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## Labor market rigidities and unemployment in Europe

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# Kiel Working Papers

Kiel Working Paper No. 787

LABOR MARKET RIGIDITIES AND UNEMPLOYMENT IN EUROPE

by  
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## **Abstract**

The paper studies the major institutional changes that are at the root of the increase in the west European unemployment rate in the last quartercentury from below 3 percent to 11 percent. The institutional characteristics of wage bargaining, the tax wedge and the legal rules hamper the self-equilibrating function of the labor market. The reservation wage, implicitly increased by the rise of the welfare state, has affected the bargaining process, the wage level and the wage structure. Econometric evidence is presented. Unemployment differs depending on the Scandinavian, the French-Mediterranean, the German and the British-Dutch approach to the labor market.

The unemployment picture in Europe is bleak. Two issues arise. First, the unemployment rate has moved up from 2.6 percent in 1970 to nearly 11 percent in 1996 in the European OECD countries, ratcheting upward in the seventies and the early eighties and moving upward again in the mid nineties. The share of long-term unemployed in total unemployed persons has increased considerably; the long-term unemployment rate has gone up from 0.9 (1979) to 6.6 percent (1994). Why has this development occurred? What has changed in Europe in the last twenty-five years?

Second, the experience in the European labor market contrasts markedly to that of the United States. Whereas employment in the private sector of the U.S. increased by 60 percent (44 million additional jobs) during the period from 1970 to 1994, Europe only added 10 percent (20 million jobs, with employment in 1970 nearly double to that of the US; see Figure 1). Unlike in Europe, there was no sustained increase in the unemployment rate. The share of long-term unemployment in total unemployment is much lower. The question is why the European experience has been so markedly different from that of the U.S..

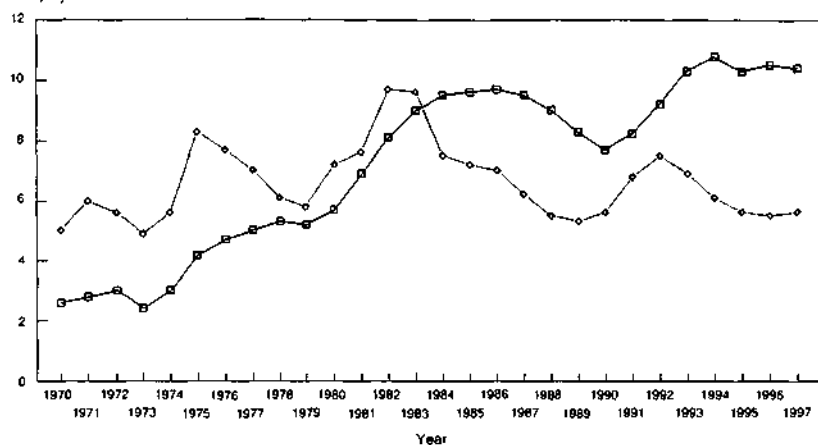
### 1. Institutions Matter

Unemployment is, of course, a complex phenomenon due to many factors. But one answer to the above two questions is that institutional characteristics are at the root of the generally poor labor market performance in Europe. More specifically, institutional changes in the labor market in Europe over the last twenty-five years can be considered to be one of the factors responsible for the increase in unemployment. Moreover, institutional differences to the United States can explain the different picture between Europe and the U.S.

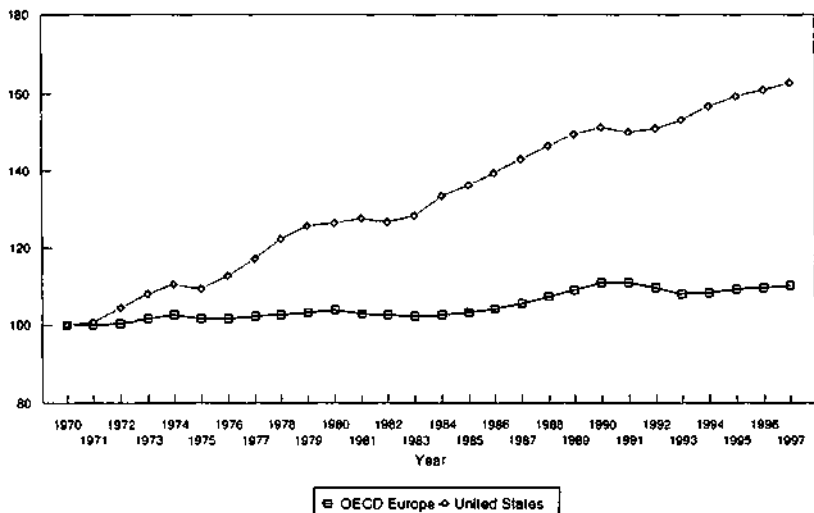
The labor market can be understood to be a very complex institutional mechanism having the function to bring about a satisfactory employment situation in an economy (Figure 2). In any economy there is an array of institutional arrangements that forms a complex web of incentives and disincentives all affecting the processes in the labor market. These arrangements relate to formal or traditional rules of behavior, for instance, in the wage negotiations between trade unions and employer associations, to procedures established

Figure 1 — Unemployment Rates and Employment in OECD Europe and the U.S.

