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The Welfare Society in the 21st Century

Bernard Enjolras

INCENTIVES

The impact of labour market regulation on economic performance

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A review

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Preface

This report is one of the products from a project entitled *The Welfare Society in the 21st Century*. Funded by the Norwegian Confederation of Trade Unions (LO) and the Norwegian Labour Party in commemoration of LO's 100th anniversary in 1999. The project spans a broad range of issues, including economics and working life, everyday life and civil society, social services, social security and welfare state distributions. A number of publications show how Norwegian society has developed in recent decades, and discuss challenges and opportunities on the threshold of a new millennium.

The project is based on contributions from scholars in Norway and abroad. Some reports are based on papers delivered at seminars while others are the result of more comprehensive studies. A list of all publications resulting from the project – a total of 44 reports and the main book *Between freedom and community* (in Norwegian only) is annexed.

The project has been directed by a project group headed by Ove Langeland and otherwise composed of Torkel Bjørnskau, Hilde Lorentzen, Axel West Pedersen, and Jardar E. Flaa and subsequently Reid J. Stene. The group received useful and constructive comments from several colleagues at Fafo and from other sources. Jon S. Lahlum has ensured that the reports are published in professional form. The project group would like to express its gratitude to the sponsors for making the project possible.

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Ove Langeland

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1 Introduction

Do labour market regulations have a negative impact on economic performance? This question has been on the political agenda since the 1980s and constitutes a fundamental challenge in the area of public employment policy. Since the mid-1970s, most industrialised countries have suffered from a slowdown in growth. Although the United States is not an exception, it has experienced a rate of employment growth which is higher than most European countries. Between 1975 and 1984, 20 million jobs were created in the United States, while the number of jobs remained unchanged in Europe. Many analysts have attributed the American miracle to the flexibility that is characteristic of the American labour market. But is the inflexibility of the labour market responsible for European economic performance? Are job security and turnover costs responsible for the bad employment performance and the slow growth of the European economies? Are trade unions detrimental to economic performance? What is the impact of the minimum wage on economic performance? Before turning to these questions two methodological questions have to be clarified: what is inflexibility and what is economic performance?

1.1 Flexibility

What are people talking about when they refer to the flexibility of the labour market? The common usage of the term "flexibility" refers to the speed at which prices and quantities adjust in response to a change in the economic environment. This may refer to the flexibility of salaries when the level of unemployment varies (Philips curve) or the flexibility of exit rates from unemployment or employment (mobility). Finally, in a wider definition, it may involve all the ways in which the firm adapts, through changes in technology or the qualification of labour, to respond to changes in the environment.

Piore (1986) distinguishes three senses of the term "flexibility":

- The flexibility which refers to the liberty of employers to separate themselves from their workforce in accordance with variations in the economic climate.
- Flexibility understood as the ability for salaries to vary in accordance with the supply and demand situation in the labour market, in order to absorb imbalances.

- Flexibility understood in the sense of the possibility of converting the traditionally hierarchical and rigid way in which enterprises are organised into a flexible organisation that will be able to adapt to rapid changes in the environment and in demand.

In the following review of literature the two first definitions of flexibility (and by contrast of inflexibility), i.e. of wages and of employment, will be mainly considered.

1.2 Economic performance

Economic science does not provide a simple measurement of economic performance. Economic theory is extremely cautious as far as aggregate economic performance is concerned. It mainly looks at ways of maximising individuals' utility without trying to measure or to aggregate it. It is nevertheless possible to compare the utility of different situations by observing the choices of individuals.

From an economist's point of view the main sources of utility are the consumption of goods and services and leisure time. Individuals pay a price for their consumption, mainly in the form of foregone leisure time (because they have to work). However, this consumption (or the work required for it) involves many other costs which may be borne by the individual him-/herself, his/her family or society as a whole: stress and health problems, lack of time for the family, pollution, depletion of resources, etc.

Economic science has never been able to tackle the issue of aggregate utility, which would be the ideal economic performance indicator. Economists regard it as impossible to measure and to compare *absolute* levels of utility (or 'happiness') between individuals, which also excludes the possibility of adding up individuals' utility levels.

A society's aggregate utility therefore cannot be measured directly. Economic science may be able to identify situations where the utility of one person can be increased without reducing the utility of others ('Pareto improvement'). By moving to such a situation, economic performance would certainly be improved, but we would not know by how much and to what aggregate absolute level.

We can only use a proxy to measure economic performance. The most common proxy is the 'official' output of goods and services (GDP), which excludes the underground economy and household production, and includes the cost of repairing damage caused by production and consumption.

Other proxies are used such as the rate of growth of GDP, the level of employment, and the level of productivity.

The studies under review here do not provide any clearcut or unified definition of economic performance. The main indicators used are the rate of growth of GDP, the level of employment and the rate of productivity growth.

This paper consists of a review of the economic literature on three dimensions of labour market regulation: job security, the minimum wage and the role of trade unions. These three dimensions are systematically examined from the point of view of their impact on economic performance. Such a study leads to a re-evaluation of the recommendations in favour of deregulation of the labour market. Without anticipating the conclusions, it can be stated right from the outset that the question does not so much involve making statements about the level of regulation (deregulation versus regulation), but rather of defining criteria allowing regulations to be adapted in order to take into account structural modifications of the economies and to create optimum forms of regulation.

2 Job security and turnover costs

Regulation which seeks to guarantee job security mainly involves the rules governing recruitment and dismissal (Emerson 1988a), and in particular: rules intended to promote the recruitment of disadvantaged groups, rules governing dismissal and resignation (both individual and collective), and rules governing temporary work, fixed-term employment and part-time work. To what extent does this regulation fulfil an economic function? What is the impact of this regulation on the levels of unemployment and employment and on economic performance?

2.1 Labour market regulation and firm behavior

Three types of models of the labour market make it possible to perceive, either directly or indirectly, the role of rules that promote job security at the firm level: the efficiency wage theory (Akerlof and Yellen 1986), the insider-outsider theory (Lindbeck and Snower 1988a), and the implicit contracts theory (Rosen 1985).

