Product Market Integrations, Institutions and the Labour Markets

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Abstract

Economic and monetary integration imply more intense competition in product and labor markets, and make it more difficult for unions and labor market institutions to shelter workers. It is often argued that competition among systems should lead to deregulation and "races-to-the-bottom" in protective institutions. Such institutions, however, do serve some intended purpose. More intense competition may increase demand for protection, and certainly calls for reforms. We propose a stylized model of the effects of structural change and of the resulting reform tensions, and we examine recent evidence in its light. The tension between more competition and *status quo* institutions is quite apparent in the data. Labour market reforms are becoming relatively more frequent in EMU countries, and many of them reduce welfare system generosity and deregulate labour markets. Most reforms are marginal, however, and in many cases deregulation-oriented reforms are accompanied by measures which appear to try and offset the implications of stronger competitition instead. Our theoretical and empirical perspectives offer insights into possible patterns of future evolution for the institutional landscape of European labour markets. In order to exploit fully the advantages of economic and monetary integration, the institutional structure of labour and other markets needs to be revised extensively. The distributional implications of structural changes and institutional reforms, however, pose difficult political problems, and the transition process may well entail substantial welfare losses for large groups of the population.

1   Introduction

The purpose of this study is to shed light on the likely impact of product market integration on labor market performance and institutions. In particular, the following

three broad questions are addressed:

- In light of recent experience, theoretical insights, and institutional configurations, what is the likely impact of product market integration on labor market outcomes?

- How is economic integration going to affect ongoing reforms of labor market institutions and, more broadly, social protection systems for non-employed individuals of working age?

- Has product market integration and, more specifically, EMU already affected labor market performance and/or the pace and nature of reforms in the relevant area?

We proceed as follows. We start by characterizing the balance of employment, wage, and fiscal objectives and concerns in the member countries' current labor market configurations, with particular attention to distributional issues. Then we move on to discuss the impact of product market integration on those configurations. Finally, we assess the character of reform tensions theoretically expected and actually observed in the EMU area.

Section 2 offers a concise review of theoretical insights and empirical indicators on the motivation and effects of labor market institutions as observed in European countries' historical experience. Institutional features are characterized on the basis of their broad and interrelated economic and distributional implications. In general, such implications depend on the structure of markets and on the details of policy implementation. In order to illustrate the relevant insights we propose a stylized model where productive efficiency is traded off against distributional objectives. The model can accommodate a stylized representation of the institutional features supporting the labor market configuration that optimally addresses that trade-off. In the model, the level of employment depend on the distributional weight of workers relative to that of firms. Low employment outcomes may be accompanied by unemployment, by low labor market participation, or by high public employment rates, depending on the policy instruments used to achieve it. We analyze the character of heterogeneity in institutional structures and labor market performance across member countries.

In Section 3 we discuss how product market integration may influence the impact of existing institutions on labor market outcomes, and how labor market institutions may be reformed when they prove inadequate in the new environment. We find it useful to adopt a working characterization of the EU as an environment of more dynamic and elastic microeconomic interactions. National macroeconomic policies are also expected to be more stable, at least in the euro area. Both features, and especially the former, are arguably relevant to the trade-offs addressed by labor market

policies. Dead-weight efficiency losses generated by distributionally-motivated policy interventions are more important when economic interactions are subject to more intense competitive pressure; a higher premium on efficiency would lead one to expect deregulation-oriented labor market reforms. Higher exposure to market risk, due to stronger product- and capital-market linkages, may however generate demands for continuing and perhaps even increasing the current levels of labor market regulation. This tension may be particularly strong for specific socio-economic groups, and in cases where deregulation and access opportunities do not improve uniformly in product and financial markets, because political constraints force Governments to adopt a piecemeal approach to regulatory reforms. We use the proposed theoretical framework to move beyond a speculative discussion of the challenges and opportunities of EMU, to a detailed examination of recent experience. We examine emerging signs of change in the immediate aftermath of EMU completion in light of the theoretical distinction between, first, the character of structural labor-market changes induced by EMU; second, the implications of such structural changes for labor-market performance at unchanged institutions; and, third, the incentives to reform such institutions when they no longer fulfill the politico-economic objectives they were meant to achieve at the time of their introduction. This layered theoretical perspective makes it possible to look for signs of theoretical tensions in a variety of labor-market and other indicators, pertaining not only to labor market performance, but also to reform tensions. We argue that realization of the potential benefits of EMU requires appropriate reforms, and that the shortcomings of existing institutional frameworks may well become even more apparent in the new economic environment.

Section 4 draws policy conclusions from theory and from preliminary analysis of the reforms occurred since monetary integration in the relevant areas. Some of these conclusions can be anticipated here. Further labor market reforms may be needed, according to our theoretical perspective, to maintain and reinforce the momentum of European economic integration. Resistance to reform is quite understandable, and should be taken into account by policymakers. It would be dangerous, however, to accept such resistance passively, or yield to pressures for reforms meant to patch the shortcomings of existing institutions without adapting them to new structural needs. Reform-oriented labor market policies should be implemented in articulate and coordinated fashion, keeping in mind that worker protection objectives are likely to remain important in Europe but should be pursued by redesigned policy instruments. Coordination of reforms at the EU level can have an important role in overcoming opposition by national lobbies, but should take into account the historical heterogeneity of labor market structures and policies within the EU. In this respect, the current coordination mechanisms provided by the Luxembourg may need to be redesigned. Rather than on simple policy indicators, coordination efforts should focus on the broad effects of reforms for welfare outcomes and on potential cross-country

spillovers, and mechanisms should be introduced for monitoring *implementation* of reforms rather than simply legislation and preventing reversal of reform efforts.

2   Institutions and labor markets in EU countries

As emphasized by Bentolila and Saint Paul (2000), a proper analysis of the complex interaction between EMU and labor market institutions must take into account more than one dimension. Labor market "rigidity" has many faces, and the process of European integration affects a wide variety of economic and monetary market mechanisms. Saint Paul and Bentolila focus on counter-cyclical monetary policy in the presence of macroeconomic shocks and labor market rigidity. From that perspective, the irrevocable fixing of exchange rates has obvious implications, since it prevents individual countries from choosing their own monetary policies. To the extent that the Growth and Stability Pact is a binding constraint, fiscal policy instruments are also less than fully implementable under EMU. However, counter-cyclical macroeconomic policy was already a blunt tool in the after-Maastricht run-up to EMU, when individual countries faced stringent exchange rate and budget constraints. Further, to the extent that the Single Market program has effectively integrated the real side of the EMU economies, most labor market shocks should occur at the regional or industry level, while the national monetary and fiscal policies suppressed by EMU are likely to be a source rather than a remedy of national economic fluctuations. More generally, the consensus view - confirmed by Saint Paul and Bentolila's numerical results - is that fixed exchange rates and a single monetary policy do *not* have direct first-order effects on labor market outcomes.

We focus on a complementary perspective on similar issues. Recalling that the unsatisfactory performance of many European labor markets reflects structural features as well as cyclical factors, we focus on the former and, in particular, on the very heterogeneous set of labor market institutions and outcomes within the EU. From this perspective, the adoption of the euro as a single currency is essentially an acceleration of the economic integration process increasing competition among systems.

We review disaggregated labor market evidence and policy reactions in member countries. Europe as a whole is faced by a broadly homogeneous set of politico-economic challenges. The evidence, however, displays remarkable heterogeneity

- of labor market institutions across countries, and

- of labor market outcomes within each country, along geographical and demographic lines.

Social policy expendiure (%GDP)	Helping the poor		Reducing Inequality		
	Social Assistance (% GDP)	Social Assistance (% SPE)	Inequality of Adjusted Disposable Income	Extended Households	Unemployment Insurance
Highest	Highest	Highest	Lowest	Highest	Most "generous"
S	IRL	IRL	FIN	GR	DK
DK	UK	UK	S	P	NL
FIN	NL	NL	DK	E	FIN
D	D	D	B	I	B
NL	F	F	IRL	IRL	F
F	A	I	D	D	P
A	I	E	NL	UK	E
B	DK	A	F	F	S
UK	E	DK	I	B	D
I	S	S	E	DK	IRL
GR	B	P	GR	NL	A
E	P	B	UK	FIN	GR
P	FIN	FIN	P	S	I
IRL	GR	GR		S	UK
Lowest	Lowest	Lowest	Highest	Lowest	Less "generous"

Increasing Rewards from Labor Market Participation				
Employment Protection Legislation	Active Labor Market Policies (%GDP)	Minimum Wage (% of average earnings)	Collective Bargaining	Inequality of Net Earnings
Most restrictive	Highest	Highest	Most centralized	Lowest
P	S	I	A	FIN
GR	DK	GR	FIN	DK
I	FIN	A	F	S
E	B	B	D	D
F	IRL	DK	B	B
G	D	NL	S	NL
S	F	IRL	I	A
B	NL	D	IRL	UK
A	P	FIN	NL	F
NL	E	S	E	IRL
FIÑ	I	F	P	I
DK	UK	P	DK	GR
IRL	GR	UK	UK	P
UK	A	E		E
Less restrictive	Lowest	Lowest	Less centralized	Highest

Notes: The ranking of minimum wages is taken from Dolado et al. (1996). The ranking of collective bargaining is with regard to the coverage rate of collective bargaining according to OECD (1994b). The rest of the columns are based on the evidence discussed in Section 1.1.

Source: Bertola, Boeri and Nicoletti (eds.), 2001

Figure 1: Selected Indicators of social policies across EU countries (circa 1995)

Part of such heterogeneity, of course, reflects different economic and social structures. However, it also reflects different configurations of systems of social protection and labor relations.

This heterogeneity can be better characterized by multidimensional rankings of indicators of social transfers and regulations, as done in Figure 1. Based on these orderings, it is customary (Bertola et al., 2001) to identify four different "Social Europe(s)".

Scandinavian countries feature extensive fiscal intervention in labor markets, based on a variety of "active" policy instruments, substantial tax wedges, and relatively extensive employment in the public sector. Unions' presence in the workplace and involvement in the setting and administration of unemployment benefits generates compressed wage structures. *Anglo-Saxon* countries are characterized by weak unions, relatively wide and increasing wage dispersion and relatively high incidence of low-pay

5

employment, half-a-way between Europe and the US. *Continental European* countries rely extensively on non-employment benefits while *Mediterranean* countries on employment protection and early retirement provisions to exempt segments of the working age population from participation in the labor market. While unions' membership rates have been falling quite dramatically in the last 20-25 years, a strong unions' influence has been to a large extent preserved by regulations and practices (e.g., jurisprudence) artificially extending the coverage of collective bargaining much beyond unions' presence. As a result, wage structures are, at least in the formal sector, covered by collective bargaining and strongly compressed in these countries.

These different clusters of institutions generate very different employment-to-population ratios and unemployment rates (Figure 2). To attain the target set at the Lisbon Summit of at least a 70% employment rate by year 2010, some countries would have to increase their employment to population ratios by about 2 percentage points per year. Significantly in many countries (Italy, Spain, Luxembourg, Greece, Belgium, Ireland and France and the new members of the EU), this will require increasing labour force participation rather than simply absorbing unemployment.

2.1 Theoretical perspectives on institutional trade-offs

In preparation for our analysis of the effects of EMU, it is useful to recognize that labor market regulation is not imposed exogenously. Many of the provisions observed in industrialized countries, in fact, may in principle be rationalized in the presence of realistic market imperfections (especially as regards the possibility to obtain insurance against adverse human capital shocks) and distributional tensions.

Broadly speaking, labor market institutions that protect workers against "unfair" market developments unavoidably reduce the intensity of competition as they trade-off lower productive efficiency against ex ante distributional equity. This may be desirable, from an ex ante point of view, in the presence of market imperfections. For example, laissez faire economic interactions can hardly supply insurance against the risk of becoming or remaining unemployed, because moral hazard and adverse selection stand in the way of such potential contractual arrangements. Workers would not try as hard to avoid unemployment and find new jobs if they were covered against the negative consequences of the event and, by purchasing insurance at a given market price. And workers who know that their unemployment risk is particularly high would make the scheme unprofitable for insurance providers and/or unattractive to workers with average risk. Hence, one can understand why collective action would try and remedy the ex-post inequitable or "unfair" labor market treatment of workers who, lacking insurance, become or remain unemployed despite their best efforts.