## Unemployment Rate

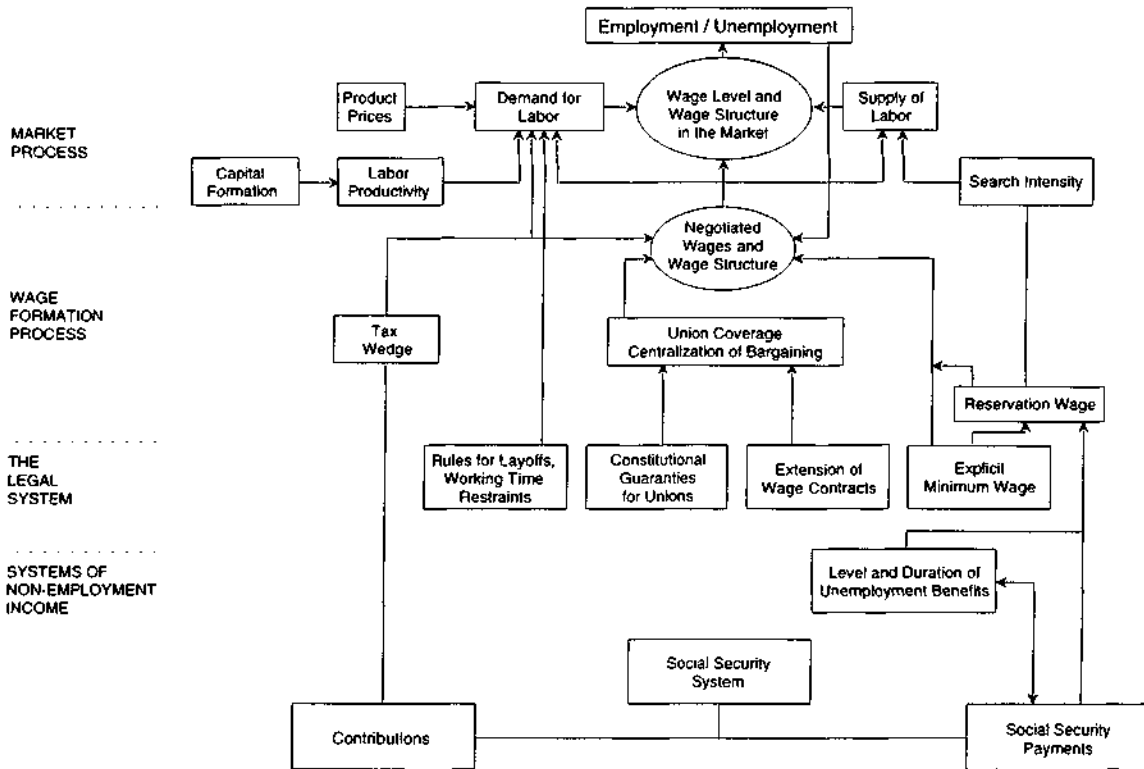


## Employment



Note: Data for 1996 and 1997 are projected; 1970 = 100; Source: OECD Economic Outlook.

Figure 2 — Institutional Arrangements and Unemployment



by voluntary contractual arrangements, to legal norms for wage setting, including constitutional rights, for instance, the right to bargain collectively ("*Tarifautonomie*") in Germany, to specific labor market regulations relating to working time or other matters, to governmental unemployment schemes, to rules for retirement and old-age insurance, to social welfare payments, to education and training, to taxation, to supply side policies, and to demand management. In Figure 2, four different institutional layers affecting the labor market in Europe are distinguished: the market process, the rules affecting the wage formation process, the legal system, and the system of nonemployment income.

Starting from a simple notion of an equilibrium in a classically clearing labor market, institutional arrangements can influence the clearing function of the labor market in basically three ways. (i) They can weaken the demand for labor, making it less attractive to hire a worker by explicitly pushing up the wage costs or by introducing a negative shadow price for labor. (ii) They can distort the labor supply. (iii) They can impair the equilibrating function of the market mechanism, for instance, by influencing bargaining behavior. Of course, all these effects are interrelated.

It should be quite clear that it is not very promising to look at a single institutional characteristics only and analyze its expected and, where possible, its empirically established impact on employment and unemployment. The effect of a single institutional arrangement can only be understood in its specific interaction with other institutional rules. A regulation making it difficult to lay off people will bite more, if a firm in crisis cannot adjust wages and working time downward. Consequently, it is the cumulative effect of rules that is relevant for the total impact (Lindbeck 1996).

## 2. Major Institutional Changes in Europe

When looking at Europe's experience with unemployment since 1970, a possible explanation is that the economic environment has changed. In some countries such as Germany the catching-up process after the war came more or less to an end in the seventies; labor productivity only increased by less than 2 percent in OECD Europe in the eighties and nineties instead of by the 5 percent that it had increased in the sixties and early seventies (OECD 1996, Table 59). Moreover, because of the oil shock, Europe experienced a



change in its exogenous data, representing a marked difference to the sixties. However, it does not appear as if Europe has experienced exogenous changes — oil shock, technological change or increased trade from developing countries — notably different from those experienced in the U.S. After the catching-up process has ended in Europe in the early seventies, the increase in labor productivity does not seem to be basically different in Europe than in the U.S. if one takes into account that Europe's labor productivity has increased at least partly as a result of layoffs. Consequently, it seems justified to concentrate on the institutional setting in Europe.

