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Minimum Wages and Employment: A critical appraisal of two theoretical frameworks

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Abstract

This paper addresses the theoretical fallout from empirical studies published in the 1990s that showed no negative relationship between the introduction of minimum wages and employment. The theoretical developments have proved to be very meagre and this, it is alleged, is due to the unwieldy neo-classical framework which can only accommodate such an anomalous relationship in circumstances where employers face positive labour supply curves and for a small increase in wages. It fails to explain why more generalised minimum wages did not adversely affect unemployment. An earlier debate on the effects of minimum wages occurred in the 1940s and 1950s which provoked a dialogue between Neo-classical theorists and their Institutional critics as to the nature of economic research. Since then the framework of analysis has narrowed considerably, with only explanations consistent with the neo-classical view of optimisation by rational agents in a world of diminishing returns being theoretically acceptable. This has led to the impoverishment of economics and can partially explain the crisis in the profession when real world phenomena are at variance with the predictions of idealised models.

Keywords: Minimum wages, oligopsony, marginalism, institutionalism.

JEL Classification: B25, J23, J38, J42.
Minimum wages and employment: A critical appraisal of two theoretical frameworks

Introduction

Minimum wages and their impact on employment is currently a hot topic. Ever since Card (1992a, 1992b), Card and Krueger (1994) and Katz and Krueger (1994) published their empirical findings which cast doubt on the presumed negative relationship between binding minimum wages and employment, debate has raged as to the implications of their research for orthodox (neo-classical) labour market theory. The issue may seem to be an empirical one but empirical studies rarely resolve such disputes. Disputes over data collection and estimation methods are usually sufficient to ensure that both sides maintain their entrenched positions. Those whose empirical work broadly supports the position of Card and Krueger include: Machin and Manning (1996, 1997) and Dickens, Machin and Manning (1999). Critics, whose research findings support the neo-classical position, include Neumark and Wascher (1995), Neumark (2001), Partridge and Partridge (1999) and Williams and Mills (2001).

What this paper addresses is the nature of the theoretical fallout provoked by the Card and Krueger results. Hammermesh (1995) challenged the potential reasons given by Card and Krueger (1995) for the absence of a negative relationship between minimum wages and employment on the grounds that the authors had failed to provide a convincing theoretical explanation as to why the old logic failed. By old logic he means neo-classical marginalist logic which assumes that all agents optimise in an environment characterised by diminishing returns. Likewise, Osterman (1995) asserted that their (Card and Krueger) models appeared like clever ex post rationalisation of their results without any real grounding. He however attributes the theoretical fragility of their reasoning to the individualist underpinnings of their labour market model, where firms are assumed to make optimal marginal decisions and workers behave in a utilitarian manner. In reviewing the theoretical developments provoked by Card and Krueger’s empirical work, I return to a debate from the 1940s and 1950s as to the nature of the neo-classical method.
According to Leonard (2000), minimum wage empirical studies have been resisted with such ferocity because they threaten the very status of economics as a policy science. What characterises theoretical developments since 1994 (most of which have been within the neo-classical tradition, albeit from a challenging perspective) is the paucity of such research and the timid and ambiguous nature of its results, which often fails to explain on its own terms labour market phenomena. This is because such research is still wedded to a marginalist logic and some informationally demanding notion of profit maximisation. I attempt to show that the approach of the Institutional school is much more grounded and useful when it comes to attempting to appraise the likely impact of the introduction of binding minimum wages.

The neo-classical theory of labour markets with some early variants of standard results

The simplest variant of the neo-classical theory of labour markets is one where all markets (input and output) are “perfectly competitive” and technology exhibits constant returns to scale. Add in the essential feature of optimising agents and the conclusion of such a model is that all factors get paid the value of their marginal product, which is the opportunity cost of their activity. Power and bargaining strength are not an issue, since in this determinate universe there is no scope to pay labour or capital any returns other than that which the market dictates. In neo-classical speak, economic rents do not exist. Hence all relations between capital and labour should be essentially harmonious in the absence of any potential to change the distribution of output (see Samuelson, 1957). Binding minimum wages (that is wages above the market equilibrium) will only result in reduced labour demand, employment and output, as capital is substituted for labour in production and the best means of reacting to the pecuniary damage caused by higher wages is to restrict output.

However the perfectly competitive model of markets is neither central nor necessary to the neo-classical theoretical claim that exogenously imposed higher wages will reduce employment. Theory tells us that when economic rents exist as a result of production and
exchange, these rents can be redistributed through the use of suitable policy instruments. Power and bargaining strength then become an issue in the struggle over the distribution of output, since the outcome is no longer determinate. The boundaries that limit the potential distribution of output are the opportunity cost for labour and the owners of capital. These boundaries are influenced by the mobility of labour and capital, the economic fall back position of labour and the owners of capital and by a subjective, psychological sense of what is and is not acceptable remuneration.

While the existence of economic rents may be a necessary condition for successful redistribution in favour of labour, it is far from sufficient. Higher exogenously imposed minimum wages will still lead to lower employment as long as labour demand is negatively related to real wages and labour demand is what determines employment. Neo-classical theory can accommodate a variety of labour supply responses to changes in wages, which range from vertical to horizontal, positive to negative depending on the level of analysis (macro or micro,) but always concludes that labour demand is negatively related to own real wages, at least in a partial equilibrium sense. The general equilibrium case is a bit more flexible in its predictions, to the extent that it acknowledges that the income distribution effects of minimum wages may impact positively on output and on labour demand. This argument is weaker when talking about economies that have extensive international trade.

What is the basis for the theoretical certainty of neo-classical economics that higher minimum wages will lead to lower employment? It is the unquestioned acceptance of the marginalist method. For some, marginalism simply means rational optimising behaviour. For others it is rational optimising behaviour in an environment characterised by diminishing net returns. Standard neo-classical theories of the firm assume that marginal cost is increasing in output and that the marginal revenue product of labour is decreasing in labour hired. This reflects the broader assumptions of neo-classical economics, whereby the net returns from all actions are decreasing in those actions. Optimisation in these circumstances means doing an action to the extent that, at the margin, one is indifferent between doing more of it or less of it. Monotonically increasing returns to
actions are not compatible with the notion of optimality. Another conclusion of optimisation and diminishing net returns to an activity is that, if there are developments such that the activity becomes less profitable, the optimal response is to do less of that activity.

