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**THE EMPLOYMENT DEBATE:  
EMPLOYMENT PERFORMANCE AND  
INSTITUTIONAL CHANGE**

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## **THE EMPLOYMENT DEBATE: EMPLOYMENT PERFORMANCE AND INSTITUTIONAL CHANGE**

### **Abstract**

This paper is the introductory chapter to the book *Job Creation: The Role Of Labor Market Institutions*. The book brings together a distinguished group of academics from various fields with the goal of providing a broad assessment of how changes in labor market institutions can improve employment performance. The objective of this introductory chapter is to provide a framework which places the contributions in the book within the broad perspective of international debate on employment performance.

The paper approaches the debate on employment and the role of labor market institutions by placing firms at the very center of the analysis. It is enterprises and entrepreneurs, with their initiative and commitment, that create new jobs. It is also firms that determine the nature of jobs, their quality, and other important characteristics such as their location. Thus, it is firms –through their strategies and their decisions on internal organization– that drive the job creation process. This paper examines how institutions, particularly the institutions of the labor market, influence the behavior of firms with regard to employment.

## **THE EMPLOYMENT DEBATE: EMPLOYMENT PERFORMANCE AND INSTITUTIONAL CHANGE**

### **1. Introduction**

Industrialized economies have faced growing labor market problems over the last two decades. In continental Europe, insufficient job creation has led to sustained high rates of unemployment, particularly among the young and the long-term unemployed. In the US, the economy has created many jobs over the last twenty years, but real wages have stagnated and there is growing inequality in labor markets.

Job creation and the quality of jobs are thus fundamental social problems throughout the industrialized world. They are also becoming increasingly important in developing countries as the latter progress in their development strategy (witness, for example, the problems experienced by South Korea in its attempt to liberalize the labor market).

This book brings together a distinguished group of academics from various fields with the goal of providing a broad assessment of how changes in labor market institutions can improve employment performance.

It is well known that job creation, by itself, does not constitute a legitimate maximand in standard economic analysis. Economists like to discuss social welfare optimization, the maximization of some function of profits and consumer welfare. Nevertheless, the question of how increased social welfare translates into variables such as participation rates and youth unemployment rates constitutes a key public policy concern.

Moreover, from the perspective of the role of firms in society, it is also important to analyze how firms can simultaneously maximize returns to shareholders and provide rewarding jobs and careers for their employees while operating in increasingly complex markets where technological change and globalization are drastically changing the very nature of work.

The objective of this introductory chapter is to provide a framework which will place the contributions in this book within the broad perspective of international debate on employment performance. To do this, it surveys a range of academic research that tackles the issue of how institutional change can improve job creation.

The survey is not comprehensive for at least two reasons. First, the vast amount of research and analysis that has been devoted to the subject by scholars in the fields of

humanities and social sciences makes it virtually impossible to provide a summary in a single, short and manageable chapter. I will be selective and focus on a few chosen research topics which are of interest, both in terms of the relevance of the questions being asked and in relation to the issues addressed by the papers in this volume. The second reason why this survey is incomplete has to do with the background of its author. Being an economist by training, I have an obvious tendency to present a skewed view of labor market problems, emphasizing the contributions of research in economics. The III International Conference on Job Creation (1), where the papers in this volume were initially presented, brought together specialists from economics, industrial relations and sociology, but I am afraid that this introductory chapter does not do full justice to the contributions from disciplines other than my own.

I will approach the debate on employment and the role of labor market institutions by placing firms at the very center of the analysis. It is enterprises and entrepreneurs, with their initiative and commitment, that create new jobs. It is also firms that determine the nature of jobs, their quality, and other important characteristics such as their location. Thus, it is firms –through their strategies and their decisions on internal organization– that drive the job creation process.

Of course, firms do not operate in a vacuum. They are subject to a wide set of restrictions imposed by existing institutions, and to external influences arising from the evolution of technology and other forces (e.g. political changes), which are enlarging the markets in which firms operate.

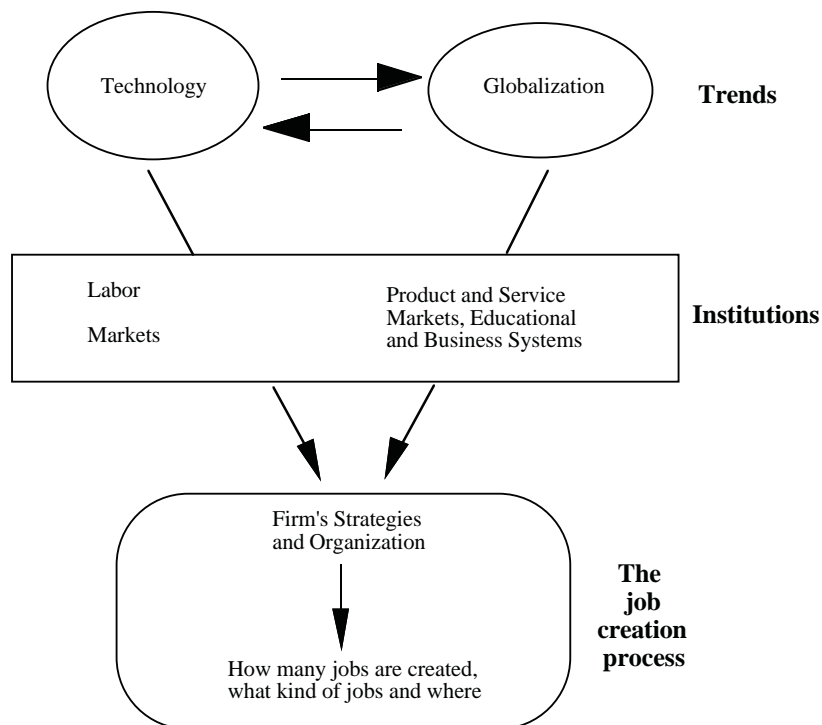
I take both technological change and globalization as two exogenous (2) trends that influence firms' behavior in many dimensions, and in particular in the way they grow, employ people, and organize themselves internally.

Technological progress and globalization affect jobs and the nature of jobs within a given economic area. The way these trends alter job creation processes is crucially determined by a large set of social institutions, of which the most important is, of course, the labor market itself. But the nature of the business system, the structure of education and training systems, and the organization of other product and service markets also matter. Chart 1 summarizes the relationships between trends, institutions and the job creation process. The framework depicted by this chart:

- a) stresses the role of the exogenous factors of change in labor relations (technology and globalization);
- b) highlights the key role of institutions in shaping the reaction of the economy to those changes; and
- c) focuses on how firms adapt to the global trends and to their specific institutional environment, and how that process of adaptation changes the nature (and number) of jobs.

The key role of institutions is fairly intuitive. How firms adapt to external forces and how this impacts on their employment and training policies is crucially dependent on the institutions of the labor markets, among others. For example, it has been widely argued that changes in technology and the opening up of international markets are hurting the low-skilled in industrialized countries. However, the nature of the impact differs, depending on the institutional context. In Europe these trends have resulted in an increase in unemployment among the low-skilled. In the US the result has been a declining relative wage.

Chart 1 highlights the fact that the job creation process takes place at the firm level but under the influence of trends which impact firms through social institutions. The chart will provide us with a road map into the employment debate. It should help us focus on the key determinants of the job creation process (labor market institutions and the strategies of firms), putting the role of trends and other institutional features into perspective. Before turning to a detailed analysis of labor institutions, we will first review the main results of the extensive research conducted on technology and globalization. We shall also look at some of the more important non-labor market institutions that are likely to influence employment performance.



