 1991, p. 22 et seq) by maintaining high morale or increasing effort. Indeed, it is argued below that higher minimum wage rates can act as an incentive for workers to avoid an upgrading of their skills.

The effect of an increase in minimum wage rates on *unemployment* will also depend on its impact on the supply of unskilled labour (ie. the labour force participation of unskilled labour). It seems likely to bring forth an increased supply of such labour. It provides an incentive for housewives to enter the workforce and for young people to terminate their education earlier than they would otherwise have done.

The final point merits some further discussion. In a market economy, one way that the effects of a fall in the demand for unskilled labour can be dissipated is by workers in this group upgrading their skills and moving into other labour categories – a form of substitution on the supply side. An increase in the minimum wage rate will reduce the incentive to do this (see Hashimoto 1982). Also, Becker (1996) points out that a minimum wage rate prevents workers from sacrificing income in return for on-the-job training. That is, they cannot accept a job which pays a low wage but allows them to accumulate marketable work experience. Of course, the incentive to upgrade skills depends on other factors, including the rate of unemployment, the level of unemployment benefits and the cost to workers of obtaining skills.

There is clearly an interaction between minimum wage rates and unemployment benefits (see Gregory 1996). If unemployment benefits are high relative to minimum wage rates, workers have an incentive to continue in the unemployed state. In particular, they have less incentive to take low paying jobs that offer on-the-job training. Unemployment benefits also provide an incentive for eligible individuals to enter the workforce. As a result of these possible reactions, changes in employment are probably a better measure of the welfare effects of an increase in the minimum wage rate than changes in unemployment (see Brown, Gilroy and Kohen 1982, p. 497).

Our conclusion with respect to supply effects is that an increase in the minimum wage rate is likely to bring forth an increased supply of unskilled labour, thereby increasing unemployment.

Minimum Wages – Macroeconomic Effects

Supporters of increases in minimum wage rates sometimes argue that the higher wages will lead to greater expenditure and, through it, to higher employment. The idea behind this assertion appears to be that lower income earners have a higher marginal propensity to consume than people earning higher incomes.

However, it is not clear that increased wage rates lead to higher **aggregate** wage income. What happens to aggregate wage income depends on what happens to employment. As discussed in the previous subsection, high wages reduce employment and this fall could more than offset the increase in wage rates.

More importantly, if total wage income increases at the expense of profits, this will have a negative impact on business investment. This effect actually appears to be quite important because business investment is very sensitive to changes in profitability. Furthermore, an increase in wage rates reduces the competitiveness of locally produced goods, increasing expenditure on imported products and reducing exports.

Overall, the empirical evidence provides little support for the view that an increase in wages leads to higher aggregate expenditure. This conclusion is borne out by studies such as Valentine (1993) which conclude that wage rates have a highly significant negative effect on employment and a highly significant positive effect on unemployment. Gregory (1996) agrees that high wage rates reduce employment, but argues that wage reductions, combined with the related reductions in unemployment benefits, will reduce the income received by the group of workers in question. The problem with this approach is that it treats income generated by production as interchangeable with income transferred by the tax mechanism. This assumed equivalence cannot be sustained. For example, the transfers will affect decisions elsewhere in the economy. Also, as discussed above they reduce incentives for workers to undergo training and could contribute to the creation of an 'underclass' of the permanently unemployed.

Gregory (1996) points out that the more flexible wage system that applies in the United States has not delivered higher incomes. He uses this outcome as an argument against the adoption of such a flexible system in Australia. This argument is not convincing because there are more compelling explanations of the comparatively slow rate of growth of output per head in the United States. Friedman (1988) looks at the effects of a low saving ratio and low rates of capital accumulation. Maddrick (1995) surveys the causes and effects of slow economic growth and regards the failure of incomes to increase in recent years as a result of slow growth not as a result of the approach to wage fixation used in the United States.

Valentine (1993) argues that, other things equal, wage flexibility will lead to higher economic growth. In the United States, other things were not equal. In New Zealand where the shift to a more flexible wages system was combined with other microeconomic reforms, more rapid economic growth did emerge (see Kasper 1996).

The Card-Krueger Study

Our initial step is to evaluate the Card and Krueger (1994) study in terms of the discussion above. Note that the study focuses on the demand for labour and says nothing about supply effects or macroeconomic effects.

The demand for labour by fast food outlets will be inelastic with respect to changes in the minimum wage rate if

- the demand for their product is inelastic;
- the wages of unskilled labour make up a large proportion of their total costs; and
- other factors cannot be easily substituted for unskilled labour.

The first of these conditions is not satisfied for individual fast food outlets (as distinct from fast food outlets as a group). The second condition is satisfied. The third condition is probably satisfied in the short term. These considerations suggest that the results obtained by Card and Krueger (1994) could depend substantially on the industry they have chosen to study and that changes in minimum wage rates have a more powerful short-term effect on employment in other industries. This question of substitutability is explored further below.

More importantly, there are serious methodological weaknesses in their approach Welch (1995) examines their data collection procedures in detail and finds many deficiencies in them. He comments that:

It is not clear that the interview process was formalized. There has been no response to my requests for anything regarding interviewers instructions and training, coder instructions or pre-test results. The two key questions, concerning wages and employment, invite inaccurate responses.