A useful way of characterising the marginalist method is that used by Cooper and John (1988). \( W_i(a_i, a_j) \) whereby \( W_i \) is the welfare of agent i, and \( a_i \) and \( a_j \) are the actions of agent i and agent j respectively that impact on the welfare of agent i. In standard neoclassical theory the optimal level of \( a_i \) is where \( \frac{\partial W_i}{\partial a_i} = 0 \) and \( \frac{\partial^2 W_i}{\partial a_i^2} < 0 \). It is usually assumed that if an external action \( a_j \) impacts negatively on the welfare of agent i, that is, if \( \frac{\partial W_i}{\partial a_j} < 0 \), then the optimal response of agent i is to do less of the activity. The conditions that must hold for \( \frac{\partial W_i}{\partial a_j} < 0 \) is for \( -\frac{W_j}{W_i} < 0 \), whereby \( W_i = \frac{\partial^2 W_i}{\partial a_i^2} \) and \( W_j = \frac{\partial^2 W_i}{\partial a_i \partial a_j} \). If we were to think in terms of the labour demand decision, \( W_i(a_i, a_j) \) is the profit of the firm, \( a_i \) is the amount of labour hired and \( a_j \) are other factors such as government policy (like the imposition of a minimum wage). For a minimum wage to result in less employment in this framework, it is not sufficient for \( \frac{\partial W_i}{\partial a_j} < 0 \) (for the firm to be made worse off), what matters in terms of firm response is that \( \frac{\partial^2 W_i}{\partial a_i \partial a_j} < 0 \). If the marginal return to the firm’s hiring action is now negative as a result of the minimum wage, the optimal response by the firm will be to hire less labour. The standard situation is shown in Figure 1 below, where N1 is the optimal level of employment before the minimum wage is imposed and N2 is the optimal level of employment after the minimum wage is in place.
Figure 1

The standard reasons supplied by neo-classical theory for labour demand to fall when minimum wages above market equilibrium are imposed are the substitution effect and the output effect. If technology was such that there was a zero substitution effect, increasing marginal cost of production and/or decreasing marginal revenue are sufficient for the optimal output response to increased costs to be less output produced and hence less labour hired. Even constant marginal costs, once allied with decreasing marginal revenue will yield the expected output and labour demand response, since net marginal profit is decreasing in output (and hence inputs) and increased costs adversely affect net marginal profit. Much of the debate regarding labour demand has focused on the presumed size of the wage elasticity. The absolute value of the elasticity is expected to be high if: other factors of production can be easily substituted for labour in production; wages are a large part of total costs and; the market where the product is sold is very competitive. Conversely, the absolute value of the wage elasticity of labour demand is expected to be low if production methods are fixed (Leontief technology), if labour costs are a small proportion of total costs and if the elasticity of demand for the firm’s output is small. However none of this challenges the view that higher wages, ceteris paribus, will lead to lower labour demand and employment. It simply allows for the effect to be more muted under certain market conditions. Moreover, if the value of the elasticity is low, labours share of total output will increase after minimum wages are imposed.
The only way labour demand will not be adversely affected when minimum wages above equilibrium are imposed is if there are kinks or breaks in the relevant marginal revenue and marginal cost curves. So for example, if we think of Sweezy’s (1939) kinked demand curve, then there is a zone of indeterminacy over which increased marginal costs do not lead to a fall in output. Ally this with no substitution effect for labour in production and the optimal hiring response of the firm to higher labour costs has not changed. In figure 2 this zone of indeterminacy is between a and b on the marginal revenue curve.

![Figure 2](image)

In this instance $\frac{\partial a_i}{\partial a_j} = 0$ since $\frac{\partial^2 W_i}{\partial a_i \partial a_j} = 0$, even though $\frac{\partial W_i}{\partial a_j} < 0$. Higher labour costs have adversely affected the firm’s profits but the optimal response is to maintain output and employment. This is shown in figure 3, whereby higher costs lower profit for the

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1 Sweezy explains this phenomenon in terms of oligopolistic product markets, whereby firms respond in an asymmetric way to the pricing behaviour of their rivals. If a firm lowers its price, other firms will aggressively follow it in a price cutting war, thereby yielding a small increase in output demand. On the other hand, if a firm increases its price, other firms will not match its pricing strategy, thus leading to a greater loss in demand. This leads to a certain inertia in the firm’s optimal output and pricing strategy.
firm but marginal profit at the original optimal level of employment N1 has not changed. The best response is for the firm to absorb the loss and maintain production and output levels.

The third scenario is one where it is optimal for the firm to increase employment and output after minimum wages above the equilibrium are imposed. This is the case presented by Stigler (1946). The firm is assumed to have monopsony power in the labour market, which means that the marginal and average cost of labour differ. In an unregulated market, labour will earn less than its marginal revenue product (or value of marginal product if the output market is perfectly competitive). The introduction of a minimum wage reduces the marginal cost of hiring but increases the average cost of hiring. This situation is shown in Figure 4, whereby the optimal level of employment post the minimum wage is N2 compared to the initial situation of N1.
Using the Cooper and John (1988) framework, $\frac{\partial a_i}{\partial a_j} > 0$ since $\frac{\partial^2 W_i}{\partial a_i \partial a_j} > 0$, even though $\frac{\partial W_i}{\partial a_j} < 0$. As shown in Figure 5, minimum wages reduce profits but at the margin (where employment is N1) marginal profit has gone from zero to positive. Hence the optimal response to this adverse development is to increase employment and output.

This of course pre-supposes that the firm is still making rents and that it is better for it to maintain production rather than to close down or relocate.
The above is the essence of the neo-classical method, with its emphasis on optimisation at the margin. Lester (1946a) challenged the view that this is how firms behave. One basis of his argument was that many firms face decreasing or constant average variable costs over output levels between 70 to 100 per cent of production capacity. According to Machlup (1947), decreasing average variable costs in production do not undermine the marginalist method. This is only true if marginal revenue is also decreasing and at a faster rate than marginal cost. Then the neo-classical theory of optimisation would predict that higher labour costs would lead to lower levels of output and lower levels of employment. However if the firm faces a capacity constraint (or a demand constraint) in addition to decreasing average variable costs, neo-classical theory would predict production at full capacity (or at a level to satisfy demand) and no change in the level of production after labour costs increased. Lester’s findings that firms may operate at less than full capacity and that many would respond to increased labour costs by increasing output and employment and improving organisation and sales effort, is not compatible with the neo-classical idea of profit maximisation. Moreover, if firms had constant or decreasing average variable costs and sold in a price taking competitive output market, neo-classical theory would predict that full capacity production was not a long run equilibrium, since such firms would be expected to constantly increase capacity as long as marginal profit of increased capacity was positive.