## 2. The factors of change

### 2.1. Technology

Technological change is commonly perceived as a major factor behind the observed trends in world labor markets. It is important to clarify, however, that the effect of technology on jobs can be traced to three conceptually distinct phenomena. First, technological change may have been accelerating over the last twenty years, displacing workers who have not yet been absorbed by a lagging rate of job creation. Second, technological change may be biased towards increased use of labor-saving technologies. And third, the nature of technological progress may have changed, so that even without acceleration or bias, new technology is characterized by features that lead to rapid changes in the qualifications demanded of the workforce.

*a) Accelerated technological change*

Casual evidence on the speed of technological progress points to very remarkable changes. For example (3), in recent years computing power has doubled every 18 months, while the price per unit of computing power has fallen at cumulative rates of 35%. Similarly, transmission capacity in telecommunications has soared, and transatlantic fibre-optic cables can now carry 1.5 million simultaneous conversations, when in 1960 the figure was a bare 138.

This informal evidence, however, is in conflict with the on-going debate on the productivity slowdown in OECD countries. Total factor productivity increases (that is, productivity increases excluding those which are purely associated with the increased use of labor and capital) have been low over the last twenty years and this has prompted substantial amounts of research and policy analysis aimed at reversing the trend (4).

The reasons for the productivity slowdown remain unclear, especially since the slowdown is at odds with casual evidence and observed (massive) investment in new technologies, particularly computing. One possible explanation would be a misguided (or inefficient) use of the new technologies. Recent research by Hitt and Bryjilfsson (1996) has systematically explored this possibility. The authors find that investment in information technologies does in fact increase productivity. However, they also find that most of the benefits of new technologies are passed on to consumers in the form of lower prices, so that investment in new technologies does not necessarily increase business profitability.

This brings us to an alternative explanation of the productivity slowdown which has been the subject of a large research effort in recent years. If the benefits of new technologies are enjoyed by consumers in the form of lower prices, maybe what is happening is that the conventional measures of productivity do not take these price decreases properly into account (5). This type of consideration underlies the US CPI Commission Report (6), which argues that inflation has been overestimated in the US over the last decades, thus leading to an underestimation of productivity growth. The measurement problems are particularly acute in service industries (7), which represent an increasing share of industrialized economies. This would reinforce the idea that we might actually have experienced a period of unprecedented strong productivity growth rather than a slowdown.

Accelerated technical change may lead to higher unemployment if growth is uneven across sectors and requires employment reallocation (8). In that case, faster growth reduces the duration of job matches, which directly increases the job separation rate and reduces the rate of creation of new vacancies. Both effects raise the equilibrium rate of unemployment. These negative effects, however, are counterbalanced by the fact that faster productivity growth will also raise the returns to vacancies and thus increase the exit rate from unemployment.

Ultimately, it is difficult to conclude on the basis of both theory and evidence that accelerating technical change is a fundamental factor behind changes in the labor market. Even if technology has moved forward at a rapid pace recently, periods of accelerated technological change have also been observed in the past and have not led to changes in employment as drastic as those we are seeing today (9).

*b) Biased Technical change*

Recent trends in technology could have a significant impact on employment if they were characterized by a bias against the use of labor relative to other productive factors,

such as capital or energy. Similarly, biased technical change could favor skilled versus unskilled labor, lowering the relative wage of unskilled workers (in a non-intervened market such as that of the US) or increasing unemployment among the less skilled (in the presence of downward rigidities in the wage formation process, as in Europe). Evidence of the importance of these demand shifts towards less labor, and in particular less skilled labor, has indeed been assembled in several studies (10). The data show that the observed pattern of unemployment and wages by skill levels can only be explained by very strong demand shifts, given that from the supply side we have witnessed a relative increase in the supply of educated workers.

It is clear, however, that this negative effect of technical change on jobs is not always the result of exogenous changes in technology. In fact, in Europe strong rates of increase of unit labor costs, particularly at the time of the oil shocks in the seventies, together with the excessive cost of labor promoted by labor regulations (see below), may in some countries have promoted technical change that aims at reducing the use of labor. The bias is thus the result of firms' choices in the face of relative costs of inputs that artificially penalize labor through high taxes and social security contributions.

Biased technical change promoted by excessive wage and non-wage increases (particularly for low-skilled workers) must certainly play a role as a factor explaining the surge of unemployment in recent years. However, one can legitimately wonder whether that is all. Many people have argued that the current changes in technology are simply different from any progress the world may have experienced in the past. For some (the luddites of the XXI century, like J. Rifkin in his 1996 best-seller *The End of Work*) it is all too easy to jump to conclusions: the new kind of technological change will truly destroy jobs, and this time, we are told, they will be gone forever.

### *c) The nature of technological progress*

Is the current technological revolution different from previous ones? And what do we mean by different?

There have been huge technical advances in the past, such as the introduction of electricity and railways. Those changes revolutionized the economy and the world of business. Is the current revolution based on computing and telecommunication technologies different?

At least two strands of literature have pointed out and explored features of the current technological change which make it unique and which may have far-reaching implications for the nature of jobs.

The first line of work has emphasized the idea that new technologies are leading to a knowledge-based economy, and that this economy will be characterized by increasing returns, with increased abilities, wealth and productivity concentrating in a small number of firms (and individuals) (Romer, 1986; Arthur, 1996). Reich (1993) has explored these issues informally, in particular linking them to globalization and the implications for the nature of jobs and worker compensation. According to Reich, only what he calls "symbolic analysts" (people working in the identification and resolution of problems through the development and manipulation of symbols such as data, words and images) will be able to command ever higher compensations. These people will enjoy access to a world market and exploit the increasing returns of their activities (the same idea can be deployed in many markets), while

individuals undertaking routine production (or service) work will be facing competition from workers in many other countries and thus lower wages and/or fewer work opportunities.

The second strand of research has explored the implications of the information revolution for production processes and the internal organization and skills of the labor force. According to this literature, the introduction of flexible machine tools, programmable multi-task production equipment and computerized data systems has brought about wide-ranging changes within firms, altering traditional Tayloristic organizational forms and placing new and different demands on employees (see Milgrom and Roberts, 1990; Lindbeck and Snower, 1996; and the contribution by Professor Snower in this volume).

Overall, existing research on technological progress as a factor of change in employment and labor relations seems to indicate that both the bias of technical change and its changing nature have had a profound impact on the job creation process. In particular, the analysis of how technological progress affects jobs is a promising line of research to which we shall return in our analysis of changes in the strategies and internal organization of firms (section 5 below).

## **2.2. Globalization**

Globalization trends are also highlighted as key contributing factors to the turmoil experienced in the labor markets of industrialized nations. As with technology, casual observation leads many commentators to conclude that low-cost labor-intensive producers from around the globe are displacing increasingly larger shares of economic activity, and thus jobs, in the industrialized nations.

It is true that there has been a change in the political climate which has fostered the globalization trend, with many countries adopting free trade and foreign direct investment (FDI) regimes, and with the promotion of trade and investment liberalization through the World Trade Organization.

Nevertheless, despite the rhetoric, globalization is nothing new in the trade domain. The data show that world trade has been increasing fast over the last ten years, but no faster than a few years ago. World exports grew at an annual rate of 4% between 1990 and 1995, but the rate was 6% between 1970 and 1980, and even higher in the sixties.

