The Political Economy of Labour Market Policies in Western and Eastern European Countries

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OLAF VAN VLIET, KOEN CAMINADA AND KEES GOUDSWAARD

Abstract

Discussions on how to organize European labour markets are one of the key public policy issues of today. In European policy debates, the most important concepts seem to be 'flexicurity' and the 'transitional labour market'. In this report we examine the cross-country variation in the generosity of unemployment benefits, which is a key element of the flexicurity model. Building on the political economy literature, we test hypotheses on the role of partisan politics, employment relations and employment protection legislation and active labour market policies in unemployment benefit reform. These factors have been extensively studied in the political economy literature, but hardly for Eastern European countries, because of a lack of data. We employ pooled time series cross-section regressions to analyze newly constructed indicators for Western and Eastern European countries. The results indicate that left-wing governments are positively related to unemployment protection for both Western and Eastern European countries, but this linkage is conditional on the economic situation. Coordinated bargaining by strong and centrally organized labour unions has also a positive impact on benefit generosity. Moreover, we find a negative relationship between the strictness of employment protection legislation and the generosity of unemployment benefit schemes, which is in line with the concept of the flexicurity model. Finally, within the EU we find a trend of convergence of unemployment benefit levels in the period 1990-2009. This finding indicates that the new EU member states have caught up.

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1.   Introduction

Discussions on how to organize European labour markets are one of the key public policy issues of today. In European policy debates, the most important concepts seem to be 'flexicurity' and the 'transitional labour market'. In a position paper (NEUJOBS milestone 13; Koster et al, 2011), we reviewed the existing conceptual, theoretical and empirical literature on these two ideal types of labour market models. Flexicurity refers to a combination of loose employment protection legislation (EPL), generous unemployment benefits and strong efforts on active labour market policies (ALMPs). The transitional labour market model offers a broad view of possible transitions that individuals may make during their life course. In this report, we examine the variation in unemployment benefits, EPL and ALMPs across countries and over time. These policies are building blocks of both the flexicurity model and the transitional labour market model. However, this report is more focused on the political economy of the flexicurity model. The transitional labour model will be examined in more detail in another report of Work Package 6 (NEUJOBS Deliverable 6.5; Koster and Fleischmann, 2012)

Based on the literature review in the position paper (NEUJOBS milestone 13; Koster et al, 2011), we constructed two indicators to measure the cross-national variation and the changes over time for two labour market institutions. First, we collected new data and we used data from OECD and Eurostat databases to update the Welfare State Entitlements Data Set (Allan and Scruggs, 2004) until 2009 and to take the enlargements of the EU into account. This resulted in the *Unemployment replacement rates dataset among 34 welfare states 1971-2009* (NEUJOBS milestone 14; Van Vliet and Caminada, 2012). Second, we constructed a new indicator for employment relations. This index enables us to analyze the variation in employment relations across the 27 member states of the EU and 7 non-EU countries.

Subsequently, we test a number of hypotheses from the political economy literature with regard to the cross national variation and the developments of labour market policies. The dependent variable of our study is the generosity of unemployment benefits, which are a key element of the flexicurity model. In this report, we examine hypotheses on the role of partisan politics, employment relations and EPL and ALMPs in unemployment benefit reform. To test the hypotheses, we employ pooled time series cross-section analyses.

In this report, we seek to make three contributions to the existing political economy literature on labour market policies. First, we aim to provide new insight in the association between partisan politics and unemployment protection. Building on the classical debate on whether leftist and rightist parties play different roles in welfare state reforms (e.g. Iversen and Cusack, 2000; Huber and Stephens, 2001; Korpi and Palme, 2003), recent research has shown that the effect of political parties is conditional on socio-economic conditions (Vis, 2009; Jensen, 2012). We show that the effect of left-wing governments is conditional on socio-economic conditions. Second, we account for the fact that labour market policies are embedded in a number of other policies. In contrast, labour market policies are generally treated as isolated policy instruments in the quantitative comparative political economy literature (Koster et al, 2011). Hence, to explain the variation in unemployment benefits, we also account for EPL and ALMPs. Third, we examine whether the political economy of labour market models and employment relations is comparable for West and East European countries. Labour market policies in Central and East European (CEE) countries seem to develop differently than labour market policies in West European countries (Beblavý, 2011; Cerami, 2010; Koster et al, 2011; Põder and Kerem, 2011). As the political economy literature on labour market policies is mainly focused on Western OECD countries, it is still an empirical question whether determinants from this literature can account for the variation in labour market policy reforms across Western and Eastern European countries.