He goes on to show how the questions mentioned could have led to misleading results. For example, the first question asked for the number of full-time and part-time workers without defining full-time or part-time.

A major problem with the study is that the authors have not actually controlled for other factors that may have affected employment in fast food outlets in New Jersey over the period covered by the study. For example,

what happened to New Jersey state income and unemployment over the period concerned? What happened to the cost of capital and the wage rates of other classes of labour? As Hamermesh (1995) points out a true control is created only when subjects are randomly allocated to the different groups to be studied. The 'natural experiment' used by Card and Krueger (1994) does not permit this approach.

A second problem is that the study looks at two points of time – February/March 1992 and November/December 1992. The choice of these time points could have influenced the outcome. For example, was the second period affected by a Christmas boom?

Moreover, the study may not have given sufficient time for adjustment to occur. In this case adjustment is likely to involve substitution of capital for unskilled labour and it will take considerable time. The lag will be made longer in the establishments in the Card-Krueger study because they are part of nationwide chains. Presumably the management of these chains makes its decisions on employment and the installation of new capital on the basis of wage costs across the nation, not in reaction to increases in a particular state. Of course, it could be argued that the fast-food industry is not one that is amenable to technological developments that allow capital to be substituted for unskilled labour. This argument may be correct, but if so it means that it is not a good industry to use for tests of the effects of an increase in the minimum wage. There has undoubtedly been substitution of this type in other industries.

Sloan (1996) points out that another possibility ignored by Card and Krueger is that the increase in the minimum wage rate has been offset by a reduction in the conditions enjoyed by the workers. Sloan (1996) also notes that other recent studies have produced different conclusions to Card and Krueger (1994). An important example is Neumark and Wascher (1995). Neumark and Wascher have re-examined Card and Krueger's (1994) results using payroll data and they conclude that over the period concerned, there was a statistically significant 4.6% reduction in employment in New Jersey fast-food outlets relative to those in Pennsylvania. Neumark and Wascher (1995) also question the quality of the data used by Card and Krueger because of its high variability. They reject the view that this could be due to the use of the number of employees rather than the number of hours worked and argue, like Welch, that it can be explained by deficiencies in the questionnaire used by Card and Krueger. For example, they say:

Survey respondents were not given any time period over which to define employment, and their answers may have well ranged from employment on the shift during which the telephone survey took place to employment over an entire payroll period. Moreover, because different managers

may have been interviewed in the two waves of the survey, there is no reason to believe that the responses in the first and second waves are based on the same 'definition' of employment, which may explain the much higher variability of employment change.' (Neumark and Wascher 1995, p. 12).

They argue that their approach based on payroll data produces more consistent observations. Neumark and Wascher (1995) also examine additional data obtained from government statistical collections. This data leads them to question the large fall in employment in Pennsylvania fast-food outlets shown in the Card-Krueger data. This perceived fall contributed significantly to the results obtained by Card and Krueger. Neumark and Wascher also conclude that this new data set indicates that the increase in minimum wage rates in New Jersey led to reduced employment.

In general, the Card-Krueger results are far from convincing. The interest they have generated probably reflects the extent to which political correctness has become a force in the economics profession rather than the compelling nature of their scientific approach. One wonders how well the Card-Krueger study would have been received if it had suggested that minimum wage laws have a strong negative impact on employment.

Conclusion: Implications for Australia

Australia does not have minimum wage legislation of the standard type. Nevertheless, the idea of a minimum wage has been applied in a number of specific areas. First, there are regulations which impose a structure of minimum wage rates for young workers according to their age. Our earlier discussion suggests that the results of this minimum wage requirement is to reduce youth employment as skilled labour and capital are substituted for unskilled young workers. It also reduces the incentive and opportunities for young workers to acquire skills.

A second application of the minimum wage idea applied in Australia is the 'safety net' wage increases that are applied to assist lower income earners who cannot achieve wage increases through enterprise bargaining. This approach has all the defects of minimum wage legislation described above.

Thirdly, Australia has a structure of award wages for different professions. These awards are specific minimum wages, but they are not the type of minimum wages focused on in this paper. Nevertheless, it can be noted here that the approach makes the wage structure inflexible and prevents readjustments across professions made necessary by changes in economic circumstances. For example, if the demand for a particular profession falls,

salaries cannot adjust downwards to facilitate adjustments. Instead, unemployment will be created in that profession.

Australians have an attraction to variations of the minimum wage ideas as a way of helping the disadvantaged (Gregory 1996, is a prime example). It is actually a poor way of achieving this objective because of its employment effects. We need to look for sensible alternative approaches. A possible candidate is the Earned Income Tax Credit (EITC) discussed by Becker (1996). Under this approach low income earners have their incomes supplemented through the government budget. The advantage of this approach over the minimum wage approach is that it does not affect employment. A negative income tax would be an alternative, but Becker argues for the EITC on the grounds that it encourages lower income people to work. In doing so, many of them will accumulate skills that will ultimately give them access to higher incomes.

Notes

1. For a compact summary of this aspect of the theory of the firm's demand for factor inputs, see Hamermesh (1986). An alternative summary is provided in Valentine (1994).

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