Efficiency wages

The efficiency wage theory offers a theoretical framework that explains the inflexibility of wages, in other words the fact that the level of wages is higher than the level at which the market would be in equilibrium. The basic hypothesis involves taking the view that the productivity of employees is positively correlated to the level of wages. The level of wages that minimises the cost of labour to the firm does not necessarily correspond to the level of pay that creates an equilibrium in the labour market (Katz 1986). In this context (cf. Weiss 1991), wages affect the quality of labour, either through the distribution of the workers who are recruited (the adverse selection effect) or through the performance of individuals (the incentive effect). Although this theory essentially deals with the inflexibility of wages, there are many arguments that could be extended to cover the existence of rules governing the employment relationship.

In the labour market, purchasers do have to face uncertainty in relation to various aspects of the productivity of employees. Although reducing the wage which they offer has the result of significantly reducing the average quality (in terms of performance) of the candidates applying for employment, firms may reasonably consider that the reduction of wages reduces their performance. The models of the labour market in terms of adverse selection explain the failure of firms to reduce wages in the presence of an excess labour supply in terms of the impact which a change in the contractual wage would have on the qualitative composition of the workforce and therefore on the performance of the firm. While the initial wage is correlated with the contribution (in terms of skills) made by employees, a reduction in wages would discourage precisely those potential employees whom the firm is seeking to attract. At the same time, the employees working for the firm would be encouraged to resign. The firm has a double incentive not to reduce the level of wages in the presence of adverse selection: a reduction in the level of wages would, on the one hand, not allow it to attract effective employees, while on the other hand it would also increase turnover costs and reduce the level of effort made by employees and their loyalty towards the firm.

The level of wages also affects the level of effort (incentive effect). The importance of the motivation generated by high salaries and the negative motivation associated with low salaries are based on the idea that in many companies the workers can create serious losses for employers by not caring for equipment, resisting technological change, not caring for customers, etc. In many cases it is impossible for the employer to localise responsibilities. The employer cannot prevent

things going wrong except by relying on the goodwill and motivation of employees.

The "shirking" model considers that checking on labour is expensive for the employer. Under these conditions it may be advantageous for the firm to offer higher wages than the opportunity cost of the employees. By increasing the wages the firm increases the cost to the employee of losing his job and motivates him to increase his efforts (not to shirk). The "turnover costs" model develops the argument to the effect that employees will have less incentive to leave their job, the higher their wages. If firms have to bear part of the turnover costs, and if these costs are inversely related to the level of salaries, firms have an incentive to increase salaries in order to reduce turnover costs. In these two models, the failure of the market is based on the dual role of wages: as a means of selection and motivation of employees and as a market price at equilibrium. The same wages cannot make it possible to create a balance in the market for new (inexperienced) employees at the same time as in the market for qualified, experienced employees. In this case a system of remuneration based on the employee's period in service may be efficient from the firm's perspective. However, if the turnover costs are higher, the more qualified and experienced the employees are (which can be positively correlated with the length of time spent working for the enterprise and the incorporation of specific human capital), regulation limiting the conditions under which employees are dismissed is itself justified from the perspective of the efficiency of the firm.

Insiders–Outsiders

The insiders-outsiders theory also offers an explanation for the downward inflexibility of wages. From this point of view it is a theory which is in competition with the efficiency wage theory (Lindbeck et Snower 1987b). The two are not, however, mutually exclusive, and it is even possible to take the view that these two effects operate simultaneously in labour markets. In the insider-outsider theory, the reason for the inflexibility of salaries (and for the resulting unemployment) lies in the presence of turnover costs and the ability of the existing employees (insiders) to influence the level of their wages without taking into consideration the interests of either new employees (entrants) or unemployed people (outsiders). The market power of insiders is made possible by the existence of turnover costs which allow them to obtain salaries higher than the starting pay offered to new entrants, while still persuading the firm not to bring in outsiders.

Various suggestions have been put forward to explain the way in which insiders can exploit and manipulate turnover costs to their own advantage:

- Through recruitment and training activities (Solow 1985), outsiders become "entrants" after the firm has borne the costs of advertising, selection and negotiation. Entrants become insiders after these costs have been absorbed. Dismissing insiders involves severance costs and the costs associated with the procedure itself.

- Through the activities of co-operation and aggression (Lindbeck and Snower 1988), insiders co-operate with each other and show aggression towards undesirable entrants (by hindering their integration within the firm), so that a productivity gap emerges between insiders and entrants.

- Through the modulation of effort according to the level of turnover, employees have less chance of being dismissed the higher their level of effort. Although the firm has only an imperfect control over the level of effort, it can induce effort not through the wage system, as in the case of the efficient wage, but through the turnover rate (the higher the turnover rate, the lower the level of effort).

Regulations governing labour relations have a fundamental part to play in the insider-outsider theory, since they help to generate the high turnover costs on which the insiders' market power is based. In terms of economic policy, this theory could serve as a basis for activities aiming to deregulate the labour market (by dismantling the rules guaranteeing job security) in order to reduce the insiders' market power. However, such a policy would be ambiguous in its effects (Lindbeck and Snower 1990). Although such measures could have the effect of reducing the wages in real terms (either by reducing the turnover costs or by reducing the insiders' market power) and could therefore reduce unemployment, they could well have the opposite effect. In fact these measures do not allow Pareto improving to take place: the improvement in the situation of the outsiders is at the expense of the insiders. The insiders may well respond to this deterioration in their situation by initiating activities intended to further their own interests (harassment of entrants, refusal to to co-operate with entrants, strikes, legal action, etc.) which could ultimately result in an increase in the market power of the insiders or in increased turnover costs.

