STRUCTURAL CHANGES AND POLICY CHOICES IN AMERICAN AND EUROPEAN LABOR MARKETS*

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1. Introduction

After the economic stagnation of the 1970s, many sectors of the US economy, and especially the labor market, were subjected to greater competition through deregulation, welfare reform, increased immigration, and expanded international trade. Accompanying these broad changes in social and economic policy were specific reforms to the tax code that were intended to increase work incentives. In particular, marginal tax rates on labor income were lowered, a refundable tax credit for low-wage workers was enacted, and entitlements to cash assistance for households with employable adults were eliminated. As a result, permanent cash transfers are now targeted primarily to the elderly and the disabled.

These reforms are widely believed to have contributed to substantial increases in employment and labor-force participation in the US. The unemployment rate fell to a thirty-year low by the year 2000 and remained relatively low during the subsequent economic downturn. The experience in many European countries over this same period,

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however, is in stark contrast to the US record. There has been little net employment growth in Europe in twenty years, despite increases in output and worker productivity that are comparable to those in the US. Consequently, unemployment rates in France, Germany, and Italy (adjusted for comparability to the US concept) are presently at near-recession levels. At the same time, wage inequality in the US (and the UK) has increased markedly, while the wage structure in most of continental Europe has remained largely unchanged. A "unified theory," emphasizing the labor-market rigidities in Europe, emerged to explain both the increase in US wage inequality and the rise in European unemployment, relative to their respective cross-Atlantic counterparts.[1]

This chapter examines differences in the performance of European and American labor markets over the past three decades, and assesses their implications for future policies. We provide a brief description of policy initiatives and labor-market outcomes in section 2. Among the labor-market institutions which are associated with the relatively high European unemployment, a paramount role has been attributed by the unified theory to stronger unions, stricter employment-protection laws, more generous unemployment-insurance benefits, and higher employment taxes. In section 3, we examine empirically the labor-market effects of these institutions. Our results call into question the ability of the unified theory, with its emphasis on labor-market rigidities in Europe, to account fully for the disparities in employment and unemployment rates both *between* the US and Europe and *within* Europe. We suggest that a wider view of the institutional differences between the US and Europe should be taken, specifically by including an important role for differences in product and housing markets. We also scrutinize the cross-country evolution of wage inequality, and conclude that the relationship between labor-market institutions and labor-market outcomes is considerably more complex than the simple, unidirectional nexus put forth in the unified theory.

One major structural change that has recently affected OECD economies is the advent of some previously uncommon forms of employment relationships (part-time work, temporary jobs, and fixed-term contracts.) There is widespread concern that the

[1] The term "unified theory" (Blank, 1997) captures the idea that the EU experience of rising unemployment and stable relative-wage levels, coupled with the US experience of falling unemployment and rising wage inequality, can be attributed to the same set of factors. By using this term, we are less interested in singling out a consistent theoretical approach than in relying on a convenient shorthand for a body of theories which

rapid growth of these types of employment arrangements portends a widening divide between "good" and "bad" jobs, with attendant adverse consequences for economic, social, and fiscal stability in the future. To shed light on these issues, we discuss in section 4 the impact of the growth of non-standard jobs on the well-being of workers. We extend our analysis to the effects of the availability of parental leave, subsidized child care, and home-based work on employment and earnings, especially for women.

Section 5 provides some concluding remarks on the appropriateness of the European policy response to the American experience and to the challenges posed by Europe's relatively poor labor-market performance. We draw implications of our assessment for future policies, especially with reference to the viability of the European Monetary System. We reiterate our doubts about the appropriateness of the policy responses suggested by the unified theory, and highlight the relevance of other unduly neglected policy options, among which are easing entry restrictions in product markets, reducing transaction costs in the housing markets, improving child-care availability, and encouraging home-based employment.

2. OECD and EU Employment Policy and Labor-Market Activity

In the 1980s, unemployment rates in most European countries increased relative to the US. This development went against the experience of the previous two decades, when the US unemployment rate was consistently higher than that of most European countries. By and large, the relative rise in European unemployment appeared to be related to long-run, structural factors rather than purely cyclical forces. A market-oriented view emerged, emphasizing the institutional and political rigidities in Europe, to explain this phenomenon.

In 1994, the OECD initiated its very influential Jobs Study Program which has formed the basis for its strategy discussions and policy recommendations ever since. According to the Jobs Study, unrealistic social norms and unreasonably stringent regulations hampered the efficient matching of labor supply and demand. The implication

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ascribes in a causal way different labor-market *outcomes* to different labor-market *institutions*. See Bertola et al. (2002) for a more complete discussion of the unified theory and for further references.

of this view was that the countries most affected by these rigidities should implement institutional reforms fostering greater competition in the labor market. The Jobs Study gave some explicit guidelines for labor-market reforms that were echoed in subsequent studies. One guideline endorsed *active labor market policies*, and four guidelines called for labor-market deregulation: increasing the *flexibility of working time* (both short-term and lifetime); removing *restrictions that prevent wages from reflecting local and individual productivity*; reducing *employment security provisions* that inhibit the expansion of employment; and reforming *unemployment and related benefit systems*, and their interactions with *the tax system*, to improve labor-market efficiency.

The Jobs Study carefully singled out for modification various labor-market institutions, regulations and policies that were thought to be most responsible for the slow adjustment of wages and employment to external shocks. Macroeconomic and structural policies fostering innovation and firm creation were said to have played a secondary role. The US economy, deemed as having implemented the most effective institutional reforms and having obtained the best performance in terms of growth and employment, was explicitly taken as a benchmark. This is interesting, since no labor-market policy document with the scope and clarity of the Jobs Study (or, for that matter, the European Union's White Papers and Reports) was ever published by a US administration prior to or during the period of US resurgence.

At the Luxembourg Jobs Summit in November 1997, the European Union (EU) launched the European Employment Strategy (EES), which on the whole endorsed the market-oriented view that had been advanced in the OECD strategy documents. Subsequently, the Lisbon European Council in March 2000 stipulated, among other things, that the overall aim of the EES was to raise the EU employment rate to 70% and to increase the proportion of women who are employed to more than 60% by 2010.

How, then, does the more recent performance of European labor markets compare to the early 1990s and to the US? Although the Lisbon goals appear out of reach for the EU as a whole, some European countries have been able to make considerable progress towards achieving them. In this vein, several authors have pointed out that there is no such thing as a *European* employment problem. On the other hand, various scholars have maintained that the OECD Jobs Strategy and the EES guidelines are fundamentally sound, and that countries which have made the most progress in labor-market

performance have complied with their recommendations most comprehensively. This point of view has come under strong criticism, however. The following simple analysis suggests that some skepticism about the current reform strategy may be appropriate. Table 1 reports correlations between changes in employment rates and the intensity of labor-market reform during the past decade.[2] We use Spearman's rank correlation coefficient (ρ), to measure the strength of the relationship between variables of interest. This coefficient ranges between -1 and +1 and is robust to the presence of outliers in the data. The terms in square brackets are p-values.[3] Correlation coefficients that control for a third variable are obtained by first regressing each of the variables of interest against the control variable, and then computing the correlation between the residuals from the regressions.

Table 1 appears about here

We restrict our attention to 16 European countries that are long-standing members of the OECD plus the US. (This group approximates the EU15, but leaves out Luxembourg and includes Switzerland and Norway.) The countries are ranked by the size of the percentage change in their employment rate. The index of the intensity of reform policy is taken from Brandt et al. (2005). This index measures the magnitude and comprehensiveness of the labor-market reforms broadly linked to the OECD Jobs Strategy which were undertaken between 1994 and 1999.[4] Our concern is to detect the extent to which these reforms have affected employment rates during subsequent years. Following Brandt et al. (2005), therefore, we specify a five-year time lag between the implementation of policy reforms and the measurement of their labor-market consequences.