The debate on the employment effects of trade has been surveyed in detail in Gual (1996) (11). The main conclusion of this controversy is that the impact of trade is predominantly of an inter-industry nature. That is, trade alters the specialization of countries and leads to industrial restructuring, with declining employment and wages in some sectors and increasing employment and wages in others (12). Aggregate employment is thus unaffected. Nevertheless, difficulties in sectorial reallocation could –as in the case of technological change– lead to temporary drops in employment. As we will explore in detail below, institutions play a fundamental role in this sectorial reallocation process. In fact, institutions can convert a temporary drop into a permanent one in a phenomenon which is known as hysteresis (13).

What has been remarkable over the last ten years has been the worldwide increase in cross-border direct investment flows. Between 1983 and 1987 the average worldwide FDI flows were US\$ 75 billion. The figure for the period 1988-1995 is almost US\$ 200 billion. The paper by Professor Ferner in this volume provides an interesting perspective on a debate which up to now has been much less explored, even though it is potentially much more important.



As argued by Professor Ferner, the impact of FDI trends on employment is an issue which has led to a strong debate in some European countries (notably France (14)). As with trade, the overall beneficial nature of cross-border direct investment justifies a detailed analysis of its implications for labor markets. Fear of job losses, or of the introduction of “screwdriver plants”, has been prominent in social debates on this issue, and the employment risks may prevent advances in the liberalization of investment flows. However, no conclusive evidence has been produced on the subject, particularly if we look not only at jobs but also at their nature.

On the one hand, inward FDI may lead to job creation, when new investments add capacity to the economy. It may also, however, lead to short-term job destruction if the foreign investors displace more labor-intensive local producers. In the long term, though, increased productivity should lead to rising living standards, with beneficial effects on output and jobs.

Similarly, outward FDI may divert investment funds abroad and could reduce the capital available to domestic workers. It has been argued that this type of FDI can delocalise jobs. The analysis here is difficult, however, since it must be based on comparisons with counterfactuals. That is, with a potential situation where outward FDI does not take place. In many industries, the alternative to investing abroad is not domestic investment. Indeed not investing abroad may lead to a permanent loss of competitive advantage and, possibly, the ultimate erosion of the remaining domestic activities. Economic literature has developed consistent and comprehensive models of FDI (Markusen, 1995), but the implications for jobs have been addressed only recently and results on this issue are still preliminary (15). The paper by Ferner in this volume looks at data on the scale of employment in multinational companies, analyzes the developments in the world economy which explain this process of relocation, and shows that the relocation danger has been grossly exaggerated. Nevertheless, Professor Ferner contends that there are some grounds for concern in relation to potential social dumping, as well as with regard to competition in high-skill sectors coming from low-wage economies.

### **3. Job creation and non-labor market institutions**

In this section I will briefly review research on the institutions, other than those of the labor market, which most directly affect employment performance. I will focus on the functioning of product and service markets, and on the role of the educational system. It is clear, though, that the nature of work and the relations between firms and their employees are going to be affected by a broader set of determinants. Workers’ attitudes to work, the incentives to take up new job opportunities, the attitude of management towards employee participation, and many other relevant dimensions of the employment relationship will be very much influenced by the business system (16). This system comprises a wide array of institutions: the cultural system, which covers the norms and rules that govern the exchange relationships between economic actors; the political system, which includes the roles of the state in society; the financial system, which determines the distribution and pricing of capital; and the labor system, which in this broad sense refers to the regulations that delineate how skills are developed, certified and exchanged between individuals and organizations (which we tackle in sections 3.2. and 4 below). We will not pursue these topics here, but it is worth stressing that from the point of view of research on job creation in industrialized western economies, the main merit of this sociological approach is to draw our attention to the role that culture and values play in determining the attitude of firms and employees towards the changing nature of the employment relationship. For example, the nature of hierarchical

relations within the firm is strongly affected by the predominant values in society. The development of flat organizations which emphasize team work and strong interactive relations between teams and the central coordination body might be less appropriate in cultural systems where “remote paternalism” predominates (see Whitley, 1996). In general, the analysis of cultural aspects is important when we analyze how firms adapt their strategy and organization to the changing competitive environment. The changing nature of human resource management policies at the firm level is going to be directly affected by the cultural context.

### ***3.1. Product and service markets***

The role of efficient product and service markets as factors contributing to job creation has been the subject of substantial debate in policy circles. The beneficial employment effects of deregulating and increasing competition in product and service markets has been voiced by influential business reports (McKinsey, 1994) and has drawn the attention of policy makers (see OECD Job Study, 1994). Nevertheless, academic research on the subject is scarce (17).

At the conceptual level, the standard macroeconomic analysis of the inflation/unemployment trade-off provides the appropriate framework (18). Rigidities and non-competitive behavior in product markets play a dual role, similar to that played by labor market imperfections. First, they tend to increase the lowest possible rate of unemployment. This rate (known as the non-accelerating inflation rate of unemployment or NAIRU) is determined by the appearance of inflationary pressures, and these are facilitated when firms face no competition or operate in highly regulated markets. In such markets cost increases are passed on to the consumers even if the economy is in a slump. Second, product market imperfections make it more costly (in terms of lost output and jobs) to reduce the inflation level. That is, the short-run inflation/unemployment trade-off is worsened. If firms can sustain mark-ups in recessions, it becomes harder to slow down price increases, and stronger policy-induced economic contractions are needed.

The empirical and policy relevance of these arguments remains, however, unclear. There is no doubt that fostering more competition in markets where either collusion is pervasive or firms abuse their dominant position has beneficial effects through lower prices, increased output and more employment. However, within a liberalized open economy there are not many markets where such non-competitive behavior prevails. In modern industrial markets a large part of observed mark-ups reflect superior product positioning by firms that have invested heavily in R&D or brand development. The anti-trust case in these situations is far less clearcut.

As for deregulation, its practical employment impact is subject to similar caveats. Although some macroeconomic benefits may be obtained in terms of more flexible price formation, the overall employment impact of lifting regulations will be to a large extent contingent on the nature of the regulatory framework before and after the changes. Although the effect of deregulation on the general economy is bound to be positive –in terms of welfare, output and jobs– as efficiency is increased in many markets (19), in some sectors regulatory conditions may have led to an excessive use of labor, so that employment declines after liberalization. This has been confirmed in ex-post assessments of deregulation, such as that produced by Winston (1993) with respect to the US.

The fact that deregulation leads only indirectly to more jobs and may be detrimental to employment in well identifiable sectors is a major obstacle to regulatory reforms.

Beyond this comparative statics perspective, deregulation and increased competition are perceived by many as key components of a dynamic business environment which facilitates firm growth and job creation (20). The link between a more competitive environment and higher innovation is confirmed by the empirical industrial organization literature (21), but how this translates into jobs is a more open issue. Higher innovation creates jobs, but it also destroys them, increasing turnover in the labor market (22). This highlights the need for coordinated deregulation of product and labor markets. It also highlights the fact that high turnover with the entry of new firms in new activities will only be possible if there is a parallel change in the supply of skilled labor. This is, in fact, the subject to which I turn next.

### ***3.2. Educational systems and the skills mismatch***

One of the main explanations of the employment problems confronted by developed countries over recent years relies on what is known as the skills mismatch; that is, the idea that trends in technology and the globalization of markets have created a gap between the skills demanded by firms and those possessed by the labor force.

It is important to recognize that if the mismatch story is to be relevant, it cannot be simply a temporary phenomenon. It has to be grounded in some basic failure in the process of skills acquisition by the workforce, otherwise a change in the demand for skills would gradually be matched by a change in the qualifications of the labor force, and the mismatch would not be a permanent phenomenon (23).