Implicit contracts

According to the implicit contracts approach, employment contracts incorporate a payment of insurance premiums by employees under favourable circumstances and allow them to benefit from compensation in unfavourable situations. As Rosen notes (1985), the implicit contracts theory is based on the idea that the workforce generates labour fixed costs associated with the existence of human capital specific to the firm, which leads to long-term employment relationships being valued. Since the existence of long-term employment relationships generates a shared benefit creating a "wedge" between the current value of the labour and the employment opportunities outside. Under these conditions it is not so much the current value of the wages as their actualised value which is important to the employee. In fact the existence of a specific human capital, ownership of which is shared between the employee and the firm and the yield on that is aleatory, since it is susceptible to variation depending on the state of demand, raises the question of knowing how risks are shared. Since firms are less sensitive to risk, particularly because they can offset the risks to which they are exposed in the capital market by diversifying their assets (while the employee only has human capital, which cannot be diversified), the presence of an insurance component in the employment contract only reflects the gains resulting from the exchange between agents who do not have the same aversion to risk (firms are risk neutral, while employees are risk averse). The existence of different types of behaviour in response to risk manifested by firms and employees may explain why firms maximising their profits may prefer contracts of employment which provide elements of inflexibility. In this hypothesis, regulation in the area of job security could only manifest this preference for inflexibility over time. Moreover, the existence of compensation on dismissal is necessary in order to realise optimal contracts, i.e. contracts which allow employees who are made redundant to attain the same level of marginal utility of income (including the utility of leisure time) as the employees who remain in employment (Wolfstetter 1990). The way in which the inflexibility of salaries is explained by implicit contract theory, however, is based on significant hypotheses in relation to the attitude of the firm towards risk and the appreciation by the firm and the employee of the probability distribution of the price of the firm's product (Carruth and Oswald 1989).

2.2 The effect of regulation in favour of job security

The regulation of the labour market in European countries is often put forward as an explanation of their poor performance in terms of unemployment. Turnover costs restricting wage competition is said to explain the "Eurosclerosis" which persists in a context of volatile demand. Bertola and Ichino (1995) therefore put forward the hypothesis that the emergence of a more volatile demand for labour may explain the increase in the disparity of salaries in the United States and growing unemployment in Europe. The "inflexibility" of the labour market in Europe is said to play a part in stabilising the relationship between labour and income, while regulation in the area of job security makes it possible to insure employees against fluctuations in employment and income, at the price of lower productive efficiency. This interpretation is not necessarily corroborated by all the theoretical work which has been done, while little empirical work has been carried out to test it. The theoretical arguments do not, in fact, all conclude that there is a loss of efficiency associated with the stabilising effect of regulation in the area of job security. With the exception of Lazear (1990), recent studies suggest that although regulation in the area of job security is not responsible for the persistence of unemployment in Europe, it is likely that it has reduced the variations in employment. Turnover costs affect the dynamics of employment more than they affect the average level of employment.

Theoretical arguments

Compensation on dismissal which is made compulsory by regulation may have a neutral effect on employment, while the transfer imposed by the regulation may be the subject of a "voluntary" counter-transfer between the employee and the firm (Lazear 1990). On the hypothesis that this counter-transfer does not take place, the level of turnover costs generates an inefficiency in the labour market, which is expressed in the form of the appearance of under-employment. The impact of this under-employment depends on the state of demand: when the level of demand is low, employment rises, and it is reduced when the level of demand is high. While turnover costs increase both the cost of recruitment and the cost of dismissal, firms wait before adjusting the level of employment in accordance with the level of demand. Firms are therefore relatively insensitive to variations in demand and forms of hysteresis appear in a situation where there are no turnover costs. Adaptation to fluctuations in demand may, however, take place through variations, not in the number of employees but in the number of hours worked.

Another approach is to take the view presented by Burda (1992) that the difference between the turnover costs borne by the firm and what is actually received by the employee generates unemployment. It follows that simply reducing the compulsory compensation will have no effect on the equilibrium in terms of unemployment. On the other hand, paying for turnover costs through public subsidies could be justified on the basis of economic efficiency.

It is also possible to take into account the costs of recruitment and dismissal within the framework of a model which seeks to evaluate the impact of turnover costs on employment and salaries, by taking the view that turnover costs may be high enough for the firm to prefer to choose inaction when the conditions relating to demand change (Bertola 1990; Bertola and Bentitola 1990). The firm's decision to recruit is therefore not only dependent on the wages and the current turnover costs, but also, in a dynamic perspective, on future turnover costs. From this perspective, turnover costs have the effect of limiting the variability of employment. If salaries remain unchanged, the turnover costs as set out in this model have the effect of reducing the profits of the firm whether the situation is good or bad (in terms of demand). As for the level of employment, it is reduced when the situation is good and increased when the situation is bad (relative to what the level of employment would be in the absence of turnover costs). Finally, regulation governing job security has the effect of reducing employment in the upward part of the economic cycle and increasing it during the downward part in relation to the level of employment that would result from a mechanic adjustment to the demand. It therefore plays a stabilising or contra-cyclical role.

The direction of the effect of turnover costs on the level of employment (Bertola 1992) depends on three elements relating to the dynamism of the firm's behaviour: the gradient of the function of marginal income from labour, the rate of actualisation and the relative level of the costs of recruitment and dismissal.

Within the framework of this new model, Bertola (1992) shows that, at a given level of wages, and taking into account future turnover costs (while actualising and dynamising the behaviour of the firm), turnover costs may contribute towards increasing employment. The presence of turnover costs may therefore help to improve the employment situation for all employees and unemployed people. Turnover costs affect the dynamics of employment (the speed at which it adjusts to fluctuations in demand) more than the average level of employment. The model predicts that turnover costs should have only a slight impact on the average demand

for labour. Turnover costs may, however, reduce the demand for labour in firms which face very volatile or seasonal demand.

The same conclusions are drawn from a model (Booth 1994; Booth and McCulloch 1996) which takes into account the bargaining behaviour of trade unions. Employees who display an aversion to risk are considered to prefer a contract of employment which includes compensation on dismissal, since it helps to stabilise employment in the long-term, while firms that are neutral with regard to risk are prepared to offer such a contract.

It is still true, however, that turnover costs may act as a burden on the dynamics of economic growth. Bertola (1994) considers that constraints on the flexibility of employment reduce the productive efficiency and the value of the firm, which generates negative effects in terms of the incentive to invest and the equilibrium on the level and rate of growth.

Empirical evaluations

Within the context of a transnational comparison of the impact on employment of compensation on dismissal in 22 countries, Lazear (1990) concludes that there is a negative relationship between the cost of dismissal and the level of employment. The data consists of 667 observations made in 1956 and 1984 and relate to the number of months' wages paid as compensation on dismissal to a worker who has 10 years of service and is dismissed without "a just cause", in other words for a reason independent of the worker's behaviour. This information is considered to be representative of the system of dismissal premiums which is prevalent in every country.

The regression carried out by Lazear reveals a significant negative relationship between the independent variable "compensation on dismissal" and the dependent variables employment/population and civil workforce/population. If these results are interpreted as a causal relationship, they show that compensation on dismissal has the effect of reducing employment, and, in particular, of reducing the number of jobs per head.