**Theoretical research since 1992**

Stigler’s (1946) monopsony example was considered to be the exception that proved the rule. Low wage markets are generally characterised by a large number of relatively small employers and hence, a priori, one would expect minimum wages or higher wages to reduce employment. Most of the theoretical advances made since the Card (1992a, 1992b), Card and Krueger (1994) and Katz and Krueger (1994) empirical studies have all been within the neo-classical tradition and most have tried to rationalise how the monopsony model of Stigler can have a wider application than the one company town.
One exception has been Rebitzer and Taylor (1993) who explain the higher employment effects of marginally higher wages through the impact of the latter on worker productivity. Their model is a simple adaptation of the Shapiro and Stiglitz (1984) shirking model which assumes that workers will shirk on the job unless the expected cost of doing so exceeds the expected utility from doing so. Hence firms use a combination of wages and supervision to ensure non-shirking behaviour. Their model is characterised by a large number of small, identical and independent firms. The firm’s labour supply curve is replaced by the non-shirking constraint which is increasing in employment and is less than the marginal cost of labour. In the unconstrained situation, wages are determined the non-shirking constraint. Industry wide minimum wages, set marginally above the unconstrained market determined wage, have the usual effect of increasing the average cost of labour but reducing the marginal cost, thus leading to increased employment. In the new minimum wage environment both minimum wages and the non-shirking constraint are binding. They rationalise this result by assuming that higher wages reduces the incentive for workers to shirk, which allows the firm to reduce the amount it spends on the supervision of workers and to use the freed up supervisory resources to hire more workers. In the new work environment it is possible to hire extra workers without increasing wages for infra-marginal workers. The firm is left in virtually the same profit position as before but as workers are better off, it is a Pareto improving result. Effectively an industry wide minimum wage overcomes an externality whereby firms originally spent too little on wages and too much on supervision. They also stress that theirs is a short term result, since they assume that the number of firms in the industry is fixed.

The other models explain why firms in seemingly competitive sectors, like the fast food industry, may face upward sloping labour supply curves. While these models may have different conceptions and structures, the reason for the positive employment effects (if they occur) are because of upward sloping labour supply curves at the firm level. When firms pay higher wages they retain workers more easily but if they pay lower wages, they will not lose all their employees.
These studies fall into two categories: (i) search models and; (ii) product differentiation models. The best exemplar of the former is a model by Burdett and Mortensen (1998) where the unemployed and the employed search for jobs and better paying jobs respectively. Job vacancies arrive randomly at a discrete rate. It is this friction in the labour market matching process (the less than infinite rate of job offers) that accounts for why firms face positively sloped labour supply functions. Job search is not costless, hence if firms were to lower their wage rate they would not lose all of their workers. Frictions give individual employers a source of labour market power. Their model has been refined and extended by Bontemps et al (1999, 2000) and van den Berg and Ridder (1998). Rauh (2004) also develops an equilibrium search model, whereby a minimum wage can increase employment by inducing workers to accept higher wages rather than continue searching. The product differentiation models of Bhaskar and To (1999, 2003, 2004) focus on the non-wage characteristics of different jobs and assume that workers have different tastes for different work environments. As Manning (2004) says, employers are differentiated in characteristic space, which could be geographic (distance of work from home) or could be related to other aspects of the firm’s work environment (nature of the work and/or the social environment of the workplace). These are models of horizontal differentiation, jobs are neither good nor bad but heterogeneous and workers’ preferences differ over the different jobs. This gives firms some market power in the labour market. The greater the degree of preference heterogeneity, the bigger the gap between the marginal revenue product of a firm and the wages that it pays its workers. Minimum wages have two effects, they increase employment at firm level and induce the exit of marginal firms from the industry. Depending on the specification of preferences, industry employment may increase or decrease. Bhaskar and To (1999) show that if preferences conform to a Salop (1979) type model, whereby firms face localised employer competition, then employment will unambiguously increase after industry wide minimum wages are applied. On the other hand, if preferences are of the Dixit and Stiglitz variety, then a minimum wage will unambiguously reduce industry wide employment (Bhaskar and To, 2004). In a more general model with heterogeneous workers and free entry, they show that the effect on employment is ambiguous (Bhaskar

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2 See Walsh (2003) for confirmation of this result.
and To, 2003). They conclude that it depends on barriers to entry in the industry. The lower the barriers to entry, the more competitive the industry and hence the greater the likelihood that minimum wages will reduce employment through the exit of marginal firms who become uncompetitive due to the cost effect of minimum wages. Conversely, if the industry has high barriers to entry, it is less competitive and appropriately set minimum wages are more likely to increase employment. This can be rationalised in neoclassical terms by asserting that firms will stay in the industry as long as they are still making at least normal profit. They characterise their labour markets as oligopsonistic or monopsonistic as opposed to the idealised cases of monopsony and perfect competition. They add that even when firm level labour supply elasticities are high and concentration low in an industry, the firm can still have wage setting powers, the moral being not to conclude that the aforementioned characteristics indicate a competitive labour market. One essential difference between their models and that of Stigler (1946) is that the labour supply to the firm depends, inter-alia, on the wages offered by other rival firms. If a rival firm increases its wages, then the firm’s labour supply and marginal cost curve will shift to the left. This has implications for the effects of minimum wages, since it implies not just a movement along a firm’s labour supply curve but a shift leftwards of that curve. It increases the probability that industry wide minimum wages will lead to a reduction in employment.

According to Falk, Fehr and Zehnder (2005), understanding of labour market phenomena can be enhanced if the impact of social preferences on individual preference formation is taken into account. These include relational variables such as fairness. According to their experimental research, the introduction of minimum wages would have anchoring effects, which would probably have negative long run effects on employment since it would increase workers’ reservation wage, thus pushing the labour supply curve and marginal cost of labour curve leftwards.