Provision of insurance in the presence of asymmetric information unavoidably decreases productive efficiency. Workers have no less incentive to decrease their job-
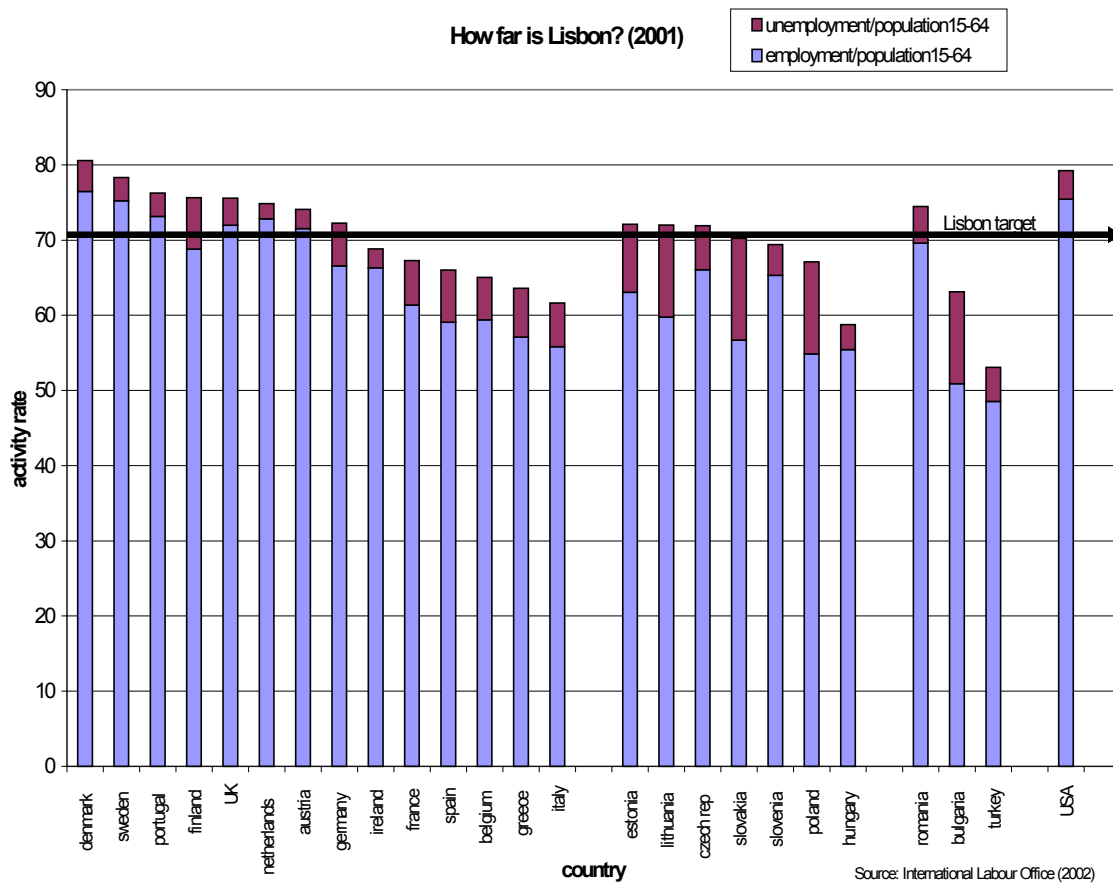
Figure 2: Employment and Unemployment as a % of Working Age Population (15-64 years) in 2001 versus the Lisbon Target (70% in 2010)

seeking effort when covered by social rather than private insurance, and protection from "unfair" developments unavoidably decreases the labor market's speed of adjustment. Such efficiency losses are not easily affordable for developing countries, but may be quite acceptable for rich and relatively stable societies.

Limits to competition also tend to privilege subsets of the market's labor force, however, since they prevent "outsiders" from successfully bidding for ex post available employment opportunities. To the extent that labor market institutions are at least partly meant to restrict competition for jobs, it is far from surprising that wage and quantity constraints imposed on laissez faire market interactions are generally blamed for the poor employment performance of many European labor markets.

It is important, however, to recognize that institutional constraints must fulfill a useful purpose from the point of view of at least some economic agents. Otherwise, it would hardly be possible to see why they were introduced in the first place, and to understand why they fail to be reformed in the face of major structural change. It would be quite misleading, especially in Europe, to suppose that all labor market reforms should aim at achieving productive efficiency at the expense of distributional objectives. The combination of wage and quantity rigidities is indeed successful if its aim is protection of insiders from negative labor market development: not only are wages compressed and stable, but also tenure lengths of "regular" workers are clearly much longer in more rigid labor markets.

2.2 A simple model

In our discussion of EMU's impact on existing labor-market arrangements, it will be useful to refer to a simple formal model. The model's basic ingredients are those found in the simplest textbook treatments of labor market equilibria, namely demand and supply schedules for undifferentiated labor.

On the demand side of the market, profits are maximized when the costs of employing one unit of labor, w_d, is equal to labor's marginal productivity. For concreteness, we let the latter be a constant-elasticity function of the employment level l, and write the labor demand relationship in the form

$$w_d = Al^{-\eta} \tag{1}$$

where A is an index of labor productivity, and labor demand elasticity η may take values between zero and unity.

On the supply side of the labor market, take-home pay w_s is positively related to the size of the labor force, again according to a constant-elasticity functional form:

$$w_s = l^\epsilon. \tag{2}$$

The elasticity parameter may range between $\epsilon = 0$, in which case the opportunity cost of working is constant (and normalized to unity), and larger values: these index increasingly inelastic labor supply schedules, and as ϵ tends to infinity the labor supply schedule $l = (w_s)^{1/\epsilon}$ tends to a constant, also normalized to unity in this formalization. Intermediate values of ϵ will prove most insightful in our discussion of EMU implications. Considering extreme cases, however, may help obtain intuition as to the effects of interest.

As in textbook models of the labor market, consider the wedge-free equilibrium where $w_s = w_d$. Neglecting irrelevant constants of integration (indexed by ξ), total production is

$$\int_\xi^l Ax^{-\eta}dx = \frac{A}{1-\eta}l^{1-\eta}$$

if marginal productivity is given by (1). Similarly, the opportunity cost of working is

$$\int_l^\xi x^\epsilon dx = -\frac{l^{\epsilon+1}}{\epsilon+1}$$

when labor supply is given by (2). Under perfectly competitive conditions both employers and workers take wages as given, and the equilibrium solves

$$\max_l \left(\left[\frac{Al^{1-\eta}}{1-\eta} - wl \right] + \left[wl - \frac{1}{\epsilon+1}l^{\epsilon+1} \right] \right) = \max_l \left(\frac{Al^{1-\eta}}{1-\eta} - \frac{1}{\epsilon+1}l^{\epsilon+1} \right).$$

that is, it maximizes the sum of firm's profits and of the workers' surplus from employment. The resulting wage and employment levels are

$$w_s = w_d = A^{\frac{\epsilon}{\epsilon+\eta}}, \ l = (A)^{\frac{1}{\epsilon+\eta}} . \tag{3}$$

respectively. The competitive outcome has the desirable property of maximizing the total surplus of production over the opportunity cost of employment relationships, or the size of the economic "pie" generated by the labor market. Since maximization entails equality at the margin of wages and workers' opportunity costs, the competitive outcome of course features zero unemployment.

In the absence of lump-sum redistribution, however, this equilibrium need not address distributional tensions within the economy. It is particularly insightful to consider the case where resources made available to firms are imperfectly substitutable to resources made available to workers (the wage bill, net of opportunity cost of working). In other words, there is a distributional conflict between employers and employees. Again focusing on constant-elasticity functional forms for concreteness, consider the objective function

$$\max\left(\left[\frac{Al^{1-\eta}}{1-\eta} - wl\right]^{\beta} \left[wl - \frac{1}{\epsilon+1}l^{\epsilon+1}\right]^{1-\beta}\right) \tag{4}$$

This formalization may be interpreted as the Nash bargaining outcome of negotiations where the outside option of employers is zero (no production, hence no profits), and the outside option of workers is the opportunity cost represented by the constant elasticity labor supply. In that setting, the parameter β indexes the relative bargaining power of the two groups. More generally, the problem (4) offers a qualitatively appropriate characterization of any situation where the contractual and institutional structure of the labor market addresses distributional concerns across two groups of agents (employers and employees), using non-market instruments to redistribute purchasing power within each group.

While the maximization in (4) could, in general, use both wages and employment levels as instruments, contractual arrangements seldom feature explicit manning requirements. In light of the discussion in Layard, Nickell and Jackman (1991, Chapter 2), it will prove convenient and insightful to assume that employment is on the labor demand schedule: maximizing (4) with respect to w under the constraint that $l = (w/A)^{-\frac{1}{\eta}}$, we obtain

$$w = (\mu)^{\frac{\eta}{\epsilon+\eta}} (A)^{\frac{\epsilon}{\epsilon+\eta}}, \text{ for } \mu \equiv \left(1 - \beta\frac{\eta+\epsilon}{1+\epsilon}\right)\frac{1}{1-\eta} \tag{5}$$

the optimal mark-up factor of wages over the opportunity cost of working. The weighted-welfare approach encompasses the case of a monopoly union (setting wages) faced by a right-to-manage (setting employment) employer: when $\beta = 0$, all weight is on worker welfare and

$$w = \left(\frac{1}{1-\eta}\right)^{\frac{\eta}{\epsilon+\eta}} (A)^{\frac{\epsilon}{\epsilon+\eta}}.$$

Perhaps less intuitively, the outcome can also coincide with the competitive one. When

$$\beta = \frac{\eta}{\epsilon+\eta}(1+\epsilon), \ 1 - \beta = \frac{\epsilon}{\epsilon+\eta}(1-\eta)$$

then $\mu = 1$ and the labor market settles in competitive equilibrium, as in (3). In fact, the competitive equilibrium is supported by any combination of weights such that the ratio of the profit share to the labor share is

$$\frac{\beta}{1-\beta} = \frac{\eta}{1-\eta}\frac{1+\epsilon}{\epsilon}.$$

This condition is similar to the Hosios (1990) condition for efficiency when individual workers and jobs meet randomly according to a given matching technology, under constant returns. It should be stressed that in that framework unemployment is present

in equilibrium but, if the Hosios condition is satisfied, unemployment efficiently coordinates the search decisions of workers and firms in a frictional labor market.

Here, the conditions for efficient bargaining outcomes is based on the elasticities of (non-constant) labor demand and supply schedules rather than on that of the function governing the allocative role of frictional unemployment (the aggregate matching function). As is the case in a matching environment, the efficiency condition can only be satisfied by chance if the "bargaining share" β is viewed as a distributional parameter determined by considerations other than productive efficiency. When there is no collective bargaining, but just individual bargaining, then β can be interpreted as a subjective discount factor, reflecting the relative impatience (hence weakness) of the two parties at the bargaining table. Thus, under individual bargaining there is no reason to believe that β will correspond to the social optimum. When β is viewed as a reduced-form representation of allocation mechanisms different from perfect competition, however, then it can be related to distributional concerns and structural features. For example, wage-setting by unions may take the employment bias of wage bargaining into account. The extent to which β reflects such considerations will depend on the nature of unions – whether they are sufficiently "encompassing" – and their internal decision-making process. Pissarides (1990) shows that when unions decisions aim at maximizing the welfare of currently unemployed workers, then wage-setting behavior can imply that β satisfies the Hosios condition in the standard model of flow-based labor market interactions, where demand and supply elasticities are determined by the operation of the matching process rather than by the technological and market features we focus on in this paper. In that framework, when unions' decisions are driven by employed individuals instead (as is realistic if choices are made by the median voter) then wage requests will create more unemployment than would be optimal.

