

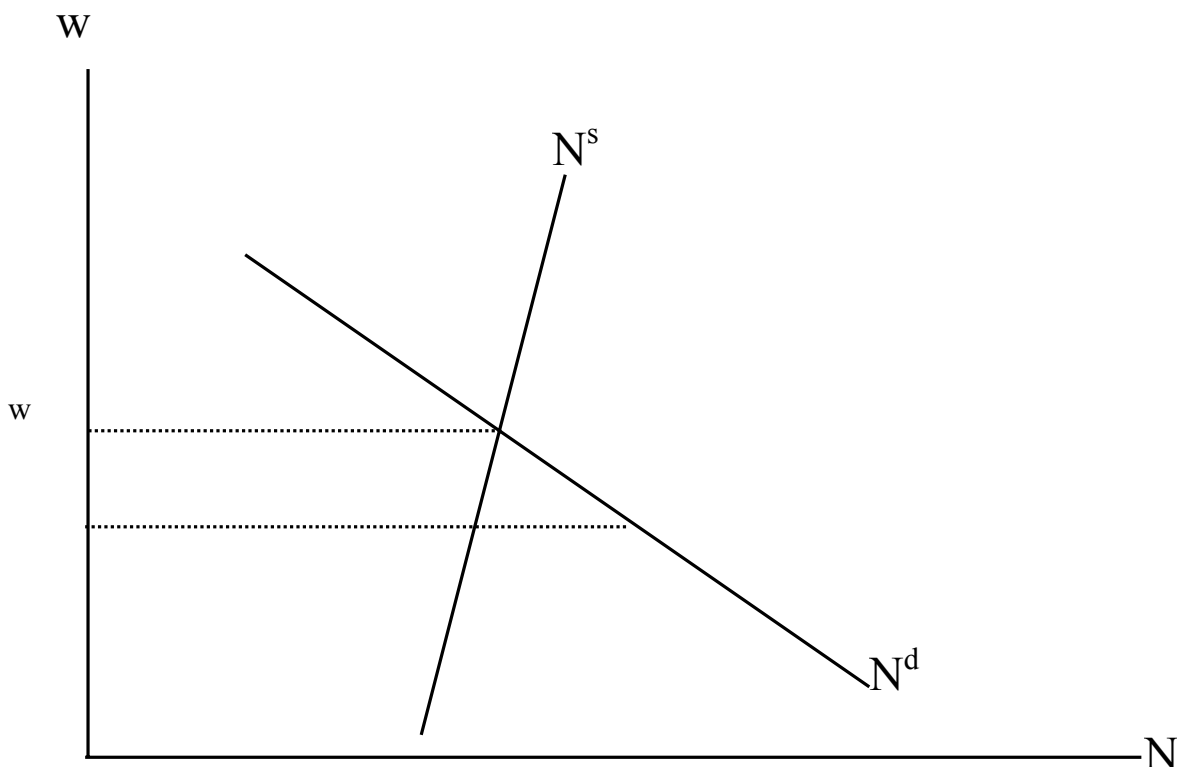
# THE ECONOMICS OF THE MINIMUM WAGE

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The effects of imposing a minimum wage is one of the most emotive and, yet, least understood issues in economic and labour market debates. Given the importance of this issue particularly in the context of the recent ACTU's *Living Wage Case*, it is timely to provide a reasoned analysis of the impacts of minimum wages. The starting point here is the standard neoclassical analysis.

The clue to understanding the minimum wage debate is the nature of the labour market. The concept of *the labour market* is an abstract one but is nevertheless useful for analysing issues such as the overall level of employment and unemployment. Every economics student will be familiar with the standard textbook treatment represented by Figure 1 below.

**Figure 1: The aggregate labour market**



This shows that if average wages are held at a minimum  $\bar{w}$  then labour supply,  $N^S$ , exceeds labour demand,  $N^D$ , and, therefore, unemployment results. There is considerable empirical research on the labour market in Australia and the effect of rises in average wages on employment (see, for instance Lewis and Seltzer 1996). This research indicates that a 10 per cent increase in average wages reduces employment by about 8 per cent. Thus, moderation in *average* wages increases employment and, with the usual caveat that all other things are equal, unemployment will fall.

It is tempting to use the above analysis to examine the effects of imposing a minimum wage for the lower paid. However, the above analysis is *not* appropriate. Since most workers would obtain a wage higher than the minimum anyway, the effect of imposing a minimum wage is to increase the wages only of those who would otherwise receive the lowest wages. The effect on the *average* wage is small and, thus, the impact on employment and unemployment is also small. This theoretical argument is supported by international empirical evidence which shows that the impacts of minimum wages on *total* employment and unemployment are small (Brown, Gilroy and Kronen 1982).

