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THE EUROPEAN EMPLOYMENT STRATEGY AND LABOUR-MARKET PERFORMANCE.  
ASSESSING THE CROSS-COUNTRY EVIDENCE\*

**Abstract**

*In this paper, in order to assess the impact of the EU Employment Strategy we assess the evolution of labour-market performance in 21 long-standing member countries of the OECD over a relatively recent period (1994-2004). We provide a survey of the literature dealing with cross-country labour-market performance, finding that, while this literature tends to conclude that institutions are a key part of the story, its results appear far less robust and uniform than is commonly believed. We then assess the impact of unobserved heterogeneity and outliers on the policy estimates. We find that in our data, changes in labour-market performance are consistently (and inversely) linked to its lagged level. Structural changes are also important: changes in the share of construction employees are very significant even in the presence of various kind of policy change indicators. As far as the latter are concerned, some consistent role seems to emerge only for active labour-market policies and (to a smaller extent) unemployment benefit reforms.*

**Keywords**

*Cross-Country Labour-market Comparisons, Labour-market Institutions, Product-market Institutions.*

\* Destefanis would like to thank Raquel Fonseca and Ronald S. Warren, Jr. for generously letting him draw material from previous joint work, carried out within the research project promoted by Joseph Cordes and Christian Toft on "Welfare State Reform in The United States and The European Union". Both authors gratefully acknowledge financial support from MIUR, Italy.

## 1. Introduction

During the 1980s, the labour-market performance of most European countries showed clear signs of worsening vis-à-vis the US. This situation was all the more surprising as it went against the experience of the previous two decades, when the US employment rate was consistently lower than that of most European countries (see Table 1).

**Table 1 – Labour Market Performance in the US and Selected European Countries: 1964-2004**  
(a) *Employment Rates*

	1964	1974	1984	1994	2004
Austria	0.67	0.64	0.64	0.70	0.68
Belgium	0.58	0.59	0.52	0.54	0.58
Denmark	0.70	0.73	0.73	0.71	0.75
Finland	0.73	0.70	0.72	0.60	0.68
France	0.65	0.64	0.59	0.58	0.63
Germany	0.68	0.66	0.60	0.67	0.69
Italy	0.58	0.55	0.54	0.51	0.57
Netherlands	0.67	0.64	0.54	0.66	0.74
Norway	0.65	0.66	0.73	0.72	0.76
Portugal	0.65	0.68	0.64	0.65	0.71
Spain	0.57	0.58	0.45	0.46	0.61
Sweden	0.72	0.75	0.79	0.70	0.72
<i>Continental Europe (unweighted average)</i>	<i>0.65</i>	<i>0.65</i>	<i>0.62</i>	<i>0.63</i>	<i>0.68</i>
UK	0.69	0.69	0.64	0.67	0.71
US	0.60	0.64	0.67	0.71	0.71

### (b) *Unemployment Rates*

	1964	1974	1984	1994	2004
Austria	2.1	1.4	2.9	3.8	4.8
Belgium	1.4	2.3	10.8	9.8	7.9
Denmark	1.2	2.8	7.9	7.7	5.4
Finland	1.7	1.9	5.2	16.6	8.8
France	1.2	2.8	9.2	11.7	9.6
Germany	0.5	1.8	7.1	8.3	9.5
Italy	4	5	7.9	10.6	8
Netherlands	0.5	2.9	8.9	6.8	4.6
Norway	1.9	1.5	3.2	5.4	4.4
Portugal	2.5	1.7	8.9	6.9	6.7
Spain	1.3	0.6	16.5	19.8	11
Sweden	1.6	2	3.3	9.4	6.3
<i>Continental Europe (unweighted average)</i>	<i>1.7</i>	<i>2.2</i>	<i>7.7</i>	<i>9.7</i>	<i>7.3</i>
UK	1.4	2	10.9	9.3	4.7
US	5.2	5.6	7.5	6.1	5.5

Source: AMECO database

As is also apparent from Table 1, in more recent years some European countries have recently managed to improve their labour-market performance substantially, while others appear to be still trapped at low employment rates. These diverging labour-market trends captured the attention of citizens and analysts from several countries. Attention in Europe was drawn to strong unions, restrictive employment protection legislation, generous social-safety nets and large tax wedges. Indeed, labour-market rigidities are widely held to play a key role in the bad European unemployment performance of the 1980s and 1990s. This was the central message of the OECD's *Job Study* (1994). More recent follow-up reports (Elmeskov et al., 1998; OECD, 1999; Brandt et al., 2005) on the implementation of the *Job Study's* recommendations reiterate this view. They also provide evidence, mostly based on bivariate relationships between some policy reform indicators and unemployment and employment rates, suggesting a direct link between structural reform and labour market outcomes. Such empirical support is less clearcut in leading academic papers, mostly based on multivariate analyses that have become increasingly complex since the pioneering work of Layard et al. (1991).<sup>1</sup>

In this paper we evaluate the OECD view through a different approach. Instead of relying on complex multivariate models, where possible misspecifications are hard to detect, we assess the robustness of the claims made in the most recent OECD follow-up study (Brandt et al., 2005) within a very similar cross-country set-up, and highlight the impact of unobserved heterogeneity and outliers on the policy estimates. In Section 2 we provide a brief account of the EU Employment Strategy, as seen from the perspective of the very influential OECD's *Job Study* (1994). Section 3 considers some of the factors most often mentioned in the literature as contributing to poor labour-market performance in Europe: generous social-safety nets, high taxes, strong unions and restrictive employment legislation. While the literature tends to conclude that labour-market institutions are a key part of the story, their role appears far less robust and uniform than is commonly believed. This brings us to examine in Section 4 structural and institutional differences also outside the labour markets, such as industrial structure, financial markets, and the housing sector. We then undertake to provide some empirical evidence of a relatively novel kind upon these issues. In Section 5, we set up an empirical framework calibrated on the most recent OECD follow-up study (Brandt et al., 2005), and suggest some ways in which the impact of unobserved heterogeneity and outliers on policy estimates can be detected and modelled in a simple cross-section framework. In Section 6 we bring this framework to the data, considering 21 long-standing member countries of the OECD over a relatively recent period (1994-2004). Some concluding remarks close the paper (Section 7).

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<sup>1</sup> See for instance the accounts in Nickell (2003), Saint-Paul (2004), Freeman (2005). Some years previously, Blank (1997) had already expressed doubts on the capability of purely market-oriented reforms to generate a well-functioning labour market.

## 2. Labour-market Policies and Outcomes. OECD and EU

In the 1980s, the labour-market performance of most European countries showed clear signs of worsening vis-à-vis the US, capturing the attention of citizens and policy-makers in several European countries. These diverging trends in unemployment captured the attention of citizens and policymakers in several European countries. By and large, the rise in unemployment appeared to be related to long-run, structural factors rather than purely cyclical forces. In 1994, the OECD published its very influential Jobs Study. The main thesis of the Jobs Study was that high unemployment in Europe originated from rigidities in the labor market. Unreasonably stringent social norms and policy regulations were believed to hamper the efficient matching of labor supply and demand, implying that the countries most affected should implement institutional reforms fostering greater competition in the labor market.

The Jobs Study gave some explicit guidelines for labor-market reform that were echoed in subsequent studies (see, for instance, OECD, 1999). One guideline endorsed *active labor market policies*, and four guidelines called for labor-market deregulation: increasing *flexibility of working time* (both short-term and lifetime); removing *restrictions that prevent wages from reflecting local and individual productivity*; reforming *employment security provisions* that inhibit the expansion of employment; and reforming *unemployment and related benefit systems* - and their interactions with *the tax system* - in order to improve labor-market efficiency.

The Jobs Study carefully singled out for modification those 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, of the European Union's (EU) White Papers and Reports) was ever published by a US administration prior to or during the period of US resurgence.

The basic tenets of the OECD Jobs Study have been echoed by some important international organizations, such as the International Monetary Fund (IMF, 1999, Ch. 4). Other international organizations have endorsed the OECD strategy less enthusiastically, especially in recent years (ILO, 1996; World Bank Group, 2003). At the same time of the publication of the OECD Jobs Study, the EU produced a White Paper, under the influence of the President of the European Commission, Jacques Delors. In that document, the unsatisfactory performance of European labor markets was linked to a set of structural factors not wholly congruent with those singled out in the OECD Jobs Study. The White Paper laid more emphasis on the need to change an industrial structure that was biased in favor of declining sectors and to sustain job creation through appropriate industrial and growth-oriented, macroeconomic policies.

In subsequent years, the process of creating a single currency centered around the implementation of the so-called Stability and Growth Pact (adopted at the EU Amsterdam Summit in June 1997) that drastically reduced the ability of member countries to conduct autonomous fiscal policy. Moreover, a single currency prevents the use of purely national monetary policies. Finally, the paramount aim of the European Central Bank (ECB)

is to maintain a low and stable rate of inflation. This created an environment where idiosyncratic, adverse shocks could not be countered by domestic demand-management policies. Instead, only by enhancing labor-market flexibility could one hope to offset the impact of such shocks on employment (Allsopp and Vines, 1998; Artis, 1998).

Macroeconomic considerations were not mentioned in the European Employment Strategy (EES), which was launched by the Luxembourg Jobs Summit in November 1997. Macroeconomic policy became the object of the Broad Economic Policy Guidelines set by the European Commission, and was geared toward low inflation and sound fiscal policy rather than to the support of public and private investment. It is also worth noting that the emphasis on the labor market percolated to these Guidelines as well, since they repeatedly stressed the requirement for wage growth to be aligned with the growth in productivity. The four pillars of the EES were *(i) employability, (ii) entrepreneurship, (iii) adaptability of firms and workers, and (iv) equal opportunities*.

The Lisbon European Council (March 2000) signaled a new strategic goal for the EU for the next decade: *to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion*. The Council also stipulated that the overall aim of this strategy is to raise the EU employment rate to 70% and to increase the proportion of women in employment to more than 60% by 2010. The Stockholm European Council (March 2001) added two intermediate goals and one additional target: the overall employment rate should be raised to 67% by 2005, to 57% for women by 2005, and to 50% for older workers by 2010.

At the Brussels European Council in March 2003, the member states established an Employment Taskforce, chaired by the Netherlands' former prime minister, Wim Kok, in response to concerns that the EES was failing to tackle effectively Europe's labor-market problems. The Taskforce set out four key requirements for the improvement of labor-market performance: *(i) increasing the adaptability of workers and enterprises; (ii) attracting more women and older workers to the labor market; (iii) investing more, and more effectively, in human capital; and (iv) ensuring effective implementation of reforms through better governance*.