When the weight β given to firms' profits is smaller than that which supports full (efficient) employment in our static framework of analysis, the labor market employs fewer individuals. Employment (on labor demand) is

$$l_d = \left(\frac{w}{A}\right)^{-1/\eta} = \left(\frac{A}{\mu}\right)^{\frac{1}{\epsilon+\eta}}, \tag{6}$$

and lower than the competitive level when the markup μ is larger than unity.

This low employment outcome may be implemented by a binding minimum-wage contractual arrangement, which prevents individual workers from bidding for work at wages lower than the collectively agreed one. Then, there must be unemployment, i.e. some individuals would be willing to work at the going wage and cannot obtain a job.[1] While all labor homogeneous in the simple model we are analyzing, in reality

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[1] At the bargain wage labor supply is $l_s = (w_s)^{1/\epsilon} = \left(A\mu^{\frac{\eta}{\epsilon}}\right)^{\frac{1}{\epsilon+\eta}}$, and is larger than emploment

selection of workers who remain unemployed (and are compensated by non-market transfers) depends on individual characteristics: workers with higher productivity, lower opportunity costs, and higher need for income (like prime-age males) are likely to be the employed ones in this type of labor market configuration.

Another way to implement the bargained/distributional optimum is by leaving the work choice to individuals, but inserting a wedge between employer cost and take-home pay (see Spilimbergo, 1999, for a discussion of tax and subsidy determination in a similar context). In the bargained equilibrium, marginal productivity is equal to employers' costs,

$$w_d = \left(\mu\right)^{\frac{\eta}{\epsilon+\eta}} \left(A\right)^{\frac{\epsilon}{\epsilon+\eta}},$$

and the resulting employment level $l_d = (A/\mu)^{\frac{1}{\epsilon+\eta}}$ is equal to labor supply when take-home pay is

$$w_s = \left(l_d\right)^{\epsilon} = \left(\frac{A}{\mu}\right)^{\frac{\epsilon}{\epsilon+\eta}}.$$

The ratio of demand and supply wages is μ, so the labor tax rate, as a fraction of gross employer wage costs, is $\mu - 1$. There is no need to tax employment and redistribute the proceeds to workers (in the form of pensions, non-employment benefits, and public employment) if $\mu = 1$, i.e. if the competitive equilibrium is consistent with distributional objectives. But a scheme that taxes employment and distributes proceeds to workers (a simple representation of the Gent system, where unions are involved in the running of unemployment benefit systems; see Boeri, Brugiavini and Calmfors, 2001) is appropriate if, for whatever reason, it is politically desirable to give workers a larger share of producer surplus. The optimal tax from the labor's point of view is such that employment is the same with the tax (and equilibrium between labor supply and demand) and with the markup enforced via binding wage contracts (and unemployment).

The optimal tax rate is an increasing function of η, hence decreases as labor demand becomes more elastic. In the simple $\beta = 0$ special case of a monopoly union, for example, where no weight is assigned to profits, the optimal tax rate as a fraction of gross wages is η, the inverse of the labor demand's elasticity. Increasingly positive values of β are associated with lower tax wedges.[2] Thus, the distributive objective represented by the sharing rule can be implemented either by a labor tax rebated to

when $\beta < \eta\frac{1+\epsilon}{\eta+\epsilon}$, i.e. when the weight of worker's welfare is larger than that which supports the competitive efficient outcome.

[2]In the general case we have the following comparative statics result:

$$\frac{d}{d\eta}\left(\frac{\eta\left(1+\epsilon\right) - \beta\left(\eta+\epsilon\right)}{\left(1+\epsilon\right) - \beta\left(\eta+\epsilon\right)}\right) = \frac{\left(1+\epsilon\right)^2\left(1-\beta\right)}{\left(-1-\epsilon+\beta\eta+\beta\epsilon\right)^2} > 0.$$

In words, the steeper is labor demand, the larger is the tax.

workers and their families, which implies a reduction in the aggregate labor force; or via minimum wages and/or administrative extension of collective wage agreements, which imply unemployment rather than exit from the labor force. In either case, for given β a more elastic labor demand makes it optimal to insert smaller wedges between labor's marginal productivity and opportunity cost.

It would be conceptually easy, but beyond the scope of this paper, to extend the proposed modeling approach to feature combinations of the two implementation mechanisms. Typically, revenue is not rebated to all, but is paid in some employment-contingent form (as is the case for pensions and unemployment benefits), which can introduce additional distortions of either sign. Conversely, when benefits are contingent on past employment (as in the Bismarck system) they bear on labor supply: take-home pay can be lower when it is tied to future benefits. In the shorthand setup of the model, all such effects are subsumed in the efficiency costs of worker-biased distribution, but analysis of real-life arrangements should keep them in mind. A distinction between non-employment benefits and public employment, and the possibility that even from the point of view of labor redistribution-oriented schemes entail deadweight losses (i.e., that transfers of purchasing power within labor are not as frictionless as the linear aggregation of the wage bill in the above objective function would imply), should however be taken into account when examining real-life arrangements.

2.3 "Social Europes" and their trade-offs

The perspective offered by the stylized model offers useful insights into the relationship between labor market institutions and performance sketched in Section 1.1 (see Boeri et al, 2000 for more detailed evidence and discussion). In all European countries, employment relationships are regulated, to varying degrees, in both their quantity (hiring and firing) and price (wage) dimensions. Different regulatory instruments covary in interesting ways, as can be appreciated considering simple statistics at both at the aggregate level and at the individual level. At the aggregate level, it is possible to observe trade-offs like those depicted in Figure 3 and 4 below. The former displays the coverage of unemployment benefit systems (horizintal axis) and the strictness of employment protection against dismissals (vertical axis), measured according to a well-know indicator produced by OECD (further discussed below) and increasing in the extent of dismissal costs. Figure 4 shows how the coverage of early retirement schemes (defined as programs allowing individuals to draw a *full* pension before reaching the statutory retirement age*)* interacts with employment protection. Both diagrams indicate that quantity (employment protection) and price (unemployment benefits and early retirement schemes, mainly funded via payroll taxation) are substitutes. Microeconometric evidence argues also in favor of substitutability: in
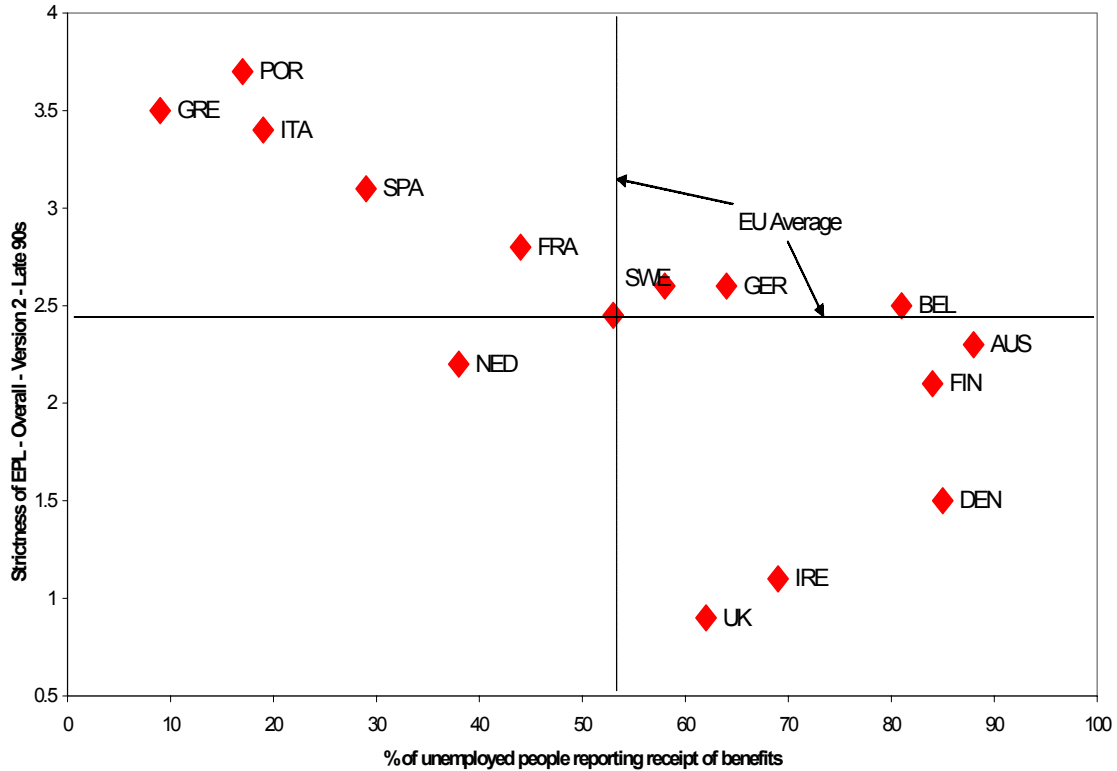
Figure 3: The trade-off between unemployment insurance and employment protection

particular Boeri, Boersch-Supan and Tabellini, based on a representative survey of households in four European countries found that employment security is implicitly traded off by individuals against unemployment insurance (Boeri, Boersch-Supan and Tabellini, 2001).

The two types of regulations have different effects on wages and employment. Thus, we turn below to the implications of having each of them in place.