The remainder of the paper is structured as follows. In section 2, we discuss a number of hypotheses from the political economy literature. In section 3, the measures and method used in the empirical analysis will be described. Here, we present the new indicators on net unemployment replacement rates and employment relations. Subsequently, section 4 presents the results of the analysis. Section 5 concludes the paper by discussing the main findings.

2. The political economy of labour market policies

2.1 European welfare states

The variation across European welfare states has been analyzed extensively for a considerable period, but the scholarly debate has gotten a new dimension since the expansion of the EU with CEE countries. Some studies found that the welfare state in CEE countries can be classified along the lines of the typologies which have been developed for mainly Western welfare states (e.g. Esping-Andersen, 1990; Arts and Gelissen, 2006) and that some CEE welfare states are catching up with Western Europe (Manning, 2004; Vasconcelos Ferreira and Figueiredo, 2005). However, other studies found empirical support for the argument that the welfare states in CEE countries form a separate, CEE welfare regime (Fenger, 2007; Põder and Kerem, 2011). At least, the variation between the groups of West and East European welfare states appears to be larger than the variation within those groups (Draxler and Van Vliet, 2010). Hence, Cerami (2006) has argued that the welfare states in post-communist countries can be considered as a distinct welfare regime that consists of pre-communist (Bismarck social insurance), communist (universalism, corporatism and egalitarianism) and post-communist (market-based schemes) components. Another distinctive characteristic is that welfare state arrangements are more generous in Western than in Eastern Europe.

According to recent studies, there is no evidence that this gap has been closed and that West and East European welfare states have converged (Draxler and Van Vliet, 2010; Põder and Kerem, 2011). This lack of convergence indicates that Western and Eastern welfare states have followed different trajectories of reforms, which might (partly) be due to the key explanatory variables for the cross-country variation in welfare state reform, namely partisan politics and corporatism.

2.2 Partisan politics

Partisan differences are traditionally considered as important explanatory factors for the variation in the generosity of welfare states in the political economy literature. The key argument is that left-wing parties have a preference for expansions of welfare state arrangements, while right-wing parties are associated with welfare state retrenchments. This argument has been extensively analyzed and the evidence provided by empirical research is rather ambiguous. The results of some studies support the hypothesis that leftist governments pursue different welfare state reforms than rightist governments (e.g. Iversen and Cusack, 2000; Korpi and Palme, 2003; Allan and Scruggs 2004), whereas other studies find little evidence for this hypothesis (Ross, 2000; Huber and Stephens, 2001).

Subsequently, the contradictory results from empirical research have led to the formulation of the hypothesis that partisan differences have become less important in welfare state reform (Pierson, 2001; Huber and Stephens, 2001; Castles, 2001). An important explanation for this diminishing partisan effect is that differences in policy preferences are mitigated by fiscal pressure from external economic shocks. Persistently high levels of joblessness lead to high expenditures on unemployed benefits and therefore to budgetary stress, regardless of the colour of the government (Saint-Paul 1996, Gaston and Rajaguru 2008). Indeed, relying on fuzzy set qualitative analysis, Vis (2009) found that deteriorating economic situations trigger cuts in unemployment benefits by both rightist and leftist governments. However, this does not imply that partisan differences do not matter. Building on prospect theory, Vis (2009) explains that rightist governments do not pursue more or harsher reforms than leftist governments, but that rightist governments are more likely to pursue benefit cuts than leftist ones. The notion that both left-wing and right-wing governments opt for retrenchments in times of high levels of unemployment has also been observed in CEE countries. In order to confine the expansion of public expenditures on welfare state arrangements resulting from rapidly increasing unemployment rates during the second half of the 1990s, welfare cuts have been pursued by centre-right parties as the ODS in Czech Republic as well as by left-wing parties like the MSZP in Hungary and the Solidarity coalitions in Poland (Cerami, 2010).

On the contrary, Jensen (2012) finds that the negative effect of right-wing governments on unemployment benefit reforms becomes smaller when unemployment rates increase. That is, right-wing governments have less room for retrenchments at higher levels of unemployment. Jensen's argument is based on a median voter model. When labour market risks increase because of higher unemployment levels, the median voter will start feeling insecure and change his preferences. Because of a higher demand for unemployment protection exerted by the median voter, right-wing governments have less possibilities for retrenchments. Moreover, Jensen (2012) argues that because left-

wing as well as right-wing parties can be expected to seek to win over the median voter, both parties act alike and expand spending at high levels of unemployment.