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[2] Our preferred measure of labor-market performance is the Eurostat definition of the employment rate (the number of persons employed divided by the working-age population), which is singled out in the Lisbon goals and is less affected by measurement problems than the unemployment rate (the number of unemployed workers divided by the total civilian labor force). However, conclusions based upon an analysis of unemployment rates would be substantially unchanged. The employment rate equals the ratio between (1 – the unemployment rate) and the labor-force participation rate, the total civilian labor force divided by the working-age population. Since countries with high unemployment rates have tended, in recent years, to have low participation rates, it follows that unemployment and employment rates went hand in hand.

[3] A p-value is the probability of wrongly rejecting the null hypothesis of no correlation when it is true. It ranges from 0 to 1, and a value lower than .10 or .05 is usually taken to indicate the existence of a statistically significant correlation.

Table 1 reports a positive rank correlation ($\rho = 0.44$ [0.08]), between the intensity of policy reforms and subsequent changes in employment rates. This is comparable to, but less precisely estimated than, the correlation found by Brandt et al. (2005, p. 67) in a similar exercise. We also find, however, a strong negative correlation ($\rho = -0.81$ [0.00]), between employment-rate changes and the initial-year employment rate. There are several possible explanations for this pair of correlations. When the employment rate is low, governments may implement OECD-recommended labor-market policies, as suggested in Brandt et al. (2005, p. 58), that succeed in raising employment growth. On the other hand, in response to low employment governments may also enact other types of policies not contemplated in Brandt et al. (2005), such as incomes policies or wage agreements, which increase future employment growth.

Thus, the positive correlation between the intensity of policy reforms 1994-1999 and subsequent employment growth may be spurious, arising from correlations of these variables with initial employment levels and policy initiatives that have little to do with the OECD and EU strategy. When we control for the initial-year employment rate, the positive correlation between the change in the employment rate and the index of reform intensity vanishes ($\rho = 0.18$ [0.48]). This finding is obviously not strong enough to support a conclusion that there is *no* correlation between the change in the employment rate and the intensity of OECD-recommended reforms. Rather, it suggests that factors other than improvements in labor-market flexibility may equally well explain the variation in employment performance among OECD economies. Does the EU employment strategy stem from an accurate evaluation of the role played by structural and institutional changes in the US in achieving its labor-market success? In the following section, we address this question.

3. Market Structure and Labor-Market Efficiency

Since the US was able to translate the economic growth of the 1980s into relatively favorable labor-market outcomes, economists and policymakers in Europe

[4] For details about its calculation, see Annexes 2 and 3 in Brandt et al. (2005).

began to consider adopting an institutional set-up akin to the American one. Attention was soon drawn to the potentially adverse effects of various European labor-market institutions and policies; among them are strong unions, restrictive employment-protection laws, excessively generous unemployment-insurance benefits, and a large employment tax wedge. Layard et al. (1991) is perhaps the *locus classicus* for this view. Similarly, Krugman (1994) emphasizes the adverse effects of a changing skill distribution in the presence of low labor mobility and rigid relative wages. However, more recent studies have widened their analyses beyond labor-market characteristics to include a role for product-, credit-, and housing-market imperfections in explaining the divergent paths of employment, unemployment, and labor-force participation in the US and Europe.

There is little doubt that labor markets in Europe are more heavily regulated than in the US, lending *prima facie* support to the argument that the performance of European labor markets could be improved by further deregulation. However, this neglects the fact that some European countries have experienced substantially better labor-market performance in recent years. As suggested in Table 1, it is difficult to assume *a priori* that some countries have achieved better performance solely because they enacted sound and consistent market-oriented reforms. A more nuanced interpretation of the evidence is arguably required, and will be provided in the following pages.

The relevance of market structure for labor-market performance is typically analyzed by assessing either the impact of institutional changes, as in Nickell and Layard (1999), or the joint role of institutions and shocks, as in Blanchard and Wolfers (2000) or Bertola et al. (2002). In this section, we will evaluate this evidence, and extend the analysis beyond labor-market institutions. However, it is important to keep in mind that the macro-econometric studies exemplified above are likely to be subject to endogeneity, or unobserved heterogeneity, problems. Changes in macro-level variables can have several different, and possibly conflicting, micro-level explanations. For instance, a rise in unemployment benefits can reflect, rather than cause, a worsening labor-market situation. Subsequently, our assessment of the literature will give more weight than is customary to micro-econometric studies, which allow causal inferences to be drawn more reliably.

Unions, Wages, and Labor Legislation

Table 2 reports some recent institutional data taken from OECD sources. By all standards, the US economy is the most market-oriented.

Table 2 appears about here

Trade unions are weaker in the US than in Europe (column 1), and their influence on wage setting is much smaller (columns 2 and 3). US wage setting is also less coordinated (column 4), a point which will prove crucial in our overall assessment. European labor markets are not only more unionized than in the US, but they are also more regulated. Employment-protection legislation is much less strict in the US than in Europe (columns 5 and 6). Yet, connecting these institutional differences to variations in labor-market performance is not straightforward, as clearly evidenced by the experience of the Nordic countries and, to some extent, by the record in the Netherlands and in Ireland.

Strict employment-protection legislation reduces both job destruction and job creation. Hence, the relationship between such legislation and aggregate labor-market performance is theoretically ambiguous. The existing aggregate evidence, surveyed in OECD (2004), suggests that weakening employment protections does not lower unemployment because the resulting decrease in the duration of unemployment is roughly offset by higher worker turnover. A similar conclusion emerges from more recent micro-based studies which focus on within-country variations in employment-protection legislation and are best exemplified by Autor et al. (2006). Strict employment-protection legislation reduces the probability that unemployed workers find new jobs but it also reduces layoff rates, so that its overall impact on employment appears to be minimal. Of course, higher *job* turnover may be beneficial because it facilitates adjustments to structural change and innovation. However, this is not necessarily true in economies where wage-setting is coordinated (Acemoglu and Pischke, 1999; and Scarpetta and Tressel, 2004).

Union wage pressure has often been blamed for the relatively poor labor-market performance in Europe. However, the presence of strong trade unions need not raise unemployment if unions coordinate centrally with firms in the wage-setting process. C*oordination* is distinct from *centralization*, which identifies the level (plant, firm,

industry, or economy) at which wages are predominantly negotiated. Economy-wide wage agreements must be highly coordinated, but the reverse is not true. Coordinated bargaining can, under certain circumstances, facilitate macroeconomic adjustments better than decentralized bargaining (Aidt and Tzannatos, 2003). Empirical estimates suggest that the size of the response in Europe of real wages to aggregate shocks is already comparable to, if not higher than, that in the US. Moreover, similar degrees of real-wage responsiveness to shocks among European countries are compatible with stark differences in unionization (Suriñach et al., 2005).

Coordinated wage agreements usually make wages less responsive to changes in area- and sector-specific conditions. Hence, the strongest argument for bargaining decentralization is that it would help reduce regional unemployment differences *within* Europe's largest countries (particularly Germany, Italy, and Spain). However, evidence for this proposition is not very compelling. Regarding Germany, it is true that the reunification in 1991 brought about a rapid rise in both wages and unemployment in eastern Germany. In subsequent years, however, the relative gap in unit labor costs between the east and the west decreased, and conditions for a lower capital-to-labor ratio have been established (Burda and Hunt, 2001). Nevertheless, the east-west unemployment gap began to rise again after 1995. A similar situation characterizes the much-discussed Italian case, with its persistent disparities between north and south. In Italy, important reforms in 1992 and 1993 allowed more decentralized wage setting, producing a widening of regional wage differentials. While this helped to realign the input mix in favor of labor, the gap in labor-market performance between northern and southern Italy remains virtually unchanged or has even worsened (Destefanis, 2005).

Technology, Globalization and Wage Dispersion

There is a consensus in the empirical literature that wage inequality has increased more in the US and the UK than in continental Europe in recent years. Many authors have convincingly argued that capital accumulation and technical change are the mainsprings of the skill upgrading that occurred in manufacturing during the 1980s both within and outside the US (Machin and Van Reenen, 1998). For the non-manufacturing sector, Black and Lynch (1996) provide evidence from the US that employer-provided training in computer skills increased establishment productivity *within* industries. Other authors

point to the growing volume of international trade with developing countries as a driving force for rising skill premiums. However, only studies allowing for imperfect competition find that increased trade has played a significant role in the deterioration of the relative wage of unskilled labor (Gaston and Nelson, 2000).