These theoretical developments are very meagre and are not a very convincing explanation as to why employment didn’t historically fall in the sweatshop trades characterised by relatively low barriers to entry or, more recently, in the relatively
competitive service sectors. Moreover, they hardly make the case for the introduction of an industry or economy wide minimum wage, since a necessary, though not sufficient, condition for minimum wages to have no adverse effect on employment within the neo-classical framework, is for “economic rents” to exist. Dickens, Machin and Manning (1994) make the point that the more heterogeneity that exists among firms, the more difficult it is to fine tune minimum wages to the needs of each employer. Hence a minimum wage may have no effect on employment in highly productive firms already paying above the minimum, it may increase employment in firms that are supply constrained (paying the minimum wage increases employment along the labour supply curve) or it may reduce employment in low productivity firms that are demand constrained. The overall effect of a minimum wage on such firms is the combined effect on all firms. Furthermore, the elasticity of labour supply may differ at firm level, industry level and economy wide level. They assume (not unrealistically) that labour supply is less elastic the higher the level of aggregation, concluding that if the industry or economy level labour supply is perfectly inelastic, then minimum wages set at that level are incapable of raising employment but could have knock on effects higher up the wage distribution as firms compete for labour.

In the basic monopsony model, the rate of exploitation (E) is:  \( (\text{MRP}-w)/w = 1/\varepsilon_s \), where, MRP is the marginal revenue product of labour, w is wages and \( \varepsilon_s \) is the elasticity of labour supply.\(^3\) Policy intervention is most effective at boosting employment when the rate of exploitation is small (labour supply elasticity is high) but the range of wages over which a minimum wage can boost employment is also small. Conversely, a high exploitation index (low labour elasticity) means a greater range of potential minimum wages that can boost employment but less effectiveness in terms of employment gains (see Boal and Ransom, 1997).

What one can conclude from theoretical developments within the neo-classical tradition is that the conditions under which minimum wages are most likely to be effective in redistributing income to workers are those where its effectiveness at increasing

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\(^3\)This is the measure of exploitation according to Pigou (1920), which has the advantage of being computable for the local elasticity of labour supply.
employment are least. Moreover, it would be very difficult from an information perspective to design minimum wages in such a way that they would not have adverse employment effects.

**Effects of minimum wages that are difficult to explain within a neoclassical framework.**

A neoclassical theory of oligopsony has as a necessary condition for higher employment after minimum wages are applied, the concept of economic rent. If a firm is to stay in business and not relocate or shut down, then it must be earning more than “normal profits”. Yet the empirical studies that showed increases in employment after minimum wages were applied often focused on sectors with low barriers to entry or what would be considered relatively competitive sectors. Card and Krueger’s (1994) seminal study was on the fast food industry, a sector not traditionally associated with high “economic rents”. Of course the fact that it is a “non-traded” service sector may account for the anomalous employment effects of higher wages. Employers can respond to higher labour costs by: (i) seeking to extract more productivity from workers, (ii) passing on the cost increase to consumers in the form of higher prices; (iii) passing on the cost increase to some of its workers by laying them off; (iv) relocating or (v) absorbing the loss in the form of lower profits. It is presumably easier to pass on cost increases in the form of higher prices in the service sector, especially if all of one’s competitors are similarly affected by higher labour costs. In fact Card and Krueger were somewhat perplexed by their results, which showed that employment and output rose as did prices. Such results are difficult to explain within a neo-classical framework, since they are not consistent with either a competitive market model (lower employment, lower output and higher prices) or a monopsony type model (higher employment, higher output and lower prices). It led critics of their results (Brown 1995) to claim that the higher prices reflected an autonomous increase in output demand. Shepherd (2000) claimed to have resolved the paradox theoretically but only by showing that some firms would go out of business, the remaining ones would expand but overall industry output would fall. Industry employment would rise if the remaining firms substituted labour for capital. This is odd
neo-classical reasoning, the idea that firms will substitute towards the relatively more expensive factor of production. One simple explanation is that firms’ pricing policy is based on a mark up over costs. This does not mean that product market conditions do not influence the extent to which firms will try to pass on costs to the consumer but it does question the neo-classical view of competitive product markets where firms have very little pricing power and higher prices must inevitably mean lower output.

Machin and Wilson (2004) looked at the impact of the re-introduction of the minimum wage in Britain in what they considered to be a vulnerable sector, the UK care homes sector. Their found some evidence of modest job losses but the results were “on the fringes of statistical significance” Like the fast food industry, this is a sector with low barriers to entry, small firms but, in addition, capped prices. This can only mean that the response of many of these small firms to higher labour costs was reduced profit.

None of this is meant to imply that firms will never close down if they become highly unprofitable, it just questions the way the term economic rents and normal profit are used in the literature. The work by Lester (1946a) some 60 years ago revealed that lower employment might not be the preferred response to higher wages even in small competitive industries. In the literature, normal profit is the minimum that a firm must earn if it is not to engage in capital strike, migrate or close down. But normal profit may be of a latitude not recognised in the literature. The more potentially mobile the firm is, the greater the minimum profit necessary to prevent it relocating. Alternatively, capital strike can depend on a firm’s reputation, it may be reluctant to strike if it could have a damaging effect on its reputation or it may be easily pushed into a non-rational profit lowering capital strike for the sake of some irrational prejudice, like an anti-union prejudice.