In summary, both leftist and rightist governments are faced with a budgetary need to cut unemployment benefits in times of increasing levels of unemployment, while the same circumstances constrain both government types to pursue such cuts for electoral reasons. This leaves us with the empirical question which effect prevails. Hence, we test the hypothesis that the impact of the left/right-wing partisan government composition on unemployment protection reform is conditional on shocks to the economy. Furthermore, we examine whether the partisan effect differs across West- and East-European countries, although, as mentioned above, we have no reason to expect that this would be the case.

2.3   Employment relations

Besides political parties, social partners are important actors in the reform processes of unemployment protection. The relationship between industrial relations and the welfare state has received a lot of attention in the political economy literature. Generally, a corporatist tradition of coordinated bargaining by strong and centrally organized social partners is positively associated with welfare state generosity for two reasons (Ebbinghaus and Hassel, 2000; Brandl and Traxler, 2005; Swank and Martin, 2001; Swank, 2011). A first reason why a positive effect of corporatist institutions can be expected is that unions exchange wage moderation for full employment commitments and expansions in unemployment protection. Second, the more social interests are incorporated in policy-making processes, the more influence they can exert on policy reforms. Institutionalized bargaining is beneficial for both social partners and governments, since they exchange social acceptance for influence over policy reforms. Hence, in a system where collective bargaining is organized at the national level, social partners are better able to resist welfare state retrenchments.

Several scholars have argued that social partners are less effective in exerting influence in welfare state reform in Eastern Europe than in Western Europe. Although tripartite councils have been introduced in many post-communist countries since the 1990s, this has not resulted in genuine influence of labour in the policy making process and in concrete material benefits in terms of welfare state arrangements (Ost, 2000; Avdagic, 2005; Hassel, 2009). A first explanation for this difference between East and West is that corporatism functions differently in East than in West European countries. Trade unions in CEE countries have originated from a totally different situation than western unions. During the transition process, the market economy was still developing and political and societal power structures were completely redefined (Hassel, 2009). In contrast to the West, where tripartism began as a government action to mediate the conflicting interests of labor and capital, in CEE countries corporatism can be considered as a way of providing societal support for the government to pursue economic reforms (Ost, 2000). In a second explanation are the differences in the influence of the social partners on welfare state reform between Western and Eastern Europe a function of the strength and the organization of the social partners. In CEE countries, labour unions are almost only present in state-owned and formerly state-owned enterprises, not in private firms (Ost, 2000). Furthermore, after the communist era employees considered 'capitalism' as a popular concept. Unions were associated

with communism and therefore East European employees have been reluctant to construct strong labour unions. They were afraid that strong unions would reduce their chances to benefit from the new economic system and to catch up to Western Europe (Ost, 2000). The explanation that the social partners in Eastern Europe are less effective in influencing reforms because they are weaker and bargaining is decentralized, could also account for the variation in effectiveness that has been observed within the group of CEE countries (e.g. Avdagic, 2005; Beblavý et al, 2011; Beblavý, 2011; Beblavý et al, 2012).

Furthermore, it could be expected that the role of social partners in unemployment protection reform depends on the socio-economic situation. When unemployment rates increase, the risk of joblessness increases and generous unemployment benefits become more important for employees. Moreover, as labour markets become less tight, the chance that unions are successful in wage negotiations decreases. Therefore, the preferences of unions change and they are more prepared to accept wage moderation in exchange for less unemployment benefit cuts.

Hence, we test the hypothesis that a corporatist tradition of policy-making has a positive effect on the generosity of unemployment benefit schemes. Furthermore, we examine whether this relationship can also provide an explanation for the differences in unemployment protection reforms across West and East European countries, or whether corporatism functions differently in Western Europe than in Eastern Europe. Finally, we test the hypothesis that the positive effect of corporatism on unemployment protection reform increases at higher levels of unemployment.