The most important aspect of the European unemployment puzzle is that Europe has seen major changes in the institutional characteristics of its labor markets, especially in the late sixties and in the seventies. In these two decades, equity considerations gained prominence (Table 1). This related to the shaping of legal norms for labor market institutions as well as to income policies and to public insurance schemes, including old-age pensions. Although the institutional characteristics of the wage setting process did not change in a narrow interpretation, other elements of the institutional setting did vary considerably: the tax wedge widened, since more generous social insurance benefits had to be financed from labor productivity. To some extent, new working-time rules negatively affected the increase in labor productivity. Layoff restraints were made more strict and severance pay in the case of closings were increased, both explicitly by law and by the judicial system. Most importantly, the reservation wage was raised by a whole set of measures: the duration of benefits was partly increased; it was made easier to obtain unemployment benefits; the conditions under which unemployed were expected to accept jobs were interpreted more generously ("reasonableness" or "*Zumutbarkeit*"); governmental schemes for the unemployed were extended; the relative distance between the lowest wage in the labor market and nonworking income in welfare programs became more narrow; and the minimum wage, which is applied in some countries, was raised. All these changes occurred more or less simultaneously.

Table 1 — Major Institutional Changes Affecting the Labor Market, Selected European Countries

France	
1968	Increase in the minimum wage.
1974	Increase in the minimum wage.
1979	Increase in unemployment benefits, extension of temporary contracts.
1981	Increase in the minimum wage.
1982	Restriction of temporary contracts to only temporary work in nature.
1983	Exceptional authorization to recruit unemployed workers with temporary contracts.
1985	Extension of temporary contracts: can apply to the unemployed.
1986	Extension of temporary contracts up to 24 months, suppression of administrative authorization.
1989	Introduction of guaranteed income benefits, increase in firing costs, new restrictions for temporary contracts: back to 12 months; limited to replacement.
Germany	
1968–1973	„Harmonized Action" ( <i>Konzertierte Aktion</i> ) between trade unions, employers associations, and government: Coordination of fiscal, social and income policies.
1969	Wage payment of 100 percent for six weeks in the case of illness (applicable to clerks) extended to workers.
1972	Mandatory social plan in the case of closings of firms ( <i>Betriebsverfassungsgesetz</i> , Firm Constitution Law).
1970–1975	Continuous increase in the share of social insurance payments ( <i>Sozialleistungsquote</i> ) from 13 to 18 percent of GDP (Sachverständigenrat 1994/95, Figure 36); increase in contributions, increase of the income threshold that determines forced membership of the social insurance system.
1975	Change in unemployment benefits ( <i>Arbeitslosengeld</i> from 63 to 68 percent of net earnings, <i>Arbeitslosenhilfe</i> from 53 to 58 percent; <i>Arbeitsförderungsgesetz</i> ; for instance: benefit in governmental labor market schemes 90 percent of previous net wage).
1976	Codetermination law: half of the members of the supervisory board of big firms have to be representatives of the workers.
1977	Social package; some reductions in payments of old age and health insurance. Reduction of minimum reserves for the old age insurance.
1982	Unemployment benefits slightly reduced. <i>Arbeitslosengeld</i> from 68 to 63 percent for unemployed without children. <i>Arbeitslosenhilfe</i> from 58 to 56 percent for unemployed without children. Overtime payments no longer taken into account.
1985	Regulation of social closing plans ( <i>Betriebsverfassungsgesetz</i> ). Maternal leave for up to 3 years with job guaranteed by firms. Maternal leave pay by government. Employment Promotion Act: Temporary work contracts up to 18 months introduced.

Germany	
1986	No unemployment benefits for workers temporarily underemployed due to strike in the same industry (§ 116 <i>Arbeitsförderungsgesetz</i> ).
1989/92/96	Caps for the increase in social health costs.
1992	Old age pensions linked to the increase in net wages instead of gross wages.
1994	Reduction of unemployment benefits ( <i>Arbeitslosengeld</i> from 63 (unemployed with no children)/68 to 60/67 percent, <i>Arbeitslosenhilfe</i> from 56/58 to 53/57 percent.
1996	Temporary work contracts are made somewhat easier by law. Loosening of layoff restraints for firms with less than 10 employees.
Italy	
1962	Restrictions on temporary labor contracts.
1966	Regulation of firing procedures.
1970	Introduction of (practically infinite) firing costs, following wave of strikes.
1977	Temporary work contracts authorized in tourism and trade.
1984	Authorization of young people to recruit with temporary work contracts.
1986	Authorization of layoff for economic reasons.
1987	Liberalization of temporary work contracts.
1989	Extension to small firms of job protection against disciplinary redundancies.
1990	Extension of unfair dismissal legislation to smaller firms.
1991	Easing of firing restrictions for large firms.
1992	Discontinuation of the <i>scala mobile</i> .
	Ending of synchronized wage bargaining across sectors.
Netherlands	
1963	Introduction of guaranteed income benefits. Continuous expansion of the social security system in the sixties.
1976	Advance notice law for firings.
1985-87	Reduction of the replacement rates for unemployment, sickness and disability from 80 to 70 percent.
1987	Stronger entry conditions for disability insurance.
1993	More restrictive definition of disability.
1994	Employers are made directly liable for wages of sick employees in the first six weeks, employer contributions related to the sickness record of the firm.
1995	Discontinuation of the Social Insurance Council, establishment of the Commission for Supervising Social Insurance.