Views on skills acquisition have been very much influenced by Gary Becker's theory of human capital (Becker, 1962, 1975). Becker's main argument can be summarized in a simple fashion. He divided training into two categories: general training, which is useful to all firms in the economy, and specific training, or training which is useful only at the level of one specific firm. In the first case, the benefits of training accrue fully to employees, since there is competition in the market for labor services and the acquired training translates into a higher wage rate. In such a situation, employees will be willing to invest in training since they will expect to enjoy all the returns from their investment. In the case of firm-specific training the returns on investments in training accrue to the firm and are shared between employees and employers, who will therefore be willing also to split the costs.

Becker's analysis has been very influential and underlies the view that the market for skills is a market that should not be subject to government intervention because the incentives of employers and employees will on their own provide the appropriate levels of training in the economy. Such a vision no doubt lies behind the free-market approach to training predominant in the economies of the UK and the US.

Nevertheless, the existence of potential market failures in the education market has long been recognized. It is widely accepted that a worker's productivity depends not only on his or her own level of training but also on the training of the workers with whom he or she works. Thus, from a social point of view, the investment in education and training by a single individual provides benefits beyond those that are reaped by that individual, through the increase in the productivity of other workers. This externality is not taken into account by private individuals when deciding how much to invest in education. This is the kind of market failure which has been at the root of the policy of general education subsidies commonly observed in many industrialized economies. Such a policy, by the way, is more common for general and university education than for vocational training, although it is not clear why that should be the case.

The Becker paradigm has been criticized on several grounds. First, in the case of firm-specific training, the idea that the returns on training investment will be appropriated by both the employer and the employee is unclear. This is a typical situation of what is known as the hold-up problem, which we reviewed when discussing job security provisions. If the investment is firm-specific, the ex-post negotiating power of workers is low, and foreseeing this, they may decide not to invest in training to begin with.

More fundamentally, the sharp distinction between “general” and “firm-specific” training is probably inaccurate (see Booth and Snower, 1996). Training is usually useful to a limited number of firms in a given industry or set of industries. Thus, in general, firms will enjoy some market power in the labor market and will be able to extract some rents from workers (see also the discussion on minimum wages below). As a consequence, they will pay a wage below the marginal productivity of labor and, therefore, appropriate some of the returns on training. This will negatively affect the incentives for individuals to acquire training.

Similarly, if training is useful not only to a single firm but to a group of firms, although this might lessen the hold-up problem, it will clearly affect the incentives for firms to develop their workers’ skills, since labor mobility could mean that firms end up subsidizing their competitors (what is known as the “poaching externality”).

The recent book edited by Booth and Snower (*op. cit.*) surveys other potential externalities. Probably the most important of them concerns the existence of failures in the credit market. As already mentioned, human capital cannot be used as collateral, and this might lead to underinvestment in education by talented individuals who face liquidity constraints. In his contribution to this book, Professor Snower argues that some of the market failures in the training domain may actually be exacerbated by the organizational revolution and the move from Tayloristic organizations to new organizational forms.

Research on the impact of skill acquisition systems on the employment prospects of individuals and the performance of firms and industries has followed several routes. Much of the work has dealt with the comparative institutional analysis of alternative training systems. This research typically compares market-based approaches, such as those of the US and the UK, with more institutionalized systems, such as those of Germany and Japan, and systems based more on taxation incentives, such as that of France (examples of this type of institutional research include Shackleton, 1995; and Hyman, 1992). This kind of research offers a wealth of evidence and appraises the effectiveness of systems by looking at a large number of issues and a variety of programs, with an analysis of their effectiveness. This is in fact very important because government intervention in training is also subject to substantial government failures, even when the government is not the direct provider of training (see Booth and Snower, *op. cit.*).

Alternatively, some recent work (Mason *et al.*, 1996) has examined the relationship between workforce skills, product quality and industry performance by comparing companies located in different countries and competing in the same industry using distinct quality-skills strategies. These authors argue that firms’ choice of strategy conditions their demand for skills, affects performance, and also sends important signals to the workforce in terms of the potential returns on investment in the acquisition of additional skills. This kind of work is extremely interesting as it points to effective ways in which training systems can be coupled with the competitive position of firms so that the training-enterprise system avoids the low skill–bad job trap.

#### 4. The role of labor market institutions

The key role played by labor market institutions in determining how firms and workers react to a changing economic environment was recognized long ago. Traditionally, institutions have been the focus of research within the “industrial relations” and sociology literatures.

Only more recently have economists started to focus on the role of institutions; and, wherever useful, they have deployed modern economic analysis techniques to study issues such as collective bargaining, or the incentives that specific institutions –such as unemployment insurance– have on employee behavior. Recent work has even tried to analyze the extent to which labor market institutions fit together and in relation to other societal institutions (Freeman, 1996).

Apart from Freeman’s attempts to provide a more comprehensive approach, the economic literature has advanced in the analysis of labor market institutions in a very systematic but compartmentalized way (24). Using economic analysis and the traditional methodology of economics, the functioning of specific institutions has been modeled and the theoretical implications have often been tested with different data sets. This line of research has produced interesting insights, evidence, and some controversies. Its reliability depends very much on the extent to which one can treat each institution in isolation (25).

From a very different perspective, sociologists have also provided interesting views on the employment debate (e.g. the contribution by Professor Crouch in this volume, developing the perspective of the neo-institutional school). Arguably, some of the criticisms of the deregulation case defended by many economists and international organizations such as the IMF and the OECD rely on a caricature of the “mainstream economics” framework, which stresses the virtues of full labor market liberalization. As argued below, however, mainstream economic analysis recognizes many labor market imperfections that may justify regulation.

Among the most interesting contributions of the institutional school are its focus on employment rather than unemployment, the detailed study of the role of female employment, and the thorough analysis of the employment patterns of the young and the elderly.

By focusing on these perspectives, Professor Colin Crouch’s contribution in this volume provides an explanation of the impact of institutions on employment performance which complements the standard economics-based approach that I will review later. For example, Professor Crouch points out that analysis of the labor market should not focus on unemployment data, since –among other problems– these data are often biased by the fact that qualification as unemployed entitles individuals to unemployment benefits (and increases government spending) (26). Because of these effects, both individuals and the government are likely to adopt behaviors which may distort the interpretation of the data.

Similarly, Crouch analyzes employment rates (computed taking into account the whole population between the ages of 15 and 80) by focusing on female employment. His analysis shows that this type of employment accounts for the greatest absolute differences between countries as well as the most recent rates of growth. Southern European countries show the lowest female employment rates, with the exception of Portugal, which scrapped the relevant legislation after the 1974 change of political regime.

Overall, the approach of the neo-institutional school highlights the importance of appraising labor market problems within a broad perspective that takes into account the role of ideology and political and social groups (see also Whitley, *op. cit.*).

The importance of the political economy of institutional reform is clear. Leaving aside the United Kingdom, labor market reform in EU countries has been very slow and patchy, despite high and rising unemployment figures. As we have seen above, the key role played by society's institutions and social actors in the workings of the labor market has long been recognized. However, only recently have researchers explored the broader political implications of labor market reform in a systematic way. Gilles Saint-Paul (1996) has shown in detail the potential distributional consequences of altering key labor market institutions and how the distribution of the gains and losses from reform affects the different political constituencies and the viability of change (27).

Turning back to the narrower economic analysis point of view, I shall next review some of the most interesting results and relevant issues reported in the literature.

### *The economic analysis of institutions*

As usual in economics, the analysis of labor market regulations starts from the benchmark case of a perfectly competitive market. In such a market, firms are willing to pay to workers the value of their marginal productivity, and workers supply their work effort taking into account their opportunity cost in terms of foregone leisure.