This causal interpretation does, however, raise some problems, as Lazear also notes. Does the correlation actually reflect the effect on employment of compensation on dismissal, or vice versa? It is actually possible that countries experiencing periods of high unemployment reform their legislation to deal with unemployment. Another factor limiting the value of these results is that this is a static

comparison, while regulation produces dynamic effects, which Bertola seeks to evaluate (1990).

Bertola (1990) puts forward some factors which provide empirical support to the predictions of the models of Bertola (1990), Bentitola and Bertola (1990) and Bertola (1992) to the effect that regulation in the area of job security accounts for differences in the employment dynamics and, in particular, poor job creation figures, when (static) conditions are good but expectations are poor. As for these models, contrary to the results obtained by Lazear (1990), they do not predict that regulation in the area of job security will have a negative impact on the level of employment.

The relationship between the degree of job security and the sensitivity of variations in unemployment to variations in GDP (Okun relationship: $\Delta U = a + b \Delta \ln GDP$) has been tested over two periods: 1962-1972 and 1973-1986. The sensitivity of the unemployment rate to variations in GDP is weaker in countries that provide a high level of employment protection, which supports the hypothesis that regulation in the area of job security has a stabilising effect.

The data does not reveal any strong relationship between the level of job security and the unemployment rate during the two sub-periods. A relationship does, however, emerge if the dynamics of unemployment are taken into consideration: the effect of past unemployment on actual unemployment is greater in the countries where the level of protection is highest. Regulation in the area of job security does not affect the level of long-term unemployment, but it has a considerable effect on the dynamics of employment and on short-term unemployment.

With the framework of a comparison of the elasticities of adjustment of employment and working hours, in relation to variations in production, carried out in five countries: France, the United Kingdom, Italy, Germany and the United States, over the period from 1960 to 1983, for 13 manufacturing industries (Maurau and Oudinet 1988), the elasticities of employment and the rate of adjustment were found to be higher in the United Kingdom (employment: 2.85, hours: 1.60), in the United States (1.27/1.13), in Germany (1.16/1.20) and lower in France (1.00/0.77) and in Italy (0.84/0.28). These results reveal considerable disparities, not only between countries but also between sectors, which suggests an interaction between (endogenic) economic factors and (exogenic) institutional factors which lead to different modes of adjustment. In a second period the authors calculate the rates of adjustment on the basis of a given level of employment towards an optimal level of employment, measured by the time taken by the level of employment

and the number of working hours to reach their maximum level of adjustment, taking the level of production into account. The United States and Germany, two countries whose institutional landscapes are complete opposites, were revealed to have very fast rates of adjustment (Germany: 14 months for adjustment of the level of employment and 6 months for working hours, the United States: one year for adjustment of the level of employment and 6 months for working hours). The United Kingdom, which has the weakest regulation, was found to have the longest period of adjustment (four years for employment and 1.5 years for working hours) which casts doubt on the hypothesis which states that regulation of the labour market has an impact on the performance of the labour market.

From the same perspective, Abraham and Houseman (1994) study the extent to which regulation in the area of job security has a negative effect on the flexibility of the labour market, by comparing the United States, France, Belgium and Germany. The results indicate that in the United States the rate of adjustment of employment to variations in activity is faster than in European countries, while in European countries working hours are adjusted more rapidly than in the United States. The results tend to show that there are several modes in which adjustment of the labour market takes place.

Furthermore, Houseman and Abraham (1995) show, using American and German data, that regulation in the area of job security does not prevent the adjustment of the labour market. In fact the results of empirical analysis show that the main difference between the adjustment of the labour market in the United States and in Germany does not relate to the adjustment of the labour factor as a whole, but to the division between adjustment in terms of the number of workers and adjustment in terms of the number of hours worked. German companies rely more on adjusting the number of hours worked in order to reduce the labour factor during recessions, while American companies more often make adjustments to the number of jobs in the form of dismissals.

Synthesis

The impact of regulation on the performance of the labour market is complex, and there are various different mechanisms which have an effect in opposite directions (Emerson 1988a and 1988b, Buechtemann 1993). The arguments can be summarised as follows, and they are based on the notions of failure of the market and failure of public policies:

Positive

- The analysis in terms of implicit contracts takes the view that regulation in the area of job security reduces the risks borne by the employee and consequently makes it possible to achieve a lower level of wages at equilibrium, which is favourable to employment,
- Regulation in the area of job security promotes employees loyalty towards their company, which has a positive impact on productivity (Akerlof and Yellen 1986).
- Job security may help to give firms incentives to invest in training employees, which has a positive impact on productivity (Piore 1986). The existence of a specific human capital may, in return, encourage the firm to offer conditions which guarantee job security (Katz 1986).
- Job security may also increase the ability of employees to cope with technological changes, and promote internal and geographical mobility (Piore 1986).
- Turnover costs affect the dynamics of employment and act as a stabilising influence, increasing employment during periods of recession and reducing it during the upward part of the cycle, but not affecting the levels of employment and unemployment in the long term (Bertola 1990, Bentitola and Bertola 1990, Bertola 1992).
- Since the labour market is imperfect, the external costs resulting from the operation of market forces (such as the social costs of unemployment) are not taken into account by the players in the market. Regulation of the labour market makes it possible to internalise these external costs.

Negative

- Regulation in the area of job security creates an inefficiency in the labour market, which generates under-employment (Lazear 1990), but the impact in terms of un-employment depends on the state of demand,
- Turnover costs augment the insiders' market power, at the expense of employment for outsiders (Lindbeck and Snower 1989). However, a policy aiming at deregulation may very well have the consequence of reinforcing the market power of the insiders (Lindbeck and Snower 1990),

- Job security, while reducing the probability of dismissals, may have negative effects on the level of effort of workers, while also reducing the opportunities to impose sanctions on shirking (Akerlof and Yellen 1986). It may motivate the effort made by workers if the firm controls its turnover rate: the employee who makes an effort minimises the risk of being dismissed (Lindbeck and Snower 1989).