After almost fifteen years what can be said about the European Employment Strategy? How European labour markets compare to their situation in the early 1990s and to the US? As already said in the Introduction, the OECD have published some follow-up reports and, more generally, much has been written about the trends illustrated in Table 1. Broadly speaking, a consensus has emerged to the effect that there is currently no such a thing as a European unemployment problem. Much of the unemployment problem in the EU is concentrated in four large countries: France, Germany, Italy and Spain. Furthermore, it must be recognised that there has been a significant reduction in unemployment in Spain (and, to a lesser extent, in Italy) vis-à-vis previously very high levels (Garibaldi and Mauro, 2002).

What then has been the role of the European Employment Strategy in promoting these changes? Could the European labour-market performance have been even better if this strategy had been followed more closely? The preeminence of recommendations related to labour-market institutions that has characterised the OECD employment strategy has drawn much of the analytical attention on the evolution of labour-market performance on changes in labour-market policies. On the other hand, it is clear that European labour-market performance has been hampered by generally sluggish output growth in recent years. The surge in growth that was expected to show up after the inception of the Single

European Market has not materialized. More broadly, the emphasis on labour-market institutions reflects in our opinion a neglect of factors such as the extent of product-market competition, the efficiency of housing and financial markets, and the industrial composition of output and employment. In the following two sections we provide a very concise assessment of the literature existing on both sets of factors.

### 3. Labour-market Policies and Outcomes. The State of the Art

We now consider how some of the factors most often mentioned in the literature as contributing to poor labour-market performance in Europe (generous social-safety nets, high taxes, strong unions and restrictive employment legislation) have evolved in recent years. We provide first an historical account and then an assessment of these institutional changes.

As a matter of fact, welfare states have undergone a thorough reform in most OECD countries. Most countries have reduced the funding of passive labour-market policies. Also, unemployment benefits have been increasingly linked to the participation to training programmes and, to a lesser extent, to mechanisms encouraging active job search during the period of benefit erogation. Moreover, labour supply has been incentivated through fiscal incentives, for instance through the introduction of in-work credits.

Typically, in the US the Temporary Assistance to Needy Families programme replaced the Aid to Families with Dependent Children in 1996, thereby virtually eliminating lifetime entitlements to cash assistance for employable nonworking adults.<sup>2</sup> Other notable changes in the US included the expansion in the early 1990s of the Earned Income Tax Credit, a refundable tax credit operating through the federal tax system subsidising low-wage workers in low-income families. Following suit, many other OECD countries introduced stricter entitlement tests for the unemployment benefits and employment-friendly fiscal incentives, in particular in-work credits. These credits can be linked either to the number of hours worked or to the amount of labour income gained (the latter is especially used if data on working hours are not reliable).

The expenditure on active labour market policies (ALMPs) is considerably greater in Europe than in the US. In Europe this expenditure actually increased since the early 1990s reaching on average the 1% of GDP (it was around 0.8% previously). In the US, on the other hand, expenditure has been constant at very lower levels (0.2% of GDP). In the field of ALMPs there is also a qualitative difference between Europe and US. In Europe ALMPs are more geared to the rise of employment, while in the US their main aim is to improve the wage of treated workers (Kluve and Schmidt, 2002).

A key point of the reforms of welfare states relates to the tax system. Following the tax reforms in the UK and the US<sup>3</sup> around the 1980s a number of OECD countries intro-

<sup>2</sup> Already before 1996 many welfare reforms (time limitations, work requirements, etc.) that ultimately became part of the federal law had already been introduced by a number of individual US states.

<sup>3</sup> In the US, the highest personal income marginal rate was lowered to 50 percent (from 70 percent) during the 1980 Reagan administration through the Economic and Recovery Tax Act, then to 28 percent in 1988 through the Tax Reform Act. It went back to 31 percent in 1991 and to 39.6 percent in 1993 - the Omnibus Budget Reconciliation Act. In 2003 was lowered again to 35 percent. In the UK the highest rate was lowered in 1979

duced tax cuts in the corporate income tax and in the marginal rates for high-wage income individuals. Particularly incisive reforms of corporate taxes have been adopted in Austria, Belgium, Canada, Finland and Germany. Until the mid-1980s, the highest personal income marginal rate was frequently above 65% in the OECD, while currently is around 50% (Owens, 2005) for most countries and in any case not above 59% even in countries with a strong welfare state tradition (Denmark, Norway, Sweden, Netherlands). These reductions have also been enacted in very recent years. Indeed, marginal tax rates for high-wage income individuals were reduced by 2.9 percentage points in the EU15, and by more than 5 percentage points in Belgium, France, Greece, The Netherlands and the US, between 2000 and 2003 (Sweden was the only country where these rates were slightly increased). Similarly, in the OECD area, the average corporate tax rate has dropped by almost 7 percentage points between 1997 and 2003 (OECD, 2004).

Another institutional element that is often brought to the fore when discussing European labour-market performance is the extent of employment protection. During the last two decades employment protection legislation has been extensively modified in most European countries. This was not so much true within regular employment as in the field of temporary employment and fixed-term contracts (a telling depiction of these developments is provided in OECD, 2004, Ch. 2). As a consequence, reforms in employment flexibility mostly consisted in favouring the development of non-standard forms of employment. A strong rising trend between 1985 and 2000 in the share of non-standard employment was observed for some European countries, such as France, Italy, the Netherlands, Portugal, and Spain. However, OECD countries still considerably differ in their share of non-standard jobs over total employment, and many countries show no clear trend.

Finally, strong unions and minimum-wage laws are often mentioned in order to explain poor labour-market performance in Europe. Yet, powerful trade unions could not be conducive to unfavourable labour market performance, if unions and firms can coordinate centrally over wage setting.<sup>4</sup> Across most of Europe, union power (as measured by union density) is weakening but bargaining coordination is still quite high. The adoption of incomes policies in some countries (for example, Italy, Ireland, and the Netherlands) has contributed to increasing coordination in recent years. Bargaining coordination remains low in the UK (where, however, union density is not very high). In France and Spain, the wage-bargaining setup may be among the least favorable in Europe, coupling high union coverage with only moderate coordination. (Cadiou and Guichard, 1999). There are some noteworthy cross-country patterns also as far as minimum-wage laws are concerned (Dolado et al., 2000). Scandinavian countries and Austria rely on collective-bargaining agreements covering most of the workforce to enforce minimum wages, while most other countries rely on statutory provisions.

Let us now turn to the literature assessing the impact of these institutional changes. We certainly do not aim to provide an exhaustive survey of a very vast literature, but, rather, to highlight the gist of the main empirical studies within the field.

As individual US states experimented with welfare-to-work programmes throughout the late 1980s and the 1990s, many of these policy measures were evaluated through randomised assessments. The resulting evidence points to the effectiveness of welfare-to-work programmes in reducing welfare costs and increasing labour supply (most of the

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from 98 to 75 percent. In 1988 it was reduced again (to 40 percent) and has not been changed since then.

<sup>4</sup> Coordination is distinct from centralization, which strictly identifies the most dominant level at which wages are negotiated, plant, firm, industry, or economy. Nationwide wage agreements are usually coordinated, but highly coordinated bargaining need not be centralised.

evidence is summed up in Bloom and Michalopolous, 2001). Arguably the most interesting state-specific study is the study of the Minnesota Family Investment Program (MFIP), which is carefully analysed in Miller et al. (2000). MFIP was implemented in 1994 and provided both strong negative (participation in mandatory job search programmes) and positive (strong earnings disregard) work incentives. The results from the assessment procedure show that both the “stick” of mandatory work requirements and the “carrot” of greater earnings disregards are effective, and that their joint application brings about significantly positive interaction effects on work and income.

There is evidence that also in Europe, labour-market performance has improved following either the shortening of the unemployment-benefit entitlement period or the enforcement of a stricter entitlement test. The experience of welfare-to-work programmes in Northern European countries, assessed in de Koning et al. (2004), is particularly relevant in this respect. In Nordic countries (as opposed to the UK), the role of ALMPs has been particularly strong (Fischer and Matthiessen, 2005). As a matter of fact Kluve and Schmidt (2002) report that in Europe training and job-search policies are on average more effective than employment subsidies in improving the job prospects of the unemployed. In the US, ALMPs are tendentially less effective, also having modest effects on wages. By and large, policies favouring young first-job seekers are less effective than those designed for adult males. There is also considerable doubt about the long-run effects of job-creation schemes.

The impact of in-work tax credits is analysed by Owens (2005) who maintains that their effects are stronger if these credits are given to individuals (like in Belgium, Finland, France, Netherlands) and not to households. Indeed there is some evidence that some workers drop out of the labour force when spouses benefit from tax credits. Even so, the impact upon employment of these tax credits are positive both in the US and the UK (where they are mostly given to households), possibly because of their interaction with other institutional and structural changes.

Several recent studies (including Prescott, 2004) argue that higher European income and payroll tax rates help explain why hours of work are significantly lower in Europe. However, the bulk of the empirical labour-supply literature suggests that tax rates can explain only a small part of this difference (Alesina et al., 2005) mostly concerning female labour supply. In Europe, an influential study by Daveri and Tabellini (2000) found that virtually all the rise in European equilibrium unemployment rates was to be ascribed to increasing payroll taxes. However, according to Layard and Nickell (1999), a reasonable estimate would imply that a 5% reduction in the tax wedge (including income, consumption and payroll taxes) lowers the unemployment rate from 8% to 7%. A key point about these estimates relates to the level at which wage bargaining takes place. Taxes on labour seem to matter less in countries where bargaining is either highly decentralised (as in the US and the UK) or highly centralised and coordinated (as in the Scandinavian countries and Austria). In the latter higher taxes are (partially) absorbed by a decline in gross wages. In continental European countries, however, where bargaining is carried out at the industry level, the tax wedge is likely to have a larger influence on labour costs and employment.