2.4 Employment protection legislation and active labour market policies

In addition to partisan politics and employment relations, the relationships between different labour-market policy instruments are important in policy reforms. A single labour-market policy instrument is embedded in a large number of welfare state institutions in a country. These interrelationships have been taken into account in the welfare regime literature in which welfare states are regarded and conceptualised as configurations of various policy instruments (Esping-Andersen, 1990). However, in the quantitative comparative political economy literature, welfare state institutions are generally treated as isolated policy instruments. In the case of unemployment benefits, especially employment protection legislation (EPL) and active labour market policies (ALMPs) are relevant. Unemployment benefits and employment protection are often considered as substitutes in terms of providing income protection to employees (e.g. Blanchard and Tirole, 2004; Blanchard and Tirole, 2008; Boeri et al., 2006).[1] Hence, when EPL decreases, it can be expected that unemployment benefits become more generous.

The trade-off between unemployment benefits and EPL is the main axis of the flexicurity model of the EU. At the EU level, the concept of flexicurity is integrated in the European Employment Strategy, which is aimed at increasing employment and reducing unemployment. The main characteristic of flexicurity is that it is intended to overcome the tensions between labour market flexibility on the one hand, and the

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[1] In theory, unemployment insurance and employment protection could be considered as substitutes. We realize that there are considerable differences in conditions, design and incentives in practice.

provision of social security for workers on the other hand (Viebrock and Clasen, 2009). Flexibility and security are viewed as complementary. The flexicurity model builds on the combination of flexible labour markets, generous unemployment benefits and a strong emphasis on activation. Flexible labour markets can be seen as beneficial for job creation, especially during periods of recovery after recessions, but they generally imply lower levels of economic security. Welfare state programmes such as unemployment benefit schemes provide economic security, but they can have adverse effects, such as longer unemployment spells and therefore higher public expenditure and less mobility on the labour market. Furthermore, ALMPs such as labour market training, services of employment agencies and subsidized employment are aimed at increasing labour market participation and at reducing the adverse effects of generous unemployment benefit schemes.

Flexicurity is presented as a package of policy reforms for the labour market. Lower levels of employment protection for employees are compensated with more generous unemployment benefits and with high efforts on ALMPs (EC, 2006; EC, 2007a; EC, 2007b; Boeri e.a., 2007; Wilthagen and Tros, 2004; Madsen, 2007). Such reform packages could be successful, as they can be expected to overcome the opposition from employees (Eichhorst and Konle-Seidl, 2005). Hence, we test the hypotheses that the strictness of EPL is negatively related to the generosity of unemployment benefit schemes and that efforts on ALMPs are positively related to the generosity of unemployment protection.

3.   Data and methods

3.1   Country selection and period of analysis

In order to analyze whether the associations between labour relations and the partisan government composition on the one hand and unemployment benefit programs on the other are comparable between the Western and the CEE member states of the EU, all 27 EU member states are included. Since most of the empirical literature on welfare state reform has been focused on a typical group of Western OECD countries, a group that consists of EU countries and non-EU countries, we also examine whether the findings can be generalized to other advanced non-EU industrialist countries. In total, 34 countries are included: Australia, Austria, Belgium, Bulgaria, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, the United Kingdom and the United States.

One of the main reasons for the fact that CEE countries are rarely included in the comparative welfare state literature is the limited availability of data. Since the transition of the CEE countries in the 1990s, more and more data have become available and international institutions and scholars have started to construct and expand internationally comparable data sets which include both West and East European countries and other countries. As for our country sample most data is available for the period 1990 – 2009, this is the period the study is focused on.[2]

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[2] Our data is available upon request.

3.2 Dependent variable

In the welfare state literature, there is a lively debate going on about the selection of the measures to compare welfare states with. This issue is known as the 'dependent variable problem' (Clasen and Siegel, 2007). Often, expenditure ratios are used to compare social and labour market policies. But differences across countries in expenditure ratios do not always reflect social policy or the generosity of welfare systems. They may also reflect differences in unemployment rates or demographic structure across countries. Comparative studies of social security systems have increasingly turned to the use of (net) replacement rates as measures of the level of benefits in different countries and therefore of the degree of social protection offered by different welfare systems (Caminada and Goudswaard, 2001 and 2002). Using replacement rate data has the advantage of allaying some of the concerns that apply to social expenditure data; see among others Allan and Scruggs (2004) and Castles (2004). More importantly, it is also more clearly how changes in the welfare state have impacted upon the life chances of 'typical' individuals in the labour market (Allan and Scruggs, 2004: 501).