At any rate, the pattern of wage inequality is considerably more complicated than is implied by the unified theory. Table 3 provides data on the wage distributions in the US and in selected European countries over a recent twenty-year period. The first row in Table 3 gives the average annual percentage change in the ratio of the average wage in the 9^{th} decile to the average wage in the 1^{st} decile of the wage distribution. The data from this row confirm the conventional wisdom that the US has experienced the most pronounced rise in wage inequality, while the wage structure in continental Europe (especially in France and Germany) has changed much less. Consider, however, the second and third rows of Table 3, which decompose the change in the 9^{th}-1^{st} wage-decile spread into changes in the dispersion of the upper half (9^{th}-5^{th}) and lower half (5^{th}-1^{st}) of the wage distribution. (The second and third rows do not always sum to the first row because of rounding.)

Table 3 appears about here

Interestingly, except for Sweden all of the increases in the 9^{th}-1^{st} decile dispersion of wages arise from the growing variance in the upper half of the wage distributions. In the US and the UK, especially, increased wage inequality is most evident in the top half of their wage structures, although common scalar measures of distributional inequality (such as the Gini coefficient) obscure this fact. The unified theory connects changes in technology and trade to reductions in the wages of unskilled workers, and so focuses on changes in the bottom half of the earnings distribution. As a consequence, factors other than those set forth by the unified theory, such as changes in the tax code, labor-market deregulation, and industrial structure, must have had an important role in the evolution of the wage structure.[5]

[5] Wage inequalities also imply health and mortality inequalities. Low-wage workers tend to have poorer health (Deaton and Paxton, 1998; Smith, 1999), and Wilkinson (1996) shows that life expectancies are higher in more egalitarian countries.

Further doubts about the simple, unidirectional relationship between labor-market institutions and outcomes stipulated by the unified theory are prompted by Nickell and Bell (1996), who examine trends in relative unemployment rates by quartile in the skill distribution. They note that changes in relative unemployment rates by skill are similar across industrialized countries and within the OECD. The more micro-oriented results presented by Card et al. (1999) and Freeman and Schettkat (2001a) tell a very similar story. All in all, the evidence suggests that the relative increase in unemployment in Europe was not brought about by greater rigidity of wage structures in the face of a shift in demand towards skilled labor. Differences in education and training systems, as well as changes in them over time, must have played a key role in this respect.

Social Safety Nets and Taxes

According to proponents of the unified theory, overly generous social safety-net systems shoulder a substantial amount of blame for the relative rise in unemployment rates in continental Europe during the 1970s and the 1980s. In the US, lifetime entitlements to cash assistance for employable, nonworking adults were eliminated by the federal Personal Responsibility and Work Opportunity Reconciliation Act of August 1996, which replaced the old Aid to Families with Dependent Children (AFDC) program with the Temporary Assistance to Needy Families (TANF) program. However, the federal government gave waivers to a number of individual states prior to 1996 to experiment with many features (time limitations, work requirements, etc.) that ultimately became part of the federal law. Indeed, these pre-TANF waivers are the source of quasi-experimental variation in the "treatment" provided by state-level welfare reforms used in several studies of their effects on labor supply, household income, and welfare-program participation.

A quantitative assessment of the outcomes of these reforms is difficult, both because they occurred contemporaneously with a growing economy and because of the rapid expansion of other programs, like the Earned Income Tax Credit (EITC), with similar predicted effects. Moreover, their many features induce complex and varied behavioral responses among the diverse, eligible populations (Blank, 2002). However, a general consensus has emerged that the states' reforms increased the employment and earnings of low-income, single mothers and reduced their program participation. One

potentially important lesson from the US experience thus far is that both the positive ("carrot") and negative ("stick") incentives characterizing the overhaul of its safety net are critical for producing desirable results. In particular, Bloom and Michalopolous (2001) report results from a randomized trial involving Minnesota's pre-TANF experimental reform suggesting that participants receiving only the "carrot" (a high earnings disregard) or only the "stick" (a mandatory work requirement) experienced much less favorable employment and net-income results than did groups receiving both "treatments" at the same time.

In some European countries, as well, labor-market performance improved following either the shortening of the unemployment-benefit entitlement period or the enforcement of a stricter entitlement test, accompanied by active labor-market policies. The experience with the implementation of welfare-to-work programs in northern European countries is particularly relevant in this respect. Favorable assessments of both tying social benefits to a willingness to work and providing active support to job search are given by de Koning et al. (2004).

This dismantling of the traditional welfare system was accompanied in the US by an increasing reliance on the tax system as a means of providing cash support for needy families. A series of tax reforms starting with the Tax Reform Act of 1986 (TRA86) sought to encourage work by reducing the highest marginal tax rate on individuals' taxable income from 50% to 28% and greatly expanding the EITC, a refundable tax credit for low-income households with at least one working adult. TRA86 and the follow-on reforms in 1990 and 1993 also provided large prospective tax decreases (through changes in the EITC, marginal tax rates, exemptions, and deductions) for single mothers contemplating low-wage employment. Indeed, the labor-force participation rate for this group increased by 14 percentage points between 1989 and 2002, suggesting a large elasticity of labor supply at the "extensive" margin (Eissa and Nichols, 2005).

Several recent studies argue that higher European income and payroll tax rates help explain why hours of work per capita are significantly lower in Europe than in the US. However, the bulk of the empirical literature suggests that variations in tax rates can explain only a small part of the cross-country differences in labor-market performance (Alesina et al., 2005). Since labor-supply elasticities are higher for females than for

males, tax rates are able to explain only the difference in labor-force participation between American and European women.

Industrial Structure, Product-Market Competition, and the Housing Sector

Job prospects in industries that are more open to international competition, such as manufacturing, have been reduced in recent decades by increased import penetration and greater outsourcing to foreign suppliers by domestic firms. In contrast, services are less affected by international competition, leading to more rapid growth in service-sector employment. The relatively strong employment performance of the US in recent years cannot be fully understood without reference to the larger share of services in its Gross Domestic Product. Consider the first two columns of Table 4, where we report correlations between the employment rate and the share of services in employment in 1981 and 2001 for basically the same countries that were analyzed in Table 1. Economies with a higher share of employment in services, such as the US, generally had higher employment rates both in 1981 and in 2001.

Table 4 appears about here

In addition to differences in service-sector growth, changes *within* the manufacturing sector have been important as well. In the US, almost half of manufacturing value added is in industries that have increased employment in recent decades, while Europe produces a much higher share of output in sectors where job reductions have been substantial. What, then, has prevented the reallocation of labor from declining to growing sectors within most EU countries?

Recent discussion of this issue has focused on the effects of restrictive product-market regulations on labor-market outcomes. Krueger and Pischke (1998) argue that economy-wide regulations, such as screening procedures and tax-related requirements for start-ups, and sectoral regulations, like zoning laws and restrictions on shop-opening hours, raise barriers to entry for entrepreneurs. Indeed, the stringency of entry regulations appears to be negatively associated with both employment rates and entrepreneurial activity across OECD countries (Fonseca et al., 2001). Countries with tighter restrictions on entry have a relatively underdeveloped service sector because such barriers hinder the

development of sectors that produce goods having an income-elastic demand. Entry regulations also provide an explanation for the gap in the marketization of personal service activities between the US and European (Freeman and Schettkat, 2001b). According to this view, European households respond to tighter entry regulations by substituting away from the purchase of services in the market (for example child care, home repairs and leisure activities) and towards home production. In contrast, Americans face lower market prices for services, so they supply more hours of market work in order to purchase substitutes for home-provided services.