Empirical support for an impact of strict labour-market regulations on aggregate labour-market performance appears to be weak. Since employment protection legislation reduces both job destruction and job creation, the relation between protection and unemployment is theoretically ambiguous. The existing evidence (OECD, 2002, 2004) suggests that stricter employment protection does not raise aggregate unemployment, while in-



creasing the duration of unemployment and reducing worker turnover. Particularly interesting findings are obtained using US state data. Kugler e Saint-Paul (2004, p. ??) show that "...a state's adoption of wrongful-discharge doctrines significantly slows the job-to-job flows of unemployed relative to employed workers...". Autor et al. (2006), after a careful consideration of the literature and of the instrumental variables that should be adopted in such a policy evaluation exercise, conclude that at least one of the common-law exceptions to employment at will, the implied-contract doctrine of not terminating a contract without good cause, has a modest but robustly negative impact on the employment-to-population ratio in state labour markets. There is also some evidence that employment protection legislation lowers cross-country employment rates for youth and women while increasing them for prime-age men (OECD, 1999; Bertola et al., 2002). These relationships however fade away when allowance is made for various control variables.<sup>5</sup> Similar results are found for temporary jobs, whose development equally favours both job creation and job destruction (Cahuc and Postel-Vinay, 2002). There is no consistent evidence either of an association between aggregate employment rates and the incidence of part-time work (Garibaldi and Mauro, 2002).

It has already been observed that strong trade unions could not be detrimental to the economy, if unions and firms can coordinate centrally over wage setting. Consistently with these expectations, there is evidence that wages are more responsive to variations in aggregate labour-market conditions if wage agreements are highly coordinated (OECD, 1997, Ch. 3; Layard and Nickell, 1999, pp. 3053, 3067; Belot and Van Ours, 2004). On the other hand, if wage agreements are less coordinated or centralised, firm or industry wages are more responsive to specific shocks (Layard et al., 1991, Ch. 4, Table 4; OECD, 1997, Ch. 3, Table 3.B.1). Summing up the weight of the empirical evidence on these matters is not easy. Aidt and Tzannatos (2003, Ch. 5) conclude that, on the whole, coordinated bargaining provides better macroeconomic outcomes than decentralised bargaining. This is consistent with the results from wage equations estimated over recent samples, according to which real-wage flexibility is highest in continental Europe (Cadiou et al., 1999; Peeters and Den Reijer, 2003). These results even suggest that a significant *increase* in the degree of real-wage flexibility took place in countries (among which Italy and the Netherlands) where the use of incomes policies contributed to raise bargaining coordination.

The available evidence (Card and Krueger, 1995; Dolado et al., 2000) also suggests that in most OECD countries statutory minimum wages are too low to have any impact on unemployment, at least for adult males. Only in countries where minimum wages for young workers are not adjusted downwards (for instance France and Spain), or in countries where payroll taxes are very high (for instance France and Italy), is there some evidence that minimum wages adversely affect youth unemployment.

#### **4. Industrial Composition, Finance and Housing**

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<sup>5</sup> Autor et al (2006) also suggest that wrongful-discharge doctrines discourage skilled labour demand in the long run, as high-skill workers have more bargaining power. This could counter the bias against relatively unskilled young and female workers.

We believe that, in order to fully account for diverging labour-market trends, structural and institutional differences between the US and Europe should also be evaluated outside the labour market. There are three sets of factors which have been repeatedly mentioned in this juncture: the role of industrial structure – closely related to the extent of product market regulation, financial markets, and the housing sector.

*- Industrial Composition*

Different industries have varying growth rates of production and demand and different labour intensities. Institutional arrangements, regulations, and policies are bound to affect them and their employment paths differently. As a result, variation in the industrial composition of national economies will lead to a variety of labour-market outcomes.

Job prospects in industries that are more open to international competition, such as manufacturing, are lowered by import penetration and by foreign outsourcing of domestic firms. In contrast, competitive, export-oriented sectors and industries with high national self-reliance have better employment prospects. Services generally are less open to international competition, and this has strongly contributed to their faster employment growth (Wood, 1994). Moreover, growth opportunities are higher in countries where new, fast-growing sectors in both manufacturing and services are more important (Vivarelli and Pianta, 1998).

The first major distinction to be drawn is between manufacturing and services. In spite of the heterogeneity of the activities performed in this sector, services have consistently been the mainspring of job creation in recent years. In the US, employment increased by 47% from 1975 to 2003 - about 9% in industry and more than 63% in services. In Europe, employment increased by 21% over the same period, with jobs falling by almost 21% in industry and increasing by 60% in services. The much larger weight of services in the US economy is at the root of its better employment performance. In 1971, services accounted for about 69% of total US employment, and between 41% and 59% in European countries (own elaborations from AMECO and STAN data).

The above data also highlight the importance of industrial composition within manufacturing. As documented in OECD (1996) and Vivarelli and Pianta (1998), throughout the 1980s and the 1990s the US had close to half of its manufacturing value added in industries that experienced employment growth at OECD level. On the contrary, European economies included many more declining sectors. Of course, stagnant employment in Europe could be the result of faster productivity growth, which might improve competitiveness and raise living standards. Yet, GDP growth in Europe has been slower than in the US and Japan. Hence, job losses due to productivity gains do not seem to have been compensated by job gains linked to higher competitiveness. Countries with a large share of employment in fast-growing sectors are better positioned to capture this compensation effect. In Europe the "virtuous circle" between innovation, growth, and employment which characterised the 1950s and 1960s (Pini, 1995), largely disappeared after the mid-1970s, and innovation began to be associated with labour-saving technical change.

Naturally, the key question is what has stopped the reallocation of labour from declining to growing industries in EU countries? The view of Blanchard (1997) and Caballero and Hammour (1998) is that difficulties in sectoral labour reallocation stemmed from the rise in capital per worker through which EU firms attempted to restore their profitability after the wage shocks of the 1970s. Other authors stress the economic relevance of factors having the nature of public goods (education, social infrastructure, and so forth), which might not be supplied adequately through the market. There is evidence by

D'Acunto et al. (2004) that export-led growth (consistent with virtuous circle between innovation and growth) might be at work in the Italian regions closer to the European core, but not in the Mezzogiorno. According to Paci et al. (2000), out-migration from agriculture is a powerful mainspring of productivity growth. They find that a number of Southern European agricultural regions have experienced less out-migration than expected, and that out-migration from agriculture is faster in regions where the decline of manufacturing is slower. All this seems to indicate that the pace of structural change is decisively slowed down by a less dynamic manufacturing sector.

Although these arguments may carry some weight, they do not address the structural differences between Europe and the US in the relative growth of the service sector. In this regard, it is interesting to consider the arguments by Hopenhayn and Rogerson (1993), Bertola (1994), and Saint-Paul (2002). According to them, strict employment protection laws either slow down labour reallocation from declining to expanding sectors or they encourage specialization in the production of declining-sector goods. Yet, as pointed out by Layard and Nickell (1999, p. 3063), these arguments apply only to the closure of old plants and the opening of new ones since, by just relying on quits, continuing firms can reduce employment by up to 10% per annum.

An arguably more promising route is put forward by Messina (2005a). Economy-wide regulations, such as screening procedures and tax-related requirements for start-ups and sectoral regulations such as zoning laws or restrictions on shop-opening hours, constitute barriers to entry for entrepreneurs. Recent studies focus on the effects of different aspects of product-market regulations on labour-market outcomes. The stringency of entry regulations appears to be negatively associated with employment rates (Nicoletti et al., 2001) and entrepreneurial activity (Fonseca et al., 2001) across OECD countries. At the sectoral level, Bertrand and Kramarz (2002) find that entry regulation hinders job creation in the French retail sector.

In the presence of economy-wide entry regulations, the market price of services and rents in the economy increase, triggering a reduction in labour supply. This provides a rationale for the negative association between product-market regulations and the employment rate found in the literature, and is also consistent with the gap in the marketization of service activities between the US and European economies found by Freeman and Schettkat (2001b). Accordingly, European households respond to tighter entry regulations by substituting away from the purchase of services in the market (child-care, home repairs and leisure activities) and towards home production while Americans, facing lower service prices, supply more hours of work purchasing equivalent services in the market. The simulations in Messina (2005a) show that economy-wide regulatory barriers to entry obstruct the natural pattern of structural change, hindering the development of those sectors whose demand is income elastic. Thus, countries with tighter restrictions on entry are expected to have a relatively underdeveloped service sector. This negative relationship persists even after controlling for a wide range of factors which might also shape cross-country differences in industrial structure.

#### *- Financial Markets*

What about the role of financial liberalization in generating low interest rates, and the credit boom? Actually, investment has *not* been especially low in Europe. Gross fixed capital formation in Europe was about 24 percent of GDP in the 1960s and early 1970s. Investment rates have since declined, and gross fixed capital formation has averaged about 19 percent of GDP in recent years. However, at the end of the 1990s European in-

vestment levels were still above those in the US (around 17 percent of GDP; see Hurst, 1998).

Obviously, credit markets differ in many ways between the US and Europe. Acemoglu (2001), mostly relying on Rajan and Zingales (1998), reports that stock market activity, venture-capital finance, and the funding of small businesses by large banks appear more important in the US than in Europe. According to Acemoglu, technological change can have a persistently adverse effect on unemployment in Europe because, in the presence of less efficient credit markets, entrepreneurs who require financial capital to start new businesses cannot easily borrow the necessary funds. Acemoglu then classifies manufacturing industries into high, medium and low credit-dependent categories, following Rajan and Zingales (1998), and examines whether the most credit-dependent industries, such as electronics and office and computer equipment, have grown more slowly in Europe since 1970. No evidence is found for major cross-sector growth differentials. However, employment in the most credit-dependent industries is higher in the US, suggesting that differences in credit markets may be playing some role in constraining employment creation in Europe. Similar evidence is reported in Wasmer and Weil (2004), who provide a simple model combining labour-market and credit-market imperfections showing that the latter tend to increase unemployment, and in Fonseca and Utrero (2004), who find a role for interactions between labour-market and credit-market imperfections in constraining firm size across OECD countries.

#### - *The Housing Market*

Barriers to geographical mobility are clearly an obstacle to the efficient functioning of the labour market. Layard and Nickell (1999, Table 13, p. 3047) provide convincing *prima facie* evidence that geographical mobility is lowest in southern Europe and highest in the US and the Scandinavian countries. In the literature on geographical mobility, the role of housing availability and affordability has been recently emphasised as a determinant of long-distance movements. The different user costs of housing between two areas affect the permanent income prospects that a household faces in its decision to move. Rationing and, more generally, rigidities in the housing market also discourage mobility. Furthermore, the propensity to move may be lower for homeowners, who have to liquidate their housing assets in a given locality to buy a new house elsewhere, thus facing sizeable transaction costs.

Hughes and McCormick (1985) examine the implications of UK housing policy for internal migration. Bover et al. (1989) emphasise the importance of regional house-price differentials for labour mobility in the UK. In addition, Jackman and Savouri (1992) provide evidence for an impact of relative house prices on UK inter-regional migration. Focusing on regional migration in Spain, Antolin and Bover (1997) examine house-price differentials as an explanation of mobility choices, apart from demographic characteristics, unemployment status, and wages. Finally, Cannari et al. (2000) argue that the cost of housing is likely to represent an important disincentive to move and, to a considerable extent, accounts for the puzzling evidence of falling mobility levels in Italy.