Economic analysis is quick to recognise that the market for labor is not akin to the market for many products and services and, as a consequence, several potential market failures have been closely examined. Labor market institutions are thus appraised as policy tools which may be used to guarantee the proper functioning of the market.

What are the fundamental market failures identified in the economic literature? First, the existence of imperfect competition in the market, due either to union activity (a monopoly on the seller's side) or to the existence of a single buyer of labor services (a monopsony). Second, the asymmetric nature of the information available in the market regarding the characteristics of jobs (e.g. in terms of health and safety). Third, the existence of uncertainty about the future behavior of both labor demand and supply, together with the impossibility of creating a market for contingent labor contracts due to informational deficiencies. A couple of examples will illustrate the nature of this market failure.

First, workers may not be able to obtain insurance that covers temporary drops in income. They may lack the required collateral (human capital cannot be used), or the market for that kind of insurance may simply collapse due to adverse selection (only workers who are more likely to experience falls in income want to obtain insurance, and this pushes the premium up too high).

Similarly, it might be difficult for firms and workers to commit freely to a long-term relationship: once a worker has acquired firm-specific knowledge, he or she is locked in. The firm need not fully compensate the worker for all the investment in order to retain her, and this may discourage the investment (which could be otherwise socially productive) to begin with. Writing a complete contingent contract for this problem may be extremely difficult, and it is even more difficult to verify it or enforce compliance (informational problems are particularly acute with regard to both the worker's effort and the firm's productivity).

Economic analysis thus provides efficiency benchmarks which may be used in the analysis of labor market institutions. It cannot be used to advocate a total deregulation of labor markets. Rather, it is useful because it points out which regulatory features are justified

from the point of view of overall economic efficiency and which have to be justified on some other grounds.

Next, I will review some of the most important institutions in western labor markets today: minimum wages, unemployment insurance, collective bargaining regulations, and job security provisions (28).

## 1. Minimum wages

According to the conventional view, minimum wage policies pursue equity objectives –guaranteeing an adequate level of wages to the less skilled– but should be assessed negatively from the efficiency point of view. From this perspective, minimum wages would typically be set above the market-clearing level, thus leading to a lower employment level than would be found in a free market. Following this conventional approach, the minimum wage would be an inefficient way to attain redistribution objectives. The alternative optimal policy is based on a negative income tax, which preserves the wage advantage of the low-skilled and restores the standard of living through direct subsidies.

Recent research conducted by some American economists has sparked a controversy over this conventional analysis. Researchers such as Card and Krueger (1995) (29) have pointed out that many firms do not in fact face a flat supply of labor at the on-going wage rate, but rather an upward sloping schedule, so that an increase in the wage rate elicits a slight increase in the labor supply; and, similarly, a decline in wages does not imply that all workers are ready to be employed somewhere else. Firms are, to a certain extent, monopsonists.

In these circumstances, firms tend to employ too few workers (hiring the marginal worker raises the cost of all infra-marginal ones), and a minimum wage could in fact lead to an increase in jobs as opposed to a decline, while improving overall efficiency.

The extent to which this argument has empirical validity has been investigated by several authors in recent work within the standard economic literature (see, for example, Dolado *et al.*, 1995). The evidence seems to indicate that minimum wages are unlikely to constitute a serious factor preventing job creation in Europe at the aggregate level (30), although they appear to be a more relevant issue for young workers (31). The results do not therefore point to a major overhaul of the minimum wage system, but they do support the need to change the current arrangements and allow the minimum wage to vary according to age.

## 2. Unemployment insurance

Unemployment insurance is another labor market institution which pursues basically equity objectives. Nevertheless, a plausible efficiency case for state intervention (32) has been made, arguing that a private market where workers would insure against the possibility of becoming unemployed would not exist, owing to the presence of an adverse selection problem. Only workers with a high probability of being fired and losing their jobs would be willing to pay for such insurance, which, as a consequence, would become too expensive.

Even if state-provided unemployment insurance must exist, research into its impact on unemployment has shown that the design of the institution is very important. The key results show that higher benefit levels and longer benefit duration worsen the unemployment rate. Benefit duration is found to be particularly important (Katz and Meyer, 1990).

Recent research by Bover, Arellano and Bentolila (1996) has also shown that these effects are quantitatively important. For example, it is found that when workers have been out of work for three months, the probability that a worker without benefits will leave unemployment is double that of a worker who is receiving benefits.

Empirical econometric research has thus confirmed the basic intuition that unemployment benefits will make the unemployed more selective in their search for jobs and, sometimes, will actually discourage job search. This will prolong unemployment spells and decrease the employability of the labor force in the face of rapidly changing technological and demand conditions.

Professor Stephen Nickell, in his contribution to this volume, argues that unemployment benefits, by encouraging the growth of long-term unemployment (LTU) versus short-term unemployment, contribute not only to higher unemployment levels, but also to higher degrees of unemployment persistence.

His empirical results confirm that higher levels of benefits contribute to higher levels of LTU, that real wages are negatively correlated with changes in unemployment, and that this correlation is higher when LTU levels are high. Indeed, higher LTU levels arise when overall unemployment declines and the proportion of LTU in the pool of unemployed increases. Nickell's results show that as unemployment declines (raising the proportion of LTU), the downward sensitivity of wages to unemployment declines, thus fostering unemployment persistence.

### 3. Collective bargaining

The debate about the labor market institutions which might be more appropriate for collective bargaining has been heavily influenced by the work of Calmfors and Drifill (1988). The conventional approach from the point of view of economic analysis had been that the existence of unions would be detrimental to employment. The argument was straightforward: unions concentrate the bargaining power of workers and lead to a monopoly situation where the only seller of labor services is the union. This bids wages up, but always at the expense of employment.

Researchers in political science and industrial relations had always emphasized the alternative view, whereby the existence of unions coupled with strong employers' organizations (in a regime that became known as corporatism) was to be preferred, as negotiators would set their wage agreements taking into account the effects they would have for the whole country: the potential impact on inflation and macroeconomic stability.

The work of Calmfors and Drifill provided a systematic empirical and theoretical analysis of these two hypotheses. The authors found that the relationship between the degree of bargaining centralization and macroeconomic performance (as measured by the rate of real wage increases) was not monotonic. In fact, real wage increases were in general higher for intermediate bargaining systems, in which negotiations were undertaken at the industry and/or regional level. The best results were obtained either in fully decentralized systems (such as that of the US) or in very centralized ones (i.e. Sweden or Austria) (33).

However, the discussion on the nature of the bargaining system should take into account considerations other than the macroeconomic impact on wages and inflation. Since macroeconomic policies have tended to be more stable in recent years, a centralized reaction



to a shock that deteriorates the competitiveness of a country is becoming less valuable. At the same time, the centralized determination of wages might hurt many firms in an economy which is increasingly working under a large variety of market conditions. Similarly, it is not clear exactly how the choices of the unions' and employers' leaders will take into account the interests of the economy as a whole. As the Spanish experience shows, the negotiation interests of the unions might concentrate on employed workers with fixed contracts, the "insiders", while neglecting other constituencies (34).

The work by Professor Nickell in this volume looks at the impact of collective bargaining on unemployment persistence rather than on employment levels. Nickell argues that coordinated bargaining by unions –counteracted by coordination on the part of employers– improves the power of insiders and thus strengthens a negative job security effect which creates persistence. This works as follows: low unemployment this period relative to last period increases job security and thus diminishes wage moderation, dampening the positive evolution of unemployment levels. Insider power, according to Nickell's results, strengthens this perverse mechanism.