2.3.1 Price regulations

Price regulations, by imposing tax wedges, reduce take-home-pay below labor productivity. Starting from whatever equilibrium configuration (maximizing a non-competitive objective), taxes further reduce employment. However, they also reduce
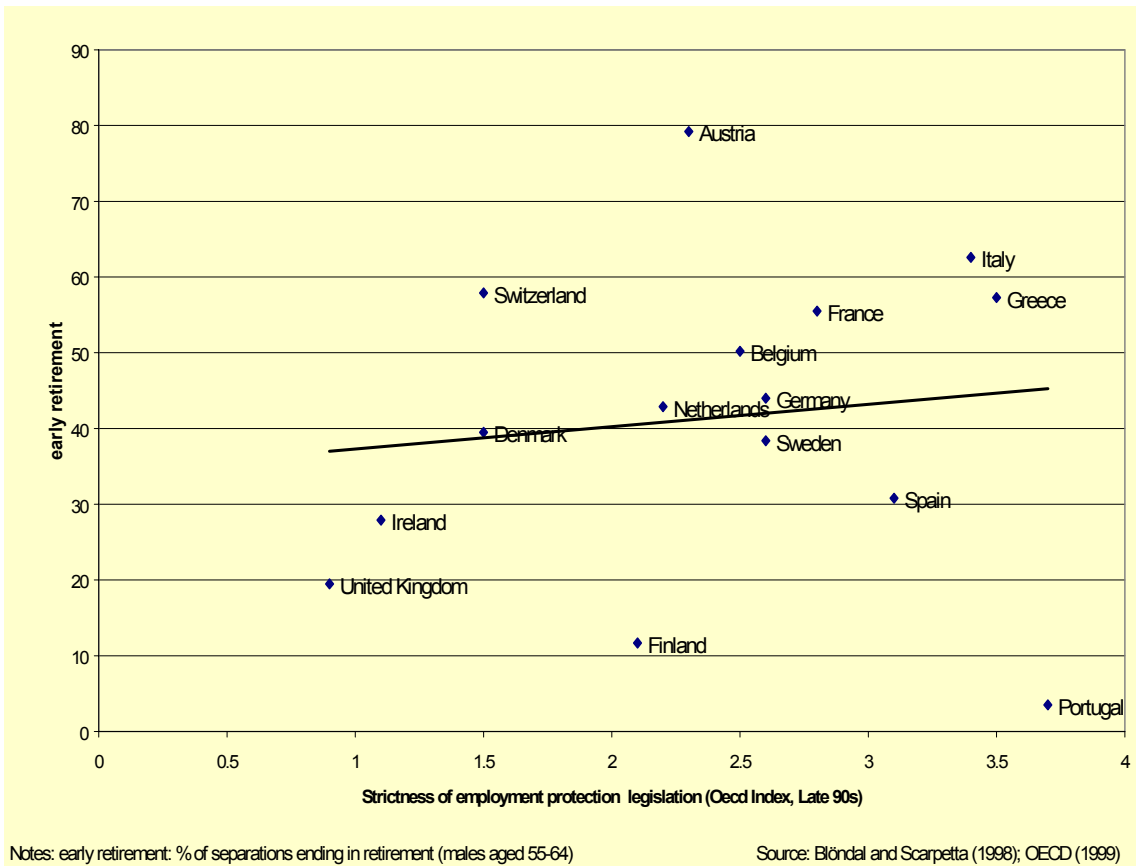
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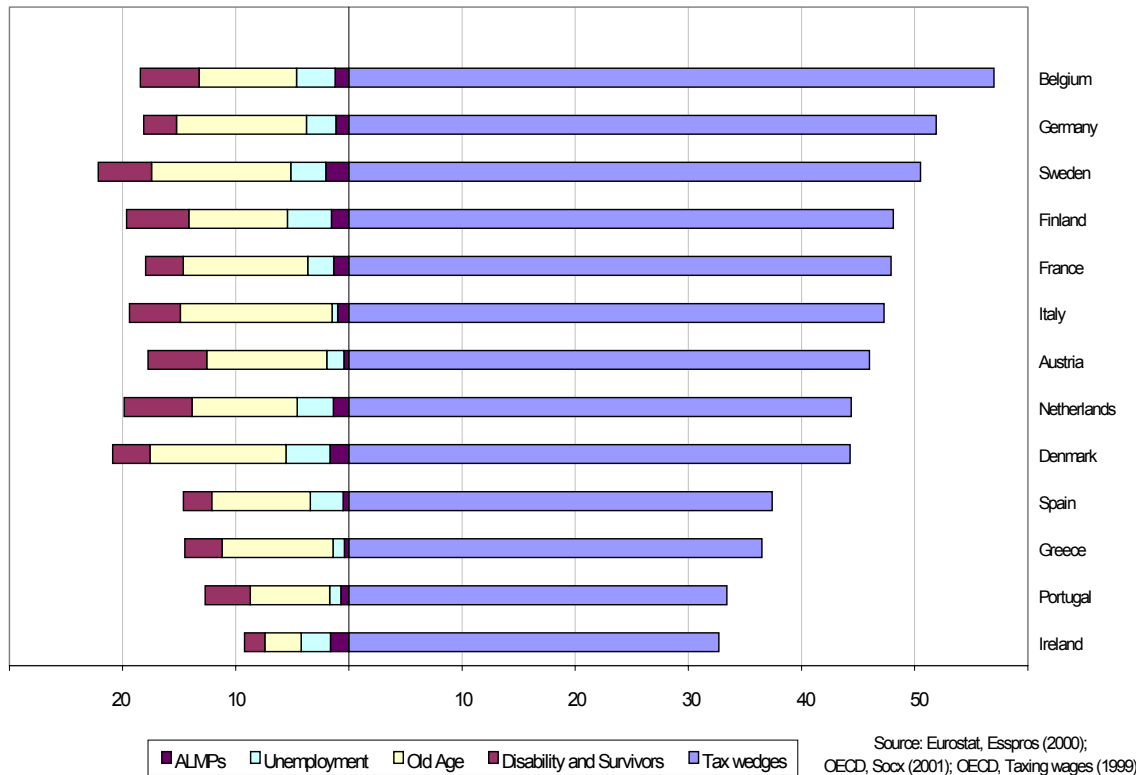Figure 4: The trade-off between early retirement and employment protection

Figure 5: Labour Taxes and their uses

labor supply: some individuals that would be willing to work in the absence of tax wedges drop out of the labor force, e.g. women in Continental Europe. Thus, the impact on take-home pay of those who continue to work cannot be established without considering on the type of redistributive programs financed by labor taxes.

The proceeds of labor taxes are generally used to pay unemployment compensation, non-employment compensation (that is, programs non-conditional on job search), and public employment (Figure 5). All these programs induce upward shifts of labor supply and reservation wages in the business sector. The extent to which such shifts bear on measured employment and unemployment depends on details of the policy: on whether payments are contingent on non-employment (pension) or employment elsewhere (public), or on unemployment (real or fictional, depending on details of job search assistance and entitlement rules).

The effects on wages will also depend on the interaction of cash transfer programs

with wage setting institutions. If the opportunity cost marked up by wagesetters is increased by the structure of subsidies, then wages will increase even further. But this needs not be the case, and depends importantly on the extent to which wage setters internalize this channel. Unions engaged in nation-wide wage bargaining may indeed internalize the fact that unemployment would increase (and payroll taxes increase) unless take-home pay concessions are made. Small, decentralized unions may instead resist changes in their members' take-home pay: if every union follows the same policy, the outcome would be too high wages at the macroeconomic level, to imply a bigger employment cost than with a nationwide union. This argument (on which see also Esping-Andersen, 1990) applies to social-policy interventions the familiar argument originally applied by Calmfors and Driffill (1988) to the labor-market effects of macroeconomic shocks under different bargaining structures. A competitive market without unions would also yield favorable employment outcomes, as take-home pay would generally tend to adjust so as to ensure that labor costs are consistent with full employment of a smaller labor force if lower take-home pay decreases labor market participation incentives (but when benefits are tightly linked to employment, as is the case in credible contributory pension schemes, work incentives need not be damaged). Hence, taxes and subsidies can be compatible with high employment and wage moderation in widely different circumstances: when unions are weak (as in the United Kingdom since the 1980s) or in the presence of extensive consultation between unions, government and employers (as, for example, in the Netherlands' recent experience, where welfare reforms were facilitated by wage moderation on the part of "corporatist" unions, see Nickell and van Ours, 1999).

2.3.2 Quantity restrictions

Quantity restrictions, such as employment protection legislation, reduce productivity in the face of ongoing reallocation shocks and change their distributional impact. Important "quantity" rigidities are introduced in labor markets by employment protection legislation (EPL) (see Bertola, Boeri, and Cazes, 2000, for a recent review). Typically, EPL requires that termination of individual employees be motivated and/or that workers be given reasonable notice or financial compensation in lieu of notice; and it grants workers an unrenounceable right to appeal against termination, sometimes stipulating reinstatement with back pay when the appeal is successful. As regards collective dismissals, legislation often mandates administrative procedures, involving formal negotiations with workers' organizations and with local or national authorities. Only some EPL aspects, such as the number of months' notice required for individual and collective redundancies, are readily measured quantitatively. Others aspects are more difficult to quantify precisely, for example the willingness of labor courts to entertain appeals by fired workers and the interpretation placed by judges on the

17

notion of "just cause" for termination. When available EPL indicators are positively correlated with each other, however, it is possible to form qualitatively unambiguous cross-country rankings of EPL, and to relate such rankings to (also qualitative) indicators of labor market performance, in light of theoretical implications.

For given labor demand and wage dynamics, more stringent EPL obviously reduces the incentives for firms to shed labor. It is perhaps a little less intuitive, but also quite obvious, that EPL also reduces incentives to hire: if employers anticipate that layoffs will be difficult or costly, in fact, they should try and reduce the amount of labor shedding called for by future labor demand downturns or wage upturns. Hence, EPL should smooth adjustment dynamics, but aggregate employment and unemployment should depend on average wages and average labor demand. Its contrasting effects on employers' propensity to hire and fire imply that the impact of EPL on average employment for given wage, or on average wages for given (e.g., full) employment, is in general ambiguous. In fact, "firing costs" are quite different from other labor costs, such as wages and social security contributions, that indeed tend to reduce labor demand. While employers must pay wages to employ labor, and reduce employment in the face of higher wages if labor demand is downward-sloping. But they can avoid paying firing costs by choosing a stable employment path around a level that may be slightly lower or even higher on average than what would obtain, for the same wage and contributions level, in the absence of job security provisions. This does not imply that firms should be happy to do so: by definition, whenever firms fail to equate wages and labor's marginal revenue product they earn lower profits. In this sense, it is quite sensible to think of employment security as imposing a "tax" on employers. Still, EPL reduces efficiency and profits does not reduce profits through lower average employment levels, but rather through poor synchronization of productivity and wages around roughly unchanged average levels.

The evidence reviewed by Bertola (1999) and its references suggests that more stringent EPL is indeed associated to more stable aggregate employment paths. It is harder to ascertain whether EPL is associated with higher or lower employment. While the above argument took wages as given, employment outcomes of course depends very importantly on the process of wage formation in reality. Empirically, wage-setting institutions are quite different in different labor markets, and quite closely related to the stringency of EPL.

On the one hand, the weight given to employment objectives by wage-setting processes depends importantly on the extent and character of unionization. Organized labor may find it advantageous to trade-off higher wages for lower employment, especially when the elasticity of labor demand is low and when non-employed individuals have little weight in union objectives and/or receive generous benefits, through explicit insurance or retirement schemes or through family relations. To some extent, the same labor markets that aim at keeping breadwinners employed by stringent EPL

18

regulation also tend to grant them high wages, and to relegate secondary workers (young, elderly, and female individuals) in non-employment labor market stata.

On the other hand, different labor markets tend to feature different degrees of wage dispersion. Low wage dispersion may of course reflect different degrees of labor force heterogeneity. If unregulated wages were allowed to reflect individual productivity, they would of course tend to be more dispersed in countries where high- and low-productivity workers coexist. The economic structure of industrialized countries, however, is sufficiently homogeneous to suggest that much of the observed variation in wage dispersion reflects institutional wagesetting constraints, such as centralized bargaining and binding minimum wages. From a theoretical point of view, it is not surprising that relative wage variation should be heavily constrained in the same markets where EPL is most stringent. Quantitative firing restrictions, in fact, could hardly be binding if wages were completely unrestrained over time for a given individual: in response to the labor demand shocks that EPL are meant to protect workers from, wages could fall so as to make stable employment profitable, or to induce voluntary quits. Hence, limiting the freedom offered to employers and workers in setting wages gives force to quantity constraints, and sustains labor market configurations where a subset of potential workers obtains relatively high-wage jobs.

EPL is not generally enforced uniformly across the board. There is evidence indeed that it becomes more stringent in high unemployment areas and under cyclical downturns (Bertola, et al. 1999). But even if EPL were to applied with the same intensity to different regions within the same country, it may produce different labor market outcomes in different areas. Even identical workers could indeed earn different wages when they hold different jobs and mobility across jobs is costly for workers (rather than for firms). Think, for example, of residents in different regions within potentially integrated labor markets. At a point in time, geographic wage differentials may be observed if the labor mobility that would arbitrage them away is costly. Residents of Southern Italy, for example, need not be enticed to move to the tighter Northern Italian labor markets by earnings differentials when mobility entails substantial economic and non-economic costs. And the observed wage differentials across jobs held by similar workers can be very large, even when mobility costs are small, when they are temporary. Would-be migrants faced by volatile labor demand, in fact, need to weigh the advantages of higher wages in the near future against not only mobility costs, but also the value of waiting for local labor market conditions to improve. Here, too, labor market institutions can play a role. Usually, job security provisions explicitly or implicitly require payments directly from the firing firm to departing employees, rather than judicial or administrative costs that are deadweight from the point of view of the individual employment relationship. Thus, more stringent EPL implies that mobility costs are at least partly borne by firms, rather than by workers, and are associated with smaller wage differentials in situations where

19

voluntary mobility across jobs is observed.

2.3.3 Some evidence

The simple model outlined above implies that similar distributional objectives (represented by the weighting of efficiency and worker welfare) can be pursued by different policy instruments and institutional configurations, with distinctive implications for observable employment, unemployment, and participation outcomes. Employment rates, in particular, can be reduced either by generous unemployment benefits, high unionisation rates accompanied with hybrid bargaining regimes (halfway between centralization and de-centralization), strict employment protection and large tax wedges (see Figure 5).

This perspective can be brought to bear on European labor market configurations. Scandinavian countries (and the Netherlands) are characterized by very high employment rates and low unemployment rates, supported by high public employment (or large incidence of invalidity pensions) and large fiscal wedges. The UK also features relatively high employment rates, but achieves them via wage dispersion. The simple single-dimensional model above cannot accommodate such dispersion explicitly, but the UK configuration can be sensibly represented by an objective function with large weight on efficiency. In Continental Europe, low employment rates are accompanied by high unemployment rates, as relatively less productive workers are priced out of employment; the labor force participation rates are less variable than employment rates through this channel.