- Turnover costs are said to inhibit the adjustment of the number of jobs in accordance with fluctuations in economic conditions. Firms that anticipate redundancy costs during the low part of the cycle will be encouraged to recruit less during the high part of the cycle, which leads to a below-optimal level of employment and is said to generate structural unemployment. This argument is based on the hypothesis that firms perfectly anticipate the state of the economy. Bentola and Bentitola (1990), taking into account the uncertainty about the state of the economy, show that the impact of turnover costs on the recruitment and dismissal behaviour of firms is minimal.

- Turnover costs are said to have a negative impact on the rate at which firms adapt to technological changes. On the other hand, sectors that are in decline, since they do not adjust their workforce quickly enough to the realities of the market, due to legislation on job security, are said to use their resources in a non-optimal way. Firms in key sectors are said to be discouraged from developing by this same legislation, which would also lead to wastage of resources.

The sum of the positive and negative effects allows us to outline two ways in which employment adjusts to fluctuation in demand: a mechanical adjustment and a delayed adjustment. These two modes of adjustment seem to differ depending on the industries under consideration. In fact it is possible to put forward the hypothesis that those industries where demand fluctuates least, where the specific human capital is important and where the level of effort of workers is difficult to control will tend to favour job security, and it is probable that regulation guaranteeing it will contribute towards making these industries more efficient. On the other hand, industries which have to cope with volatile demand, which do not invest much in specific human capital and which can easily control the level of effort will tend to favour mechanical adjustment and their performance will be reduced by the presence of regulation.

This conclusion is corroborated by the analysis of employment relationships in terms of transaction costs (Williamson 1975, 1985). When the exchange relates to a specific human capital (specialised qualifications which are valued by a particular employer), transactions governed by the market alone expose the specific human capital to the risks of expropriation and are unstable. The existence of rules and the presence of a collective governmental structure in the form of a trade union helps to protect employees against the risks of expropriation, and helps to protect employers against the risk of undesirable departures. It therefore allows the exchange to exist within the organisational framework (alternative to the market), and therefore constitutes an efficiency factor. In general, the fact that the labour market does not behave like a market in goods, particularly because of the presence of asymmetries of information and uncertainty, leads to various forms of market failure. In such an environment, market regulation is likely to lead to better results than the free action of market forces. Tthe firm does not know the real productivity of the employee at the moment of recruitment, controlling the effort made by the employee is difficult to put into practice, there are risks of opportunistic behaviour on the part of both the employee and the employer, and future world conditions are uncertain for both parties.

3 Trade unions and economic performance

The conventional economic approach to the role of trade unions suggests that the impact of trade unions on salaries (since the trade union premium on wages is a result of the monopoly position of the trade union) causes a poor allocation of resources, while the remuneration of production factors no longer corresponds to their marginal productivity. Too few employees will be employed in the unionised sector, while the non-unionised sector will employ too many. Furthermore, the "trade union premium" will ultimately be borne either by consumers, through price rises, or by capitalists, through lower profits. It has also been suggested that the restrictive and protective practices of trade unions have an impact in terms of lost production which is greater than the impact of the wage premium.

This traditional approach was attacked by Freeman and Medoff (1984), who developed the idea that trade unions could have a positive impact on productivity, building on the Exit-Voice paradigm developed by Hirchman (1970). According to

this hypothesis, trade unions allow employees to express themselves collectively, which results in productivity gains.

3.1 The impact of trade unions on productivity

Trade union action may have a positive impact on productivity through three channels: The shock effect, collective expression and the idiosyncratic exchange (Hirch and Addison 1986, Booth 1995).

Shock effects

This approach considers that the firm was inefficient before it was unionised. Leibenstein (1966) characterises the inefficiency-X as the result of poor utilisation in technical terms of a minimal combination of labour and capital. Problems of information and motivation underpin the idea of inefficiency-X. In Leibenstein's view, the level of unit cost partly depends on the degree of inefficiency-X, which in turn depends on the degree of competitive pressure and motivation factors. Many sources of efficiency-X, such as incentives aimed at employees, organisational variables, conditions of employment and supervision by the management are likely to be influenced by the presence of the trade union. If the firm is in a situation where costs are not minimised, due to the presence of inefficiency-X, unionisation produces a "shock" effect, inducing the management to reduce sources of inefficiency. The management, since it has to pay higher salaries, is encouraged to look for opportunities to cut costs.

Collective expression

The collective expression model (Freeman and Medoff 1984) considers that due to the qualifications specific to the firm which employees have, and the turnover costs which they generate, long-term employment is likely to generate gains. Within the context of a lasting employment relationship, decisions on pay are not determined directly by market forces. Within the context of such a relationship, the contracts which are developed are multi-dimensional, taking other factors into account as well as salaries. These contracts are used, on the one hand because employees are equally concerned about non-pecuniary factors in the employment relationship and, on the other hand because different modes of organisation generate different costs.

Since employees partly control their own productivity, particularly in the case of work teams where control is expensive, their attitude and motivation are important productivity factors.

Furthermore, since the workplace has the characteristics of a public good, collective expression within the framework of the trade union is also likely to increase productivity. There are two dimensions which should be considered: firstly the conditions of employment, which are the object of consumption without competition on the part of employees. This raises the problem of the mechanism which is used to determine the level of consumption of the good (the quality of conditions of employment) and the compensation paid to workers. A mechanism for collective expression makes it possible to bring together the preferences of workers and establish a level of consumption of the public good. Secondly, the level of effort, which risks being fixed at a sub-optimal level without a collective form of organisation, as soon as there is a complementary aspect to the actions of each worker. In fact, in the absence of a collective mechanism, each individual has no incentive to consider the effect of his action on others, which may lead to a lower level of effort than would have been present if external factors had been taken into consideration.

Overall, the presence of a mechanism for collective expression (a trade union) which makes it possible to express discontent other than by leaving the firm, reduces the turnover (recruitment and training) costs and increases specific investment by the firm. Furthermore, such a mechanism, by aggregating the workers' preferences within the context of a collective negotiation, induces the firm to choose an appropriate level of quality of conditions of employment and employee remuneration. A collective mechanism of this kind also promotes co-operation between the workers, which may lead to enhanced productivity. Finally, the presence of the trade union forces the management to select those production and management methods which are most productive.