To get to grips with the effects of a minimum wage it is necessary to dig deeper into the operations of the labour market. In reality there is not a single labour market but rather very *many labour markets* each with their own supply and demand. For instance, employment in a hospital will be determined by markets for specialists, doctors, nurses, clerks, cleaners etc., each with different amounts of required skills and characteristics resulting in different wages. An important characteristic of the

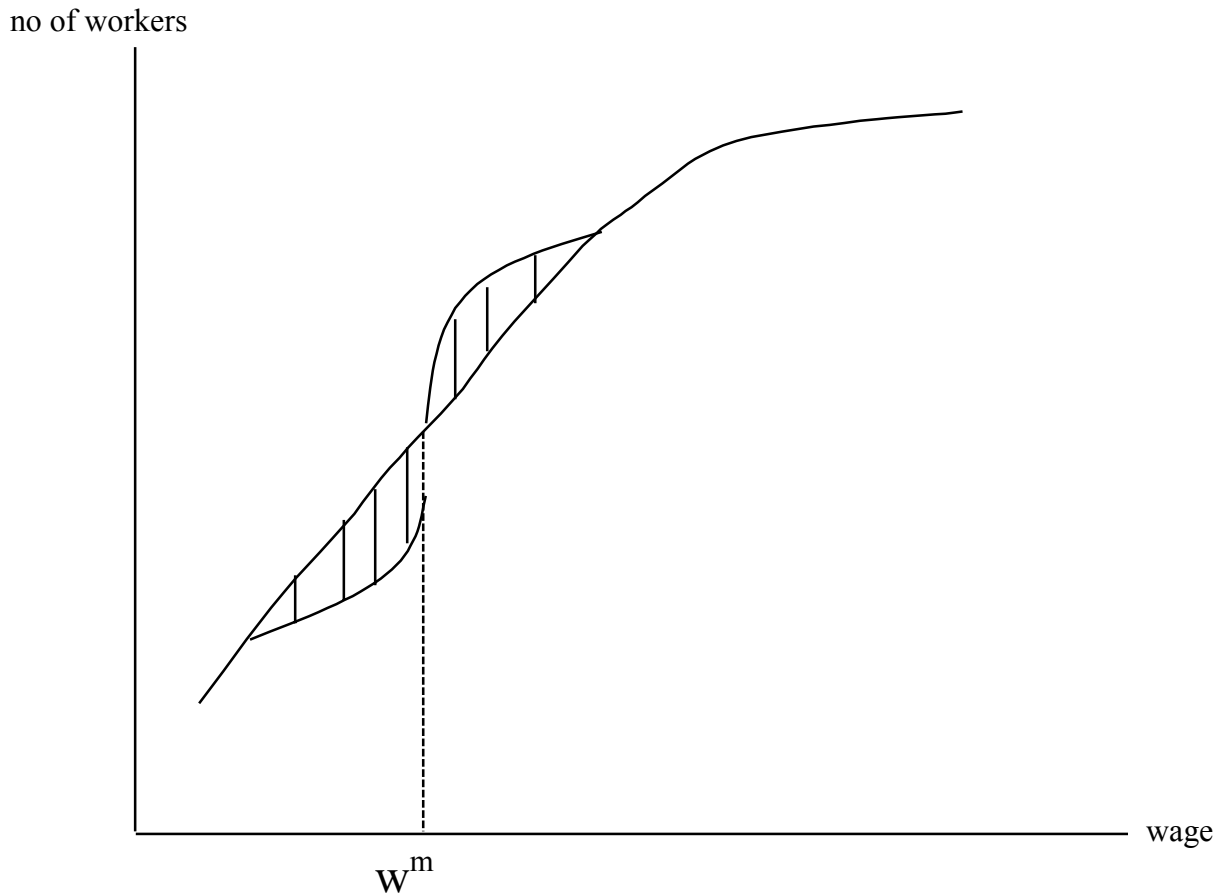
multitude of labour markets is *substitutability*. Although it is common, particularly in the professions, to think of occupations being rigidly defined, in practice there is a great deal of substitutability between workers. For instance, at various times relatively junior doctors can perform duties of specialists, registered nurses often perform duties which would well be the domain of doctors, particularly in rural areas. TAFE-trained enrolled nurses can be substituted for university trained registered nurses and, increasingly, particularly in aged care, relatively unqualified 'carers' perform duties which were once the province of nurses.

Most empirical studies of individual labour markets point to the high degree of substitutability, with respect to demand, between types of labour. There is also strong evidence that, given the degree of substitutability, the demand for labour in these more narrowly defined labour markets is highly responsive to *relative wages* (Hamermesh 1993, Lewis 1985). Also, generally, the lower skilled the worker then the more responsive is demand to relative wages. In addition to demand being highly responsive to relative wages research shows that labour supply is also responsive to relative wages (Kenyon and Wooden 1996).