United Kingdom	
1965	Redundancy payment act.
1971	Unfair dismissal law.
1975	Equal pay and sex discrimination acts came into force.
1978	Employment protection consolidation act.
1979	Statutory redundancy consultation period reduced.
1979	Increase in the employment duration required to benefit from unfair dismissals protection (1 year instead of 6 months).
1980	Employment Act of 1980 abolishes statutory recognition procedures; extends grounds to refuse to join a union; limits picketing and secondary industrial action, dismantling of the extension mechanism.
1980-1992	Continuous decline in benefit replacement rates.
1982	Employment Act of 1982 prohibits actions that force contracts with union employers; weakens closed shop; removes some union immunities.
1983	Equal Pay act strengthened.
1984	Trade Union Act of 1984 requires pre-strike ballots, ballots for union elections and for unions to hold political funds, strengthens employer power to get injunctions.
1985	Increase in the employment duration required to benefit from unfair dismissal protection (2 years instead of 1 year).
1986	Scope and function of Wages Councils reduced.
1986 onwards	„Restart Program“: Mandatory counseling between labor office and unemployed after six months of unemployment. Unemployed has to prove own efforts to get a new job.
1988	Employment Act of 1988 removes further union immunities; extends individual rights to work against a union.
1990	Employment Act completes effective abolition of closed shop and protection for secondary action. Allows for selective dismissal of unofficial strikers.
1993	Trade Union Reform and Employment Rights Act. Wages Councils abolished (except Agriculture).
1995	Extension of employment protection rules to part-time workers.
1996	Reduced duration of unemployment insurance benefits from 1 year to 6 months.

Source: France: Saint-Paul, 1996; Germany: Sachverständigenrat, various annual reports; Netherlands: Hartog, 1997; United Kingdom: Barrell 1994, Nickell, 1997, information from Richard Layard and Peter Robinson; for all countries OECD 1995a, Saint-Paul 1996.

### 3. Wage Setting

#### *Self-Equilibration in the Labor Market*

Two important characteristics of the equilibrating function of the labor market are how labor demand reacts to the real wage (employment response to the wage rate or wage elasticity of labor demand) and how the wage rate reacts to unemployment (wage response to unemployment or unemployment elasticity of the wage rate). The wage elasticity of employment indicates how effective wage restraint is in bringing about new jobs whereas the unemployment elasticity of the wage rate denotes to what extent workers and trade unions are prepared to exercise wage restraint in the case of unemployment.

The long-run wage elasticity of labor demand in the private sector, i.e., how the labor demand of firms reacts to wages, seems to be similar between European countries and the U.S. their long-run wage elasticity both being roughly  $-1$ . A one percent reduction in labor costs tends to increase labor demand in the private sector by 1 percent (OECD 1994a, Table 5.1).<sup>1</sup> However, the adjustment in employment speed of changes in employment to changes in the wage rate, i.e. the short-run response, exhibits significant differences. In the U.S., half of the adjustment in employment takes place within a single year, European countries like Germany or France need two years for half of the adjustment.

How the wage responds to unemployment, i.e., to the disequilibrium pressure in the labor market, also differs markedly between countries. This elasticity, a measure for the institutional characteristics of labor markets, is a mirror image of the quantity adjustment in the labor market. In the U.S. and the U.K., half of the wage adjustment takes place in one year; it is therefore not surprising that both countries show a relatively low long-term response with an elasticity of  $-1.0$ . Some European countries need a longer time, for instance, 4 years in Germany for half of the wage adjustment; they tend to have a higher long-term response, with an elasticity of  $-3.0$  for Germany and  $-3.5$  for France (OECD 1994a, Table 5.2). This indicates that in some European countries the institutional characteristics of the labor market do not allow a quick correction of a disequilibrium via a market clearing price for labor.

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<sup>1</sup> For Germany, a lower elasticity of 0.73 has been estimated in other studies; still other studies find an even lower elasticity (OECD 1995a, Table 2.5).

*The Institutional Characteristics of Bargaining*

Whereas wage formation in the United States comes close to being a market process (being decentralized, with low unionization, low coverage rates, and low coordination), wage negotiations in European countries exhibit characteristics that move wage formation away from the market process (OECD 1994): wages are not determined on the firm level but on the industry level or even at the economy level. In some countries, results obtained in industry negotiations are extended by covert bargaining coordination to other sectors of the economy (Austria, Germany) or even by overt bargaining coordination to the economy as a whole (Finland, Sweden up to the nineties, Belgium, Spain, Portugal).

Relatively high unionization rates in European countries stress the importance of the collective nature of the bargaining process; of course, their impact depends on the strength of employer associations, i.e., the level of membership. In one group of European countries, high unionization rates are associated with high coverage rates (Finland, Norway, Sweden); this contrasts markedly to the US which has low unionization and low coverage rates. Interestingly, in quite a few European countries, coverage rates exceed unionization rates markedly, for instance, in Austria, Belgium, Netherlands, Spain; France has a coverage rate of 92 and a unionization rate of 10 (OECD 1994, Chart 5.1, OECD 1995a). In this group of countries, legal rules, for instance, minimum wages (France) provide unions with leverage over wages. Germany has a high coverage rate in public services and in industry; unions have a leverage on wages by implicit extension and to some extent by mandatory expansion of bargained wage in some labor-intensive sectors.

Ceteris paribus, a more centralized form of bargaining, high unionization, and high coverage rates (strong extension) can be expected to take wage formation away from a market solution, but the interplay of these factors and the strength of employer associations have to be taken into account as well. If only an increase in the degree of centralization of bargaining is considered and variations of other aspects of wage formation are not explicitly reviewed, it is not surprising that no clear-cut results are obtained. Whereas complete decentralization always goes hand in hand with low unemployment, a high degree of centralization (for instance, with strong unions and a strong employer associations as in Austria; OECD 1994) have been observed to be associated with a positive employment picture; it has been argued that in spite of monopoly power unions tend to take into account the

overall impact of wages on unemployment. Intermediate forms of centralization in wage formation have been shown to go together with higher unemployment than complete centralization and decentralization for the period from the mid-seventies to the mid-eighties; however, the relevance of such a hump-shaped curve of the real wage level and the degree of centralization (Calmfors and Drifill 1988, Table 2) depends on many different institutional characteristics. It is highly questionable whether statistical results will survive if data for the nineties are included; for instance, the Nordic countries have now high unemployment. In any case, since labor is not as homogenous as assumed by theory, centralization hinders the necessary dispersion in the wage structure (Calmfors 1993, p. 183).