Homeowners are relatively immobile, presumably because they find it much more costly than private renters to move in search of new jobs. Evidence from the British Social Attitudes Surveys reveals the greater (expressed) willingness to move of renters compared to homeowners (Oswald, 1997). Using the UK Working Lives Survey, Owen and Green (1997) find that moves to and from the small British private rental sector account for almost as many residential moves as the whole of the owner-occupied sector. Perusal

of the UK 1995 General Household Survey confirms that the length of time at one's current address is markedly lower if one is a renter.

If owning a house reduces geographical mobility, the consequences for the labour market of secularly rising homeownership could be profound. Could the rise in homeownership be part of the high European unemployment story? A decline in the willingness to switch locations can be expected to raise the aggregate unemployment rate. People living in rented public-sector housing are less likely to move across regions or leave unemployment (Hughes and McCormick, 1985, 1987). Intuition suggests that the same might be true of homeowners, and Wadsworth (1995) finds that private renters have a notably faster outflow rate from unemployment into jobs.

Levels of homeownership and unemployment rates are surprisingly highly correlated across countries and throughout time. Moreover, countries with the fastest growth in homeownership had the most rapid growth in unemployment (Oswald, 1997). Most industrialised countries have recently experienced substantial growth in homeownership. Two exceptions are Switzerland and the US. These two countries also have had almost no long-run change in their unemployment rates. Moreover, Greece, and Spain currently have the highest rates of owner-occupied housing in the OECD. They also have the very high unemployment rates. This relationship appears to hold in quite different circumstances and for many places. Oswald (1997) reports evidence favourable to this hypothesis for a panel of OECD countries and for the US states, as well as slightly weaker evidence for regions of the Netherlands, Belgium and West Germany. Supportive evidence is also reported by Belot and Van Ours (2004), who carry out an empirical analysis for a panel of OECD countries.

### **5.A Set-Up for Empirical Analysis**

Since the OECD's *Job Study* (1994), labour-market rigidities are held to play a key role in the relatively bad European labour-market performance. Recent OECD's follow-up reports (Elmeskov et al., 1998; OECD, 1999; Brandt et al., 2005) reiterate this view. They also provide evidence, mostly based on bivariate relationships between some policy reform indicators and unemployment and employment rates, suggesting a direct link between structural reform and labour-market outcomes.

The most recent OECD follow-up report (Brandt et al., 2005) considers an index of the intensity of reform policy measuring the magnitude and comprehensiveness of the labour-market reforms broadly linked to the OECD Jobs Strategy which were undertaken between 1994 and 1999.<sup>6</sup> Their concern is to detect the extent to which these reforms had an effect on employment and unemployment rates during subsequent years. Believing that some time is needed before the benefits of reform materialise, Brandt et al. (2005), introduce a five-year time lag between the implementation of policy reforms and the measurement of their labour-market consequences. In accordance with previous follow-up reports, they find empirical support for the hypothesis that OECD-inspired policy reforms improve labour-market performance. In particular, they report significant Spearman correla-

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<sup>6</sup> For details about its calculation, see Annexes 2 and 3 in Brandt et al. (2005).

tion coefficients among the reform policy index and the rates of employment and unemployment (respectively of 0.48 and -0.50). Such unequivocal empirical support rarely stems leading academic papers.

Empirical evidence on the labour-market rigidity view mostly comes from multivariate analyses that have become increasingly complex since the pioneering work of Layard et al. (1991). While these studies tend to conclude that institutions (welfare safety nets, unions, taxation, employment protection) are a key part of the story, their results are less robust and uniform than is commonly believed. According to Baker et al. (2003), the literature turns up little evidence for performance-worsening effects of union density and mixed evidence for unemployment insurance and employment protection legislation. At the same time, performance-enhancing effects of collective-bargaining coordination and (to a smaller extent) active-labour-market policies tend to emerge. An important part of the explanatory power of labour-market institutions derives in fact from these two institutions' ability to enhance performance.

In this paper we evaluate the OECD view through a different approach. Instead of relying on complex multivariate models, where possible misspecifications are hard to detect, we assess the robustness of the claims made in Brandt et al. (2005) within a very similar cross-country set-up, and suggest some ways in which the impact of unobserved heterogeneity and outliers on policy estimates can be detected and modelled in this simple cross-country framework.

We consider 21 long-standing member countries of the OECD (Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Netherlands, Norway, New Zealand, Portugal, Spain, Sweden, Switzerland, UK, USA) over recent years (1994-2004, although some of our variables stretch back to 1988). We thus exclude from our sample countries with less than one million inhabitants and countries which either acceded to OECD in fairly recent years or which still have a GDP per head far below the OECD mean. Our sample differs from Brandt et al.'s one, but we believe that our choice - dictated to some extent by data reasons - makes for more reliable results. We also show below some evidence according to which our main points are not likely to be affected by this sample selection.

We measure labour-market performance through (cycle-adjusted) changes in the rates of employment and unemployment and we relates these changes to a set of indicators for labour-market institutions, mostly from the OECD. We begin from bivariate relationships between policy change indicators and labour-market performance, show in a simple way that they cannot allow for the effects of unobserved heterogeneity and outliers, and proceed to reassess the role for labour-market institutions.

The basic regression format, closely following the set-up in Brandt et al. (2005) is:

$$(1) \quad (r_{2004_i} - r_{1994_i}) = f(\text{Policy changes}_i)$$

The dependent variable stands for changes in either the employment or the unemployment rate for country  $i$  between 1994 and 2004.<sup>7</sup> Following Brandt et al., labour-market performance reacts to policy changes with a 4-5 year lag. Our policy change indicators include first and foremost the index of the intensity of reform policy computed by Brandt et

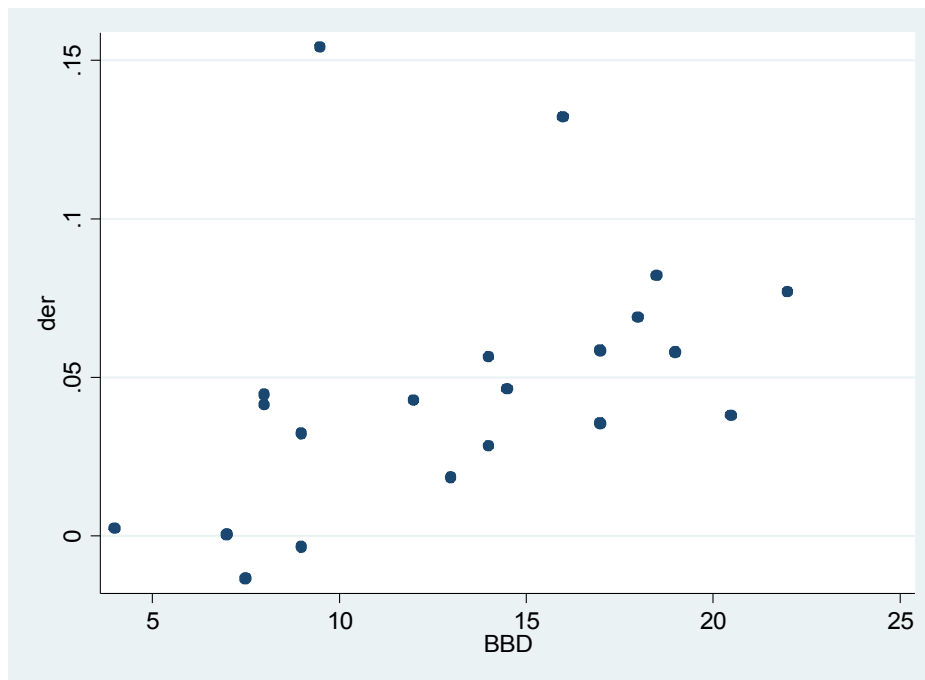
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<sup>7</sup> We adopt a linear specification: hence changes are absolute differences in employment or unemployment rates, and levels are not logged. As will be made clear below, this specification yields more readily interpretable results than its loglinear counterpart. Non-nested testing of the two specifications suggests that their goodness of fit is virtually equal.

al. (2005) for the 1994-1999 period. We also consider separately the components of this index, that is indicators relating to changes in the following policy fields: taxes and social security contributions, employment protection legislation, unemployment benefit system, active labour-market policies, retirement and pension schemes, wage formation, part-time and working-time flexibility. Given that policy changes may take some time to work their effects out, we add to the above the ten-year changes (1989-1999) in the indexes of employment protection legislation and wage bargaining coordination calculated by the OECD. We also consider both five- and ten- year changes (respectively 1988-1993 and 1988-1998) in the OECD indexes of product market regulation and ten-year changes (1991-2001) in homeownership rates calculated from various sources (clearly the latter is not *stricto sensu* a policy change indicator, but it is convenient for exposition purposes to range it in this category).<sup>8</sup>

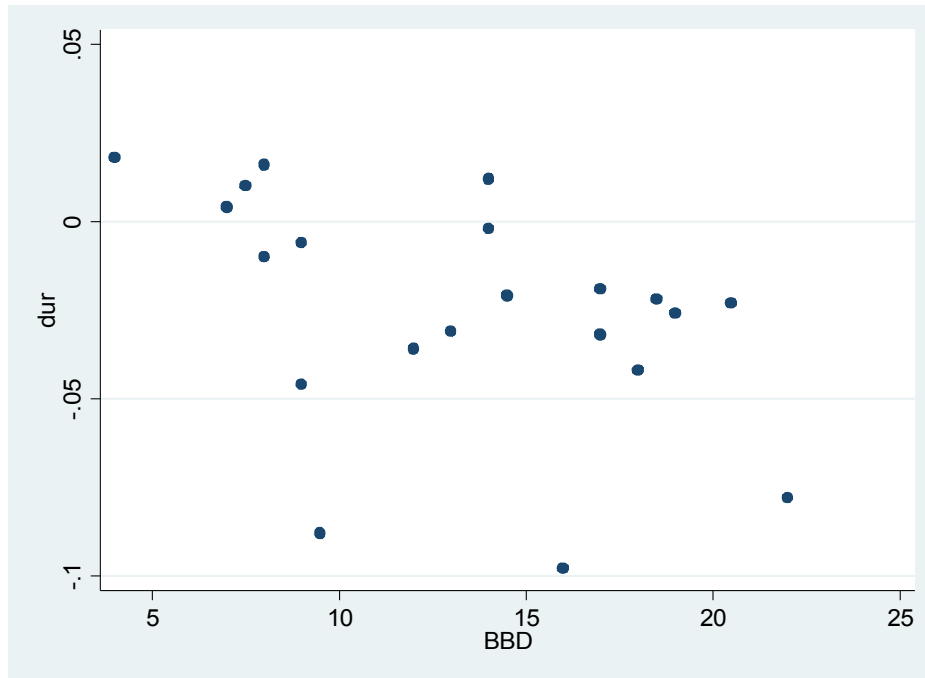
Results from (1) will be commented in the following section, but it may be appropriate to point out here that the *prima facie* evidence is, like in Brandt et al. (2005), favourable to the OECD view. Consider the scatter plots in Figs 1 and 2. They suggest that the basic result obtained in the OECD follow-up report is not affected by our sample choice. The Spearman correlation coefficients between the composite policy change indicator and rates of employment and unemployment is respectively 0.61 and -0.53.