The neo-classical theory of wages assumes that labour productivity determines wages. Yet equally productive labour may be paid different wages and labour of differing productivity may be paid the same wage. These anomalies cannot all be explained away by compensating differentials or lack of information. This is especially important when
the debate on minimum wages is extended to a trading economy. The neo-classical theory of comparative advantage, which concludes that even the most economically disadvantaged country can profitably trade, bases its theory on the idea that resources get paid according to their productivity. (Krugman, 1998). Hence, labour standards and/or minimum wages will simply hurt the competitiveness of less competitive, developing economies. If we think of regions of a country as being like countries in an international trading environment, then a national minimum wage should induce the most adverse employment effects in those regions dominated by low wage sectors, which are presumed to be low productivity sectors (given the neo-classical assumption that labour productivity determines wages). Stewart (2002) evaluated the effect of the re-introduction of minimum wages in Britain in 1999. The a priori expectation was that the greatest decline in employment would be in areas with a high percentage of low wage workers compared to areas with relatively few workers who were paid below the minimum wage. This was not the case. This must surely raise questions about a productivity based theory of labour determination and the potential effects of labour standards in developing countries. Rama (2001) looked at the impact of the doubling of real minimum wages in Indonesia, a country with an impressive economic performance but a lot of labour intensive firms operating in the textile, clothing, footwear and electronic sectors. He found no significant effects on overall levels of employment, although when he did a more disaggregated study he found negative (and significant effects for small firms) and some positive effects for large firms. His study is significant insofar as the industries that are the basis of Indonesia’s growth were all attracted there because of low labour costs and Indonesia is competing with countries that offer even lower wages such as Bangladesh and Vietnam.

The monopsony/oligopsony theory of increased labour demand after minimum wages are enforced assumes that increased employment comes from increased voluntary labour supply. The limiting factor in terms of the level of employment was not the decision of firms to hire or not, but the decision of labour to supply its services or not. The idea of voluntary unemployment in a model where firms are assumed to have market power is intuitively implausible. Manning (1995) tried to address the voluntary unemployment
feature of these models by merging monopsony in the labour market with the Shapiro and Stiglitz (1984) shirking variant of the efficiency wage model. Thus labour supply becomes redundant in the firm’s employment decision which is now determined by labour demand and the firm’s effective labour supply curve, the non-shirking constraint. The firm will not accept all workers who want to work at the firm but turn away those whom they believe will shirk. This could be due to a high value of leisure or adeptness at shirking. Those workers who are turned away because it is thought that they will shirk can be called the involuntarily unemployed, since they can’t price themselves into a job by reducing the wages at which they are willing to work. All is an elaborate explanation to explain the difficult fact that low wage workers may not choose to be voluntarily employed but may in fact have difficulty in securing work.

According to most of the theories attempting to explain why employment may not fall after minimum wages are imposed, the more widespread the minimum wage the less likely it is to have positive employment effects and the more likely it is to have negative effects. This is because labour supply is assumed to be more inelastic at a more aggregate level (thus lowering the potential employment boosting effects of minimum wages) or, another way of saying the same thing, is the Bhaskar, Manning and To (2002) idea that a firm’s labour supply curve shifts leftwards as other competing firms increase their wages. In addition, heterogeneity among firms makes it likely that minimum wages will be too high for some of them thus causing them to lay off workers. This runs counter to commonsense where one would expect that the more widespread the minimum wage, the smaller its potential adverse employment effects, since firms can pass on the cost increase with less fear of loss of market share.

It is hard to get away from Osterman’s (1995) criticism that the theoretical models are simply clever ex post rationalisations of observed phenomena and that they are not grounded in a sensible model of how firms take decisions regarding production, sales and employment. Neither is it clear how the neo-classical framework assumed by these authors is consistent with the anti-marginalist approach adopted by institutionalists such as (1946a, 1947a), despite the dedication on Card and Krueger’s 1995 book and the
similarities alluded to by Hammermesh (1995). Lester’s empirical work indicated that the most important determinant of employment was output and expected sales, that average variable cost of production was decreasing or constant over output and that firms indicated that their most likely response to higher labour costs would be improved organisation and increased sales effort. A survey conducted in Indonesia among managers in the footwear and garment industry showed that minimum wages were not the main concern for managers. More important problems were low labour productivity, trade barriers, licences and general problems with bureaucracy (cited in Rama, 2001). Hazard (1957), speaking from a management perspective (albeit a little dated), stated unequivocally that the first goal of a competitive enterprise is to maintain its producer-customer relationship, which means that production comes first, and profit and prices next. Sales, customers, market access, licences, the message is similar, the status of the firm as a reliable producer comes first, what wages are to be paid are determined by factors antecedent to it.

So where does this leave the neo-classical model of the firm? It could be argued that the neo-classical model can incorporate the above facts by introducing information deficiencies, capacity constraints, risk aversion etc. So decision makers may not know the elasticity of demand for their output (or the marginal cost of production) and technology could exhibit decreasing or constant average variable costs (or they may perceive it to be that way) but this still fails to explain why firms would operate at less than full capacity. It likewise fails to adequately explain why re-organisation and improved sales effort would be the preferred option of firms if their labour costs increased, since the behavioural assumption of the neo-classical method is optimisation. Why might firms not be optimising prior to increases in labour costs? One explanation is again information. Decision makers may not know the cost and profit consequences of different organisational forms so optimisation does not make sense as a behavioural guide. Rather they may have sales targets and profit targets and the stimulus to changed behaviour may come from developments in the external environment (such as minimum wages) that threaten profits if the firm fails to respond to the new challenge. In a similar vein, firms may be slow to increase capacity because of risk aversion.
So could we conclude that the firm’s decision maker is still behaving rationally and optimising something (utility?) albeit in a challenging informational environment? One could argue that the decision maker in the firm is rationally using all information available to best satisfy their preferences? But where does this leave the neo-classical theory of the firm? According to Osterman (1995) there is no general theory of labour markets, since firms will respond in different ways to changes in the economic environment, such as increased wages. Some will respond passively, some will optimise, some will innovate. Kaufmann (1999) addresses the psychological deficiencies of the neo-classical model of the firm and of labour markets. Agents may not be able to optimise effortlessly if they have bounded rationality, either due to limited information or cognitive limitations. However he adds the role of emotion in decision making, how too much or too little stress may lead to sub-optimal performance as some agents get panicked and addled and are not capable of purposive rational action. There may be a variety of responses to challenging economic developments. This reminds us of the importance or otherwise of motivation to the status of economics as a predictive science. This debate started by Lester (1946a, 1947a) provoked responses from Machlup (1946, 1947), Alchian (1950) and Friedman as to the nature of economics. According to Machlup (1946), it doesn’t matter if managers do not know marginal magnitudes or do not consciously optimise, since their habits and routines are learnt behaviour that derive from profit maximisation. Alchian (1950) introduced the idea of natural selection and claimed that in a Darwinian fight for survival, those firms that will survive are those whose strategies are closest to optimum profit maximising strategies. He concludes therefore that economists can still make predictions. Finally Friedman (1953) exhorted us to accept a theory on its predictive power, not its motivational basis. Yet it is precisely the failure of neo-classical economics in predicting what will happen if minimum wages are increased, that is at question. Also Alchian’s notion that the economist will know the economy’s required requisites for survival and the most appropriate behaviour is a view that has been challenged by many, who point to the inadequacy of top down knowledge and the damaging effects of a one strategy fits all situations approach to policy, which is favoured by neo-classical economists. An important division between neo-classical and
institutional economists is that the latter stressed the importance of detailed case studies and empirical work; in other words a bottom up approach to theory and policy prescription.