For this study we use data from Van Vliet and Caminada (2012). Their *Unemployment replacement rates dataset among 34 welfare states 1971-2009* provides systematic data on net unemployment replacement rates for singles persons and for a household with a dependent spouse, two children and a head of household drawing the unemployment benefit (N x T = 4,026). In this analysis we took a sub-sample of our dataset and (re)calculated unweighted averages of net replacement rates for two family situations, for an unemployment spell of 1 year and for the average production worker wage, only for the period 1990-2009 (N x T = 515).

The net unemployment replacement rate is defined as the ratio of the net income from unemployment benefits to the net income from work.[3] Calculations assume a worker, aged 40, who earns the average production worker wage.[4] Benefits for families include child benefits, including means tested benefits.

It should be noted that our dataset calculates net replacement rates for an average production worker in the initial phase of unemployment. This net replacement rate differs from a person in the 30th or 60th month of benefit receipt. In most countries the net replacement rate at the beginning of unemployment is relatively high for a couple

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[3] The net replacement rate varies according to the type of household, employee, sector of industry, wage and salary group and the reasons for not working. Hence, there is no such thing as *the* replacement rate in any country, rather there is a myriad of replacement rates corresponding to the specific personal and family characteristics of the unemployed, their previous history of work and unemployment, and the different structures and entitlements of unemployment insurance and social assistance systems in countries and the ways in which these systems interact with tax systems.

[4] The OECD has made a fundamental change in the approach of the average wages. The classical approach of calculating the average wage was based on the average wage of a production worker (APW), which refers to the wage level in the manufacturing industry. The new concept for the average wage refers to the average worker wage (AW), which includes much more sectors. The differences in the levels of the APW and the AW can be significant for individual countries. The transition from APW to AW started in 2005 and the AW is available from 2000 onwards. The APW data is available for all years up to 2005 and for the year 2007. Hence, there is no consistent time series for the period 1990-2009. In order to have a consistent replacement rate time series, Van Vliet and Caminada (2012) estimated the APW for the years 2006, 2008 and 2009 based on the growth rate of the AW.

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with two children, but lower for someone who is single. But here are, of course, substantial differences in the net replacement rate from one country to another.[5]

Table 1 presents the replacement rates for 1990, 2000 and the most recent data year available (2009). Levels vary to a large extent across countries. The highest net replacement rates around 2009 are found for Luxembourg, Switzerland and Portugal, while rather low levels are found for Australia, Greece, Malta, Poland, and the United Kingdom. In most, but not all, countries the replacement rate for single persons lies below the level for one earner couples with two children. Exceptions are Japan, Latvia, Portugal, Slovak Republic, Slovenia and the United States. Furthermore, the level of unemployment protection is considerably lower in Eastern Europe than in Western Europe, especially for household with children. Also, we see that average replacement rates in CEE countries have fallen during the period 1990-2009.

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[5] Hence, the fact that the replacement rate does not account for the duration of the unemployment benefit scheme and other characteristics such as eligibility criteria is a notable limitation of the indicator. However, at this point, our study does not deviate from other studies (e.g. Allan and Scruggs, 2004; Jensen, 2012; Vis, 2009).