#### 4. Job security provisions

Employment protection legislation includes provisions on redundancy payments and advance notice requirements, as well as the conditions accepted by courts to justify a dismissal as based on a valid cause. This legislation is usually justified on equity grounds. However, in an uncertain world access to information will be asymmetric: working conditions or pay may be subject to external factors (technology or product demand), about which the employer may have better information than employees (35). In such a world, complete contingent labor contracts cannot be written, and specifying restrictions on contracts may serve efficiency purposes. Nevertheless, even if job security provisions may be justified on an efficiency basis, this does not imply that it is easy to determine the most appropriate form of correcting the market failure (what kind and what level of employment protection should be offered).

Aside from their welfare and distributional impact, job security provisions have an effect on employment and wages. This has been investigated by economists and the prevailing evidence shows that employment protection regulations have a very minor direct effect. Employment is unaffected, since firms engage in less firing in economic downturns, but foreseeing this, they also engage in less hiring to begin with (36); wages, however, tend to be lowered by employment protection regulation (Bertola 1990), thus reflecting the fact that the rent captured by workers with this regulation is, at least partially, lost in terms of wages.

The predominant view, therefore, is that such regulations shift rents from firms to workers without necessarily leading to lower employment creation (Layard *et al.*, 1994, p. 108). The most significant impact on jobs arises when the legislation discriminates between different groups of workers. Then, the regulation favors insiders who resist the acceptance of lower nominal wage increases despite the existence of high unemployment (Lindbeck and Snower, 1989; Bentolila and Dolado, *op. cit.*).

Professor Nickell emphasizes in this book the negative effect of these regulations on the persistence of unemployment. Job protection schemes may not affect the level of unemployment (if we consider a long enough time span), but they do seem to augment the degree of persistence. Nickell points out that persistence does not in itself reduce social welfare. In fact, slow

adjustments to negative shocks could be defended on equity grounds. Nevertheless, it should be pointed out that job protection schemes could diminish efficiency by limiting the adjustment possibilities of small firms to negative shocks (large firms can usually adjust employment because they experience a large enough regular flow of employees leaving the company).

## **5. Firms' strategies and the changing nature of jobs**

I started this introductory chapter emphasizing that the conceptual framework would place enterprises at the center of the analysis. Indeed, jobs are created as new firms appear in the market or old firms successfully expand their activities. This process of firm creation and expansion is based on the effective adaptation of existing firms and potential entrepreneurs to the changing demands of the market and the potentialities of new technologies. So far we have focused on how institutions influence the demand for labor by firms, the supply behavior of individuals, and the whole employment relationship.

It is worth stressing, though, that new skilled jobs appear if firms are able to react to the challenges of technologies and new markets, and can adapt internally to the new scenario. Jobs are preserved if firms and employees can also adapt. It is therefore important to explore how firms can adapt their strategy and their internal organization and employment practices to confront these challenges, and how this adaptation changes the nature of work.

### ***Organizational changes***

One of the distinctive features of the current technological revolution is its extremely important impact on two types of costs which crucially affect the internal organization of firms (37).

The first cost that has declined dramatically is the cost of communications. Thanks to revolutionary progress in telecommunications, it is today cost-effective to disseminate huge amounts of information within the firm. Similarly, information collected in market transactions can be channeled at low cost and used for decision-making.

The effective use of information within the firm relies, of course, on the sharp reduction of computing costs. Technological progress in this domain has allowed the development of computerized systems that can handle vast amounts of information about the market and internal production flows. More generally, it has permitted the appearance of programmable, multi-task, flexible equipment.

The increased availability of information, the ease with which it can be processed, and the increased flexibility of production and service-provision systems has a profound impact on the way firms organize themselves internally.

The immediate implication of this kind of technical change is to alter the way production processes are organized and even the way products are designed. For example, it may facilitate broader product lines, reduce batch sizes, shorten product cycles, facilitate made-to-order production and reduce work in process.

In fact, some of the broad trends that we observe in modern industrialized economies may be seen as part of the same phenomenon. In many companies we have seen

dramatic *organizational changes*, with significant reductions in the labor force (downsizing), the elimination of middle managers, and sometimes a complete redesign of the company process (reengineering).

The investigation of this shift towards a new production paradigm has been motivated by well-known management accounts of the process (38). In a series of papers Paul Milgrom and John Roberts have focused on manufacturing and have emphasized the systemic nature of this process by stressing how the effective introduction of the new technologies requires changes in several organizational aspects of the firm, owing to the complementarities between different aspects of production strategies and organization.

Indeed, the impact goes beyond the pure production process. Changes in information flows, new flexible multi-task equipment, and the general reorganization of activities within firms lead to a reorganization of work and the way tasks are carried out. This imposes new demands on the labor force and may call for a new system of human resource management (HRM) practices (39).

Altogether, the nature of work is changing in many organizations and, concomitantly, there is a new approach to employee-employer relations.

As far as job definition is concerned, the tendency is to move away from repetitive, mechanical activities towards a new concept of flexible, multi-task jobs, with substantial work rotation and team work.

Simultaneously, there has been a marked increase in the introduction of innovative and supportive human resource management policies. The general spirit of these innovations has been to increase employee participation, to foster new relationships with management, to facilitate team activities, and to increase profit-sharing and other innovative financial compensation schemes.

### *New organizational forms and firm strategy*

In fact, reengineering processes, the introduction of innovative work practices and other organizational changes should be understood as reflecting the competitive reaction of enterprises in an environment which is rapidly changing under the influence of new technologies, increased competition through globalization and deregulation, and changing consumer preferences as income per capita rises.

To the extent that organizational changes are the result of competitive moves in the marketplace, they will be contingent on the strategies followed by companies and the market environment they experience. Indeed, the work by Osterman in this volume and elsewhere shows that in the case of innovative human resource practices such a link does exist.

Osterman distinguishes between innovative work arrangements (such as self-directed work teams; job rotation; use of employee problem-solving groups; and total quality management) and HRM policies (fundamentally rules on hiring, compensation and training). He argues that firms focusing on a quality-based competitive strategy will be more likely to use innovative HRM policies, as opposed to firms operating on the basis of low-cost strategies.

In fact, the effects of new work practices on firms and the determinants of their rate of adoption have been explored in detail in several papers (40).

This type of work points to four main conclusions. First, HRM practices do not have an impact as independent measures but rather when they form part of packages or bundles of policies undertaken by firms in this area. Second, when that is the case, HRM bundles may be very important in quantitative terms in the sense of significantly affecting performance. Third, despite this fact, few firms adopt sets of consistent (41) HRM practices. And fourth, this insufficient adoption may be explained by a large variety of causes.

One of the possible causes is that the adoption of a bundle of HRM policies has to fit with the overall business strategy of the firm and with the nature of technology in the industry. This is consistent with the work of Osterman and has been explored in a few empirical industry-specific papers. For example, MacDuffie (1995) (42) explores empirically the relation between bundles of HRM practices and firm performance. He argues that the introduction of flexible production systems –reducing buffers in the production process– makes the introduction of innovative HRM practices a key component for success. His empirical results confirm this thesis in the automobile industry. It remains to be seen how the fit process between strategy and HRM policies works in other manufacturing or service industries.

Indeed, results in this area are not yet conclusive and other researchers find that the adoption of high performance work practices invariably improves performance and seems to be unrelated to business strategy (Huselid, 1997). As reviewed elsewhere (43), the ambiguity of these results may be linked to the specification and empirical problems inherent in this type of study thus far.