**Institutionalism**

A criticism of the neo-classical productivity approach to wage determination is that it appears to be contradicted by stylized facts. A criticism of an institutional approach to labour markets is that it is too descriptive and ad hoc and lacks any overarching theoretical structure. However there are insights, especially from early institutional theorists like Thorston Veblen and John Commons that are very instructive in addressing the issue of wage determination and the likely effects of minimum wages.

Veblen may have recognised the centrality of business to general economic welfare but he did not conflate business interest with economic welfare. The pecuniary motivation of the business class means that it will do what it needs to do to make profit. This will include cost shifting to workers, the environment, the government, consumers and society at large, where such cost shifting is feasible. (See Praasch, June 2005 and Champlin and Knoedler, Dec. 2002). Institutional economists seem to be less naïve about the motivation and behaviour of business than their neo-classical counterparts who, while accepting the legitimacy of the profit motive, proceed to assume that businesses will operate within the legal framework and not seek to change or break the rules when opportune to do so in the interests of the bottom line. Veblen identified business activity as falling into two categories, useful activities and selfish activities. The latter he claimed will be overlaid with ceremonial justification and enabling myths. One such myth is that what is bad for business is also bad for the worker, the consumer and society at large. So for example, in a submission to the Joint Economic Committee of the US Congress on the effects of minimum wages, the research presented is designed to show that minimum wages hurt most those they are designed to help (the young, the unskilled, poor black males). It is also claimed that they hurt small business, result in less training of workers, lead to increased hiring of illegal immigrants, increase crime, cause inflation and lower the capital stock. Given the litany of social ills associated with minimum wages, one
wonders why anyone, especially the poor and disempowered, would be interested in their introduction and maintenance. What is interesting about the list of potentially adverse social consequences is that key actors in facilitating these effects are the decision makers in firms. Managers and/or owners make the decisions to hire less, invest less, pass on costs to consumers, hire illegal immigrants etc. Some of these decisions are legitimate within the current legal environment while others are not. All are presented with an overlay of moral justification as though these managers had no other option, given market realities.

For Commons, there is no pre-ordained price for goods or labour just as there is no such concept as general welfare. Conflict of interest in exchange, which arises out of scarcity, is his starting point. Laws and working rules resolve this conflict by prescribing some actions and proscribing others, in other words laying down the parameters within which individual discretion can be exercised. Price is inseparable from the rules governing production and exchange. Within the zone where individual discretion can be exercised, economic laws exist that explain economic outcomes. (see Ramstad, 2001). The terms of exchange (price) are determined by the power of the parties to that exchange. The power by one party to wait for the other to give in, influences one’s willingness to exchange and hence the terms of exchange in favour of the party with the greatest capacity to wait. The wage bargain is unlikely to be fair, in the sense of an outcome where both parties have equal power, because of the superior resources of the capitalist and his ability to wait. Even when the capitalist’s range of action is proscribed by minimum wages and other laws relating to terms of employment, he can still decide on how much labour to hire and ultimately fire. It is this power of determining employment that leads some commentators to conflate business interest with general societal welfare. The neo-classical presumption is that proscribing their power in the wage setting sphere will automatically have adverse consequences in terms of their decisions regarding employment, investment and overall level of economic activity.

The institutional approach to labour market theory does not question the power of capitalists to make employment decisions. What Lester’s empirical studies challenged
was the idea that managers have enough information to make marginal decisions regarding output and employment (see Lester, 1946a, 1946b, 1947a, 1947b, 1952, 1957). Among the evidence that he presented were similar production techniques in multi-plant firms in the north and lower waged south of the United States, wage variation within industries and localities and a predicted managerial response to higher wages at variance with neo-classical predictions. Different inter-firm, intra-industry wage strategies would suggest that information is not a public good when it comes to the organisation of production and sales. Failure to adapt production methods to local market labour conditions and the claim by managers that their preferred response to higher wages would be improved organisation and sales effort suggests that profit maximisation is a nonsense, at least in the neo-classical sense, as managers do not have enough information to predict the profit consequences of different hypothetical production and organisational forms. Profit matters, but change is a product of a changing environment and new working rules. For Lester (1957), the neo-classical theory of production was too static and mechanical, it was a theory that allowed management no latitude or discretion in terms of how to respond to a changing economic environment and changing rules of economic exchange. He spoke of a zone of no reaction within which changing rules brought no change in management behaviour or organisational form. His earlier empirical work suggested a zone of positive reaction, whereby managers respond to higher labour costs by increasing production and hiring more labour. This is in marked contrast to the neo-classical prediction of a negative reaction to higher labour costs because of the presumed substitutability of factors of production and decreasing net marginal profit in production. Lester was more an empiricist than a theorist and the major theoretical contributions to labour economics from an institutional perspective came from Clark Kerr and John Dunlop. The former questioned the idea of a single labour market and hence the law of one wage on the grounds that labour markets are segmented. This segmentation derives from “distance gaps between locations, lack of knowledge, the job tastes of workers, inertia, desire for security and the personal predilections of employers” (p. 9, Kerr, 1954). These explanations are a foretaste of some of the more recent neo-classical explanations for the monopsony power of firms (see Burdett and Mortenson, 1998 and 17and To,
For Kerr (1954), each internal labour market was unique with its own institutional rules and access to a given labour market could only occur at pre-specified nodes. Dunlop (1957) developed the idea of internal labour markets with the concepts of job clusters and wage contours. The latter supplies the link with the external market (and presumably conditions of supply and demand) through the inter-action of firms in an industry. The dominant firm in an industry will determine the wage contour, which will impact on other firms’ key internal rates via its impact on the wage rate at the port of entry. However, the external labour market is only one of many forces that influence a firm’s internal wage structure, thus allowing for wages to differ in the same industry and locality. This is one attempted theoretical explanation of the phenomena described by Lester, whereby firms in the same industry or locality pay different wages. The work of Kerr and Dunlop provided the basis for the Segmented Labour Market theories of Doeringer and Piore (1971) and Edwards, Reich and Gordon (1975). The former emphasized the dual nature of product markets and, as a consequence, labour markets. There are product sectors characterised by monopoly and/or oligopoly, where the firms are large and capital intensive and where product demand is stable. In neo-classical parlance we would say that these are sectors where economic rents are earned. Workers in these sectors enjoy good conditions of work, with steady employment and opportunities for advancement, as well as relatively high levels of remuneration. In other words, they get to share in the economic rents that derive from product market conditions and the production set up of the firm. There are other product markets characterised by high levels of competition and unstable demand. Production is labour intensive and the firm tends to be small in size. Workers here earn relatively low wages and endure difficult working conditions, with little opportunity for advancement and insecure employment. Dual labour market structures are assumed to derive from dual product market structures. Wage differentials between workers in the primary (high wage) and secondary (low wage) sectors are not compensating wage differentials. The former are fortunate and the latter are not. Edwards et al (1975) focused on management strategies for differentiating between groups of workers through control of the production process. A divided workforce is seen as being conducive to profitability as it weakens the collective bargaining power of workers. The later segmentation theorists associated with Cambridge developed the supply side of
SLM theory and the scope for worker organisation and laws to improve wages and working conditions. Certain social groups (women, ethnic minorities, lower social classes) get shunted into the secondary labour market. This has less to do with their intrinsic skills than with a low societal evaluation of these skills and inadequate organisation. (They reject the human capital theory). Humphries and Rubery (1984) argue that gender differences in labour supply is a product of family organisation which is historically determined by the earnings options and opportunities afforded to women. Wilkinson (1983) emphasised the need for a dynamic and interactive analysis to take account of the historically contingent nature of labour market outcomes, while Deakin (1986) examined the role of labour law in structuring labour markets (in the Commons tradition).