In support of this point of view, the last four columns of Table 4 report a statistically significant, negative correlation between an index of product-market regulation and both the employment rate and the share of services in employment. These relationships have persisted over the last two decades, implying that appreciable improvements in labor-market performance can be obtained by reducing product-market regulation. The evidence discussed in Messina (2006) suggests that if countries such as Italy or Germany had the lower level of product-market regulation observed in the US, their shares of employment in services would increase by 6 to 8 percentage points.

The efficient functioning of the labor market is also hindered by barriers to geographical mobility. It is well known that US regional labor demand shocks are mainly absorbed through interregional labor migration, rather than by wage changes, while interregional labor flows are relatively low in Europe. Recent evidence suggests that geographical mobility is lowest in southern Europe and highest in the US and the Scandinavian countries, a pattern consistent with relative unemployment rates (Silvia, 2004). In Europe, there are obviously many more cultural, institutional, and legal obstacles to labor mobility than there are in the US. However, contributing to worker immobility between and within countries are barriers to mobility arising from the housing market: geographical disparities in housing prices and high rates of homeownership.

During the last several decades, housing prices have increased substantially in the rapidly growing regions of a number of OECD countries. This widening of regional house-price differentials has proved to be a significant factor in discouraging out-migration from the economically stagnant areas of Europe. Another link between the housing and labor markets arises from the fact that homeowners are relatively immobile, presumably because they find it more costly than renters to move in search of new jobs.

Homeownership and unemployment rates are positively correlated in panels of both European countries and US states. Moreover, countries with the fastest growth in homeownership have had the most rapid growth in unemployment (Oswald, 1997; Belot and Van Ours, 2004). Further support for the hypothesis that homeownership adversely affects labor-market performance is provided in Figure 1, which depicts the negative relationship between homeownership and employment rates. Summarizing these data with Spearman rank correlation coefficients, we find that employment rates are negatively correlated with homeownership rates (ρ = -0.64 [0.01]), and this correlation persists even after controlling for the share of services in employment (ρ = -0.59 [0.01]).

Figure 1 appears about here

Many European governments have sought to reduce the size of the private rental-housing sector and increase homeownership over the last few decades. Of course, this decision to subsidize homeownership reflects many economic, social, and political factors, and an evaluation of it cannot simply focus on the effect on geographical mobility. Has rising homeownership worsened labor-market performance in Europe? In this respect, it is interesting to note that the US has achieved considerable labor-market success by fostering both labor mobility and homeownership. According to the OECD (2005, Ch. 2), an important reason why homeowners are less mobile than renters is that, in many countries, buying a new house entails the payment of large transaction costs – in particular, high legal fees, taxes, and real-estate agent commissions. In Figure 1, countries with relatively high housing transaction costs (as reported in OECD (2005, pp. 101-102)), such as Belgium and France, are below the regression line, while the US, along with Denmark, Norway and the UK, have lower transaction costs and are above the regression line. It is true that the Netherlands, with high transactions costs, is above the line, while the reverse is true for Germany. However, a general pattern emerges among homeownership, labor-market performance, and transaction costs in the housing market that deserves further consideration by policy analysts.

The unified theory claims that, in the face of a rising wage premium for labor-market skills, countries with relatively rigid institutions have suffered employment losses while countries with more deregulated labor markets have experienced increasing wage

inequality. In this section, we considered several factors that help to explain the diverging labor-market performance of the US and countries on the European continent, as well as the widening differences within Europe. We have established that a simple, causal, connection running from labor-market institutions to outcomes cannot easily be uncovered, in part because institutions may *react* to outcomes. We conclude that, although reforms of the social safety net can play an important role in lowering unemployment rates, the emphasis of the OECD and EU strategies on more decentralized wage-setting, lower taxes, and weaker employment-protection legislation has been misplaced. Instead, more attention should be accorded to reducing product-market regulation, especially in the service sector. Finally, while the OECD and EU strategies clearly recognize the importance of greater geographical mobility for improving labor-market efficiency, they do not give appropriate recognition to the connection between labor-market and housing-market rigidities.

4. New Employment Arrangements: Trends and Assessment

One of the major recent structural changes that have affected OECD economies is the growing importance of some previously uncommon forms of employment relationships, such as part-time work, temporary employment, and fixed-term contracts. The label "non-standard employment" has often been used to describe these new types of employment arrangements. Apart from changes in *wage* inequality, the rise of non-standard employment is often cited as the main factor behind trends in *labor income* distributions, especially outside the US. Later in this section, we discuss the emerging evidence on the consequences of non-standard jobs for the well-being of workers.

Non-standard (or "new") employment arrangements have been closely linked in a number of studies to low wages, job insecurity, and meager fringe benefits (OECD 2002, 2004). However, not all of these new arrangements are necessarily undesirable. For example, the growth of part-time work in some countries may reflect an increasing desire of parents (especially mothers) to combine work with family duties. We examine the evidence in detail, first for temporary employment and then for part-time work, and

discuss possible roles for child-care policies and home-based work in lowering the cost of combining household responsibilities and market employment.

(a) Temporary jobs and flexible staffing arrangements

Temporary jobs have increased in most European countries in recent years. Individuals subject to flexible staffing arrangements include independent contractors, on-call employees, temporary-help-agency workers, and workers provided by contract firms. The share of temporary-help-agency workers in total employment increased considerably during the 1990s in France, the Netherlands, Spain, and Italy, with the increase in Italy especially noteworthy. As a result, in some European countries (for example, in Spain), temporary jobs account for one-third of all employment, while in other countries (such as France, Italy, and Germany) they account for about 10-15% of total employment (OECD, 2004). In contrast, only 4.0% of all US employees were included in 2001 in the broadest concept of temporary workers, defined as those who do not expect their present jobs to last more than one additional year, including self-employed workers and independent contractors, consultants, and free-lancers (US Bureau of Labor Statistics, 2001). In both Europe and the US, temporary workers are roughly equally divided between men and women, and are disproportionately young (Booth et al., 2002).

Proponents of the unified theory have often claimed that these differences in the extent of temporary employment are the result of stricter labor-market regulations in Europe. There is, however, little evidence supporting this claim when allowance is made for other factors (OECD, 1999, Ch. 2; OECD, 2002, Ch. 3; OECD, 2004, Ch. 2). For example, socioeconomic and demographic changes such as the increase in female labor-force participation have surely played a role in explaining the rise of temporary, as well as part-time, employment. Furthermore, some European countries (for example, France, the Netherlands, and Belgium) have targeted special policies at temporary-help agencies in an attempt to reduce long-term unemployment.

There are good reasons to question the desirability of temporary jobs. A majority (52.1%) of temporary workers in the US would prefer full-time permanent employment, implying a substantial amount of "involuntariness" in this type of work (US Bureau of Labor Statistics, 2001, Table 10). In both the US and Europe, workers in these jobs receive less training, have worse career prospects, are paid less, and are much less likely

to have health-insurance coverage than permanent employees. Also, workers employed in flexible staffing arrangements are less likely than regular, direct-hire permanent employees to be covered by laws mandating or regulating workplace conditions, and are also less likely to receive pension coverage, health insurance, and other non-wage benefits (Houseman, 2001).

On the other hand, many employers often use temporary-help agencies to screen workers for permanent positions. Because the intermediation of temporary-help agencies lowers the cost to employers of hiring workers with poor work histories or other risky characteristics, these workers may benefit from the opportunity to try out for positions they otherwise might not have held (Erickcek et al., 2002). However, when agency temporaries or contract workers are substituted for permanent employees on a long-term basis and receive lower compensation than they otherwise would, distributional inequities are exacerbated. The evidence gathered in OECD (2002, Ch. 3) suggests that a substantial proportion of temporary workers remains permanently in temporary jobs.

From a macroeconomic standpoint, an increase in temporary jobs in the presence of positive firing costs fosters both job creation and job destruction, yielding an ambiguous net impact on employment and unemployment. Consequently, there is no consistent cross-country correlation between the extent of temporary work and aggregate labor-market performance.