As shown in Figure 2 above, employment tends to be especially low in larger countries such as Italy, Germany, and Spain. Within these countries, unemployment rates are very different across regions and persistent (Pench et al., 1999). Figure 7 shows that ten years apart correlation in regional unemployment rates is of the order of .8 compared with .3 in the US. Internal labor mobility and regional competition tend to be reduced by such institutional features as centrally negotiated wages and job security provisions; non-employment benefits set at levels which do not take into account of inter-regional differences in the cost-of-living; and subsidies to less developed regions. Smaller countries, such as Austria, Ireland, Portugal, the Netherlands, tend instead to feature relatively favorable combinations of income equality and employment, and find it easier to set-up and preserve centralized bargaining structures which, through coordination, attach weight to employment as well as wage objectives.

Independent variables	coeff.	st- err.	T-stat.
Gov. sector employment	**0.71**	0.12	6.03
Unemployment benefits: repl. rate	**-0.11**	0.03	-4.22
Union density	**-0.07**	0.03	-2.67
Corporatism (intermediate)	**-1.77**	0.44	-4.05
Corporatism (high)	**0.74**	0.41	1.81
Employment protection legislation	**-1.35**	0.71	-1.91
Tax wedge	**-0.09**	0.05	-1.73
Output gap	**0.61**	0.04	17.1
No. of observations	223		
No. of countries	19		
F-test (fixed effects)	129.1 ***		
F-test (gov. sect. empl. = 1)[1]	6.1 **		

Each coefficient represents the expected change in the employment rate by an unitary change in the independent variable.

***: statistically significant at the 1% level; ** at the 5% level; at the 10% level.

1. The null hypothesis is that the coefficient of the gov. sect. employment rate is equal to 1. The test does not reject the null hypothesis at the 1 per cent level.

See Nicoletti and Scarpetta (1999) for more details.

Figure 6: Reduced-form employment rate equations, 1982-1995 (non-agricultural employment/working age population, fixed effects). Source: Boeri, Nicoletti and Scarpetta, 2000.
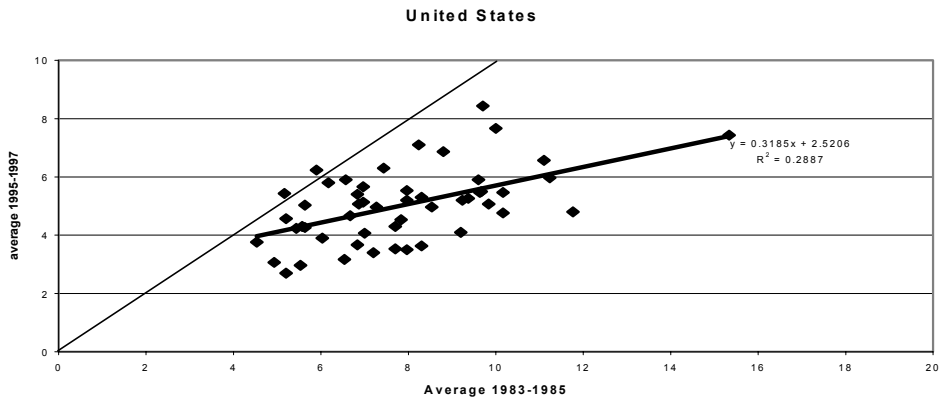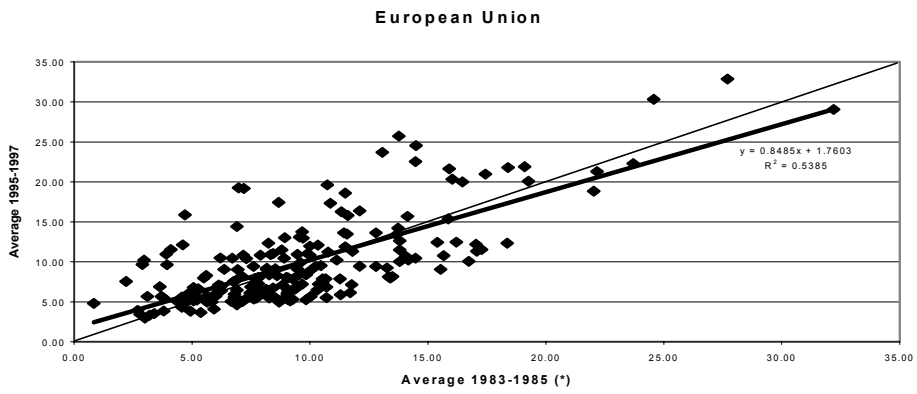
European Union

$y = 0.8485x + 1.7603$
$R^2 = 0.5385$

(x-axis: Average 1983-1985 (*); y-axis: Average 1995-1997)

United States

$y = 0.3185x + 2.5206$
$R^2 = 0.2887$

(x-axis: Average 1983-1985; y-axis: average 1995-1997)

Figure 7: Correlation between Regional Unemployment Rates (1983-85 and 1995-97); Europe versus US.

3 Product market integration and reform incentives

The simple modeling perspective proposed above is based on the idea that labor market institutions do serve some useful purpose. To the extent that the competitive, productive-efficient equilibrium fails to address relevant considerations, deregulation is neither advisable nor politically feasible. This does not imply, however, that reforms are not advisable. One would advocate and expect labor market reforms – even for unchanged weights given to efficiency and distributional objectives – when the negative effects of existing institutions outweigh the advantages foreseen at the time of their introduction.

The regulatory and fiscal configuration of EU labor markets is challenged by a variety of such structural changes, arising not only from the process of European economic integration and eastwards enlargement, but also from common and country-specific demographic, technological, and extra-EU trade developments.

3.1 Macro and labor-market perspectives

Before turning to the limited evidence so far available on the impact of EMU, it is useful to recall two popular views as to the implications of EMU for labor market performance and reform.

The first approach focuses on macroeconomic interactions, and in particular on the character of policy "games" played by economic agents and monetary authorities with different employment and wage objectives. If market interactions deliver suboptimally low levels of employment and economic activity, and nominal wages are rigid in the short run, then monetary authorities are ex post tempted to engage in expansionary monetary policy. If such behavior is rationally expected by wage- and price-setters, however, then inflation will be ex ante so high as to discourage further increases. The resulting equilibrium combines low levels of activity (or high unemployment) and high inflation. To correct this unsatisfactory state of affairs, the standard prescription is that low activity levels and excessive real wage aspirations should be targeted by appropriate structural reforms. These should aim at reducing monopoly power and fostering supply by fiscal instruments, while monetary policy should be explicitly and independently targeted to price stability only.

For the euro area, monetary policy is indeed conducted at the central level, and should be independent of national structural rigidities. Whether this fact may encourage or hinder the structural reforms envisioned by the standard prescription is controversial. Incentives for structural reform may be smaller when it affects only local activity levels and not inflation (Calmfors, 1998; Sibert and Sutherland, 1997),

and their political feasibility may be hampered by constraints on the extent to which monetary and fiscal macro policy can be used to smooth adjustment trajectories and buffer distributional implications in the aftermath of such reforms (Bean, 1998).

The second approach, more germane to our perspective on labor market institutions, focuses on microeconomic interactions instead, and on the nature of economic (rather than purely monetary) integration (see Andersen et al, 2000, and references therein). Increased product market competition, free mobility of capital, and incipient labor mobility should privilege economic efficiency, and make it harder to sustain existing levels of regulation. Contractual negotiations and legal requirements on a national (or regional) level face strong deregulatory pressure from "competition among systems." Through this channel, one might expect to see lower unionization, wage moderation, increasing wage differentials, more nominal and real wage flexibility, and a reduction of institutional barriers to interregional and inter-occupational mobility in the labor market.

To summarize, the macroeconomic approach views monetary policy as the main brake on wage pressures, and inflation bias as a reason why labor market reform may be less urgent. The microeconomic approach views competition from other workers, possibly mediated by product market interactions, as the main reason why wage moderation may be induced by EMU. Our review of empirical features—especially as regards the persistent character of unemployment, and its concentration along geographical lines—leads us to privilege the latter. The analysis of labor market reforms under past European (quasi)-monetary union experiments is supportive of this choice: the countries belonging to the DM-area did not experience a stasis in structural reforms, but in many areas actually carried out more reforms than the countries outside the union (Bertola, Boeri and Nicoletti, 2001).

3.2   Competition and the effects of institutions

An explicit model of the impact of EMU on microeconomic labor market interactions, mediated by institutions, would need to take into account the higher intensity of product-market competition resulting from interactions among a larger number of potential and actual suppliers and increased price transparency. Following Blanchard (2000), we can represent such phenomena in the context of simple models like those introduced above as increase in the elasticity of labor demand, η, by the labor market's representative employer. In an undistorted competitive economy, economic integration is also expected to increase productivity through better exploitation of comparative advantage, economies of scale, or other sources of higher efficiency. In the context of the simple model proposed, a reduced-form representation of such phenomena can be given by an increase of A, the parameter determining the productivity of labor at a given employment level.

In a competitive equilibrium situation with no (fiscal or wage-setting) wedges between labor supply and demand relationships, the combined effect of more elastic and higher demand for labor should lead both employment and wages to increase, along the labor supply schedule. We denote the pre-integration labor demand schedule with $A_0 l^{-\eta_0}$, and that after integration with $A_1 l^{-\eta_1}$. We assume that $A_1 > A_0$ and $\eta_1 < \eta_0$ and, for simplicity, suppose that labor supply is not affected by integration.[3] By equation (3), the competitive full-employment level is higher after integration (and so are total production and welfare) if

$$A_0^{\frac{1}{\epsilon+\eta_0}} < A_1^{\frac{1}{\epsilon+\eta_1}}. \tag{7}$$

Following Rodrik (1999), we proceed to examine the implications of higher labor demand elasticity for labor market outcomes in the presence of distribution-motivated wedges between marginal productivity and wages. If institutions aim at maximizing a weighted sum of worker welfare and profits—or rents, since we do not explicitly account for capital accumulation and potential mobility—then, by equation (6), the pre- and post-integration employment levels are

$$l_0 = \left(\frac{A_0}{\mu_0}\right)^{\frac{1}{\epsilon+\eta_0}}, \; l_1 = \left(\frac{A_1}{\mu_1}\right)^{\frac{1}{\epsilon+\eta_1}}, \tag{8}$$

where μ_0 and μ_1 are expressions in the form given in (5). The markup factor depends on β, which may or may not vary as a result of more competitive and more productive economic interactions, as well as on η. As mentioned, a higher elasticity of labor demand implies a *ceteribus paribus* smaller optimal markup for any given objective function. For example, in the case where $\beta = 0$ and institutional interference simply aims at maximizing worker welfare, with no weight on profits, then the markup is related to the elasticity of labor demand by a standard monopoly-union relationship. In the context of the model, these considerations support the standard view that economic integration should lead to labor-market deregulation. It is also useful to note that the other optimistic prediction of economic integration models, namely the increased product-market efficiency represented by $A_1 > A_0$ in the model, implies that such deregulation need not decrease worker welfare. If increased elasticity of

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[3]Labor supply elasticity could also change after EMU, mainly as a result of migration. We neglect this potentially important longer-term channel in order to focus on the initial impact of EMU, and to simplify the analysis. Further work should also recognize that labour is really more heterogeneous than in our single-dimensional model and illustrations. When labor supply becomes more elastic, more benefits are paid at any given wage, and existing wage-support programs may become unsustainable, as was the case in Germany when construction work was contracted to "posted" workers—see Bean et al (1998) and Sapir (2000), who also studies the extent to which immigrants draw on unemployment and other benefits directly in various European countries.

labor demand is associated with an upward shift of the labor demand schedule in the relevant region, in the aftermath of the structural change and efficient employment and wages increase as in (7), then wages and employment can also increase when they are set as a (smaller) markup on an (increasing) participation opportunity cost.