**Is there a problem with this analysis and how does it explain the effects of minimum wages?**

A standard criticism of institutional analyses, whether it is that done in the 1940s and 1950s or the SLM theories of the 1970s and 1980s is that the research is too descriptive and that there is no unified theory that can be used to explain labour market phenomena. According to Fine (1998, p134-135), SLM theories use a triple analytical structure, whereby industrial structure determines labour demand, the relationship between society and economy determine labour supply and the labour market structure is the product of their interaction. Neo-classical theorists have also criticised labour market segmentation theories on the grounds of that they cannot be explained by either individual or collective behaviour. More specifically they question why firms in the primary sector share rents with workers as opposed to devising alternative work contracts. To some extent this issue of rent sharing has been addressed by the literature on efficiency wages (see Bulow and Summers, 1986) but the most convincing of the efficiency wage theoretical variants has to be the sociological models, which recognise the importance of perceived fairness if workers are to be motivated to work in the interests of the firm (Akerlof, 1982. Akerlof and Yellen, 1990).
What one could question is the uni-directional nature of the demand side of the labour market. Conditions in product markets determine whether or not “economic rents” exist and other considerations then determine whether these rents get shared with workers or not. As far as the whole debate on minimum wages is concerned, the implication is that minimum wages may not adversely employment if economic rents already exist in that sector and legislation simply obliges firms to share these rents. However, in the simpler variant of the SLM models, the high rent sectors are already paying above the competitive wage. Low wages are paid to those workers operating in the competitive side of the economy. Low paid jobs in Developed Countries are in sectors like childcare, cleaning, catering, the hotel industry, the fast food industry. Minimum wages have had an impact on the wages of workers employed in the “competitive” sector, yet have not resulted in the predicted unemployment that either neo-classical theory or the dual labour market theories would predict. A theory that sees labour market conditions (especially wages and labour demand) as emanating exclusively from product market conditions cannot explain this empirical phenomenon. The older institutionalism of Commons (1934) may be more up to the task of explaining why political measures that increase the bargaining power labour do not automatically result in increased unemployment. Just recognising that price is inseparable from the rules governing production and exchange is a start. Labour regulation is not an interference with the free market, it simply another form of regulation along with the customs, norms and practices that govern the way labour was contracted. Understanding why some jobs are low paid requires understanding why they were traditionally socially undervalued. This has historical roots and can be partly explained by the inability of certain social groups to organise and demand higher wages. Path dependency can partially explain why this position has persisted for certain jobs. Card and Krueger (1994) had difficulty explaining why their empirical study of fast food restaurants in New Jersey appeared to confirm a monopsony story in terms of increased employment effects but a competitive story in terms of increased price. This is in keeping with marginalist logic that higher output (as a result of higher employment) should have resulted in lower prices. Adopting an alternative theory of firm pricing policy, such as a mark up over costs would be sufficient to explain why prices increased after minimum wages were introduced. This post-Keynesian approach would be
consistent with the empirical findings of Hall and Hitch (1939). This is not to say that firms have total discretion as to pricing policy but it seems intuitively plausible that there will be much less resistance to passing on increased costs (caused by minimum wage legislation), to the consumer, if all of their competitors are similarly affected. A characteristic of low wage sectors in Developed Countries is not just the composition of its workforce but also the fact that they are service sectors, that is to say, sectors that traditionally did not have international competition. Hence firms’ pricing policy in such sectors is probably different to what it would be if the sector was internationally tradeable, especially when the scope of legislative measures also impacts on their competitors. Allowing for two way causality between the product market and the labour market could partially explain why higher wages do not necessarily result in lower employment, especially if firms can successfully pass on the cost of higher wages to the consumer, without adversely affecting demand (see Pollin, Brenner and Luce, 2002).