(b) Part-time Employment

Approximately 17% of all US workers are part-time, with women comprising about two-thirds of the part-time workforce (US Bureau of Labor Statistics, 2006). Similarly, in the EU part-time work is one-sixth of total employment, and 78.5% of part-time workers are women. There is considerable evidence that most part-time jobs in the US are held by workers who are well-matched to the opportunities those jobs provide. Less than one-fifth of all part-time employees report that they are limited "involuntarily" in their work hours because of slack demand or by an inability to find full-time employment (US Bureau of Labor Statistics, 2005, Table A-5).

There is some evidence suggesting that part-time employment entails a wage penalty (OECD, 1999, Ch. 1). However, Hirsch (2005) analyzed individuals changing from part-time to full-time status and vice versa, and found essentially no change in their

wage rates. Furthermore, some people prefer to work part-time schedules. Part-time employment is used to substitute inter-temporally away from full-time labor-market activity during periods of unusually heavy non-market (e.g., family) responsibilities and by individuals who are frequently out of the labor force as a preferred form of intermittent employment. For example, teenagers and young adults may wish to combine schooling with jobs, women may want to balance household production (including child care) with employment and older adults who have left career positions may desire to remain active in the labor market. Part-time employment may be advantageous for firms, as well. Companies facing uncertain product demands can reduce labor costs by hiring employees for brief or split work shifts filled by part-time workers.

Part-time employment is often discussed in Europe as a means of facilitating the integration of women in the labor market by allowing them to combine market work with family responsibilities. However, part-time jobs can also marginalize women's status in the labor market (Jaumotte, 2003). Part-time jobs typically held by women are often characterized by low prestige and earnings. Moreover, occupational segregation (both towards women and low-status jobs) is more pronounced in part-time jobs than in full-time employment. If the part-time work performed by women occurs mainly in temporary jobs, as is the case in southern Europe and in the UK (OECD, 1998), pension coverage for women will be low and they risk being employed in the least stable and secure jobs (Petrongolo, 2005).

(c) Parental-Leave Policies, Child Care, and Home-Based Work

A preference for part-time work may reflect a genuine desire of parents to spend time with their children, with accompanying social and economic benefits. However, these preferences may also be shaped by the incentives provided by the absence of policies that provide affordable child care or encourage paid parental leave. These issues are of considerable policy relevance, since having fewer children per household may hamper current macroeconomic performance by making future pension burdens heavier.

Efforts made by families to meet the often conflicting demands of work and family have been well documented in recent years. One area of growing concern is the set of problems faced by families with young children and one or more parents who work a non-standard schedule. Various studies have focused on the effects of pre-school or child-

care policies on the labor-market status of women. Work-schedule flexibility may increase the rate of female labor-force participation as well, but combining family and work without affordable child care is difficult. Increasing the availability of affordable child care and raising the subsidy for parental leave might encourage women to seek full-time jobs with better long-term prospects.

Although most governments provide some incentives for parental leave, the legally mandated period of parental leave differs substantially across countries, as does the generosity of the benefit payment (Gornick and Whiteford, 2005). There is evidence that paid parental leave has increased employment rates in most OECD countries (Ruhm, 1998) by helping (mostly) women reconcile their work and family lives. However, taking parental leave for an extended period may also depreciate labor-market skills, lower lifetime earnings, and make it more difficult for women to return to the labor market.

The Lisbon European Council stipulated in March 2000 that member states must provide child care for at least one-third of all children 3 years old or younger, presumably to encourage greater labor-force participation of mothers. Indeed, cross-country evidence in support of a role for child care in raising female labor-force participation is given in Table 5. In particular, we present for a group of OECD countries correlations among the female labor-force participation rate, the difference between female and male part-time employment rates, the share of children 3 years old or younger in day-care facilities, and the fertility rate.

Table 5 appears about here

There is a striking positive correlation of the female labor-force participation rate with both the fertility rate and the share of young children in day-care facilities. However, no correlation is found between female labor-force participation and fertility, once we control for the share of young children in day care. Moreover, there is no correlation between the female labor-force participation rate and the difference between female and male part-time employment rates. The same results obtain if we estimate, instead, the correlation between female labor-force participation rates and female part-time employment rates or various temporary employment indicators.

This evidence is consistent with a wide array of institutional set-ups. Government support for day care for young (pre-kindergarten) children varies widely even among countries with similar levels of female labor-force participation. For example, in Denmark 56% of young children are in state-supported day-care facilities *versus* only 8% in the UK (Whiteford and Gornick, 2005). At the same time, most countries in southern Europe have both low female labor-force participation rates *and* little public provision of child care. Private provision in the US and UK is facilitated by a relatively low-wage service economy, but the institutional setting of day care for young children differs even between these two countries. In the US, most child care is purchased in the private market from for-profit firms or non-profit organizations, whereas in the UK home-based child minders are more commonplace. If expanding public subsidies for child care proves difficult because of budgetary restraint, southern European countries may find it necessary to encourage its private provision by reducing entry regulations in the service sector.

Employment and family responsibilities can also be combined through home-based work. Indeed, in the US the number of wage-and-salary employees who are paid for their work at home has doubled in the past ten years to almost four million (US Bureau of Labor Statistics 2005). Much of this increase in home-based employment has been attributed by Oettinger (2004) to rapid advancements in computer technology and the spread of high-speed data-transmission infrastructure that facilitates telecommuting in many clerical, professional, and managerial occupations. Conventional theory suggests that female home-based workers face lower wage offers and have lower reservation wages than women who work on site. Moreover, home-based workers will accept lower compensation for performing a given set of tasks because of the greater convenience and flexibility of working at home. At the same time, firms are predicted to offer home workers a lower wage because they are more costly to monitor and supervise and are less integrated into the teamwork environment that characterizes efficient, modern workplaces.

Although empirical research suggests that performing home-based work may have reduced hourly wages in the past, a wage *premium* for home-based work has, in fact, emerged in recent years. Oettinger (2004) reports estimates of substantial wage penalties for home-based workers in 1980 and 1990. Yet by 2000 younger, relatively well-

educated males and females working at home could expect to receive a small wage premium. Similarly, Schroeder and Warren (2003) find that home-based workers earned substantially more in 1997 than their site-based counterparts, even after controlling for measurable human-capital characteristics and endogenizing the location of work. The recent findings of a wage advantage for working at home are consistent both with increased productivity of home-based work due to technological changes and a widening compensating differential that firms pay home-based employees because they are not provided with workplace capital. However, further research is required to discriminate between these two explanations.

5. Summary and Policy Implications

During the past twenty-five years, the unemployment rate in the US has been substantially below the jobless rate in much of Europe. At the same time, wage inequality increased markedly in the US (and in the UK), while remaining relatively unchanged in most of continental Europe. A market-oriented, unified theory emerged to explain both of these observations, finding prominent expression in various widely disseminated "white papers," most notably by the OECD. European employment policy has been heavily influenced by this theory in recent years. However, these policies have an uneven record of success across the EU thus far. Although some European countries have been able to make considerable progress toward achieving the goals set at the 2000 Lisbon European Council, they now appear out of reach for the EU as a whole, as was clearly admitted in the EU Economy 2004 Review.