The idiosyncratic exchange

The collective expression model put forward by Freeman and Medoff (1984) has common features with the idiosyncratic exchange model suggested by Williamson (1975, 1985). According to this model, as soon as the exchange is idiosyncratic, since it relates to a value specific to the parties to the exchange (a specific qualification which is not perfectly transferable), the parties to the exchange are motivated to make the exchange permanent by creating a collective structure of

government. This in particular, takes the form of collective bargaining between the management and the trade union.

The advantages, in terms of efficiency, of the presence of a trade union are the same, from the point of view of the idiosyncratic exchange model, as those developed within the framework of the collective expression model. They are based, however, not on the dimension of employment relationships as a public good, but on the specific character of qualifications. The two approaches reveal the information problems relating to the operation of the labour market.

However, the impact of the trade union presence on productivity ultimately depends on the co-operation which is established between management and the trade union, i.e. management's response to collective bargaining and the trade union's response to the management's actions, and from this perspective it is a matter for empirical evaluation.

Most empirical evaluations since the ground-breaking work of Brown and Meedoff (1978) have assumed a production function of the Coob-Douglas type, taking into account the workforce in the unionised sector and in the non-unionised sector on a differentiated basis.

Estimates have been carried out on two levels: at the national economy level and at the sectoral level.

Brown and Meedoff (1978), considering the USA at national level, estimated that unionisation has a positive and statistically significant effect on productivity of more than 20%. Clark (1984) found a slight negative effect of unionisation on productivity (2% to 3%). Warren (1985) revealed a negative and statistically significant coefficient which suggests that unionisation has a negative impact on productivity.

Bemmels (1987), Lovell, Sickles and Warren (1988) have obtained results which show that, in general, unionisation is negatively correlated to productivity, but that the link is positive in some sectors.

At the sectoral level, Clark (1980b) did not find that unionisation has significant effects on productivity in the cement industry. Clark (1980a) studied six cement factories that changed their status during the period from 1953 to 1978: not unionised and then unionised. The impact of unionisation on productivity was between 6 and 8%, and it is stable in time. These results are consistent with the theory according to which unionisation is accompanied by a rise in salaries which forces the management to rationalise production costs. This generates a productivity gain, which is then maintained over a period of time.

It is possible, following Hirsch and Addison (1986) and Booth (1995), to take the view that empirical studies on the impact of unionisation on productivity in the United States have revealed the following facts, in broad terms:

- Trade unions do not, on average, contribute towards increasing productivity,
- The positive impact of unionisation on productivity is felt mainly in the private sector, where there is a certain amount of competition in relation to the product,
- A positive correlation is observed between pay discrepancies within a sector and the presence of a positive impact of unionisation on productivity: those sectors where there are considerable pay discrepancies are likely to demonstrate differences in productivity between the unionised sector and the non-unionised sector.

Recent studies from the UK indicate that (cf. Booth 1995 for a synthesis) unionisation does not, on average, have a negative impact on the level of productivity but does have a significant positive impact on growth in productivity. In other words, trade-unionised industries are more likely to have a lower level of productivity but a higher level of productivity growth than non trade unionised industries. It is clear that this difference should disappear over time, at least in the long run. In the US, on the other hand, trade unions appear to enhance productivity while at the same time contribute towards reducing growth in productivity.

3.2 The impact of trade unions on profitability, investment and employment

The pay increases that are obtained by trade unions are at the expense either of non-unionised employees, who receive lower salaries, or of consumers, through higher prices, or of the owners of the capital, through lower profits. Each of these possibilities is limited by competitive forces.

The relationship between the rate of return on capital and the trade union effect is a complex one: it does not solely depend on the effect on salaries and on productivity, but also on the structure of the market (elasticity of demand), the proportion of total costs represented by labour costs and changes affecting the composition of the capital (substitution effects and economies of scale). If the trade unions obtain a benefit from the potential profits of the firm, there is a risk

that the source of the benefit will be linked to the presence of the firm's market power or to public regulation (restriction of entrants, restriction of price competition) giving a benefit to the firm.

The impact of the trade union on the firm's profitability will, consequently, depend on the trade union's power to negotiate and the structure of the market (the extent of the firm's market power) and the technology (the benefits associated with a technology).

American empirical studies (Hirsch and Addison 1986 and Addison and Hirsch 1989 for a synthesis) reveal a consensus on the fact that trade unions contribute towards reducing profits. The results are contradictory when it comes to determining whether the impact of unionisation on profits is reduced in accordance with the extent of the firm's market power.

British studies (see Booth 1995 for a synthesis) also reveal a consensus showing that unionisation has a negative effect on profitability.

On a theoretical level, the presence of a trade union could lead to under-investment, since when the firm has invested in new equipment the trade union has a motivation to demand an increase in salaries in order to capture part of the quasi-rent linked to the new equipment. Firms that anticipate this effect would be induced to invest less. However, this effect is not necessarily linked to unionisation. The need to pay an efficient wage may lead to the same result.

Conversely, in the conventional model of the maximising firm, the level of capital is fixed depending on the relative price of capital and labour. If the trade union obtains a pay increase, this is in fact a substitution of capital for labour, expressed in the form of an increase in investment.

The direction of the impact of unionisation on investment is therefore a matter for empirical measurement. American studies reveal that unionisation is linked to a lower level of investment in physical capital but a higher level of investment in human capital (training) (cf. Booth 1995 for a synthesis).

British studies reveal contradictory results as regards the impact on investment in physical capital and a positive impact on investment in human capital (Booth 1995).

According to the conventional model of the demand for labour, if a trade union raises the level of salaries above the competitive level, the firm will respond by reducing the level of employment. Consequently, this model predicts that unionisation reduces employment. This prediction does not take into account two factors which may reverse the conclusion. First of all, unionisation may be accompanied

not only by a rise in salaries but also by a change in the organisation of labour which may enhance the co-operation and motivation of employees. This may be expressed as a modification of the attractiveness of the demand for labour. In this hypothesis, unionisation has a negligible effect on employment.

Finally, it may be that higher salaries do not affect the level of employment when the labour markets and product markets are not competitive. Particularly in the case of a buyer of labour who is a monopsonist, a pay increase may result in an increase in employment. In cases where the firm has market power in the product market, unionisation will simply take the form of a redistribution of part of the super-normal profits associated with the non-competitive structure of the market.

There are not many empirical studies (Booth 1995). American studies reveal a negative impact on employment and the two British studies showed contradictory results. More empirical work will be necessary before any credible conclusion can be reached.