Empirical analysis confirms that the unemployment rate rises with the coverage of collective bargaining (cross-sectional analysis for 20 countries, 1983-88, Layard et al. 1991, p. 55; Nickell 1997, Table A3); weak coordination, especially on the employers' side, seems to favor unemployment (ibid.).

It should be noted that the form of wage bargaining has been changing in European countries since the mid-eighties. Union coverage has fallen in some European countries such as the U.K. and the Netherlands (OECD 1994, Table 5.8). Extension procedures were dismantled in the United Kingdom in the early eighties, whereas France experienced a significant increase in coverage in the eighties (OECD 1994). Wage bargaining has become more decentralized in some European OECD countries (Lindbeck and Snower 1996, p. 3).

### *The Tax Wedge*

In most European countries, taxes with a negative impact on employment have gone up during the seventies and eighties. Taxes influence the demand for and the supply of labor in a number of ways. Employers' contributions to social security raise the real labor costs of firms and are a tax on labor. Employees' contributions to social security as well as income taxes widen the tax wedge between labor costs for firms (producers' wage) and net income for workers (consumption wage). The net income defines the incentives for work; it influences the willingness for wage restraint and the bargaining behavior of trade unions.

The overall marginal tax wedge including employers' and employees' social security contributions has increased since the seventies in most European OECD countries (OECD

1994a, Table 9.1), a main reason being that the level of social insurance was extended. For instance, in Germany, social security contributions for unemployment, retirement, health, and nursing insurance increased from 26.5 (1970) to 40.9 (1996) percent of the gross wage. This means a wider tax wedge between producers' and consumption wage. Assuming a given increase in labor productivity, higher social security contributions leave less room for increases in the net wage. Insofar as the contributions are borne by firms (and the net claims of workers do not adjust downward), the increase in social security contributions weakens the demand for labor in the long run and adds to unemployment.

The response of total labor costs to an increase of employers' social security contributions is different between countries. In some countries such as Germany, a one percent increase leads to an increase in labor costs of one percent which implies that adjustment is eventually taking place in terms of employment and unemployment. In other countries, such as the United States, wages adjust downward so that total labor cost remain unchanged (OECD 1994a, Table 9.5). This apparently reflects different institutional properties of wage setting behavior. Quite clearly, where employers' social security contributions end up in an increase in total labor costs, unemployment will rise in the long run (OECD 1994a, Chart 9.4).

The implicit taxation of labor demand is relatively heavy in some European countries. Whereas employers bear a smaller share relative to employees in the Netherlands (7.9/33.5) and an equal share in Germany (20.45/20.45), other countries require a much higher contribution from firms such as France (33.5/18.6) and Italy (46.1/10.0; OECD 1996, Table 17). Spain also has high employers contributions (OECD 1994a, Chart 9.7). We should expect that demand for labor is more severely affected in these countries.

#### 4. The Legal Environment

In the sixties and in the seventies, job protection legislation was passed in most European countries that regulated the procedures that had to be followed in the case of dismissals. In general, dismissals had to be approved by work councils; social aspects (marital status, number of children, health) played a role in dismissals. Severance pay became mandatory; in some countries like Germany "social closing plans" had to be established in the



case of major restructuring of firms (OECD 1993, Table 3.7 and 3.8). The legal norms were further developed by the labor courts.

The intent of this complex legislation was to make jobs more "secure". Unfortunately, this type of legislation only looked at the first-order effect in a very static sense but neglected the long-term impact on the demand for labor. Indeed, those who had a job were protected; but for firms, job protection rules make dismissals costly. In an intertemporal profit-maximizing calculus, layoff constraints put a negative shadow price on labor thus reducing the demand for labor in the long run (Van Long and Siebert 1983) (whereas also the ambiguous role of layoff costs is stressed, Bertola 1990). Of course, it took some time, before firms fully experienced these restraints, but eventually it became clear to them that in the case of a crisis, of an unfavorable development of the sector or of the economy, higher adjustment for labor costs arose. Firms anticipated these costs by hiring fewer people. Thus, the demand for labor was eventually weakened.

Layoff constraints are a telling example that under the institutional conditions of Europe the cumulative effects of regulations self-enforce their long-run negative impact. The negative shadow price on labor due to layoff restraints would be lower if, in the case of an economic crisis, firms could adjust wages or working hours downward. Wages are sticky downward and flexibility with respect to working hours is only developing in the nineties. Therefore, firms were strongly induced to anticipate the layoff restraints in their hiring.

Job protection rules can be considered to be at the core of the continental policy towards the unemployment problem: the approach to protect those who have a job in the short run reduces the incentives to create new jobs in the long run.

Political decision making with respect to rules for the labor market today still shows a short-term orientation of a similar nature: in most continental countries, the use of temporary work contracts is legally restricted, overtime rules reduce flexibility with respect to working time, and product market regulations have a negative impact on the labor market.