Will further progress be achieved simply by persuading all member countries to comply fully with the EES? To address this question, we examined the empirical relationship between market-oriented policy reforms and improved labor-market performance, and found it to be rather weak. As a result, we cast doubt on the appropriateness of the explanations offered by the unified theory for the diverging paths of labor-market conditions between the US and the European continent (and also within Europe). We emphasized the relevance of recent research that has widened the scope of the theory to include a consideration of the importance of differences in product and

housing markets for understanding variations in labor-market performance. We then examined recent trends in wage inequality and in non-standard employment in Europe and the US, and singled out some key issues for discussion. Our main conclusions can be summed up as follows:

a) Reforms of the social safety net can play an important role in reducing the unemployment rate and increasing female labor-force participation. The experiences of the US and Northern Europe indicate the value of providing both positive and negative incentives for employment, as well as the desirability of devoting additional resources to child-care availability and to active labor-market policies.

b) Even in highly unionized economies, bargaining coordination facilitates adjustments to macroeconomic shocks. Greater decentralization of bargaining is unlikely to result in substantial reductions in unemployment across regions or skill groups. Also weaker employment protections are unlikely to bring about sizable reductions in the unemployment rate.

c) Industrial structure affects labor-market outcomes, and is affected by product-market regulations. For example, less stringent entry regulations may lower the prices of personal services, thereby increasing service-sector employment and female labor-force participation.

d) Greater homeownership reduces the geographical mobility of labor and increases unemployment. This relationship suggests that appropriate policies aimed at reducing transactions costs associated with buying and selling housing would improve labor-market performance.

e) Although the rise in temporary employment may have had undesirable redistributive effects, there is evidence that part-time work provides opportunities for people, especially women, to combine market work with other responsibilities. However, facilitating child-care arrangements is likely to increase even more both female labor-force participation and fertility.

f) Home-based work has grown rapidly in the US in recent years, and this development may portend a similar trend for Europe in the future. Policies favoring this alternative work arrangement may be particularly advisable, as it provides opportunities for men and women to combine home and market activities more efficiently. Moreover, there is little evidence of a wage discount for home-based employment.

Overall, the OECD and EU strategies calling for better-managed social safety nets and active labor-market policies seem to be well-founded. Although there is some scope for further strengthening the link between benefit receipt and the willingness to work, decreasing benefit generosity should be much less of a priority. On the other hand, we find that the emphasis of the OECD and the EU on more decentralized wage-setting is somewhat misplaced. As noted by Calmfors (2001), a spontaneous trend toward greater bargaining decentralization has characterized European industrial relations in the last decade. Encouraging further bargaining decentralization seems to be less important from a policy perspective than channeling this process within the bounds of economy-wide, coordinated bargaining, as does the two-tiered system in Sweden.

Both the OECD and the EU have exaggerated the importance for labor-market performance of additional tax incentives and employment-protection reforms. Labor taxes have been reduced in a number of European countries, but little improvement in labor-market performance should be expected from this quarter or from the relaxation of employment-protection legislation. Instead, further progress in reducing unemployment will most likely come from reduced regulation of the service sector and greater labor mobility. While the OECD, perhaps more than the EU, has acknowledged the importance of reducing product-market regulations for increasing efficiency in the labor market, neither organization has placed sufficient emphasis to the deregulation of personal services, which is critical for increasing female employment and labor-force participation. The OECD and the EU acknowledge the importance of increasing the geographical mobility of labor, but the EES does not recognize the importance for labor-market performance of the crucial link between labor-market and housing-market rigidities. Finally, since the social goals in Europe highlight a greater role for women in the labor market without a reduction in the number of children per household, more should be done to facilitate child-care availability and home-based employment should be encouraged.

Much debate about US-EU differences in labor-market performance concerns perceived variations in both real-wage flexibility and institutional and regulatory rigidities. Yet, the evidence suggests that the responsiveness of real wages to aggregate shocks in Europe is already comparable to, if not higher than, that in the US. Moreover, similar degrees of real-wage responsiveness among European countries are consistent

with stark differences in labor-market institutions and regulations. Hence, it is not clear which policy changes would promote greater real-wage responsiveness or whether such changes are even necessary for a successfully integrated European economy. On the other hand, labor mobility in Europe (especially outside Scandinavia) is still much lower than in the US. The facilitation of greater labor mobility should, then, be placed at the top of the agenda in future discussions of economic policy for the Euro area.

References

Acemoglu, Daron and Jörn-Steffen Pischke (1999), The Structure of Wages and Investment in General Training, *Journal of Political Economy*, 107, 539-572.

Aidt, Toke and Zafiris Tzannatos (2003), *Unions and Collective Bargaining*. Washington, DC: The World Bank.

Alesina, Alberto, Edward Glaeser and Bruce Sacerdote (2005), Work and Leisure in the US and Europe: Why So Different? Harvard Institute of Economic Research Discussion Paper No. 2068, Harvard University, Cambridge, MA.

Autor David H., John J. Donohue III, and Stewart J. Schwab, 2006, The Costs of Wrongful-Discharge Laws, *Review of Economics and Statistics*, 88(2), 211-231.

Belot, Michele and Jan C. van Ours (2004), Does the Recent Success of Some OECD Countries in Lowering Their Unemployment Rates Lie in the Clever Design of Their Labor Market Reforms? *Oxford Economic Papers*, 56, 621-642.

Bertola, Giuseppe, Francine D. Blau and Lawrence M. Kahn (2002), Comparative Analysis of Labor Market Outcomes: Lessons for the US from International Long-Run Evidence, in Alan B. Krueger and Robert Solow, eds., *The Roaring Nineties: Can Full Employment Be Sustained?* New York: Russell Sage and Century Foundations.

Black, Sandra E. and Lisa M. Lynch (1996), Human-Capital Investments and Productivity, *American Economic Review Papers and Proceedings*, 86, 263-267.

Blanchard, Olivier J. and Justin Wolfers (2000), The Role of Shocks and Institutions in the Rise of European Unemployment: The Aggregate Evidence, *Economic Journal*, 110, C1-C33.

Blank, Rebecca M. (1997), Is There a Trade-Off Between Unemployment and Inequality? No Easy Answers: Labor Market Problems in the United States versus Europe. Public Policy Brief No. 33, Levy Economics Institute.

Blank, Rebecca M. (2002), Evaluating Welfare Reform in the United States, *Journal of Economic Literature*, 40, 1105-1166.

Bloom, Dan and Charles Michalopoulos (2001), *How Welfare and Work Policies Affect Employment and Income: A Synthesis of Research*. New York: Manpower Demonstration Research Corporation.

Booth, Alison, Marco Francesconi, and Jeff Frank (2002), Temporary Jobs: Stepping Stones or Dead-ends? *Economic Journal*, 112, F189-F213.

Brandt, Nicola, Jean Marc Burniaux, and Romain Duval (2005), Assessing the OECD Jobs Strategy: Past Developments and Reforms, OECD Economics Department Working Paper No. 429, Paris.

Burda, Michael and Jennifer Hunt (2001), The Reunification of Germany, *Brookings Papers on Economic Activity*, No. 2, 1-75.

Calmfors, Lars (2001), Wages and Wage-Bargaining Institutions in the EMU – A Survey of the Issues, *Empirica*, 28, 325–351.

Card, David, Francis Kramarz, and Thomas Lemieux (1999), Changes in the Relative Structure of Wages and Employment: A Comparison of the United States, Canada, and France, *Canadian Journal of Economics*, 32, 843-877.

Deaton, Angus S. and Christina Paxton (1998), Aging, the Inequality in Income and Health, *American Economic Review*, 88, 248-253.

Decressin, Jörg and Antonio Fatàs (1995), Regional Labor Market Dynamics in Europe, *European Economic Review,* 39, 1627-1655.

Destefanis, Sergio (2005), Salari, Prezzi e Produttività, in Adalgiso Amendola and Emiliano Rustichelli, eds. *Rapporto sul mercato del lavoro del Mezzogiorno* Vol.1 "Monografie sul Mercato del lavoro e le politiche per l'impiego," n. 12/2005, Rome: Isfol.

de Koning, Jaap, Richard Layard, Steve Nickell, and Niels Westergaard-Nielsen (2004), *Policies for Full Employment*. London: Department for Work and Pensions.

Edwards, Linda N. and Elisabeth Field-Henry (2002), Home-Based Work and Women's Labor Force Decision, *Journal of Labor Economics*, 20, 170-200.

Eissa, Nada and Austin Nichols (2005), Tax-Transfer Policy and Labor Market Outcomes, *American Economic Review Papers and Proceedings*, 95, 88-93.

Erickcek, George, Susan Houseman, and Arne Kalleberg (2002), The Effects of Temporary Services and Contracting Out on Low-Skilled Workers: Evidence from Auto Suppliers, Hospitals, and Public Schools, Upjohn Institute Staff Working Paper No. 03-90.