4 Minimum wage and economic performance

Within the framework of the conventional model of the labour market, the introduction of a minimum wage has the immediate effect of increasing the level of unemployment. Indeed, the existence of a minimum wage creates inflexibility in the price of labour which inhibits the harmonisation of the wages with marginal productivity. In such a context, employees whose marginal productivity is lower than the minimum wage will not find work.

Consequently, arguments in favour of a minimum wage are rare in economic literature, while minimum wages are widely used in developed countries.

At least three kinds of theoretical argument may be put forward in favour of the minimum wage, while recent empirical work does not reveal a negative impact on employment caused by the minimum wage.

4.1 Theoretical arguments

Within the context of an economy where the ideal optimum is unattainable due to the existence of assymetries of information preventing the implementation of a system of fixed transfers, the minimum wage may be socially desirable, even if it results in unemployment, in so far as it makes it possible to reach a second-best

solution (Guesnerie and Roberts 1987). This is the case when a linear system of taxation is used. When considering the case of a non-linear tax system, the argument loses its force due to the restrictive hypotheses which make it possible to reach the required result. Marceau and Boadway (1994) take up the argument by showing how the linkage between a minimum wage and a system of unemployment insurance makes it possible to obtain a second-best solution. Swinnerton (1996) analyses the case of a minimum wage within the context of a market with imperfect information and job search, and reaches the conclusion that the existence of a minimum wage may improve the efficiency of distribution (this is Pareto improving), whatever the effect in terms of unemployment, if the firms bound by the minimum wage have their demand for labour rationed.

A second argument is put forward by Fitoussi (1994) and Fitoussi and Dehez (1996): inequalities in salaries and unemployment may go hand in hand, so a reduction in unemployment may be achieved by reducing inequalities in salaries. From this point of view, the minimum wage plays an important part. Indeed Fitoussi and Dehez (1996) present a general equilibrium model with several categories of labour, each of which is characterised by an inelastic supply of labour and a level of productivity. Two conclusions are drawn from this model, after the introduction of a minimum wage. First of all, an increase in the minimum wage always leads to an increase in unemployment and a reduction in the real wages paid to the most highly qualified employees, when the types of qualification are complementary. Finally, full employment can, however, be achieved through a system of wage subsidies if the minimum income received by an employee is lower than the average weighted value of marginal productivity. Such a solution may be reached spontaneously if the pay structure is such that the degree of inequality in the distribution of salaries is lower than the degree of inequality in the distribution of the value of marginal productivity.

Consequently, the existence of a minimum wage may generate a lower level of inequality (first result), which may generate lower unemployment if the inequalities in salaries are lower than the inequalities in marginal productivity. The reduction of inequalities through the use of a minimum wage may be favourable to employment.

A third argument (see, for example, Card and Krueger 1995) involves considering the case of a labour market where employers of poorly qualified employees exercise market power and act as monopsonistic buyers of labour. In such a model

(Stigler 1946), the introduction of a minimum wage increases the level of employment, increases the firm's production and reduces the firm's sale prices.

4.2 Empirical studies

Recent empirical studies have used two types of approaches: the first one estimates, in order to assess the role of minimum wage, the elasticity of unemployment by qualification whereas the second one uses "natural experiments" in order to investigate the impact of minimum wage. The last method has led to a recent controversy.

Elasticity of unemployment according to qualification

Fitoussi (1994) analyses the impact of the increase in the minimum wage which took place between 1981 and 1982 in France, where the number of employees receiving the minimum wage doubled. In order to account for the impact of the minimum wage on unemployment, Fitoussi estimates the elasticity of the unemployment rate for each category of qualification, in relation to the overall male unemployment rate, to check whether the remainders from the regression correspond to the changes in the minimum wage/average wage ratio. This procedure makes it possible to reveal the negative impact of the minimum wage on employment of young, unqualified workers. As for overall employment, it does not seem to have been affected by the increase in the minimum wage. Furthermore, the comparison with the United Kingdom and the United States shows that the level of unemployment for the least qualified categories is the same. The minimum wage also remained unchanged in the United States from 1981 to 1990, while the United Kingdom has no national minimum income system (26 wage councils are responsible for providing protection to employees who are not covered by collective agreements). This would tend to show that the level of unemployment in these categories is independent of the existence of a minimum wage.

Natural experiment

Empirical studies on the effects of the minimum wage were encouraged in the United States in the early 1990s. In fact, after ten years at a fixed level the federal minimum wage was increased in 1990 and 1991. Legislation stipulated the introduction of a "subminimum" making it possible to pay adolescents 85% of the minimum wage.

Most previous studies on the effects of the minimum wage in terms of employment use time series (longitudinal section) or a cross-section of data comparing different states. The longitudinal series exploit the fact that the minimum wage varies over time in relation to other salaries, while the cross-section series exploit the fact that while the minimum wage is constant for all the states at a given time, the level of the minimum wage varies in accordance with specific rules in the states. Most previous studies (Brown 1988) concluded that a 10% increase in the minimum wage led to a reduction of 1% to 3% in employment of young people.

The studies carried out in the early 1990s (Katz and Krueger 1992, Card 1992a, 1992b, Card and Krueger 1994) analyse "the natural experience" of the increase in the federal minimum wage in the United States after ten years of stagnation at an absolute figure (a reduction in real terms).

The fast food restaurants in Texas which were operating both before and after the increase in the minimum wage in 1991 were studied by Katz and Krueger (1992). Since these restaurants are major employers of unqualified labour, the authors seek to evaluate whether the increase in the minimum wage was accompanied by a reduction in employment in this activity.

Data from the "current population survey" was used (Card 1992a) to determine whether employment of young people has fallen since the increase in the minimum wage in 1990. The analysis is based on the fact that before 1990 the proportion of young people who were earning more than the minimum wage before 1990 ($3.35) and less than the minimum wage after 1990 ($3.80) varied from 10% to 50% depending on the State.

The impact of the increase in the minimum wage in the state of California (from $3.35 to $4.25) in 1988, which preceded the increase in the federal minimum wage, was also the object of analysis (Card 1992b). The author compares the changes that have taken place in the employment of young people in California and in the states which have a comparable employment structure and have not increased their minimum wage.