Empirical studies indicate that job security legislation (including severance pay) is positively correlated with the unemployment rate. In a pooled time-series estimation for 19

OECD countries, job security is found to be positively associated with long-term unemployment (OECD 1993, p. 105).

### 5. The Reservation Wage in the Welfare State

The rise of the welfare state in Europe took place in the seventies. Redistributive targets played a major role, and not seldom were institutional arrangements of the labor market changed by politicians to foster political support. This changed the incentive system of the labor market.

#### *The Exogenous Increase in the Reservation Wage*

The typical European economy has two different layers of income floors for people who cannot earn their living in the labor market. One layer is social welfare benefits. Originally intended to protect those who are old (and have insufficient pensions) and those who are physically unable to work, welfare benefits now also cover some who may be able to work. Welfare benefits are provided for an unlimited period of time and are supposed to cover the subsistence level; they are means-tested and not linked to previous income. Guaranteed income benefits that are provided irrespective of work history have been introduced in some countries, for instance, in the Netherlands (1963), Finland (1972), and France (1989; OECD 1994a, Table 8.6). In some countries, guaranteed income benefits have gone up considerably, changing the relative incentive for work and nonwork. For instance, in Germany, social security benefits for an employee (married, one child) increased from 65.7 percent (1970) to 85 percent (1994) of the net wage income of the lowest-paid job in industry (Siebert 1995, Table 8.3).

The other layer of the income floor is unemployment benefits that are usually limited and linked to previous work income. Net replacement rates, i.e., the ratio of unemployment benefits to the previous wage income after tax, reached 70 percent in the European OECD countries in 1994 against 60 percent in the OECD average for a couple with no children (OECD 1996, Table 2.1); they are meant to be higher than income from welfare. Some countries have additional intermediate forms of support, for instance, *Arbeitslosenhilfe* in Germany which is paid after *Arbeitslosengeld* is terminated and is generally provided indefinitely. In the seventies and eighties, in general, entitlements were raised in the

European countries. The OECD index of benefit entitlements (OECD 1996, Chart 2.2) increased markedly already in the sixties for the Netherlands and Belgium and thereafter for all the other European countries (except for Germany where it remained relatively stable and the U.K., where it fell in the eighties).

Some countries increased the duration of unemployment benefits (OECD 1994a, Chart 8.1), access to unemployment benefits was made easier in general, and social security benefits were given more graciously. In addition, other policy measures affected the incentive structure relevant for the labor market; for instance, the legal minimum wage was raised in the Netherlands (in the seventies) and in France in the seventies and eighties (OECD 1994a, Chart 5.14).<sup>2</sup>

#### *The Impact of a Higher Reservation Wage*

Taking all these measures together means that on the whole the reservation wage was raised in the seventies and eighties. This has had several effects.

First, the unemployed have a lower incentive to accept work at a low market wage rate. In addition, their search intensity for a new job is lower. The institutional feature of a higher reservation wage holds people in unemployment, thus establishing an unemployment trap and impairing the market clearing role of wages.

The reduced incentive to work resulting from government sponsored income in the case of no work is aggravated by high effective marginal tax rates (reaching 100 percent in some European countries) for the transition from social assistance benefits to market income. This discourages effort and establishes a poverty trap. In addition, with the sanctionary of social assistance providing full health and disability insurance besides some income, work effort is directed towards the black market.

How incentives operate is nicely illustrated by the experience of the Netherlands with respect to unemployment and disability benefits. Whereas unemployment benefits are reduced to the social minimum after some time, prior to 1993 disability benefits were not re-

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<sup>2</sup> Note that the Netherlands reduced the role of the minimum wage in 1983 (OECD 1993, p. 167).

duced, but instead were indexed to the price level. Thus, it was more favorable to claim disability rather than unemployment benefits, and the Netherlands observed an explosion in disability benefit recipients.

Second, trade unions (and insiders) are less prepared to take into consideration the opportunity costs that wage increases surpassing productivity growth have on unemployment; in wage negotiations, trade unions pay attention to the level of unemployment, however, only to some extent and only with a time lag. If those who are or become unemployed are more or less protected by governmental schemes, trade unions have a reduced incentive to consider what sort of impact wage rises will have on unemployment. In a way, the wage cartel shifts the burden of its behavior to a third party, namely to the government or to the taxpayer. Moreover, the bargaining power of insiders is unintentionally increased if outsiders are taken care of by the government; the outside option of insiders is improved. With an expansion of the welfare state, the assignment of responsibilities of different players of economic policies is reshuffled: Whereas in the regular assignment, wage policy is responsible for employment, fiscal policy for growth and redistribution, and monetary policy for price level stability, the rise of the welfare state shifts the responsibility for employment away from the players in wage setting to fiscal and social policy, i.e. to the government.

Econometric studies show that in a number of European OECD countries, wage negotiations respond to social policies. Empirical evidence for the impact of benefit duration and replacement rates on unemployment is found in a cross-section analysis of 20 countries in the period 1983–88 by Layard et al. (1991 p. 55). Both factors raise the unemployment rate. This is also confirmed by time series analysis (Layard et al. p. 433). Layard et al. conclude from their empirical work that economies respond well to exogenous shocks if they have an unemployment benefit system which discourages long-term unemployment, i.e., if the system offers benefits for a short duration (15 month or less). A pooled time-series estimation for 19 OECD countries finds a positive impact of the duration of benefits on long-term-unemployment (OECD 1993, p. 106). Several studies indicate that active employment programs tend to raise the wage level (instead of reducing it by increasing the labor supply and by wage competition, OECD 1993, p. 50).