Fonseca, Raquel, Paloma Lopez-García, and Christopher Pissarides (2001), Entrepreneurship, Start-up Costs and Employment, *European Economic Review*, 45, 692-705.

Freeman, Richard B. and Ronald Schettkat (2001a), Skill Compression, Wage Differentials and Employment: Germany versus the US, *Oxford Economic Papers*, 53, 582-603.

Freeman, Richard B. and Ronald Schettkat (2001b), Marketization of Production and the US-Europe Employment Gap, *Oxford Bulletin of Economics and Statistics*, 63, 647-670.

Gaston, Noel and Douglas Nelson (2000), Globalisation and Wages in OECD Economies: Linking Theory with Evidence, in J. Francois, D. Roland-Holst, and D. van der Mensbrugghe, eds., *Globalisation and Employment Patterns: Policy, Theory, and Evidence*. Oxford: Oxford University Press.

Hirsch, Barry T. (2005), Why Do Part-Time Workers Earn Less? The Role of Worker and Job Skills, *Industrial and Labor Relations Review*, 58, 525-551.

Houseman, Susan N. (2001), The Benefits Implication of Recent Trends in Flexible Staffing Arrangements. Working Paper 2001–19, The Pension Research Council, The Wharton School, University of Pennsylvania.

Jaumotte, Florence (2003), Female Labour Force Participation: Past Trends and Main Determinants in OECD Countries, OECD Economics Department Working Paper No. 376, Paris.

Krueger, Alan and Jörn-Steffen Pischke (1998), Observations and Conjectures on the US Employment Miracle, in Third Annual EAAG Symposium: *Labor Markets in the US and Germany*. Bonn: German-American Academic Council, 99-121.

Krugman, Paul (1994), Past and Prospective Causes of High Unemployment, in *Reducing Unemployment: Current Issues and Policy Options*. Symposium, Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, 49-80.

Layard, Richard, Stephen J. Nickell, and Richard Jackman (1991), *Unemployment: Macroeconomic Performance and the Labour Market*, Oxford: Oxford University Press.

Machin, Stephen and John Van Reenen (1998), Technology and Changes in Skill Structure: Evidence from Seven OECD Countries, *Quarterly Journal of Economics*, 113, 1215-1244.

Messina, Julian (2006), The Role of Product Market Regulations in the Process of Structural Change, *European Economic Review*, 50, 1863-1890.

Nickell, Stephen J. and Brian Bell (1996), Changes in the Distribution of Wages and Unemployment in OECD Countries, *American Economic Review Papers and Proceedings*, 86, 302-308.

Nickell, Stephen J. and Richard Layard (1999), Labour Market Institutions and Economic Performance, in Orley Ashenfelter and David Card, eds., *Handbook of Labor Economics*, Vol. 3C. Amsterdam: Elsevier.

Nicoletti, Giuseppe, Robert Hafner, Stephen J. Nickell, Stefano Scarpetta, and Gylfi Zoega (2001), European Integration, Liberalization and Labour Market Performance, in G. Bertola, T. Boeri, and G. Nicoletti, eds., *Welfare and Employment in a United Europe*. Cambridge: MIT Press.

Norris, Michelle and Paul Shiels (2004), *Regular National Report on Housing Developments in European Countries*, *Synthesis Report*, Dublin: Department of the Environment, Heritage and Local Government.

OECD (1994), *Jobs Study*, Paris.

OECD (1998, 2001, 2002, 2004, 2005), *Employment Outlook*, Paris.

Oettinger, Gerald S. (2004), The Growth in Home-Based Wage and Salary Employment in the United States, 1980-2000: How Much and Why? Paper presented at the 9th Annual Meeting of the Society of Labor Economists, San Antonio, TX, 2004.

Oswald, Andrew J. (1997), *The Missing Piece of the Unemployment Puzzle, An Inaugural Lecture*. University of Warwick, England.

Petrongolo, Barbara (2005), Gender Segregation in Employment Contracts, CEPR Discussion Paper No. 4303.

Ruhm, Christopher J. (1998), The Economic Consequences of Parental Leave Mandates: Lessons from Europe, *Quarterly Journal of Economics*, 113, 285-317.

Scanlon, Kathleen and Christine Whitehead (2004), Housing Tenure and Mortgage Systems: A Survey of Nineteen Countries. Paper presented at the ENHR Conference, Cambridge, UK, July.

Scarpetta, Stefano and Thierry Tressel, (2004), Boosting Productivity via Innovation and Adoption of New Technologies: Any Role for Labor Market Institutions? Policy Research Working Paper Series 3273, The World Bank.

Schroeder, Christine and Ronald S. Warren, Jr. (2003), The Effect of Home-Based Work on Earnings. Paper presented at the 8th Annual Meeting of the Society of Labor Economists, Toronto, ON, September.

Silvia, Stephen J. (2004), Is the Euro Working? The Euro and the European Labour Markets, *Journal of Public Policy*, 24, 147-168.

Smith, James P. (1999), Healthy Bodies and Thick Wallets: The Dual Relation between Health and Economic Status, *Journal of Economic Perspectives*, 13, 145-166.

Suriñach, Jordi, Manuel Artís, Herbert Buscher, Miquel Clar, Christian Dreger, and Raúl Ramos (2005), *The Contributions of Wage Developments to Labour Market Performance*, European Economy: Special Report 2005, 1. Brussels: European Commission.

US Bureau of Labor Statistics (2001), *Contingent and Alternative Work Arrangements*, USDL 01-153.

US Bureau of Labor Statistics (2005), *Work at Home in 2004*, www.bls.gov/news.release/homey.nr0.htm

US Bureau of Labor Statistics (2002), *Women in the Labor Force: A Databook*, Report 973, February.

US Bureau of Labor Statistics (2005), *Characteristics of the Employed*, www.bls.gov/web/cpseea7.pdf.

US Bureau of Labor Statistics (2006), *Employment Situation*, www.bls.gov/web/cpseed1.pdf.

Whiteford, Peter and Janet Gornick (2005), European Models and American Exceptionalism in Family Policy, this volume.

Wilkinson, Richard (1996), *Unhealthy Societies: The Afflictions of Inequality*, New York: Routledge.

Table 1: Correlations between intensity of labor-market reforms (1994-1999) and percentage change in employment rates (1998-2004).

%Δ Employment Rate 1998-2004	*Reform Intensity 1994-1999*	*Employment Rate 1998*	*Reform Intensity 1994-1999 (controlling for initial-year employment rate)*
Spearman's ρ	0.44	-0.81	0.18
[p-value]	[0.08]	[0.00]	[0.48]
Number of Observations	17	17	17

Sources:
Civilian employment, persons (domestic) and population - 15 to 64 years: AMECO file *Population and Employment* downloadable at http://ec.europa.eu/economy_finance/indicators/annual_macro_economic_database/ameco_contents.htm;
Index of intensity of labor-market reforms, 1994-1999: Brandt et al. (2005, Annexes, country pages).
Countries in the sample include: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Norway, Portugal, Spain, Sweden, Switzerland, The Netherlands, UK, US.

Table 2: Unions and Employment Protection Legislation in European and US Labor Markets

	(1) *Trade Union Density* *2000*	*(2)* *Collective Bargaining Coverage* *2000*	*(3)* *Wage-setting Centralization* *1995-2000*	*(4)* *Wage-setting Coordination* *1995-2000*	*(5)* *Strictness of Employment Protection Legislation Regular Employment* *2003*	*(6)* *Strictness of Employment Protection Legislation Temporary Employment* *2003*
Austria	37	95+	3	4	2.4	1.5
Belgium	56	90+	3	4.5	1.7	2.6
Denmark	74	80+	2	4	1.5	1.4
Finland	76	90+	5	5	2.2	1.9
France	10	90+	2	2	2.5	3.6
Germany	25	68+	3	4	2.7	1.8
Greece	27	-	-	-	2.4	3.3
Ireland	38	-	4	4	1.6	0.6
Italy	35	80+	2	4	1.8	2.1
Norway	54	70+	4.5	4.5	2.3	2.9
Portugal	24	80+	4	4	4.3	2.8
Spain	15	90+	3	3	2.6	3.5
Sweden	79	90+	3	3	2.9	1.6
Switzerland	18	40+	2	4	1.2	1.1
The Nether.	23	80+	3	4	3.1	1.2
UK	31	30+	1	1	1.1	0.4
US	13	14+	1	1	0.2	0.3

Sources:
Strictness of employment legislation: Table 2.A2.4 from OECD (2004, Ch. 2); other data: Tables 3.3 and 3.5 from OECD (2004, Ch. 3).