Given the above framework it is relatively easy to understand the impact of minimum wages on employment and unemployment. The imposition of minimum wages affects only those in low skilled, low paid jobs. These individuals are, generally, very poor substitutes for the majority of the workforce and, therefore, minimum wages have little impact on the wages and employment of most workers. However, those workers earning just above the minimum wage are highly substitutable for those who would otherwise earn below the minimum. This is because although there is still a skill

differential between them the jobs are still, relatively, unskilled. The impact of the imposition of a minimum wage is shown in Figure 2.

**Figure 2: The impact of a minimum wage on employment**



The bold line in Figure 2 is the distribution of workers by wage. Norris (1996) shows that for Australia this distribution is positively skewed. The dotted line shows the new distribution after the imposition of a minimum wage. The lower shaded area represents the loss of employment of workers now priced out of the labour market and the upper shaded area represents the increase in employment of workers substituted for those displaced. The upper area is less than the lower area since the higher wage results in some substitution of capital for labour. Employers employ less of those who would have earned below the minimum wage and, therefore, unemployment among

this group rises. However, these workers are substituted by more workers earning just above the minimum wage. Thus, the net effect on *total* employment and unemployment is small. However, there is a large fall in employment of workers who could otherwise have earned below the minimum wage.

In summary, the impact of the minimum wage on total employment and unemployment is small but the impact on low skilled, low paid workers is high.

Interestingly, the above logic applies to the analysis of wage subsidies. Whereas minimum wages increase the cost of employing low skilled workers, wage subsidies reduce the cost of employing them. Therefore, wage subsidies should increase employment of low skilled workers, such as the long term unemployed, but at the expense of other workers. Employment effects operate through *substitution* of one group of workers for another with total employment largely unaffected. From the viewpoint of an economist it is strange to observe the seemingly opposite views of those debating the above issues. Those who dismiss the effectiveness of wage subsidies in creating employment often argue that minimum wages having dramatic effects on employment and unemployment. Others argue for wage subsidies to create employment but reject reducing minimum wages. The impacts on total employment are small but very significant for workers directly affected by either policy.

The above neoclassical account of the effect of minimum wages has been challenged recently by Card and Krueger (1995). The impact of the work on the economics profession has been tremendous. For instance

'*Myth and Measurement* may well be the most important labor economics monograph of the 1990s' (Ehrenberg 1995) and

'... this book is a damning indictment of how labor economics has been practised over the past three decades' (Osterman 1995).

Card and Krueger's analysis is based on four previous published papers. These studies are almost exclusively empirical and relate to changes in minimum wages in the fast food industry in the United States. Others have provided empirical evidence for other countries (see Seltzer 1997 in this issue).