Empirical studies for the U.S. indicate that an increase in potential benefits of one week is associated with an increase in the mean spell of unemployment of between 0.16 and 0.2 weeks (Katz and Meyer 1990); the U.S. exit rate from unemployment falls monotonously over time and jumps upward at the point where benefits are exhausted (Katz and Meyer 1990). The length of the benefit periods seems to have a greater impact on the exit rate from unemployment than the benefit level.

The OECD concludes (1994a, p. 213): "There is considerable evidence that benefits affect unemployment rates. Countries which currently have high unemployment and significantly reduce benefit disincentives may experience a considerable improvement in their unemployment situation within a few years; and conversely, countries with high entitlements which do not reduce them may find that other policies alone are not enough. In the long term, if unemployment is to be kept low, it is vital to limit entitlements to benefit and refuse benefit to people who are not available for work, and give employers and local governments incentives to tackle employment problems."

Third, the reservation wage defines the floor of the wage structure. With an increase of the reservation wage, the floor of the wage structure moves upward and the earnings distribution is truncated from below. This is to the detriment of low-skilled workers; they are priced out of the market. The institutional features pushing up the reservation wage are the cause of unemployment of low-skilled persons. This is especially relevant when labor demand goes against the less qualified (Nickell 1997).

Minimum wages set by law affect the level of unemployment in European countries as soon as they approach the market clearing wage in the lower segments. Whereas the legal minimum wage is 34 percent of the median earnings in the U.S., it reaches 60 percent in France (OECD 1996, p. 71). European Countries with an explicit minimum wage that is applied economy-wide are characterized by high unemployment rates (Belgium, France, Greece, Portugal, Spain, with the exception of the Netherlands; Jackman 1995, Table 7). In France, Spain, Portugal, and Greece, i.e., in the French-Mediterranean group of countries, the minimum wage applying to 18-year-old workers is one major reason for the high youth unemployment rate.

Note that the disincentives engendered by the two layers of the income floor also hold for a negative income tax; introducing a negative income tax would only aggravate Europe's labor market problems; this is especially true if it is taken into consideration that over time a negative income tax would affect the behavior of the young generation (Siebert 1995).

### *Wage Differentiation*

The impact of institutional arrangements is clearly seen with respect to wage differentiation. Centralization of wage formation, covert or overt coordination, and extension tend to lead to less wage differentiation; one result is that the lower segments of the wage structure are raised relatively more for equity reasons. A higher reservation wage due to a generous welfare state enforces this tendency. A low degree of wage differentiation indicates that the wage rates do not fully fulfill their function in bringing about the necessary adjustments to a new equilibrium with more employment; then, as a substitute for prices, adjustments take place via quantities, i.e., via changes in employment. This is especially relevant in an environment of intensive structural change in the foreign trade-oriented economies of Europe. In addition, work is now reorganized around small, customer oriented teams; this requires a more differentiated wage structure (Lindbeck and Snower 1996).

The most striking fact is that in the eighties and nineties relative wages have become more differentiated in the U.S. and the U.K., while they have remained unchanged in some European countries. Relative wages, or earning dispersions can be measured by taking the ratio of various earnings deciles to one another. For example, the ninth decile refers to the upper earnings limit that ninety percent of all employees earn less than. In this way, the fifth decile defines the median earning level. One way of measuring earnings dispersion is therefore to take the ratio of the ninth decile to the median or to take the ratio of the ninth decile to the first decile. According to this measure, a trend of increased differentiation can be observed during the eighties and nineties for the U.S. and the U.K. (OECD 1996, Table 3.1). Although sensitive to the recession of 1991 in the U.S. (as can be expected, since the low-skilled are likely to be laid off first, which means less earnings dispersion), dispersion increases immediately after the recession; in the U.K., it is unaffected by the recession.

Some European countries are characterized by a reduction in dispersion (Germany in the eighties and nineties, Belgium in the mid-eighties to nineties), some by a stable dispersion (Netherlands) or by near-stability (France, with a greater dispersion in the upper deciles of the distribution), and some by a small increase in dispersion without a consistent trend for male or female employees (Austria, Sweden; OECD 1996, Table 3.1).

Economic theory would tell us that *ceteris paribus* a country with a relatively low wage dispersion can be expected to have a low percentage of employment in low-paid jobs. This is exactly what can be observed. Defining low-paid workers as those who earn less than two-thirds of the median wage, the percentage of low-paid workers in total employment varies noticeably with the dispersion of earnings, from 5.2 percent in Sweden to 25 percent in the U.S. (Belgium 7.2, Netherlands 11.9, Italy 12.5, Germany 13.3, France 13.3, United Kingdom 19.6; OECD 1996, Table 3.2). It can be shown that the incidence of low pay varies inversely with unemployment benefit replacement rates (OECD 1996, Table 3.3).

Note that the inequality in dispersion of earnings observed in a single year need not be permanent; it changes over time because of vertical mobility. Within a five-year period, the patterns of vertical mobility in the OECD countries do not appear to be too different from one another (OECD 1996, p. 94): *approximately half of the workers move up one or more quintiles over a five-year period*. It seems that two-thirds of the inequality still persist after a five-year period. A longer time horizon appears to be associated with a strong vertical mobility in the U.S. (Addison 1996). For low-paid workers below 65 percent of median earnings (who show a different frequency in OECD countries), however, vertical mobility varies, considerably between OECD countries. More than half of them are in a higher earning status after five years in Italy (69.8 percent), Denmark (68.3 percent), the United Kingdom (52.9) and France (50.2) in contrast to Germany (44) and the U.S. (26.9). In some countries, a large proportion leaves full employment (Germany, 40.5; U.S. 39.2). In general, a low share of low-paid workers seems to be associated with a high vertical mobility (OECD 1996, Table 3.9).