As also mentioned above, however, the policies and institutional arrangements that aim at achieving objectives different from pure productive efficiency in typical European countries are often in the form of legal regulations, fiscal instruments, and welfare-provision systems rather than more or less centralized bargaining by unions. The degree of centralization of collective bargaining system is also difficult for governments and policymakers to affect. Hence, it may be too optimistic to predict labor market evolution on the basis of equation (8), where not only the labor demand parameters A and η but also the markup μ is supposed to vary as structural conditions change. When the workers' objectives are pursued by tax and legal instruments, any variation of the markup needs to be implemented by *reforms* (rather than via collective bargaining). In the model, a smaller tax-based wedge represents reforms meant to "make work pay," that is, to increase labor market participation and employment, which is qualitatively consistent with the broad thrust of recent reforms. (As regards EPL reforms, reallocation shocks may or may not be more intense in post-EMU environment, but the initial adjustment to new conditions is expected to require more labor reallocation than before EMU).

Reforms, however, may well be delayed by procedural and political constraints. Hence, it is quite instructive to analyze the simple model's predictions for labor market performance in the aftermath of economic integration when the institutional framework represented by the markup over the opportunity cost of working, μ, remains stable in the face of structural change. While the level of full, efficient employment would increase by the assumption made in (7), the condition for employment to increase when the wage markup factor μ is not allowed to vary in the face of increased elasticity of labor demand is more stringent:

$$l_1 > l_0 \ \text{ iff } \ \left[\left(\frac{A_1}{\mu_0} \right)^{\frac{1}{\epsilon+\eta_1}} \geq \left(\frac{A_0}{\mu_0} \right)^{\frac{1}{\epsilon+\eta_0}} \right]. \tag{9}$$

or

$$\left[\left(A_1^{\frac{\epsilon+\eta_0}{\epsilon+\eta_1}} / A_0 \right)^{\frac{1}{\epsilon+\eta_0}} \geq \mu_0^{\frac{\eta_0-\eta_1}{(\epsilon+\eta_1)(\epsilon+\eta_0)}} \right]$$

In words, to ensure that a distorted labor market will not generate less employment as labor demand becomes higher and more elastic, institutional changes need to be such as to imply the term on the left-hand side of (9) is larger than unity. In practice, to avoid worsened labor-market performance the effects indexed by parameter A need
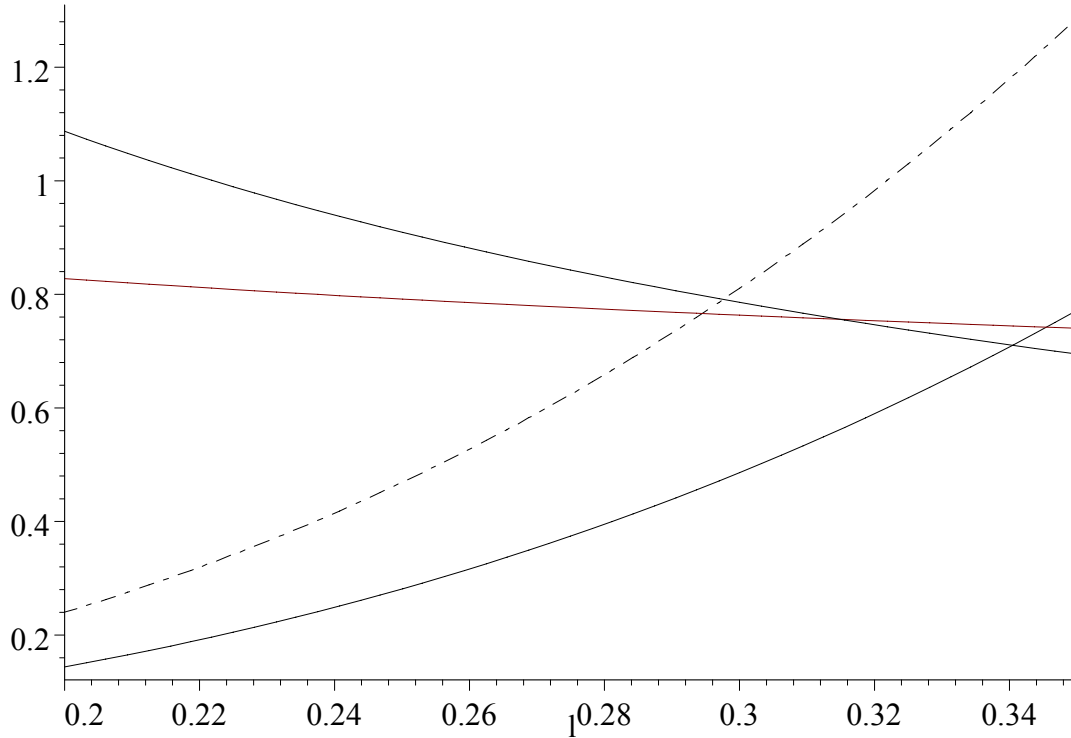
Figure 8: Employment Effects of EMU-driven shift in Labour Demand

to be particularly strong, since with $\mu_0 > 1$ and $\eta_0 > \eta_1$ the right-hand side of the condition in (9) is larger than unity.

The insight, in fact, is simple and more readily conveyed by a graphical illustration than by the analytic expression in (9). Figure 7 plots a stable labor-supply schedule along with two labor demand schedules: the flatter one also has a larger proportional constant and, as in (7), would imply higher employment if the labor market were characterized by wedge-free equality of labor demand and labor supply. When employers' labor costs are higher than would be implied by the labor supply relationship, as illustrated by the dashed marked-up upward-sloping schedule, it is however possible that structural change and unchanged institutions imply *lower* employment. The figure, of course, exaggerates the magnitude of the relevant effects. The insight, however, is qualitatively robust and appealing: labor markets that feature large distribution-motivated wedges and high rates of unemployment or non-participation are also likely to perform poorly in the face of increased labor demand elasticity, which magnifies

the negative employment implications of such wedges.

This simple insight offers useful perspectives on recent reform tensions, which can be interpreted by decomposing familiar race-to-the-bottom reasoning in two interrelated steps. Economic integration, at unchanged institutions, should on impact worsen employment performance, or at least make it more urgent for economic agents to exploit all margins of flexibility left open by institutions that reduce employment rates. Institutional arrangements should of course react to such impact effects: but reforms take time and need to take complex political considerations into account. We proceed to study relevant aspects of recent European experiences in these two respects.

3.3   Preliminary evidence

Based on a variety of sources (including country economic reviews carried out by OECD, Income Data Source studies, EC-MISSOC reports, etc.), it is possible to take stock of reforms carried out in Europe in the field of non-employment benefits (encompassing not only unemployment benefits, but also the various cash transfers provided to individuals in working age), pensions and employment protection. The inventory of reforms is organized along two main dimensions (details on the inventory of social policy reforms produced at the Fondazione Rodolfo Debenedetti are available at `www.frdb.org`).

On the one hand we distinguish reforms on the basis of their broad orientation, that is, whether they tend to reduce or increase the rewards from labour market participation (e.g., by reducing the generosity of unemployment benefits or introducing employment-conditional incentives) and make employment protection more or less stringent. This is, after all, the same dimension along which the figures commented so far were organized and therefore we believe that it is not necessary to add more information here.

On the other hand, we distinguish reforms depending on whether they are marginal or radical. This procedure is done in two stages. At first, we rely on qualitative assessments, which are based on an evaluation of the scope of the various reforms. In particular, we preliminarily classify as radical those reforms that satisfy at least one of the following criteria:

- reduce replacement rates at the average production worker (APW) level by at least 10 per cent;

- are comprehensive, that is, do not address just minor features of the cash transfer schemes (e.g., the minimum employment record required to qualify for unemployment benefits), but rather reform their broader design, and

- involve existing entitlements rather than being simply phased-in for the new beneficiaries of the various schemes (e.g., reforms of employment protection should concern also workers under permanent contracts).

In the second stage of the classification procedure we look at the actual behavior of the series which should be most affected by the reforms and only if we observe a change in the underlying trend of these series we confirm our qualitative assessment. Clearly the second-stage of the procedure can only be implemented for the reforms carried out before 1993 as we need a minimum number of observations in order to establish whether a change in the underlying trend has occurred. Sometimes even in the case of reforms done before 1993 the second-stage validation procedure cannot be implemented, as some reforms are followed just a few years after by regulatory changes moving in the opposite direction, undoing part of the initial institutional changes. In all the cases where the second stage procedure cannot be implemented, only the first stage assessment is used. The latter was validated in 85 per cent of the cases.

The series used in the empirical validation procedures are chosen according to the institutional features subject to reforms. In the case of employment protection, we looked at labor market flows, notably unemployment inflows, as previous work has found a strong negative correlation between employment protection and the incidence of unemployment. The impact of reforms on stocks (e.g., employment and unemployment levels or labor force participation rates) can, in any event, only be appreciated when working with long series, something which is not within our feasibility set. In the case of non-employment benefits, we used proxy outflows from unemployment (or outflows from the live registers to jobs in the countries for which such data are available): radical reforms should significantly affect exit flows from unemployment.

The resulting data are organized in Figure 9 and 10 along the two dimensions relevant to the present paper. We report reform frequencies (on a per-country, per-year basis) for the period 1986-2002 for the EMU and other EU groups of countries.