**Figure 1** – Plotting  $\Delta er$  vs Brandt-Burniaux-Duval's *intensity of reform policy indicator*



<sup>8</sup> More details about all these indicators are provided in the Appendix.

**Figure 2** – Plotting  $\Delta ur$  vs Brandt-Burniaux-Duval's *intensity of reform policy indicator*



There are various misgivings, however, that can be aired about this kind of evidence. Perhaps the most obvious one, in the light of the modern econometric literature about policy evaluation, is that policy changes are not randomly distributed across countries. When the labour-market performance is bad, governments may be more willing to implement OECD-recommended labour-market policies, just as suggested in Brandt et al. (2005, p. 58), that succeed in raising employment growth. On the other hand, for example, in response to bad labour-market performance governments may enact other types of policies not contemplated in Brandt et al., 2005, such as incomes policies or wage agreements. Thus, the positive correlation between the 1994-1999 intensity of policy reforms and improvements in labour-market performance may be spurious, arising from their correlations with policy initiatives that have little to do with the OECD strategy, or with other unobserved phenomena. We also find, indeed, strong negative correlation (Spearman  $\rho$ 's equal to, respectively, -0.69 and -0.72) between employment- and unemployment-rate changes and their initial year's levels. In order to control for all these factors, we include in the estimates the 1994 (initial-year) rates, a strategy similar to the inclusion of past history variables in microeconomic policy evaluation analysis.

$$(2) \quad (r_{2004_i} - r_{1994_i}) = f(\text{Policy changes}_i, r_{1994_i})$$

A further point is that the cross-sectional set-up implies that we share with Brandt et al. the hypothesis that policy changes affect all countries with equal strength. However, we do not have to share also the hypothesis that all countries are hit by the same vector of shocks. The discussion in Section 6 should in fact alert us to the possibility that changes in industrial structure, not wholly amenable themselves to policy changes, could have an impact of their own on labour-market performance. In order to allow for this pos-



sibility, we rely on the following specification:

$$(3) \quad (r_{2004_i} - r_{1994_i}) = f(\text{Policy changes}_i, r_{1994_i}, \text{Shocks}_i)$$

The  $\text{Shocks}_i$  in (3) will be proxied in empirical work by changes in the share of construction or service employees over total employment.

Finally, it clearly emerges from Figs 1 and 2 that there may be in our sample some outlying countries (Ireland, Spain, and, for unemployment, Finland), exerting an anomalous influence on the estimation results. In order to provide evidence on this, we rely on Cook's distance (C), and on DfBeta (DfB), which are both statistics for assessing the influence of a given observation. Observations with larger C values than the rest of the data are those which have a relatively greater influence on the coefficient estimates. If DfB is greater than zero, the observation increases the slope; if it is smaller than zero, it decreases the slope.

Once decided that there is an outlier problem, we can proceed in various ways. If there only one or two clearly outlying countries, we could simply exclude them from the estimates. Otherwise we can rely on robust regression techniques. Here we adopt median regression (styled as *qreg* by Stata 9.2, our estimation package), and another type of robust technique (*rreg*), which relies on a weighting scheme giving outliers less weight. One difference between *qreg* and *rreg* is that they attempt to estimate different versions of the central tendency: *qreg* estimates the median while *rreg* comes closer (in principle) to estimating a robust mean. The difference may be negligible in essentially symmetrical distributions, but for skewed distributions where the mean and median are not expected to be equal, one would expect their estimates to deviate systematically. When dealing with skewed distributions where the median is noticeably different from the mean, *rreg* may be more appropriate than *qreg*.

## 6. Some Recent Evidence

We now bring to the data the empirical set-up described in the previous section. We begin by discussing the results from equation (1), a bivariate relationship between policy change indicators and labour-market performance akin to the exercise carried out in the OECD follow-up reports. We then proceed to equations (2) and (3), considering the impact upon the policy coefficients of past labour-market performance and structural shocks. As far as the latter are concerned, we only report estimates including the changes in the share of construction employees over total employment. The share of service employees is virtually never significant. In order to understand the evidence correctly it is important to notice that all policy indicators are computed in such a way as to affect positively changes in employment rates and negatively changes in unemployment rates.

The first batch of results is presented in Tables A.1 and A.2. There are a few items that characterise these results, and that to a large extent remain true also in subsequent analysis. First of all, the impact of policy change indicators is very heterogeneous.

More specifically, reforms in taxes, as well as in employment protection legislation, are somehow significant in equation (1), but largely lose significance in the other equa-

tions (*epI* even acquires a “wrong” sign in the unemployment equation). Part-time and working-time flexibility reforms have a consistently wrong sign, with varying degrees of significance. Retirement and wage formation reforms are basically never significant, as are active labour-market policies in the employment equation. The latter becomes however significant for unemployment in equations (2) and (3). Unemployment benefit reforms are always significant and rightly signed for unemployment, and also have some impact on employment. The Brandt-Burniaux-Duval composite indicator is significant in equation (1) for both employment and unemployment, but heavily loses significance in equations (2) and (3). The other variables are generally not significant.

The second main result is that past labour-market performance matters. The lagged level variable is always significant and its inclusion affects policy coefficients, generally decreasing their significance. Similarly, the changes in the share of construction employees are very significant, although their influence on the policy coefficients is arguably weaker.

At any rate, the estimates in Tables A.1 and A.2 are likely to be influenced by anomalous observations, whose existence is apparent from Fig.'s 1 and 2. We provide evidence on this matter through two different diagnostics: Cook's distance (C), and the DfBeta (DfB) of the policy change indicator. C measures the effect of deleting a given observation. Observations with larger C's than the rest of the data have correspondingly higher leverage. Fox (1991: 34) suggests values of C greater than  $4/(n - k - 1)$  as a cut-off criterion, where n is the number of observations and k is the number of regressors. For us, this cut-off is equal to  $4/18 \approx 0.22$ . Other authors suggest however  $C > 1$  as the strong indication of an outlier problem. Similarly, an observation may be considered an influential outlier if  $|DfB| > 2$ . An alternative rule of thumb suggests a critical  $|DfB| > 2/(n^{0.5})$  – equal to  $2/(21^{0.5}) \approx 0.44$  for us. Recall that if  $DfB > 0$ , the observation increases the slope; if  $< 0$ , the observation decreases the slope. In Table A.3 we only provide C's above 0.22, while in Table A.4 we show the couplets of highest and lowest DfB's, underlining the values above the 0.44 threshold.

In line with our expectations, Ireland and Spain very often show up as influential observations. Switzerland (for employment), Greece and Portugal (for unemployment) also are very frequent outliers (Finland is not apparently a very serious problem country, but this is not the key issue here). The bottom line is however that the outlier problem is by no means limited to these countries, and cannot subsequently be solved by singling them out. We then proceed to estimate equations (1)-(3) through robust regression methods, *rreg* and *qreg*. We present in Tables A.5 and A.6 the results obtained with these procedures.

First of all, *qreg* estimates are always less significant. This is to be expected, as median regression is relatively inefficient and our sample is pretty small. When comparing the two techniques, we thus concentrate on coefficient *sizes*. Given that the lagged labour-market performance variable is always significant, we confine our comments to equations (2) and (3). Tax, retirement and wage formation reforms are never significant, while reforms concerning employment protection legislation, as well as part-time and working-time flexibility, appear sometimes significantly, but with the wrong sign. Unemployment benefit reforms and, especially, active labour-market policies are slightly more significant and tend to show up in regressions with very close coefficient values. Finally, the Brandt-Burniaux-Duval composite indicator is significant for employment but not for unemployment. Given the previous evidence on the single indicators, it could however be

asked how much this result does not crucially depend upon the role of active labour-market policies. In Table 4 below we show some estimates relating to this matter.

It turns out that an indicator created by aggregating unemployment benefit reforms with active labour-market policies is virtually just as significant as Brandt-Burniaux-Duval composite indicator, and always more significant than Brandt-Burniaux-Duval composite indicator *minus* active labour-market policies. Hence, our finding at least partially reiterate the point made in Baker et al. (2003), according to which much of the explanatory power of labour-market institutions for labour-market performance derives in fact from the performance-*enhancing* effects of active labour-market policies. A final remark is that all these indicators are much more significant for employment than for unemployment.

**Table 4 – Summing up the evidence**

Rreg														
	$\Delta er$							$\Delta ur$						
		bbd	ub + almp	bbd - almp	bbd	ub + almp	bbd - almp		bbd	ub + almp	bbd - almp	bbd	ub + almp	bbd - almp
(column header)	--	.0032 (2.84)	.0045 (2.65)	.0021 (1.20)	.0029 (2.55)	.0036 (1.88)	.0023 (1.60)	--	-.0003 (0.39)	-.0015 (1.46)	.0002 (0.23)	-.0008 (1.11)	-.0015 (1.99)	-.0001 (0.21)
er94	-.14 (1.80)	-.10 (1.49)	-.19 (3.03)	-.23 (2.72)	-.07 (1.02)	-.17 (2.47)	-.14 (1.80)	-.49 (4.82)	-.59 (5.47)	.59 (7.03)	-.63 (5.72)	-.40 (3.81)	-.41 (5.57)	-.46 (3.85)
$\Delta csh9500$	2.02 (2.64)	--	--	--	1.59 (2.57)	1.19 (1.69)	2.08 (2.98)	-1.28 (2.99)	--	--	--	-1.59 (3.99)	-1.59 (5.11)	-1.37 (3.03)

Qreg														
	$\Delta er$							$\Delta ur$						
		bbd	ub + almp	bbd - almp	bbd	ub + almp	bbd - almp		bbd	ub + almp	bbd - almp	bbd	ub + almp	bbd - almp
(column header)	--	.0029 (1.46)	.0036 (2.13)	.0032 (1.21)	.0025 (1.20)	.0023 (0.73)	.0028 (0.93)	--	-.0007 (0.59)	-.0012 (1.43)	.0013 (1.33)	-.0013 (1.34)	-.0014 (1.30)	-.0006 (0.36)
ur94	-.20 (1.01)	-.12 (1.22)	-.19 (2.61)	-.13 (1.16)	-.12 (0.87)	-.21 (1.45)	-.12 (0.72)	-.49 (4.82)	-.60 (5.04)	-.58 (7.17)	-.74 (7.17)	-.31 (2.56)	-.51 (4.72)	-.35 (1.59)
$\Delta csh9500$	2.65 (1.57)	--	--	--	1.02 (0.78)	1.41 (0.96)	1.37 (0.82)	-1.90 (3.52)	--	--	--	-2.01 (3.58)	-1.01 (1.76)	-1.92 (2.69)

Summing things up, the gist of our evidence is that in recent OECD cross-country data, changes in labour-market performance are consistently (and inversely) linked to its lagged level. Structural changes are also important: changes in the share of construction employees are very significant even in the presence of various kind of policy change indicators. As far as the latter are concerned, some consistent role seems to emerge only for unemployment benefit reform and, even more so, active labour-market policies.