However, while firms may be able to pass on some cost increases to the consumer, it may not always be feasible or it may be only possible to pass on some of the cost increase, depending on nature of the product market. This raises a second question. How will firms who see their profits adversely affected by minimum wages respond? If they are working in competitive sectors (especially tradeable sectors) and they can’t cost shift, how much scope do they have to absorb losses before it makes economic sense to either relocate or to close down? Lester (1946) may have questioned marginalist decision making, but this still leaves unanswered the second question about “economic rents” being a necessary condition for paying wages above some market determined competitive rate. For those trained in the neo-classical tradition, sectors with low barriers to entry tend to be competitive and competitive sectors operate on low margins. Here the neo-classical (and SLM) concept of economic rent is both useful theoretically yet misleading in a practical sense. It is useful insofar as it defines the fall back position of parties to an exchange (their so called opportunity cost) before they cease to be interested in exchange, yet misleading in that simple accounting evidence of high or low profit may not tell us whether economic rents are being earned or not? A firm earning huge profits from production may be considered (in the neo-classical sense of the word) to have low
economic rents, insofar as it has other profitable production options, which it will exercise if the costs of producing in its current location are considered too onerous. By contrast a relatively small firm operating in a competitive industry with low barriers to entry may have higher economic rents than initially appears to be the case because of its lack of options and lack of mobility. Economic rent is the surplus between price of output and the cost of inputs in addition to the opportunity cost of labour and capital. Laws, property rights, ownership of assets, market power all determine the size of this rent. **It is not a fixed amount,** therefore changing the rules changes the opportunity cost to the different parties involved in an exchange and influences their behaviour. For example, a firm could be making a fixed amount of accounting profit from producing in a certain location. If the option to transfer capital relatively cheaply to another location exists (no tax on capital transfers and possibly incentives from local or national governments in the alternative location), their opportunity cost will be high and economic rent subsequently low. Hence legislative or other measures that reduce their profit could induce relocation and a loss of jobs. If, on the other hand, the cost of relocating was high (because of different rules), measures that adversely affect their profit may not induce a change in their output or employment behaviour since the alternative may be worse.

Firms with market power due to their size can extract favourable conditions not just from workers but also from other firms with whom they trade. These firms may be at any point in the production chain. They could be manufacturer’s like Nike or retailers like Tesco. What matters is that they have the economic clout, through the sheer volume of their sales and/or purchases to compel other firms in the production chain to offer them favourable terms of exchange and hence increase their profits (and economic rent). I use the term rent deliberately to indicate scope for action to reduce same without necessarily provoking a backlash from the firms adversely affected, if they see that there is no alternative. What campaigns like end the sweatshop labour campaigns have shown is how adverse firms are to bad publicity and how willing they are to be **seen** to be responding to public concerns. This would come as no surprise to Institutionalists such as Veblen and Commons. The bottom line is profit. If bad publicity affects sales, then firms may take measures to partially address the problem. Addressing the problem may increase their costs and reduce their profit/ economic rent, but it is better than the alternative. Of course
A first best world for such firms would be one where these problems do not arise. Preemptive measures are best. Long, globalised, production lines where much subcontracting takes place benefits multinational firms in a number of ways. The multinational nature of their activity give them a bargaining advantage with labour and national governments. The perception of their mobility allows them to extract favourable terms (wages and fiscally) under which to produce. Moreover, it is more difficult from an information perspective to monitor the conditions under which production is taking place. Hence the common defence of ignorance when labour abuses are discovered. For example, the collapse of a nine-storey factory in the export-processing zone of Savar, near Dhaka in Bangladesh on 10 April 2005, where at least 100 workers died, was due to criminally negligent construction. The rationale was the imperative of the market and the need to ensure continuity of supply to their European customers. The company’s main client is Inditex (Zara) based in Barcelona and is supposed to have carried out social audits of its 900 Asian subcontractors since October 2004. But the Savar workforce went unnoticed and unchecked as they were hired by an Indian company who didn’t tell Inditex. Whether ignorance is real or feigned, the fact remains that when extensive subcontracting exists in certain sectors, allied with the market power of the dominant player in the production chain, this has to increase the probability that labour abuses will occur. The principal beneficiaries are the dominant firm (in terms of profits) and possibly consumers in Western markets if cost cutting gets passed on to them in the form of lower prices.

The bargaining power of labour is also determined by its opportunity cost which is a product of its economic situation and its legal rights and entitlements. As Commons was at pains to point out, there is no such thing as general welfare, and legislative interference is not necessarily a curtailment of liberty. The liberties of some section of society may be reduced by legislative measures while those of others may be enhanced. Information rights, public transport, reasonably priced child minding facilities, the right of labour to organise, quite apart from welfare assistance if unemployed, all serve to increase the opportunity cost of labour and put a downward floor on wages. Because of the imbalance

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4 See Le Monde diplomatique, August 2005, pp. 6-7.
of economic resources between capital and labour, the latter needs all the legislative assistance that it can get. Management in firms can and do rationally deploy resources to further weaken the bargaining power of labour. The co-option of workers, the routine infringement of their civil liberties are all standard managerial practices in the low paid competitive sector.\(^5\) By lowering workers evaluation of their own self worth, they reduce their fall back position (opportunity cost), which adds to firms’ profitability. The legislative environment globally has moved in the last 30 years in the direction of conferring extra rights on capital and consequently extra burdens on labour. This is true in developed countries and developing countries. The enabling myth is that this is in the interests of all, capital and labour in developed countries and developing countries. It is rational for business elites to sustain this myth, just as it may be rational for key State actors to adopt a similar position. Workers with limited opportunities do what most people do when confronted with difficult circumstances that seem immutable, they adapt. “Considerations of feasibility and practical possibility enter into what we dare to desire and what we are pained not to get….The deprivations are suppressed and muffled in the scale of utilities by the necessity of endurance….” (Sen, 1985, pp. 21-22). The first step in terms of myth debunking is to question the rationale behind giving business more power and then claiming powerlessness in the face of business dominance. Efforts to improve the lot of labour (through the minimum wage and other measures) may have negative effects on labour under the national and international rules protecting capital as currently constructed. This does not mean that the rules are immutable. The bargaining power of firms and the threat of relocation if minimum wages are applied may be real but only to the extent that such relocation is not too costly. Economic rent may indeed be a necessary (though not sufficient) condition for labour to benefit from minimum wages but economic rent is a flexible concept that bears little relationship with actual profitability and a lot of relationship with the rules and regulations that determine firms’ fall back position.

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\(^5\) See Barbara Ehrenreich’s Nickel and Dimed for an account of the treatment of low paid workers in the US.
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