The impact of EMU on reforms can be appreciated by looking at developments since the mid-1990s. While the irrevocable fixing of exchange rates in the euro area is operational since January 1, 1999, the Growth and Stability Pact was adopted in 1997, setting a legally binding framework for fiscal policy in the euro area. Expectational effects of EMU implementation have been felt even before 1997, and can be traced back to the adoption of the Maastricht Treaty in 1992. Wage moderation, in the form of social pacts and restrained collective wage settlements, predates EMU by at least seven years (i.e., from the collapse of the ERM, and earlier in the Netherlands: the Wassenaar agreement of 1982 – when the Netherlands had effectively become part of a D-Mark-based economic and monetary union with Germany – resulted in substantial unemployment reduction beginning in 1986, when German labor costs were growing
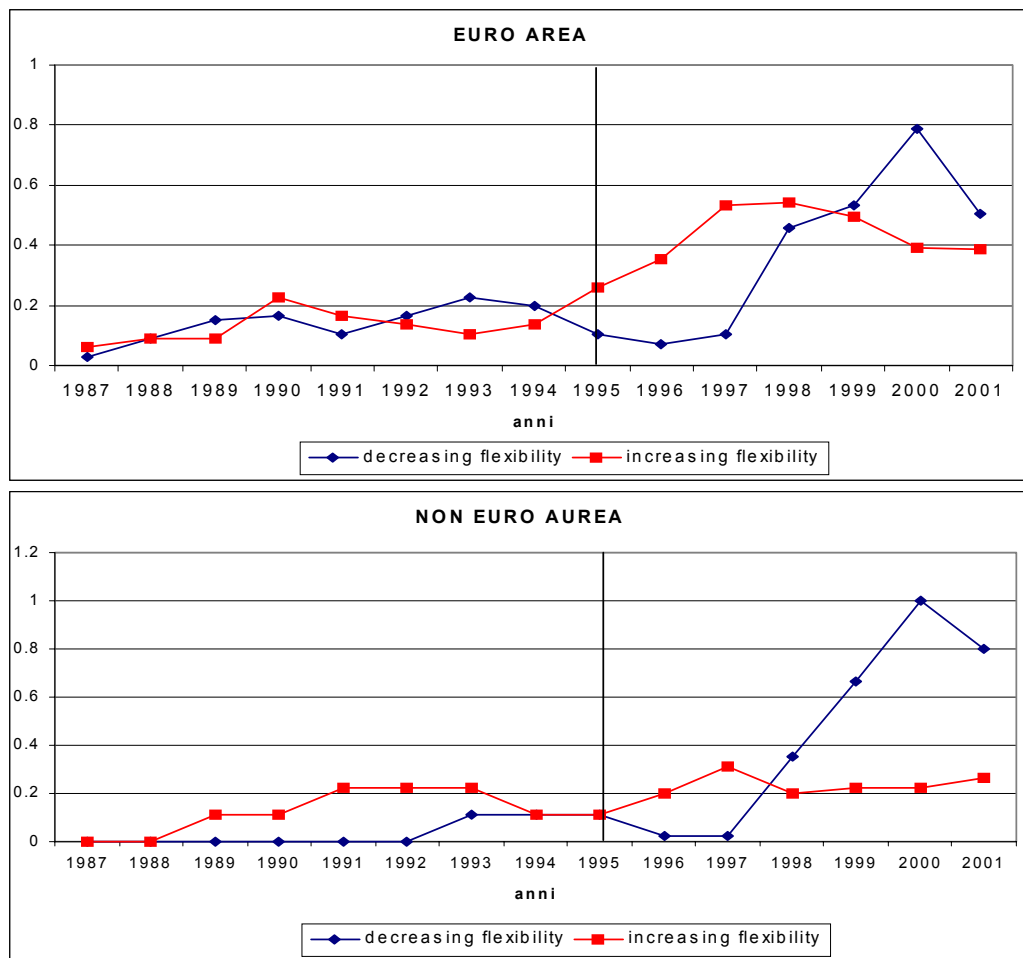
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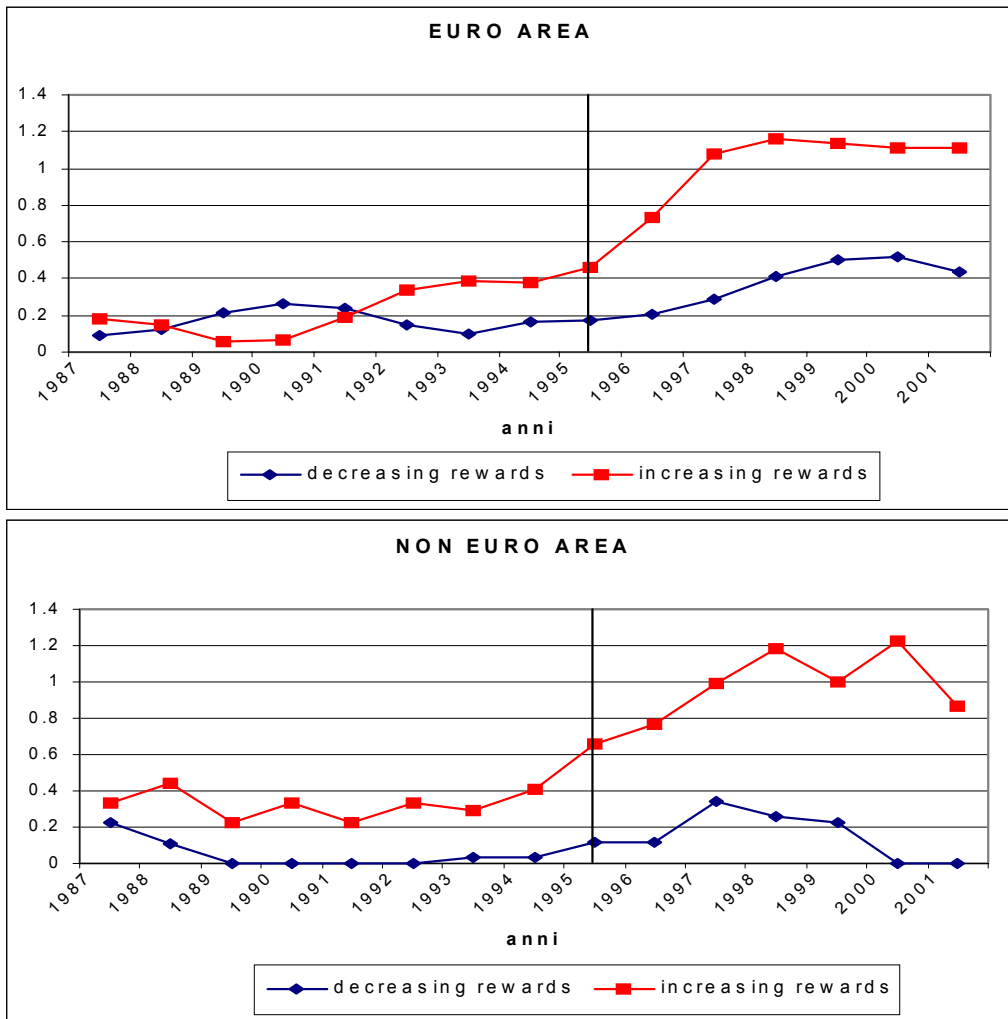Figure 9: Employment Protection - Average yearly number of reforms per country

Figure 10: Non -Employment Benefits - Average yearly number of reforms per country

31

at almost two-digits levels in real terms, while Dutch costs were essentially flat). By choosing a relatively early date for the EMU break (e.g., 1995 as suggested by the vertical axis in the charts), we are likely to detect the effects of fiscal consolidation efforts related to the convergence to the Maastricht criteria as well as the effects of monetary union per se. Adjustment lags are also likely to be important when dealing with labor market adjustments and institutional transformations. Bearing the above in mind, the time is ripe to go beyond a review of what might happen in EMU, and preliminary assess actual and potential developments on the basis of recent evidence as well as of theoretical arguments.

The data indicate that EMU has brought about an acceleration of reforms, especially in the Euro area and in the field of non-employment benefits. However, not always reforms evolve in the direction of increasing labour market flexibility and rewards from participation. Reforms going on opposite directions are often common. This can also be explained by the fact that some reforms reducing the generosity of social welfare systems are bundled together with measures compensating specific groups. In some cases, however, reforms done one year are undone the following year, which is consistent with our perspective: stronger competitive pressures also increasing the demand for protection. Moreover, most of these reforms appear "marginal" in the sense defined above, and the ratio of marginal to structural reforms has increased since 1995.

These inconsistencies and the marginal nature of most reforms are increasing the institutional complexity of the European social welfare landscape. In the field of employment protection, for instance, the number and variety of non-standard employment contracts is increasing fast, and fixed-term and unstable jobs coexist with still heavily protected permanent positions. All this has increased the dualism of European labor markets, making them more segmented not only between insiders and outsiders but also among various types of outsiders.

Figure 11 shows that the use of these contractual types has been particularly intense in the Eurozone, where employers have widely used the "flexibility at the margin" allowed for by temporary work. Clearly the use of temporary work is not simply the byproduct of EMU. It is the resultant of EMU plus strict regulations for regular workers. Significantly Spain, the only country in the Eurozone having experienced a sizeable decline in the incidence of temporary employment, is the only country where EPL of regular workers has been reduced.

More on the impact of EMU may come from the observation of labor market flows as stocks are generally slow to react to changes in the policy environment. There is some evidence of increasing unemployment inflows as a percentage of the working age population in countries like Italy, France, Germany and Spain.

Employment-to-wage elasticities would also seem to be on the rise in Euroland, as witnessed by year-to-year variations in employment (expressed as a ratio to the
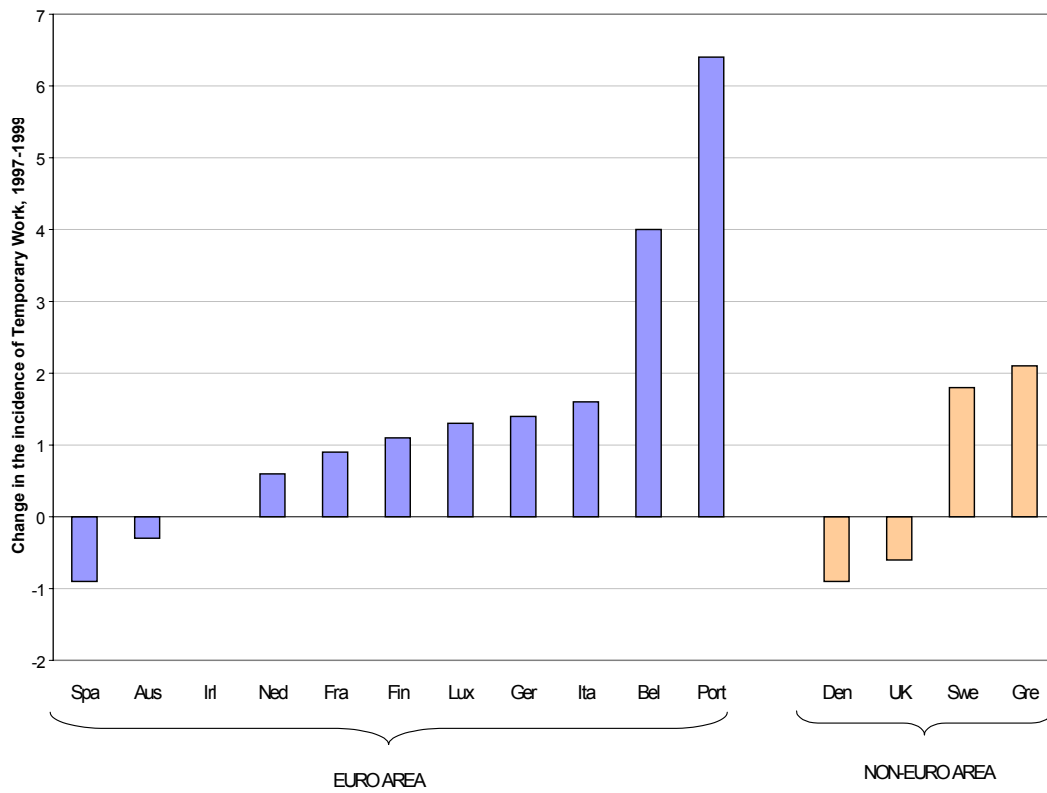
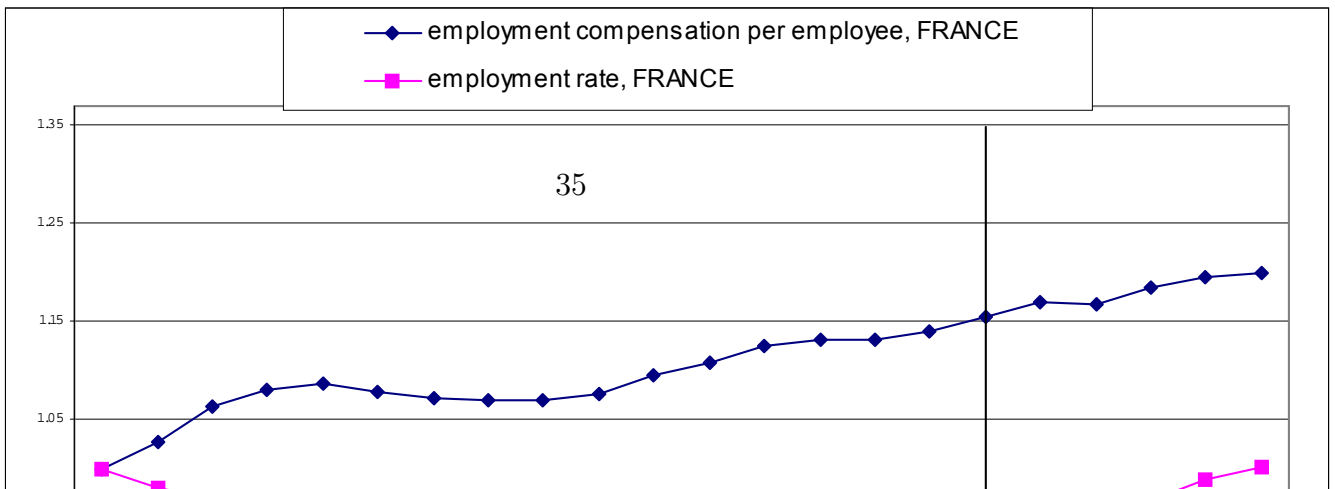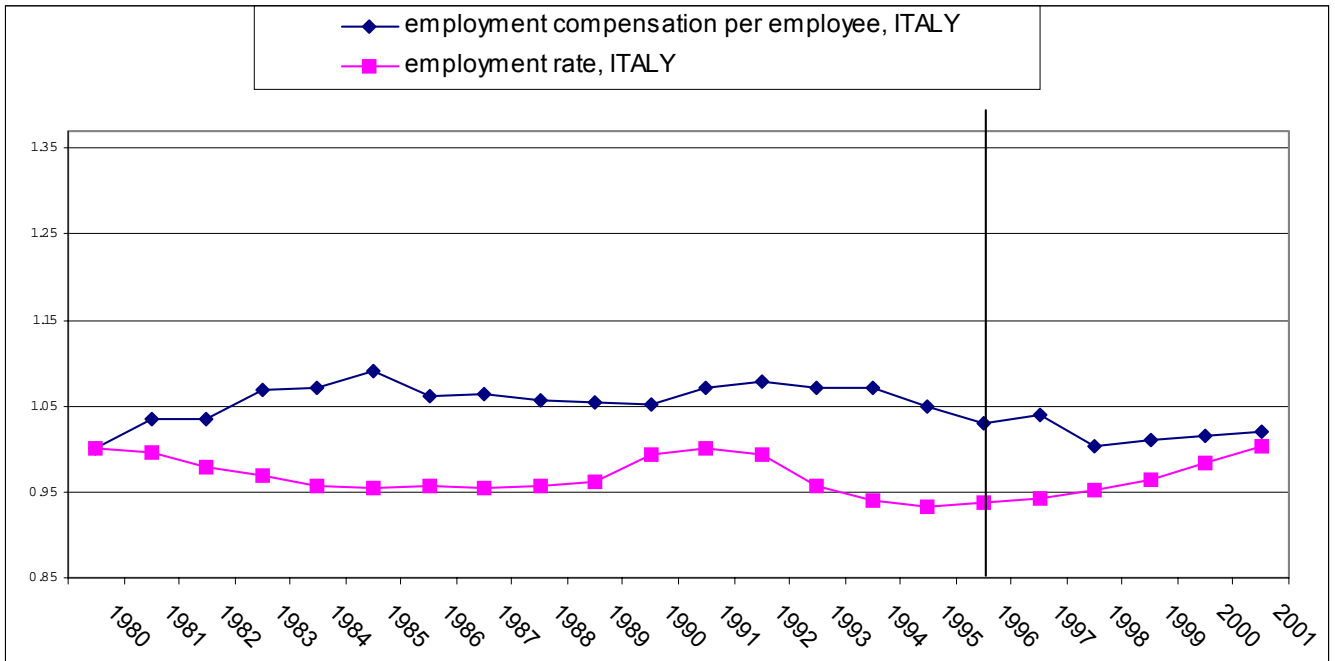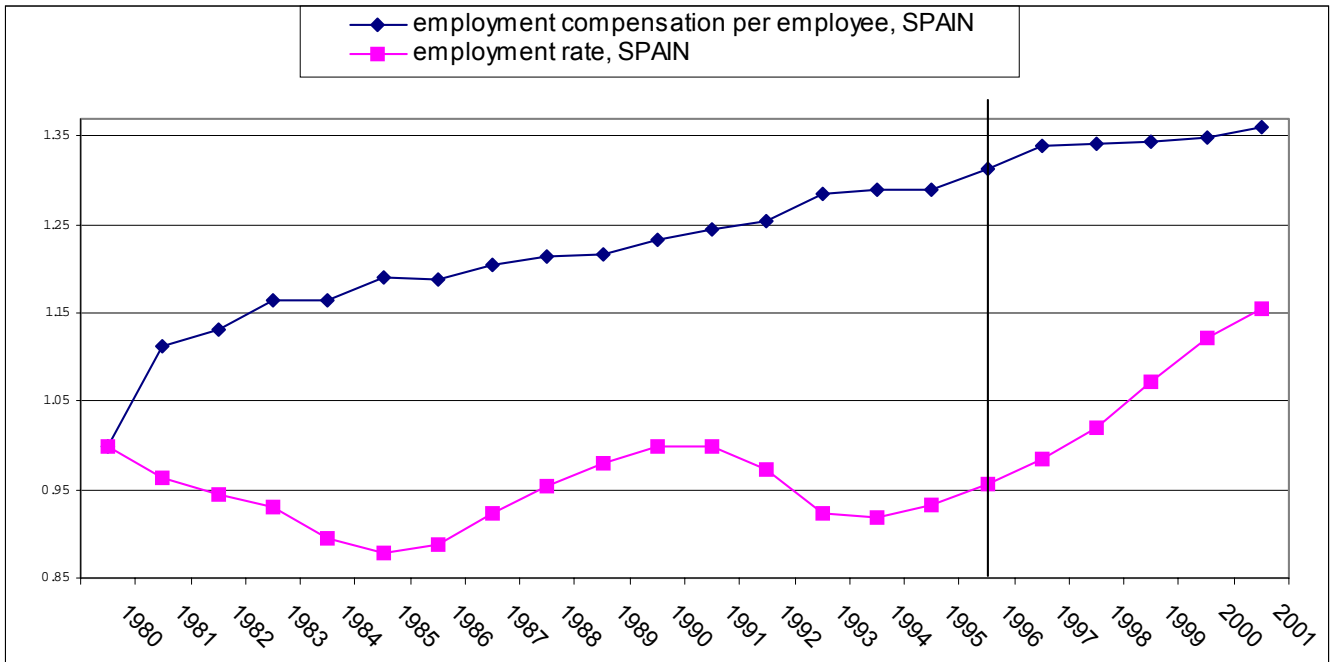Figure 11: 1997-99 Variation in the Employment Share of Temporary Workers.