Table 3: Average Annual Change in Wage Dispersion in the US and Selected Countries in Europe, 1979-2003.

	US.	***UK***	***Netherl.***[1]	***France***[2]	***Italy***[3]	***Germany***[4]	***Sweden***[5]
% Δ (9/1)	0.9	0.8	0.6	-0.2	0.8	0.2	0.5
% Δ (9/5)	0.6	0.6	0.3	0.1	1.3	0.3	0.3
% Δ (5/1)	0.2	0.1	0.2	-0.3	-0.6	-0.1	0.3

[1] 1979-1999; [2] 1979-2002; [3] 1986-1996; [4] 1984-2002; [5] 1980-2004.

Note: Each table entry gives the average annual percentage change in the ratio of the average wage in the numerator decile to the average wage in the denominator decile; full-time workers.
Source: OECD Earnings Data Base (May 2005).

Table 4: Employment Rate, Share of Services in Employment, and Product Market Regulation; 1981-2001.

	Correlations between					
	ER 1981 and SS 1981	ER 2001 and SS 2001	SS 1981 and PMR 1978	SS 2001 and PMR 1998	ER 1981 and PMR 1978	ER 2001 and PMR 1998
Spearman's ρ	0.62	0.46	-0.60	-0.69	-0.45	-0.47
[p-value]	[0.02]	[0.06]	[0.03]	[0.00]	[0.07]	[0.06]
Number of Observations	13*	17	13*	17	17	17

Sources:
ER = Employment Rate: civilian employment, persons (domestic) and population - 15 to 64 years: AMECO file *Population and Employment* downloadable at http://ec.europa.eu/economy_finance/indicators/annual_macro_economic_database/ameco_contents.htm;
SS = Share of Services in Employment: Employment, persons, services (National accounts) and Employment, persons, total economy (National accounts): AMECO file *National Accounts by Branch of Activity (Part 1)* downloadable at http://ec.europa.eu/economy_finance/indicators/annual_macro_economic_database/ameco_contents.htm;
PMR = Index of product market regulation: OECD (2002, Ch. 5, Table 5.A.3).

* Countries in the sample include: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Norway, Portugal, Spain, Sweden, Switzerland, The Netherlands, UK, US. However, the share of services in employment is not available in 1981 for Belgium, Ireland, Switzerland and The Netherlands.

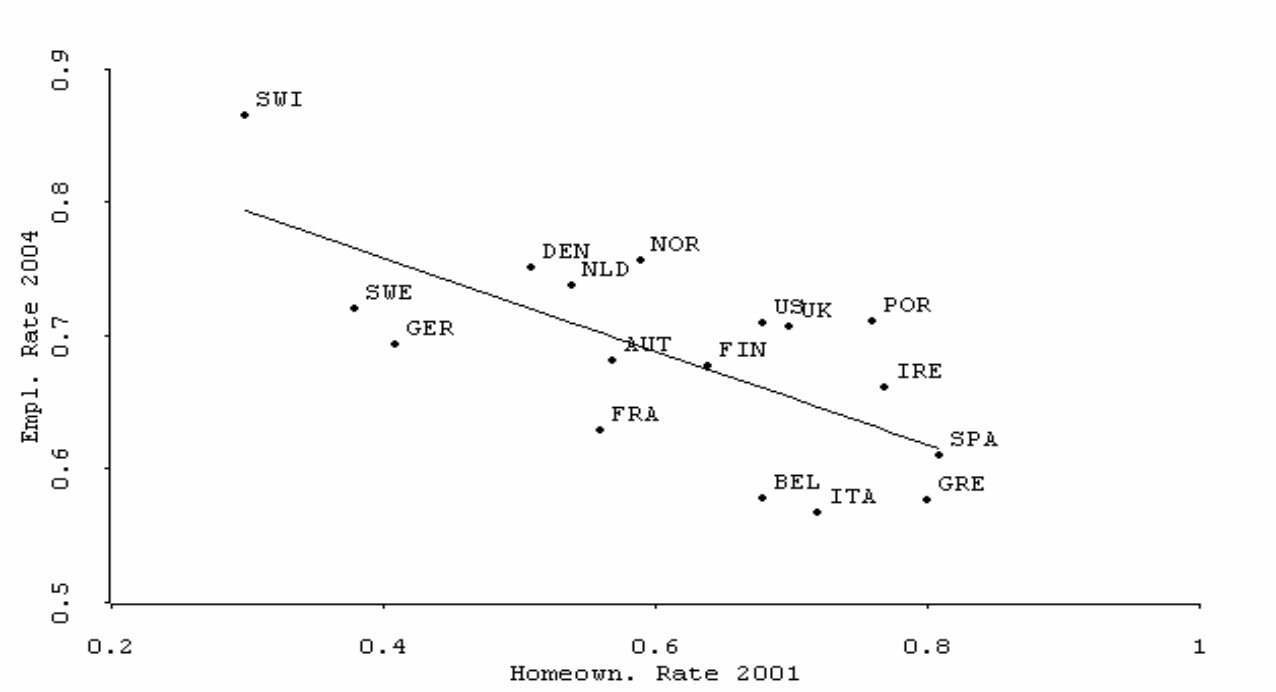
Table 5: Female labor-force (LF) participation, difference in female-male part-time employment rate, share of young (< 3 years old) children in day-care facilities, and fertility rate; recent years.

	Correlations between					
	Female LF participation rate and the difference in female-male part-time employment rate	Female LF participation rate and share of children in day care	Fertility rate and the difference in female-male part-time employment rate	Fertility rate and the share of young children in day care	Female LF participation rate and fertility rate	Female LF participation rate and fertility rate, controlling for share of young children in day care.
Spearman's ρ	-0.15	0.67	0.00	0.76	0.53	0.24
[p-value]	[0.58]	[0.01]	[0.99]	[0.00]	[0.04]	[0.37]
Number of Observations	16*	16*	16*	16*	16*	16*

Sources:
Female labor-force participation rate (2004): OECD (2005, Statistical Annex, Table B); Part-time employment rates (2004): OECD (2005, Statistical Annex, Table E);
Share of young children in day care (various years from 1995 to 2000): OECD (2001, Ch. 4, Table 4.7);
Fertility rate (Number of children born to women aged 15 to 49, 2003): OECD Factbook 2006.

* Countries in the sample include: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Norway, Portugal, Spain, Sweden, The Netherlands, UK, US. The share of young children in day care is not available for Switzerland, which is always excluded from the sample in order to avoid sample selection biases.

Figure 1: Employment and Homeownership Rates in the EU and US[6]



Sources:
Employment Rate: civilian employment, persons (domestic) and population - 15 to 64 years: AMECO file *Population and Employment* downloadable at http://ec.europa.eu/economy_finance/indicators/annual_macro_economic_database/ameco_contents.htm;
Homeownership Rate: Norris and Shiels (2004, country pages); Scanlon and Whitehead (2004, Table 1).

[6] *Legend of the country abbreviations*: AUT=Austria, BEL=Belgium, DEN=Denmark, FIN=Finland, FRA=France, GER=Germany, GRE=Greece, IRE=Ireland, ITA=Italy, NLD=the Netherlands, NOR=Norway, POR=Portugal, SPA=Spain, SWE=Sweden, SWI=Switzerland, UK=United Kingdom, US=United States.