A second potential explanation for the insufficient adoption of consistent HRM policies could be that labor market institutions and other societal restrictions prevent firms from undertaking change. This has not been explored in detail, but in a context of rapidly changing technologies, the ability of (labor market) institutions to adapt to the changing requirements of firms can be a key determinant of the success of a country in the creation of rewarding jobs. As argued above, the job creation process can be in jeopardy if social inertia and legal restrictions prevent change. From the public policy point view, it is important to assess what design of labor markets and business and educational systems facilitates the adaptation process. Before tackling this point, I turn next to the issue of the extent to which the changes triggered by the organizational revolution play a role in the trends observed in modern labor markets.

### *The impact on labor markets*

Whatever the exact nature of the relationship between firm strategy and the organizational revolution, it is clear that changes within firms could play a significant role in actual labor market outcomes. Indeed, from a theoretical perspective Lindbeck and Snower (1995, 1996) have explored the implications of some of the observed trends in production systems (and to a lesser extent of the sometimes coincidental innovative work practices) for the labor market. Their argument is based on the increased importance of the returns from (informational and technological) task complementarities relative to the returns from specialization. They show that advances in information and production technologies, together with increases in the supply of employees with general human capital, can explain the changing fortunes of workers in labor markets, with increased jobs and employment opportunities for what they call versatile workers, relative to non-versatile workers. Lindbeck and Snower conclude that the organizational revolution could be an additional factor (together with skill-biased technological change, international trade and insufficient training) explaining the increase of labor market inequalities.

The paper by Osterman in this volume considers also the possible implications of the organizational revolution for the quality of work. It does so by looking at the main features of contingent employment. In fact, the papers in this book by both Osterman and Salas argue, without a formal model in this case, that the move towards new organizational forms may induce the segmentation of the labor market between core and peripheral employees. These authors do not focus on the internal reorganization of the firm (the redesigning of the way tasks are bundled into jobs) but rather emphasize the redefinition of the boundaries of the firm brought about by new technologies and increased competitive pressures. Firms may decide to focus on “core” competencies and, as a consequence, provide job security and other benefits to “core” employees.

The data presented by Osterman show two remarkable aspects of contingent employment. First, its dual nature. Even though most contingent employment is associated with low-quality jobs (low wages, low social benefits and low training), there is also a non-negligible segment of qualified contingent jobs (44). Second, that most contingent employment seems to be driven by conventional motivations, related to the increased importance of peak demand, rather than by the organizational revolution.

Altogether, this type of evidence may lead the analyst to conclude that the increasing weight of contingent employment in modern economies is a result of the well-known trends in labor markets (i.e. biased technological change, Third World competition) and has little to do with organizational changes within firms. This conclusion is unwarranted, however. As Salas points out in his paper, the evidence collected thus far is very tentative, since we know very little about internal labor markets. Indeed, one of the key points made by this author is that the organizational revolution could, in itself, facilitate job preservation and the increased availability of high quality jobs. That is why public policy, through the choice of institutions that facilitate organizational change, is important.

### ***The policy implications***

From the perspective of public policy, the organizational revolution questions the adequacy of the traditional policy instruments used in most western economies and may call for active intervention whereby institutional change is promoted with the objective of facilitating the adoption of new organizational forms at the firm level.

Professor Snower discusses how institutions such as centralized bargaining, unemployment security benefits and job security legislation, as commonly implemented, become counterproductive in the context of the organizational revolution.

New organizational forms are characterized by the increasing importance of multi-tasks, which makes it difficult to apply the traditional “equal pay for equal work” principle of centralized bargaining in wage negotiations.

Similarly, the unemployment benefit systems tend to discriminate against workers who might be willing to supply their services on a temporary or part-time basis. As discussed above, the demand for this type of worker (with low or high levels of training) will increase as firms adopt new organizational forms and keep only “core” employees within the boundaries of the company. According to Snower, the trend towards increased temporary work will make job security legislation largely irrelevant, and in fact quite counterproductive to the extent that acquired rights extend to occupational mobility.

Public policy, however, should not only adapt to the organizational revolution. It can actually play a role in promoting it. In fact, Professor Salas argues that public policy, through the design of key labor market institutions, can be a crucial determinant of the nature of employment relations and thus facilitate organizational change at the enterprise level.

According to Salas, who focuses on the Spanish situation, institutional changes may promote a reorientation of the strategy of Spanish firms, away from the current focus on low-cost competition towards a higher value added approach. This goal can be achieved by moving away from what the author qualifies as traditional explicit labor contracts towards a new relational contract. This type of contract will be more open-ended, leaving more room for adjustment to new circumstances. It will be based on the commitment of both employers and employees to a long-run relationship, with implicit job security in exchange for increased worker participation and internal occupational mobility.

In principle this type of (incomplete) contractual relationship is more appropriate in a turbulent business environment, but decision rights under unforeseen circumstances (residual decision rights) are ascribed to the firm, and this change in the balance of power within companies is likely to prevent the change in the contractual regime. Professor Salas suggests that investments by employers in general multi-task training, and government regulations promoting information exchange (worker representation on corporate boards) are institutional changes that could give credibility to the new contractual relationship and thus facilitate change.

## **6. Concluding remarks**

Institutions play a key role in determining a country's employment performance. Key indicators such as the rate of job creation, the unemployment rate or the participation rate, are to a large extent established by the complex interaction of various social, economic and political institutions.

This book focuses on the role of labor market institutions, although, as this introductory chapter has made clear, a much broader range of economic and social institutions are likely to influence employment performance.

I believe that emphasizing the role of institutions is the appropriate analytical approach. Today it is widely recognized that insufficient job creation, low participation rates and high unemployment rates are structural problems. These are difficulties that will not go away with cyclical growth, nor –as some analysts apallingly have argued– with a (distant) decline in the rate at which new and smaller cohorts of youngsters enter the labor force. Only structural –that is, institutional– change can improve employment performance.

Institutional change is, however, very difficult. Institutions, whether they are legal constructs or social norms, are prone to have substantial inertia, often embodying a complex network of conflicting interests and opposing social groups. Under many circumstances, the beneficiaries of inherited institutions block potential changes that could be highly beneficial from a global point of view.

Institutional rigidities are particularly unfortunate in the world economy at the turn of the XXth century. The rapid pace of technological change, the very nature of the new technologies, and the globalization process impose new and changing demands on firms, individuals and society at large.

Spurred by increasingly competitive markets, firms are quickly reacting to this challenge and undergoing a profound organizational revolution. Social institutions must be adapted to the new circumstances. They should ease the adjustment of firms but at the same time cushion the social impact, ensuring social cohesion and facilitating the adaptation of individuals.

Furthermore, as Professor Salas argues in this book, public policy should not only accommodate institutional change, but also lead the way towards increased institutional flexibility and adaptability.

Institutional reforms may include a wide range of structural changes. At the company level, reengineering and firm reorganization are strong institutional changes which may adversely affect individuals. At the country level, equally strong social shocks may be caused by the reduction of unemployment benefits, the introduction of firm-level bargaining, the reduction of job security provisions, and other reforms in employment relationships.

These and other institutional reforms imply profound changes in the distribution of rents and economic power in the economy. In some cases, institutional restructuring increases the uncertainty about the future distribution of rents and job opportunities. Indeed, this anticipated or suspected income redistribution lies behind the slow pace of structural labor market reform thus far, particularly in most of continental Europe.

The recognition of the strong impact of institutional reform on employment performance and income distribution across the whole economy makes it clear that institutional change must be systemic, encompassing a wide range of institutions, with the objective of ensuring enough political support for change, spreading the gains and losses from reform as evenly as possible across the population. □

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(1) IESE, Barcelona, June 1997.