Additional clues for the relevance of earning dispersions may be obtained if qualifications, regional dimensions, and sectorial aspects are taken into consideration. Especially with respect to qualifications, for instance, those of nonmanual and manual workers, wage differ-

entiation in the U.S. has increased and is high relative to Europe. In some European countries, this type of wage differentiation has been reduced in the eighties (for France see Katz et al., 1995, Table 1.3) or remained constant (Freeman and Katz 1993, Table 2.1). It is hard to conceive that the European labor force is so much more homogeneous with respect to qualifications than the U.S. labor force that no wage differentiation is necessary. This is also contradicted by the fact that a large portion of the unemployed in Europe consists of the low-skilled.

Another aspect of wage differentiation is the regional wage structure. Under market conditions, one should expect the regional wage structure to react to unemployment that differs regionally. When unemployment rates rise in some regions relative to others, the dispersion in the regional wage structure should increase. This should be especially true for Europe where the regional mobility of people is relatively low. For the period 1975–1990, Germany shows a different picture. Whereas the unemployment rates of West German *Länder* became more diverse, the regional wage structure remained constant (Siebert 1995, Table 7.1).

Sectorial wage structures may be more difficult to measure and to compare. Some empirical estimates indicate that sectorial wage differentiation is high and increasing in the U.S. whereas it is stable or moderately declining in most European countries (Freeman 1988, Table 2; Davis 1992; OECD 1995a, Table 1.11).

### *The Dual Labor Market*

Taken together, the phenomena described so far have led to a dual labor market in most European countries. There is a sizable section of the labor force for which the labor market does not function anymore. Labor-saving technical progress and structural change due to intensified competition in a more globalized world economy would require flexibility in wages which is prevented by institutional conditions. Unemployment is reinforced by ratchet effects in that it becomes more and more difficult to find employment again when one has been out of employment for a while. The unemployed lose qualifications relative to the employed, in severe cases they also lose their social competence. Unemployment can easily become persistent, and in order to overcome the hysteresis and path



dependency of unemployment in a self-enforcing trap, it takes a big and a comprehensive push, of institutional change.

#### 6. The Scandinavian, French-Mediterranean, German, and British-Dutch Models: Four Different Approaches

Although Europe often looks like a homogenous block from the outside, marked differences in the institutional approaches of individual countries have developed in the eighties and nineties. It can be shown that their performance in the labor market is sensitive to these changes.

Four different performance groups may be distinguished (for a similar, but slightly different view see Paqué 1996): (i) The Scandinavian countries (except Denmark), challenged with a dramatic increase in unemployment after 1989, are successfully attempting to restructure the welfare state. (ii) The French-Mediterranean countries (except Portugal), which experienced a steady upward movement of the unemployment rate up to the mid-nineties (and increasing as well as high long-term unemployment), have not succeeded in improving the functioning of their labor markets. For instance, in France, society seems to be unwilling to accept a comprehensive reform (Saint-Paul 1996); the failed revision of minimum wages for young workers during the Balladur government is a striking example. (iii) Germany which had a hefty increase in unemployment in the seventies and early eighties in the western part of the country and transformation unemployment in eastern Germany after unification, is characterized by very persistent unemployment. Long-term unemployment remains high. So far in the nineties, only minor institutional reforms have been undertaken. (iv) The Netherlands and the U.K. took a new approach to the labor market which resulted in a reduction in the unemployment rate in the eighties, most notably in the Netherlands. Long-term unemployment has also been reduced.

Other countries cannot easily be classified into one of these four groups. Austria follows the French pattern, Denmark lies between the French and German patterns, and Belgium exhibits the French patterns if the Belgian definition of the unemployment rate is used, but exhibits the Dutch patterns if the standardized OECD-rates are used.

Since the mid-eighties, the Netherlands, besides implementing wage restraints (causing a fall in the real labor cost per unit of output), restructured the welfare state. Replacement rates for unemployment, sickness, and disability were lowered, access to benefits was more thoroughly scrutinized, employer contributions to health insurance were related to the sickness record of the firm, and organizational schemes for controlling social benefits were changed (Hartog and Theeuwes 1997).

In the U.K., wage formation moved more towards a decentralized market process. Legislation reduced the power of trade unions, membership declined. Labor markets were made somewhat more flexible (Nickell 1997); wage bargaining became less coordinated. Wage Councils were eliminated, and employment protection legislation was weakened. Benefit replacement rates declined and the benefit system was lightened. There was also a switch away from payroll taxes towards commodity taxes. Earnings dispersion has increased since the mid-eighties. The unemployment rate has fallen since the mid-eighties but it still remains high, and possibly higher than one would have expected after all the institutional changes.<sup>3</sup>

### Conclusions

The majority of European countries have followed a policy of making only marginal changes to their labor market institutions in the nineties. On average, they did not succeed in reducing unemployment noticeably; in most countries it is still rising, for instance, in Germany and France. The Dutch-British experience suggests that more comprehensive institutional changes can improve the functioning of the labor market and create more employment. It seems fair to conclude that the specter of unemployment cannot be banned out of Europe unless governments are prepared to undertake major reforms of the institutional setup of the labor market.

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<sup>3</sup> For a possible explanation see Nickell 1997.

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