## **7. Concluding Remarks**

In the first part of this paper, we consider in detail some factors often mentioned in the literature as contributing to poor labour-market performance in Europe. The evidence here is that coordinated bargaining helps achieving a better labour-market performance even in conjunction with strong unions. Empirical evidence also reveals that there are strong interactions between labour-market performance and welfare reforms. Properly designed welfare-to-work policies have been able to deliver more jobs without large wage penalties, both in Nordic countries and in the US. On the other hand, empirical support for the influence of strict labour-market regulations on unemployment appears to be weak. Similarly the development of non-standard jobs does not appear to have had a significant impact on aggregate labour-market performance.

The evaluation of structural changes in the US and European labour markets is not wholly accurate without examining the role of other factors, such as industrial structure, financial markets, and the housing sector. We find that industrial composition matters for labour-market performance, and that it is likely to respond favourably to reduced product-market regulation. An independent impact of financial structure on labour-market performance has not yet been convincingly demonstrated, but there seem to exist interactions between financial-market and labour-market imperfections. The structure of the housing market has on other hand a seemingly strong impact on the geographical mobility of labour.

In the second part of the paper, we turn to the evidence provided by the OECD follow-up reports, mostly in Brandt et al. (2005), and evaluate their results in a very simple cross-country set-up. We suggest that impact of unobserved heterogeneity can be modelled through the lagged level of the employment (or unemployment) rate, as well as through some structural shocks, and carefully assess the existence of outliers, also providing two kinds of robust estimates. We are obviously aware that this exercise is still subject to many strictures, perhaps foremost of which is the hypothesis of equal coefficients across countries. We believe however that our analysis could contribute to the overall assessment of the OECD view, by examining its claims in a framework much closer to the typical follow-up report set-up, and exempt from the complexities of full-fledged multivariate modelling.

Our main results are that in recent OECD cross-country data, changes in labour-market performance are consistently (and inversely) linked to its lagged level. Structural changes are also important: changes in the share of construction employees are very significant even in the presence of various kind of policy change indicators. As far as the latter are concerned, some consistent role seems to emerge only for unemployment benefit

reforms and, even more so, active labour-market policies. There are two additional points that should be noticed. The first is that the policy change indicators, if they matter at all, seem to do so for the employment, as distinct from the unemployment, rate. This is interesting because it points to some important differences in the determination of these two indicators of labour-market performance, at least partially contradicting the oft-heard argument that, in recent years, countries with high unemployment rates also tended to have low labour-force participation rates (Saint-Paul, 2004). The other point is that some countries, especially Ireland and Spain, seem to possess some distinctive factors setting them apart from the rest of the sample. This matters not only inasmuch as the impact of influential country observations on the overall results should be carefully taken into account, but also because undue generalisations from particular country experiences should be taken with a lot of caution.

Summing up, our evidence shows, first, how sensitive the OECD follow-up evidence is sensitive to changes in its basic (arguably too simple) set-up. It also shows that the most comprehensive available measures of institutions and policies can only account for a minor part of the differences in labour market performance across OECD countries over the past ten years. Such evidence lends support to Atkinson's (2001, 48-49) view that "Aggregate cross-country evidence, interesting though it may be, cannot on its own provide a reliable guide to the likely consequences of rolling back the welfare state."

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## APPENDIX

## Legend of the Tables.

$\Delta er$  = changes in the rate of employment, 1994-2004

$\Delta ur$  = changes in the rate of unemployment, 1994-2004

er94 = rate of employment, 1994

ur94 = rate of unemployment, 1994

$\Delta csh9500$  = changes in the share of construction employees over total employment, 1995-2000

tax = index of reforms in taxes and social security contributions, 1994-1999

epl = index of reforms in employment protection legislation, 1994-1999

ub = index of reforms in the unemployment benefit system, 1994-1999

almp = active labour-market policies, 1994-1999

retir = index of reforms in retirement and pension schemes, 1994-1999

wage = index of reforms in wage formation, 1994-1999

flex = index of reforms in part-time and working-time flexibility, 1994-1999

bbd = composite index of the intensity of reform policy, 1994-1999

epl8999 = changes in the OECD index of employment protection legislation

crd8999 = changes in the OECD index of wage bargaining coordination, 1989-1999

dereg9398 = changes in the OECD index of product market regulation, 1993-1998

dereg8898 = changes in the OECD index of product market regulation, 1988-1998

mob9101 = changes in the homeownership rates, 1991-2001

The absolute values of t-ratios are given in brackets.

Table A.1 - OLS - Dep. var.:  $\Delta er$ 

	tax	epl	ub	almp	retir	wage	flex	bbd	epl8999	crd8999	dereg9398	dereg8898	mob9101
<i>(column header)</i>	.0057 (2.45)	.0075 (1.53)	.0035 (0.96)	-.0002 (0.02)	.0049 (0.88)	.0043 (0.65)	-.0197 (1.36)	.0034 (2.47)	.0153 (0.55)	.0102 (1.17)	.0202 (1.18)	-.0041 (0.21)	-.1128 (1.02)
<i>(column header)</i>	.0011 (0.39)	.0037 (1.07)	.0056 (2.87)	.0017 (0.42)	.0014 (0.27)	.0006 (0.15)	-.0201 (3.18)	.0017 (1.25)	-.0248 (1.36)	-.0031 (0.41)	.0041 (0.30)	.0078 (0.55)	.0798 (0.63)
<i>er94</i>	-.29 (2.85)	-.28 (3.29)	-.32 (3.67)	-.31 (3.44)	-.30 (3.20)	-.30 (3.45)	-.31 (4.89)	-.27 (2.51)	-.35 (3.97)	-.31 (3.47)	-.30 (3.31)	-.31 (3.44)	-.32 (3.43)
<i>(column header)</i>	.0013 (0.60)	.0035 (1.27)	.0030 (1.52)	.0008 (0.26)	.0043 (0.95)	.0043 (1.06)	-.0099 (1.37)	.0018 (1.55)	-.0118 (1.07)	-.0002 (0.05)	.0082 (0.62)	.0071 (0.47)	.0815 (0.92)
<i>er94</i>	-.19 (1.96)	-.18 (2.68)	-.22 (2.96)	-.21 (2.82)	-.19 (2.65)	-.19 (2.78)	-.23 (3.31)	-.17 (1.97)	-.23 (3.74)	-.20 (2.45)	-.19 (2.74)	-.21 (2.65)	-.22 (3.04)
<i><math>\Delta csh9500</math></i>	1.99 (3.24)	1.96 (3.17)	1.75 (2.74)	1.96 (3.16)	2.12 (3.47)	2.10 (3.64)	1.44 (2.52)	2.01 (3.39)	1.86 (3.30)	1.98 (3.27)	2.01 (3.50)	1.97 (3.30)	1.98 (3.70)

Table A.2 - OLS - Dep. var.:  $\Delta ur$ 

	tax	epl	ub	almp	retir	wage	flex	bbd	epl8999	crd8999	dereg9398	dereg8898	mob9101
<i>(column header)</i>	-0.042 (1.74)	-0.018 (0.45)	-0.071 (2.15)	-0.024 (0.45)	-0.069 (1.65)	.0015 (0.28)	.0210 (2.45)	-0.029 (2.61)	.0033 (0.17)	-0.007 (0.08)	-0.288 (1.75)	-0.047 (0.32)	-0.0697 (0.77)
<i>(column header)</i>	-0.013 (0.79)	.0023 (1.10)	-0.035 (2.37)	-0.021 (2.43)	-0.012 (0.31)	.0034 (0.86)	.0125 (3.09)	-0.007 (0.96)	.0222 (1.78)	.0014 (0.32)	-0.034 (0.27)	-0.124 (1.40)	-.0748 (1.49)
<i>ur94</i>	-.63 (10.87)	-.69 (7.97)	-.62 (9.90)	-.66 (9.32)	-.65 (6.67)	-.67 (9.08)	-.60 (6.66)	-.63 (7.78)	.70 (8.96)	-.66 (8.99)	-.65 (6.49)	-.68 (8.43)	-.66 (9.49)
<i>(column header)</i>	-0.011 (0.88)	.0023 (1.28)	-0.032 (2.64)	-0.021 (2.50)	-0.038 (1.03)	.0018 (0.63)	.0085 (1.60)	-0.009 (1.31)	.0189 (1.65)	.0019 (0.77)	-0.093 (0.89)	-0.126 (1.34)	-.1133 (2.06)
<i>ur94</i>	-.50 (5.46)	-.55 (6.63)	-.49 (6.93)	-.52 (6.82)	-.46 (4.12)	-.53 (6.15)	-.53 (5.42)	-.46 (4.51)	-.57 (6.02)	-.52 (6.08)	-.47 (4.72)	-.53 (6.35)	-.50 (7.54)
<i><math>\Delta csh9500</math></i>	-1.08 (2.17)	-1.10 (2.64)	-1.03 (2.12)	-1.08 (2.15)	-1.29 (2.01)	-1.05 (2.05)	-.72 (1.14)	-1.17 (2.07)	-.98 (2.10)	-1.10 (2.08)	-1.19 (2.07)	-1.10 (1.93)	-1.26 (3.61)