These three studies, using the same methodology, lead to the same conclusion: there is no proof that the minimum wage has a negative impact on the level of employment.

Controversies

Neumark and Wascher (1992) have built up a database (longitudinal analysis supplemented by geographical information depending on the situation in the states)

in relation to the minimum wage, for the period from 1973 to 1989 in order to analyse the effects in terms of employment of changes affecting the minimum wage.

Whereas Katz and Krueger (1992) and Card (1992a, 1992b) do not find proof that the increase in the minimum wage has an impact on employment, Neumark and Wascher (1992) show that the minimum wage has an impact on employment: a 10% increase in the minimum wage leads to a 1% to 2% reduction in the employment of young people and a 1.5% to 2% reduction in the employment of young adults.

There are three explanations that may be put forward to account for these divergences:

- Katz and Krueger recognise that they are analysing the change in employment in firms which have "survived" the increase in the minimum wage. The increase in the minimum wage may very well lead to a reduction in the probability of "survival" and the probability of new firms being set up.

- The data collected by Neumark and Wascher covers a more recent period than the other studies, during which the value of the minimum wage was higher in relation to prices and other salaries. It may therefore be that the magnitude of the impact on employment is sensitive to the relative level of the minimum wage.

- The results depend on the statistical model which is estimated: Neumark and Wascher do not find any negative effects on employment caused by the increase in the minimum wage when they estimate Card's model using their data.

It is also true that some of these explanations are not supported empirically by subsequent studies by Card and Krueger (1994, 1995).

Card and Krueger (1994) analyse the increase in the minimum wage for the fast food industry in the state of New Jersey (which increased its minimum wage from $4.25 to $5.05 in 1992) in comparison with the neighbouring state of Pennsylvania, which did not implement such an increase. No evidence was provided of any negative impact on employment. One valuable aspect of this study is that it makes it possible to refer the analysis carried out for New Jersey to a control group with the same characteristics as Pennsylvania. Furthermore, the authors have access to full information about the sample (100% response to the two waves of the survey: before and after the increase in the minimum wage and for the two states), and on

the closure of establishments, which allowed them to brush aside the hypothesis that the minimum wage has an impact on the firms' rate of "survival".

The wave of recent studies on the impact of the minimum wage on employment, applying the principle of "natural experimentation", i.e. analysing exogeneous changes differentiated in time and space, call into question the conclusions of the conventional model of the labour market. The role of institutional mechanisms in the economy needs to be evaluated in relation to the real world, which should ideally be a "second best world". It may well be that the minimum wage, like other institutional characteristics, is efficient in such a world, contrary to the teaching of the ideal models from economics textbooks.

5 Conclusion

The experience which has been gathered in the area of deregulation in the United States and the United Kingdom leads to a re-evaluation of the principle that the absence of regulation makes it possible to obtain an incentive structure with none of the distortions that cause persistent long-term unemployment, maladjustment of qualifications in the labour market and, in general, the dysfunctions affecting European labour markets.

Regulation does not necessarily take the form of policy action against the market; it may complement the market. The areas of "inflexibility" introduced by regulation are not necessarily imperfections in the market. They may be understood as characteristics necessary for the adequate functioning of the labour market (Butler et al. 1995).

More generally, the labour market is a social institution (Solow 1990),and the factor which differentiates it from other markets is that the employee's performance is dependent, in particular, on the price which he is paid. Since the level of salaries plays a dual role as a productive factor and as a simple cost, it is not possible to bring supply and demand into equilibrium as would be the case for any other market. It is precisely because the labour market is a social institution that it does not spontaneously find its own equilibrium. One consequence of this specific characteristic of the labour market is that it is likely to reach multiple points of equilibrium (Solow 1990) and is not limited by a unique "natural rate of unemployment". Making the labour market more competitive (through deregulation)

may lead to an impasse, precisely because of the specific institutional characteristics of the labour market. Not only is it possible that deregulation may result in a loss of efficiency in the labour market (in the real world, institutions should not be evaluated with reference to an ideal solution, but rather with reference to a second-best or even third-best solution), but the criticisms of the provident state tend to attribute too much importance to the problem of efficiency. Social policies should be evaluated in the light of an analysis in terms of costs and benefits. Within this context, the net social benefit of a social policy is positive if the social value of the increase in security for citizens exceeds the social value of any loss in productivity (Buttler et al. 1995). The fact of showing that regulation has a cost in terms of efficiency or negative incentivisation is not enough in itself to argue against it.

The theory of contracts (Williamson 1975, 1985) emphasises transaction costs and suggests that all transactions, whether they are commercial or non-commercial transactions, have a cost. The thing that differentiates the hierarchical market (and it is possible to consider regulation as a hierarchical institutional form (cf. Enjolras 1995, p. 109) is that the market is oriented towards short-term transactions (spot market), while the hierarchy is suitable for long-term relationships. Hierarchy may reduce flexibility in the short term but increase it in the long term (Butler 1995). In the area of research and innovation, for example, transactions carried out on a spot market may dissuade, due to uncertainty, the development of a research programme, while a long-term agreement (for example the setting up of a subsidiary), by stabilising the relationship, generates the incentive structure necessary for contractualisation despite the uncertainty.

Job security may, in the same way, constitute a condition for the co-operation of employees with a view to enhancing productivity and the development of innovative production procedures. The existence of institutions that stabilise contractual relationships and reduce uncertainty (for example redundancy rules) may be a precondition for the realisation of some investments. This is particularly the case when it comes to investments in human capital, as soon as a specific human capital is involved.

One important criticism of regulation intended to guarantee job security involves stressing the fact that it increases wage costs and consequently leads to unemployment. Turnover costs should not, however, simply be added to labour costs as in static analysis. It is also necessary to consider their dynamics. Positive

turnover costs are likely to increase the level of employment and play a stabilising role in absorbing shocks in demand.

The impact of regulation in the area of social policy on economic performance is ambivalent. Regulation may limit the degree of individual liberty, but it also helps to reduce uncertainty (Buttler et al. 1995), and it may prove to be necessary to the efficient functioning of the market. From this perspective, it is not a matter of deciding whether or not to have regulation. It is a matter of defining a type of regulation, through a cost-benefit analysis, which makes it possible to optimise the relationship between security and efficiency. Although this will often lead to a conflict of aims, in many cases it will give rise to synergies.

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