(2) Of course, complete exogeneity is too extreme. There is a feedback mechanism, and technology and globalization are also the result of firms' strategies. Indeed, the literature on endogenous growth in economics makes it clear that innovations take place as a result of the pursuit of profit motives by individual firms (Romer, 1986). Foreign direct investment is also endogenous in the recent economic literature on the subject (Markusen, 1995). As usual, the establishment of a conceptual framework requires that we abstract from some of the features of the real world, so as to be able to center the analysis on the issues of direct interest. It is therefore reasonable to assume that technological change and globalization are exogenous when examining the job creation process.

(3) See *The Economist* (1996) and Butler *et al.* (1997).

(4) For example, influential reports such as the Made in America project led by Dertouzos and others (1989).

(5) See Baily and Gordon (1988).

(6) For a succinct account of the report, see Boskin *et al.* (1997).

(7) See Gordon (1996).

(8) This intuitive idea has been formalized by Aghion and Howitt (1994). In general, however, very little research supports a positive relationship between technological change and unemployment. As Layard *et al.* (1994) point out, unemployment is untrended over the very long term and this suggests that there is no long-term relationship between productivity changes and unemployment.

- (9) Indeed, the period with the strongest rate of growth of output (not total factor productivity) for the currently developed countries corresponds to the golden years after the Second World War (a rate of 3.7% on average for 16 countries between 1950 and 1970); and the last two decades do not show a slow growth (2.2) if one compares it with the rates observed between 1870 and 1950 –with averages ranging from 1.2 to 1.5 (see Barro and Sala i Martín (1995), p. 6).
- (10) See Juhn *et al.* (1991), Berman *et al.* (1994) and Machin (1996). See also footnote 23.
- (11) Some recent (opposing) contributions to the debate include Lawrence (1996) and Rodrik (1997).
- (12) See Revenga (1992), Sachs and Shatz (1994), Lawrence and Slaughter (1993), and Freeman (1995).
- (13) See Gual, *op. cit.*
- (14) See Arthuis (1993).
- (15) See Feenstra and Hanson (1995), Lawrence (1994) and (1995), Messerlin (1995), and Slaughter (1995).
- (16) Whitley (1996).
- (17) For a detailed survey, see Gual (1997).
- (18) Beyond the standard macroeconomic model, which is based on the idea that there is only a short-term trade-off between inflation and employment, some authors have introduced new arguments in favor of a more active demand management policy. For example, Drèze (1996) argues that even purely temporary drops in demand can have permanent negative effects on employment, and Akerloff *et al.* (1996) have shown that when stable inflation is set too low there might be negative permanent effects for employment.
- (19) Note that in some markets where market failures are pervasive, full deregulation may decrease efficiency.
- (20) The empirical literature on growth has also used a liberalization variable as a factor contributing significantly to the growth of GDP per capita.
- (21) See, for example, Geroski *et al.* (1995) and Nickell (1995).
- (22) This is, of course, the point made by Aghion and Howitt (*op. cit.*).
- (23) Work by Machin (1996) and Haskel and Martin (1996) suggests that economies such as those of the UK and the US have indeed suffered major changes in the nature of labor demand, with a significant shift towards skilled employment, without the supply of skilled labor being able to keep pace. Moreover, Machin also shows that most of the observed demand changes do not take place across establishments or industries but rather within specific work sites, often in relation to R&D work places. This would point to biased technological change as the major factor inducing labor demand changes.
- (24) Bertola and Rogerson (1997) provide an example of a joint analytical treatment of two institutions. These authors argue that the remarkable similarity between job turnover rates in the US and Europe despite the difference in job security institutions may be explained by the joint impact of job security provisions and other institutions (such as collective bargaining), which compress wages and prevent the adjustment of the market through wages in the presence of demand shocks.
- (25) As pointed out by Alogoskoufis *et al.* (1995), it is difficult to assess empirically the impact of each of these institutions in isolation because their presence is highly correlated in cross-country analysis.
- (26) The need to focus on employment rates rather than unemployment rates has also been emphasized by Murphy and Topel (1997).
- (27) Mancur Olson's theory of collective action provides a related approach. This author argues that the increase in European unemployment is secular and due to the formation of special interest groups which shape policy and maintain the "status quo" (see Olson, 1995).
- (28) This review is not comprehensive since I do not consider other relevant labor market institutions, such as the impact of taxes on labor, restrictions on non-standard labor contracts, and regulations on working time and on the structure of compensation and wage differences across workers.
- (29) See also Neumark and Wascher (1995) and Deere, Welch and Murphy (1995).
- (30) Machin and Manning (1997) do not find any evidence for a group of countries including France, the United Kingdom, the Netherlands and Spain.
- (31) This effect is captured by Bazen and Skourias (1997) for the case of France.
- (32) The case for insurance, private or public, is also based on the ideas of labor income volatility and job search. Unemployment insurance could be an appropriate instrument to guarantee a smooth income stream to workers over their lifetime, since human capital cannot be used as collateral for borrowing. Unemployment payments may also facilitate the process of looking for an appropriate job and thus contribute to overall economic efficiency.
- (33) The complexity of the relationship between the structure of collective bargaining and employment outcomes makes it difficult to provide a clearcut empirical assessment. The OECD has recently obtained inconclusive results (see OECD, 1997), despite the fact that a related result (the negative impact of collective bargaining on wage dispersion) appears to be confirmed by the data.
- (34) See Bentolila and Dolado (1994).
- (35) Alogoskoufis (*op. cit.*).
- (36) Nevertheless, employment protection regulations reduce turnover and this may be detrimental to sectoral reallocation in periods of fast technological change (Alogoskoufis, *op. cit.*, p.114). Moreover, as argued by Bertola and Rogerson (*op. cit.*), advance notification requirements may play a significant role. The advance notice would allow workers with a higher chance of finding a job to avoid entering the



unemployment stock, and as a consequence, those that do enter unemployment will be less likely to find a job within a short time span.

- (37) Butler *et al.* (1997) argue that technological changes, by drastically reducing the cost of economic interactions, are going to fundamentally alter the boundaries of the firm, diminishing integration and fostering horizontal cooperation.
- (38) Womack *et al.* (1990) and Hammer and Champy (1993).
- (39) Indeed, Milgrom and Roberts do refer to the implications for jobs and HRM policies (for example, employment guarantees are explored in Milgrom and Roberts, 1995), but they center their attention on the consequences for the internal organization of the firm (i.e. the structure of production and vertical integration; see Milgrom and Roberts, 1990).
- (40) See Osterman (1995), Ichniowski and Shaw (1995), Ichniowski *et al.* (1996), and Ichniowski *et al.* (1997).
- (41) This type of research deals jointly with new work arrangements and new policies. Consistency –as required for example by Ichniowski *et al.* (*op. cit.*, p. 312)– means, therefore, fit between the new ways of organizing work (for example, teams) and HRM policies (such as compensation).
- (42) See also Arthur (1992).
- (43) See Portales and Gual (1997).
- (44) In fact, in a recent paper Segal and Sullivan (1997) argue that part of the growth of the temporary jobs industry is associated with the supply side of the market (people willing to offer their services on this basis). Similarly, they argue that the rapid growth of this industry is having beneficial effects on the labor market and the macroeconomy. Many firms use temporary workers as a way to recruit new employees, and the increased match between supply and demand in the labor market may explain (in the US) the extraordinarily low (non-inflationary) unemployment rate achieved in recent years.

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