Table A.3.a - Cook's Distance - Dep. var.:  $\Delta er$ 

	tax	epl	ub	almp	retir	wage	flex	bbd	epl8999	crd8999	dereg9398	dereg8898	mob9101
(1)	Ireland .30	Ireland .26 Spain .67	Spain .32	Austria .49 Spain 2.78	Ireland .22	Spain .27	Spain 1.01	Spain .42	Ireland .24 Spain .47	Ireland 32	Ireland .24 Spain .30	--	--
(2)	Spain .54	Ireland .35 Spain .43	Spain .56	Austria .29 Spain 2.33	Greece .22 Ireland .23 Spain .40	Spain .39	Spain .23 Switzer. .27	Spain 1.23	Ireland .22 Spain .48	Ireland .25 Italy .32 Spain .39	Spain .38	Spain .43 Switzer. .51	Portugal .39 Spain .37
(3)	Spain .38	Spain .25 Switzer. .25	Spain .40 Switzer. .28	Spain 1.64 Switzer. .24	Spain .28 Switzer. .62	Spain .25 Switzer. .29	Spain .44 Switzer. .27	Spain 1.00 Switzer. .37	Spain .33	Spain .27 Switzer. .29	Spain .26 Switzer. .28	Spain .29 Switzer. .99	Spain .24 Switzer. .24

Table A.3.b - DfBeta's - Dep. var.:  $\Delta er$ 

	tax	epl	ub	almp	retir	wage	flex	bbd	epl8999	crd8999	dereg9398	dereg8898	mob9101
<b>(1)</b>	Italy	Ireland	Spain	Spain	Ireland	Ireland	Spain	Spain	Sweden	Australia	Australia	Spain	Spain
	-.29	-.52	-.61	-.3.08	-.47	-.38	-.1.48	-.80	-.55	-.30	-.32	-.60	-.29
	US	Australia	Denmark	Sweden	Sweden	Denmark	Ireland	Denmark	Ireland	Italy	Canada	Ireland	Netherlands
	-.18	.26	-.28	-.06	-.37	-.30	-.41	-.34	-.53	-.28	-.30	-.56	-.21
Japan	Austria	Japan	Japan	Switzer.	Netherlands	US	Ireland	US	Sweden	Switzer.	Netherlands	Austria	
.21	.35	.29	.46	.37	.21	.35	.28	.27	.14	.24	.33	.23	
Ireland	Spain	Ireland	Austria	US	Spain	France	Austria	Spain	Ireland	Japan	Switzer.	Ireland	
.69	1.16	.41	.94	.41	.53	.35	.31	.92	.72	.33	.48	.40	
<b>(2)</b>	Spain	Ireland	Finland	Spain	Ireland	Ireland	Spain	Spain	Ireland	Italy	Canada	Switzer.	Portugal
	-.53	-.67	-.33	-.2.33	-.48	-.39	-.57	-.1.29	-.60	-.80	-.33	-.77	-.1.03
	Italy	Australia	Spain	Greece	Austria	New Zea.	Belgium	Italy	Belgium	Spain	Ireland	Ireland	Netherlands
	-.50	-.21	-.31	-.18	-.33	-.16	-.34	-.25	-.32	-.31	-.23	-.41	-.57
Ireland	Austria	Italy	Ireland	New Zea.	Spain	Netherlands	Austria	Spain	Switzer.	Netherlands	New Zea.	Austria	
.46	.38	.21	.22	.42	.24	.22	.33	.25	.25	.17	.34	.29	
New Zea.	Spain	Ireland	Austria	Greece	Netherlands	US	Greece	France	Ireland	Greece	Netherlands	Ireland	
.54	.58	.37	.86	.63	.38	.36	.38	.49	.52	.55	.41	.50	
<b>(3)</b>	US	Ireland	Spain	Spain	Switzer.	Denmark	Spain	Spain	Canada	Italy	Canada	Switzer.	Netherlands
	-.55	-.67	-.44	-.2.10	-.78	-.40	-.92	-.1.28	-.24	-.33	-.66	-.1.31	-.76
	Spain	Australia	Finland	Greece	Sweden	Australia	Belgium	Denmark	New Zea.	US	Switzer.	UK	Sweden
	-.47	-.21	-.22	-.18	-.38	-.33	-.26	-.35	-.22	-.26	-.24	-.46	-.18
Greece	Austria	US	Japan	Greece	Spain	Sweden	Greece	US	Ireland	Germany	US	Canada	
.37	.38	.32	.26	.46	.28	.19	.29	.27	.28	.26	.36	.18	
New Zea.	Spain	Canada	Austria	US	Netherlands	Netherlands	Netherlands	Spain	Switzer.	Greece	Netherlands	Austria	
.54	.58	.36	.80	.59	.44	.24	.36	.33	.38	.47	.55	.26	

Table A.4.a - Cook's Distance - Dep. var.:  $\Delta ur$ 

	tax	epl	ub	almp	retir	wage	flex	bbd	epl8999	crd8999	dereg9398	dereg8898	mob9101
(1)	Ireland .39	Ireland .23 Spain .48	Spain .26	Spain 2.35	Ireland .29	--	Spain .28	Spain .27	Ireland .24 Spain .31	Ireland .49	Germany .24	Ireland .32	--
(2)	Ireland .38	Ireland .34	Ireland .26	Ireland .25	Greece .35 Ireland .49	Ireland.28	Ireland .28 Spain 1.35	Ireland .25	France .25 Ireland .32	Ireland .55	Germany .25 Greece .27 Ireland .33	Ireland .48	Ireland .27
(3)	Ireland .31 Portugal .27	Ireland .26 Portugal .32	Ireland .29 Portugal .28	Ireland .29 Portugal .26	Greece .32 Ireland .45 Portugal .46 Switzer. .42	Ireland .29 Portugal .29	Ireland .49 Portugal .30 Spain .90	Ireland .29 Portugal .42	Portugal .25	Ireland .56 Portugal .27	Greece .25 Ireland .35 Portugal .32	Ireland .66 Portugal .26 Switzer. .50	Portugal .34



Table A.4.b - DfBeta's - Dep. var.:  $\Delta ur$ 

	tax	epl	ub	almp	retir	wage	flex	bbd	epl8999	crd8999	dereg9398	dereg8898	mob9101
<b>(1)</b>	Ireland	Spain	Finland	Finland	Finland	Spain	France	Finland	Spain	Ireland	Finland	Greece	Ireland
	<u>-.82</u>	<u>-.93</u>	<u>-.54</u>	<u>-.49</u>	<u>-.50</u>	<u>-.38</u>	<u>-.46</u>	<u>-.45</u>	<u>-.69</u>	<u>-.94</u>	<u>-.43</u>	<u>-.38</u>	<u>-.40</u>
	Japan	Finland	Ireland	Austria	Greece	Australia	Belgium	Ireland	Japan	Norway	Japan	Switzer.	Portugal
	<u>-.30</u>	<u>-.30</u>	<u>-.46</u>	<u>-.45</u>	<u>-.34</u>	<u>-.28</u>	<u>-.42</u>	<u>-.33</u>	<u>-.32</u>	<u>-.12</u>	<u>-.34</u>	<u>-.30</u>	<u>-.39</u>
	Italy	Portugal	Denmark	Norway	Austria	Germany	Ireland	Denmark	Greece	Australia	Canada	Spain	UK
	<u>.38</u>	<u>.26</u>	<u>.48</u>	<u>.11</u>	<u>.23</u>	<u>.32</u>	<u>.47</u>	<u>.29</u>	<u>.30</u>	<u>.32</u>	<u>.44</u>	<u>.43</u>	<u>.22</u>
	Sweden	Ireland	Spain	Spain	Ireland	Ireland	Spain	Spain	Ireland	Finland	Germany	Ireland	Japan
	<u>.39</u>	<u>.46</u>	<u>.52</u>	<u>2.62</u>	<u>.59</u>	<u>.40</u>	<u>.69</u>	<u>.53</u>	<u>.54</u>	<u>.51</u>	<u>.60</u>	<u>.68</u>	<u>.30</u>
<b>(2)</b>	Ireland	Greece	Greece	New Zea.	Greece	Australia	Spain	Greece	France	Ireland	Greece	Greece	Ireland
	<u>-.73</u>	<u>-.53</u>	<u>-.42</u>	<u>-.22</u>	<u>-1.00</u>	<u>-.65</u>	<u>-1.09</u>	<u>-.63</u>	<u>-.70</u>	<u>-.98</u>	<u>-.83</u>	<u>-.67</u>	<u>-.40</u>
	New Zea.	Netherlands	Ireland	Ireland	New Zea.	Denmark	Belgium	New Zea.	Sweden	New Zea.	Australia	New Zea.	Greece
	<u>-.47</u>	<u>-.41</u>	<u>-.30</u>	<u>-.19</u>	<u>-.50</u>	<u>-.55</u>	<u>-.24</u>	<u>-.32</u>	<u>-.69</u>	<u>-.04</u>	<u>-.28</u>	<u>-.33</u>	<u>-.23</u>
	France	Germany	Finland	Austria	Norway	Ireland	Greece	Italy	Greece	Australia	Ireland	Switzer.	Netherlands
	<u>.38</u>	<u>.34</u>	<u>.41</u>	<u>.32</u>	<u>.22</u>	<u>.45</u>	<u>.31</u>	<u>.18</u>	<u>.54</u>	<u>.34</u>	<u>.49</u>	<u>.47</u>	<u>.33</u>
	Italy	Ireland	Canada	Spain	Ireland	Germany	Ireland	UK	Ireland	Italy	Germany	Ireland	UK
	<u>.48</u>	<u>.65</u>	<u>.42</u>	<u>.40</u>	<u>.86</u>	<u>.49</u>	<u>.33</u>	<u>.29</u>	<u>.64</u>	<u>.34</u>	<u>.79</u>	<u>.73</u>	<u>.39</u>
<b>(3)</b>	New Zea.	Greece	Greece	New Zea.	Greece	Australia	Spain	Greece	Sweden	Ireland	Greece	Greece	Portugal
	<u>-.51</u>	<u>-.53</u>	<u>-.56</u>	<u>-.24</u>	<u>-1.14</u>	<u>-.59</u>	<u>-1.04</u>	<u>-.78</u>	<u>-.81</u>	<u>-.69</u>	<u>-.97</u>	<u>-.87</u>	<u>-.86</u>
	Greece	Netherlands	Ireland	Ireland	New Zea.	Denmark	Ireland	New Zea.	France	Italy	Spain	New Zea.	Ireland
	<u>-.46</u>	<u>-.41</u>	<u>-.14</u>	<u>-.12</u>	<u>-.44</u>	<u>-.32</u>	<u>-.33</u>	<u>-.33</u>	<u>-.62</u>	<u>-.11</u>	<u>-.13</u>	<u>-.34</u>	<u>-.37</u>
	Italy	Germany	Finland	Greece	Portugal	Greece	Greece	Switzer.	Portugal	Finland	Germany	Ireland	UK
	<u>.29</u>	<u>.34</u>	<u>.25</u>	<u>.29</u>	<u>.51</u>	<u>.23</u>	<u>.51</u>	<u>.33</u>	<u>.35</u>	<u>.12</u>	<u>.36</u>	<u>.57</u>	<u>.43</u>
	Sweden	Ireland	Denmark	Austria	Switzer.	UK	Portugal	Portugal	Greece	Australia	Canada	Switzer.	Netherlands
	<u>.39</u>	<u>.65</u>	<u>.34</u>	<u>.42</u>	<u>.91</u>	<u>.34</u>	<u>.64</u>	<u>.44</u>	<u>.75</u>	<u>.33</u>	<u>.65</u>	<u>1.03</u>	<u>.44</u>