working-age population, in order to control for demographic developments) and real compensation to employees in the largest EMU countries, except Germany (see Figure ??). The charts hint at an increase of employment-to-wage elasticities since 1995. For instance in Spain a one-percent decline in labour costs has been associated with a 3 million increase in employment in the 1996-2001 period, whilst in the sixteen years from 1980 through 1995 the employment to wage "elasticity" was of the order of 2. However, reasonable estimates of the responsiveness of employment to wage and output changes since EMU would require more data points than those currently available.

The model implies that, when institutions are not reformed so as to reflect new structural relationships, then the balance of desirable and undesirable implications of the *status quo* configuration may be substantially altered. The negative implications for employment of any given tax wedge, for example, are exacerbated by a more elastic labor demand. It would be desirable, but very hard, to try and detect such tendencies in the scarce data available to date.

Informal examination of several particular cases, however, does confirm the impression that some such phenomena are indeed occurring. The very limited amount of available information makes it impossible to establish statistical significance, but the urgency of policy issues should lead researchers and policymakers to take into account all available information.

4   What the future may bring

The data offer some support to the view of EMU as an increase in the intensity and scope of product and labor market competition, brought about by greater price transparency and the impossibility to adjust parities vis-à-vis the main trading partners. Currency area and even quasi-monetary unions are not completely unknown events for Europe. There are countries like Austria, Belgium, and the Netherlands which have maintained fixed parities with the D-Mark, virtually sharing the same currency, in the last 20 years of the twentieth century. The French Franc has also been an "hard currency", kept well within the narrow EMS bands since 1987. If these are not truly monetary unions, they are very close approximations of them. Empirical evidence points to the achievement of a stronger price similarity within these areas (Bertola, et al., 2001) and strong trade links (e.g., one third of Dutch exports goes to Germany). One important implication of the new macroeconomic stability environment is that market adjustment mechanisms should gain importance, as labor-market adjustment can no longer be left to devaluation and fiscal escape routes. In practice, relative prices, wages, employment, and production levels should respond more promptly to exogenous shocks, even in the absence of institutional reforms, as it becomes more

Top chart legend:
- employment compensation per employee, SPAIN
- employment rate, SPAIN

Y-axis: 1.35, 1.25, 1.15, 1.05, 0.95, 0.85

X-axis: 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001

Middle chart legend:
- employment compensation per employee, ITALY
- employment rate, ITALY

Y-axis: 1.35, 1.25, 1.15, 1.05, 0.95, 0.85

X-axis: 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001

Bottom chart legend:
- employment compensation per employee, FRANCE
- employment rate, FRANCE

Y-axis: 1.35, 1.25, 1.15, 1.05

35

important for economic agents to exploit margins of adjustment.

Starting from an initial "optimal" configuration of wages, taxes, and subsidies, a more elastic labor demand calls for less regulation. The acceleration of reform efforts documented in the previous section is in line with this theoretical perspective. However, institutions are persistent by definition, and the "European values" which motivate existing configurations of European labor markets remain relevant in the new, integrated, and more competitive economic environment: after EMU, the EU does not become the US. Thus there are tensions in these reform efforts which is important to characterize as the final outcome will depend on the relative strength of the opposing forces. It would be naive to expect all players, all countries, to adapt their institutions immediately. For example, the Netherlands adapted more quickly than Germany to the Strong ERM environment, and the employment miracle in the former was mirrored by increasing unemployment in the high-wage German environment. An important impact effect of EMU, however, is the *de facto* lower degree of centralization of collective bargaining. Wages are no longer restrained by monetary policy punishment: in the tradeable sector wage increases are punished by the market, not by monetary policy. There is no EU-wide trade union, and the "Doorn" process of workers' organization coordination across national boundaries has not yet made, and may not ever succeed in making, substantial impact in Continent-wide industrial relations (some informal coordination may arise in the context of multi-national corporations; see Calmfors, 2001).

All this means that it becomes more difficult for unions and labor market institutions to shelter workers from competition. As supply of protection becomes more difficult, however, demand for it may well increase, and the political outcome of the resulting reform tension is hard to predict. While it is uncontroversial that EMU increases the intensity of product- and labor-market competition, its implications for labor market outcomes and institutional reforms are less obvious. As noted above, it would be misleading to expect stronger product- and capital-market linkages automatically to lead to deregulation, and to view any such deregulation as unqualified blessing for European labor markets. Deregulation takes time, and it may be easier to observe the negative implications of new conditions for unchanged institutions than to observe a race to deregulation. Further, increased market pressure may generate demands for continuing and perhaps increasing the current levels of labor market regulation, particularly for specific socio-economic groups. As unions' membership is getting increasingly concentrated in sheltered sectors – e.g., natural monopolies – even centralized bargaining partners will not internalize the costs of economic efficiencies and strongly oppose labor market liberalization. Labor mobility, especially of non-EU immigrants, may induce local constituencies to restrain access to social services by introducing residency-based eligibility criteria.

Some institutional transformations, however, may be more desirable than others,

if they make it possible to cope with the demand for protection and competitive pressure. For instance, unemployment-insurance-based systems are more mobility-friendly than job-security oriented labor market institutions, focused on protection of primary breadwinners' labor income. Also, family-based social protection systems may be more robust to race-to-bottom tensions than cathegorical or citizenship-rights-based systems, in that foreigners would likely find it difficult if not impossible to access an intricate web of clientele-based aid relationships; they are also, however, peculiarly ill-suited to accommodate new demands for mobility. Thus, the industrial relations systems of the larger Continental and Southern members of the EU are likely to face the most urgent reform challenges, especially in that any co-ordinated EU-level policy configuration cannot possibly aim at replicating those countries' performance on a continental scale. Unions have played and important role in ensuring macroeconomic co-ordination and stability in the run-up to EMU (especially in Italy and in Scandinavian countries). After EMU, nation-specific shocks are likely to have only a policy-based character, while other macro shocks will be more regional or sectoral in nature. Thus, national-union-based systems of industrial relations may need to be reformed quite substantially, to address new demands for microeconomic adaptability.

Constraints on fiscal and exchange rate adjustment will make it difficult to ease the short-run costs of reforms and may reduce even further the likelihood of comprehensive and radical reforms. Member Countries will likely need to restructure their labor-market institutions through an array of many marginal reforms, rather than through a few radical ones. This suggests that there may be scope for policy co-ordination at both the macro and the micro level. At the macro level, policy co-ordination may engineer expansionary policies while member countries engage in structural reforms. At the micro-level, policy co-ordination should aim at synchronizing reform efforts while respecting differences in initial conditions. Other contributions to this volume discuss such coordination avenues in more detail, particularly as regards the labor-market policy Luxembourg Process. ¿From the perspective offered in this paper, the most significant recent coordination effort may be the forceful statement at the Lisbon summit that higher employment, rather than lower unemployment, should be the primary objective of policy interventions. In yet another instance of the "negative" character of coordination in the early years of EMU, that policy guideline is most effective in preventing countries from reacting to stronger competition by (e.g.) granting early retirement, or otherwise increasing (rather than decreasing) the low-employment bias of many European labor market configurations.

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