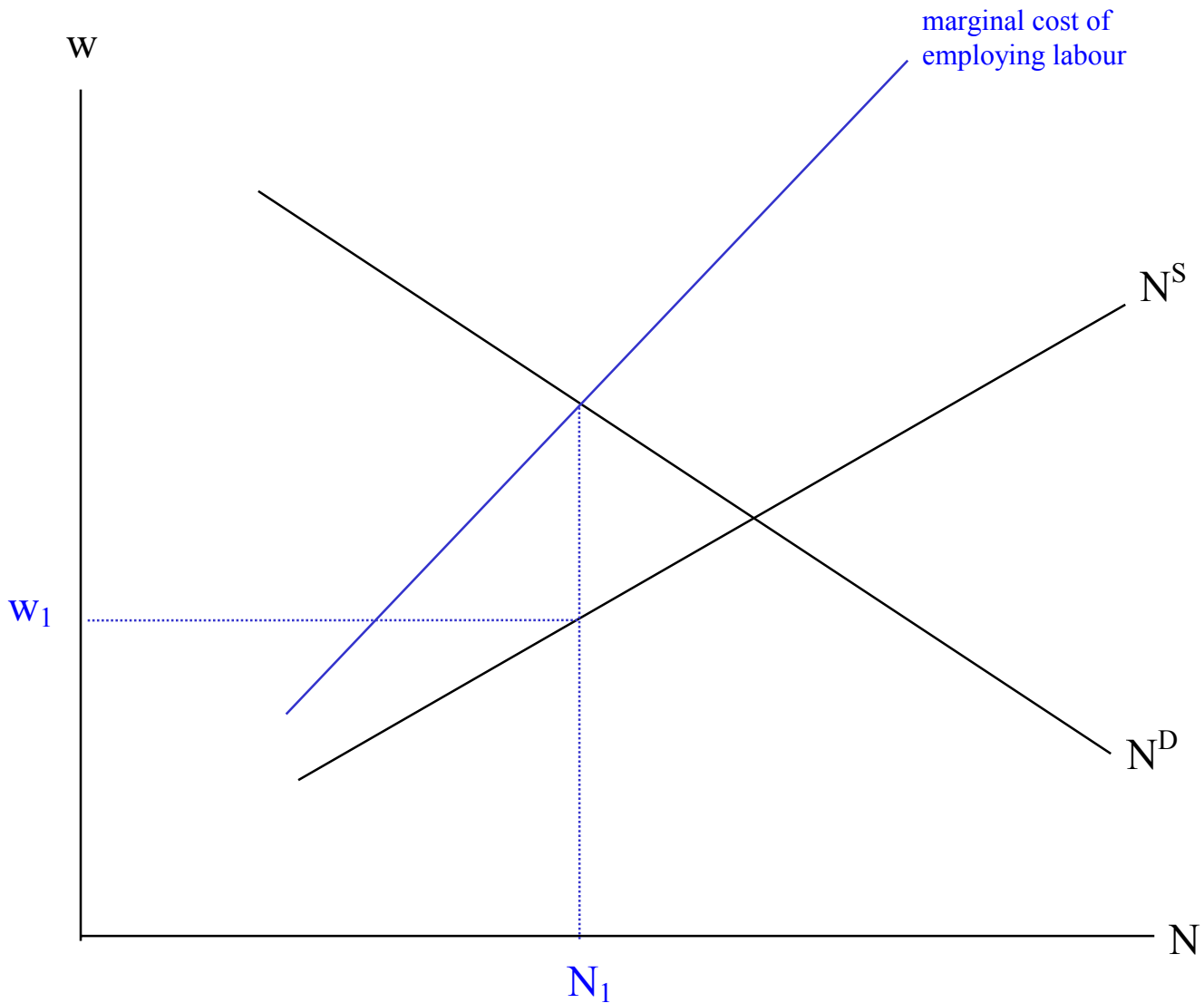
Briefly, their research shows little impact of minimum wage increases on teenage employment - they even find, in some cases, *increases* in employment.; They go on to examine previous studies showing negative effects of minimum wages and maintain that they do not hold up to serious scrutiny. In return Welch (1993) has cast doubt, after examining the original data and methodology, on the validity of the studies by Card and others.

Whatever the empirical results the problem for supporters of the view that minimum wages have little effect, or even a positive effect, on employment is to come up with a convincing theoretical reason for doubting these empirical results.

Card and Krueger (1995) first suggest an explanation based on the concept of monopsony. Those who sat through microeconomics classes at university consisting of a seemingly endless catalogue of market structures will vaguely remember

monopsony as a theoretical artefact of little relevance to any practical problem except that of a 'company town'. The monopsony model is shown in Figure.

**Figure 3: The effect of a minimum wage on a monopsony firm**



Whereas in the competitive model there is a going wage for the job, under monopsony a firm must offer a higher wage to acquire additional employees. Because the firm must also pay existing workers the higher wage, the cost of employing one extra worker is greater than the wage. Employers employ  $N_1$  workers where the revenue produced by the last worker is equal to the cost of employment at A. Thus, the extra revenue produced (the marginal revenue product) is greater than the wage. In labour

economics texts this ‘exploitation’ of workers can be remedied by unions increasing both wages *and employment* up to the maximum of  $\bar{w}$  and  $\bar{N}$  respectively. Clearly, this can also be argued for an administered minimum wage. An administered minimum wage above  $\bar{w}$  would reduce employment.

While being a satisfactory theoretical explanation it is difficult to imagine that it applies to low skilled workers, particularly in a high unemployment country like Australia. It is even harder to have faith in this explanation in the long run. Even if a firm faces short run labour shortages it is very unlikely that this will persist, particularly given the high degree of competition one would expect, given the homogeneity of unskilled labour.

Another possible explanation is that a rise in minimum wages somehow causes a ‘shock’ to management which results in greater efficiency in production, extra output and, therefore, greater demand for labour. In this explanation the increased wage creates a need to cut production costs by such measures as better monitoring of staff, reducing absenteeism, reducing labour turnover, better screening of job applicants etc. Again, this is a concept often used to illustrate the possible positive effects of unionisation.

While the ‘shock hypothesis’ may be a useful short run explanation it is of little use in explaining long run effects, such as those imposed by Australia’s award system, for instance.

Even the neoclassical model is consistent with only a small short run effect. There are adjustment costs for firms in substituting labour for labour and capital for labour which would imply little short run effect. In the case of fast food outlets one could even imagine the case where, because most workers are teenagers who have a particular taste for fast food, wage rises would increase consumer demand and, hence, labour demand, in the short run.

The jury is still out on the ‘new economics’ of the minimum wage. However, the extent to which it has been so eagerly embraced by sections of academic economists and politicians means that it will continue to receive attention and raise debate.

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