Table A.5.a - Rreg - Dep. var.:  $\Delta er$ 

	tax	epl	ub	almp	retir	wage	flex	bbd	epl8999	crd8999	dereg9398	dereg8898	mob9101
<i>(column header)</i>	.0038 (1.44)	.0061 (1.46)	.0045 (1.08)	.0092 (2.63)	.0095 (1.95)	.0020 (0.26)	.0041 (0.34)	.0040 (3.98)	.0039 (0.17)	.0032 (0.31)	.0178 (0.80)	.0129 (0.71)	-.1250 (0.87)
<i>(column header)</i>	.0013 (0.40)	.0039 (1.03)	.0056 (1.52)	.0080 (2.62)	.0020 (0.34)	.0007 (0.09)	-.0204 (2.34)	.0032 (2.84)	-.0246 (1.04)	-.0037 (0.34)	.0043 (0.21)	.0085 (0.49)	.0671 (0.43)
er94	-.26 (2.75)	-.27 (3.34)	-.29 (3.90)	-.16 (2.49)	-.28 (3.37)	-.28 (3.25)	-.30 (4.44)	-.10 (1.49)	-.33 (3.70)	-.30 (3.29)	-.29 (3.36)	-.30 (3.68)	-.30 (3.34)
<i>(column header)</i>	.0018 (0.68)	.0034 (1.06)	.0031 (0.89)	.0059 (1.76)	.0042 (0.84)	.0039 (0.61)	-.0106 (0.97)	.0029 (2.55)	-.0134 (0.65)	.0002 (0.02)	.0075 (0.43)	.0066 (0.45)	.0961 (0.80)
er94	-.16 (1.82)	-.18 (2.38)	-.22 (2.70)	-.15 (2.09)	-.18 (2.26)	-.19 (2.27)	-.23 (2.74)	-.07 (1.02)	-.22 (2.46)	-.19 (2.19)	-.19 (2.27)	-.20 (2.56)	-.22 (2.72)
$\Delta csh9500$	2.05 (2.69)	1.98 (2.77)	1.74 (2.21)	1.35 (1.94)	2.13 (2.76)	2.12 (2.65)	1.47 (1.54)	1.59 (2.57)	1.89 (2.43)	2.02 (2.52)	2.04 (2.61)	2.00 (2.62)	2.03 (2.77)

Table A.5.b - Qreg - Dep. var.:  $\Delta er$ 

	tax	epl	ub	almp	retir	wage	flex	bbd	epl8999	crd8999	dereg9398	dereg8898	mob9101
<i>(column header)</i>	.0049 (1.51)	.0030 (0.49)	.0042 (0.77)	.0090 (1.75)	.0075 (1.11)	-.0009 (0.11)	.0017 (0.14)	.0041 (2.45)	-.0037 (0.13)	.0058 (0.57)	-.0013 (0.06)	-.0071 (0.37)	-.0913 (0.55)
<i>(column header)</i>	.0052 (1.29)	.0032 (0.47)	.0056 (1.35)	.0060 (0.99)	.0087 (1.23)	.0021 (0.20)	-.0268 (1.39)	.0029 (1.46)	-.0157 (0.49)	-.0031 (0.27)	.0098 (0.29)	.0106 (0.37)	.0738 (0.26)
<i>er94</i>	-.21 (1.76)	-.18 (1.42)	-.22 (2.24)	-.16 (1.48)	-.13 (1.47)	-.18 (1.41)	-.35 (2.26)	-.12 (1.22)	-.21 (1.74)	-.18 (1.40)	-.15 (1.12)	-.15 (1.23)	-.21 (1.38)
<i>(column header)</i>	.0048 (1.60)	.0006 (0.08)	.0034 (0.79)	.0054 (0.89)	.0016 (0.12)	-.0019 (0.16)	-.0161 (0.86)	.0025 (1.20)	-.0104 (0.20)	-.0004 (0.03)	.0017 (0.04)	.0257 (0.74)	.1063 (0.46)
<i>er94</i>	-.00 (0.03)	-.24 (1.35)	-.20 (1.82)	-.17 (1.17)	-.22 (0.97)	-.19 (0.84)	-.25 (1.64)	-.12 (0.87)	-.19 (0.89)	-.19 (0.79)	-.18 (0.87)	-.27 (1.49)	-.23 (1.18)
<i><math>\Delta csh9500</math></i>	2.61 (2.82)	2.36 (1.56)	1.21 (1.12)	1.33 (0.37)	2.40 (1.11)	2.45 (1.25)	1.85 (1.11)	1.02 (0.78)	2.47 (1.33)	2.77 (1.47)	2.80 (1.49)	2.89 (1.87)	2.44 (1.54)

Table A.6.a - Rreg - Dep. var.:  $\Delta ur$ 

	tax	epl	ub	almp	retir	wage	flex	bbd	epl8999	crd8999	dereg9398	dereg8898	mob9101
<i>(column header)</i>	-0.0038 (1.45)	-0.0015 (0.39)	-0.0073 (2.07)	-0.0086 (2.99)	-0.0082 (1.83)	.0006 (0.08)	.0205 (2.24)	-0.0031 (3.25)	.0034 (0.16)	.0021 (0.22)	-0.0322 (2.13)	-0.0203 (1.46)	-0.0515 (0.37)
<i>(column header)</i>	-0.0001 (0.04)	.0025 (1.32)	-0.0028 (1.35)	-0.0021 (1.39)	-0.0009 (0.29)	.0014 (0.36)	.0149 (3.22)	-0.0003 (0.39)	.0202 (1.78)	.0050 (1.39)	-0.0092 (1.07)	-0.0158 (2.57)	-0.0555 (0.85)
<i>ur94</i>	-.62 (5.96)	-.67 (7.27)	-.59 (6.23)	-.61 (7.94)	-.61 (5.91)	-.62 (6.20)	-.70 (7.88)	-.59 (5.47)	-.69 (7.11)	-.60 (8.89)	-.56 (7.07)	-.62 (9.34)	-.61 (7.03)
<i>(column header)</i>	-0.0007 (0.48)	.0032 (2.02)	-0.0022 (1.31)	-0.0023 (1.64)	-0.0034 (1.27)	.0015 (0.42)	.0071 (1.23)	-0.0008 (1.11)	.0150 (1.45)	.0019 (0.40)	-0.0041 (0.40)	-0.0096 (1.16)	-1.091 (1.75)
<i>ur94</i>	-.48 (4.37)	-.54 (5.94)	-.44 (4.70)	-.47 (5.45)	-.39 (3.82)	-1.15 (2.51)	-.53 (5.00)	.40 (3.81)	-.54 (5.02)	-.49 (4.70)	-.45 (3.97)	.51 (4.79)	-.50 (5.02)
<i><math>\Delta csh9500</math></i>	-1.23 (2.70)	-1.24 (3.31)	-1.34 (3.39)	-1.33 (3.61)	-1.73 (4.09)	-.51 (4.71)	-.80 (1.55)	-1.59 (3.99)	-1.11 (2.49)	-1.26 (2.84)	-1.40 (3.10)	-1.22 (2.70)	-1.27 (2.98)

Table A.6.b - Qreg - Dep. var.:  $\Delta ur$ 

	tax	epl	ub	almp	retir	wage	flex	bbd	epl8999	crd8999	dereg9398	dereg8898	mob9101
<i>(column header)</i>	-0.0018 (0.44)	-0.0003 (0.05)	-0.0033 (0.68)	-0.0069 (1.94)	-0.0067 (1.51)	-0.0007 (0.08)	.0140 (0.90)	-0.0033 (2.12)	-0.0022 (0.07)	-0.0020 (0.16)	-0.0340 (1.11)	-0.0067 (0.28)	-1.091 (0.65)
<i>(column header)</i>	.0008 (0.43)	.0028 (0.94)	-.0019 (0.70)	-.0021 (1.03)	-.0001 (0.02)	-.0024 (0.51)	.0092 (1.37)	-.0007 (0.59)	.0198 (1.16)	.0050 (1.08)	-.0113 (0.78)	-.0162 (1.84)	-.0633 (1.24)
<i>ur94</i>	-.61 (4.35)	-.68 (5.15)	-.62 (5.72)	-.60 (5.55)	-.60 (4.90)	-.61 (4.25)	.64 (4.95)	-.60 (5.04)	-.68 (4.92)	-.61 (6.82)	-.57 (4.56)	-.63 (8.15)	-.60 (8.04)
<i>(column header)</i>	.0004 (0.19)	.0022 (1.90)	-.0024 (0.90)	-.0025 (1.36)	-.0052 (1.13)	.0017 (0.31)	.0067 (0.66)	-.0013 (1.34)	.0154 (0.78)	.0026 (0.41)	-.0129 (0.86)	-.0192 (1.15)	-1.110 (0.84)
<i>ur94</i>	-.53 (3.48)	-.55 (7.15)	-.43 (2.94)	-.46 (3.15)	-.41 (2.31)	.47 (2.70)	-.57 (2.78)	-.31 (2.56)	-.51 (2.68)	-.53 (3.17)	-.38 (2.07)	-.61 (3.08)	-.56 (2.94)
<i><math>\Delta csh9500</math></i>	-1.66 (2.41)	-1.61 (5.67)	-1.39 (2.01)	-1.54 (2.08)	-1.85 (2.73)	-1.79 (2.42)	-.45 (0.43)	-2.01 (3.58)	-1.44 (1.64)	-1.17 (1.48)	-1.48 (1.96)	-.89 (0.95)	-1.15 (1.28)