Table 1. Net unemployment replacement rates around 1990, 2000 and 2009

	Single person				*One earner couple with two children*		
	1990	2000	2009		1990	2000	2009
Australia	0.31	0.28	0.23		0.68	0.66	0.57
Austria	0.58	0.56	0.55		0.73	0.70	0.68
Belgium	0.64	0.63	0.59		0.60	0.59	0.60
Bulgaria	0.69	0.58	0.59		0.72	0.62	0.65
Canada	0.65	0.63	0.58		0.71	0.76	0.71
Cyprus	0.67	0.61	0.58		0.81	0.78	0.76
Czech Republic	0.55	0.45	0.47		0.61	0.50	0.50
Denmark	0.67	0.61	0.55		0.72	0.66	0.62
Estonia	0.22	0.28	0.46		0.31	0.34	0.52
Finland	0.63	0.58	0.54		0.73	0.69	0.64
France	0.71	0.70	0.70		0.64	0.67	0.70
Germany	0.63	0.60	0.60		0.70	0.71	0.71
Greece	0.33	0.34	0.36		0.36	0.40	0.42
Hungary	0.68	0.46	0.36		0.77	0.58	0.49
Ireland	0.35	0.29	0.35		0.65	0.54	0.62
Italy	0.24	0.41	0.58		0.31	0.52	0.68
Japan	0.60	0.60	0.60		0.56	0.57	0.56
Lithuania	n.a.	0.42	0.49		n.a.	0.41	0.52
Latvia	0.30	0.69	0.54		0.32	0.68	0.51
Luxembourg	0.84	0.84	0.84		0.85	0.90	0.91
Malta	n.a.	0.29	0.30		n.a.	0.48	0.49
Netherlands	0.73	0.73	0.68		0.78	0.78	0.73
New Zealand	0.31	0.27	0.25		0.67	0.58	0.48
Norway	0.66	0.66	0.67		0.73	0.73	0.72
Poland	0.40	0.30	0.26		0.49	0.36	0.30
Portugal	0.79	0.79	0.78		0.76	0.79	0.75
Romania	0.70	0.72	0.59		0.75	0.75	0.63
Spain	0.70	0.54	0.50		0.79	0.69	0.69
Slovak Republic	0.68	0.57	0.64		0.74	0.61	0.58
Slovenia	0.64	0.64	0.65		0.64	0.67	0.66
Sweden	0.87	0.70	0.65		0.87	0.74	0.69
Switzerland	0.72	0.72	0.71		0.83	0.82	0.83
United Kingdom	0.21	0.19	0.17		0.37	0.54	0.50
United States	0.58	0.58	0.58		0.60	0.57	0.53
Mean 34 countries	0.57	0.54	0.53		0.65	0.63	0.62
Coef of Variation	0.33	0.32	0.30		0.24	0.21	0.20
Mean 27 EU	0.58	0.54	0.53		0.64	0.62	0.61
Coef of Variation	0.34	0.32	0.28		0.27	0.22	0.20
Mean 15 West-EU	0.59	0.57	0.56		0.66	0.66	0.66
Coef of Variation	0.35	0.32	0.29		0.26	0.18	0.16
Mean 10 CEE-EU	0.54	0.51	0.51		0.59	0.55	0.53
Coef of Variation	0.33	0.28	0.24		0.29	0.25	0.19

Note: around 1990 =average 1990-93; 2000 = average 1998-2001; around 2009 = average 2006-09. See Appendix A for more data years.

Source: *Unemployment replacement rates dataset among 34 welfare states 1971-2009* (Van Vliet and Caminada, 2012)

3.3 Independent variables

To analyze the role of social democratic and other left-wing parties in reforming unemployment benefit programmes, we use the percentage of total cabinet seats held by left-wing parties, weighted by the number of days the government was in office in a given year. For this variable, the study relies on data from the Comparative Political Data Set (Armingeon et al, 2011).

In the comparative political economy literature, several measures have been developed which enable welfare state scholars to examine the role of employment relations. The data sets of these measures include many countries and years, but CEE countries are not included in any of those data sets. Therefore, we construct a measure of employment relations that makes it possible to compare the effect of employment relations on unemployment benefit programs across West and East European countries. This measure, that is based on a measure developed by Swank (2011), is an additive index (standardized scores) of several dimensions highlighted in the variaties-of-capitalism literature. The first sub-indicator is a scale of the level of wage bargaining where a low score indicates fragmented bargaining, mostly at the company level, and a high score indicates economy-wide bargaining. The second measure gives an indication of the extent of involvement of the main union confederation in consultation with the government. The third measure is an index of the centralization of union confederation power, which includes the confederal control over appointment of leaders of affiliates, the confederal involvement in wage agreements negotiated by affiliate unions, the relative size of a joint strike fund and the confederal power over strikes by affiliates. The fourth indicator is the union density rate, measured as the net union membership as a proportion of wage and salary earners in employment. A higher score on the aggregate index indicates stronger labour relations. Data on sub-indicators are taken from Visser's (2011) ICTWSS data set. Further details on the labour relations measure are provided in Appendix B.

To examine the role EPL and ALMPs, two measures are included. For the strictness of EPL, we rely on an indicator that is provided by the OECD (2009). The indicator covers regular employment, temporary employment and the regulation on collective dismissals. It is calculated as a weighted average of sub-indicators of employment regulation, such as legislative provisions setting conditions under which a dismissal is justified, procedural inconveniences that an employer may face during a dismissal process, notice and severance pay provisions and the restrictions on the hiring of temporary employment by firms.[6] The indicator is normalized to a scale from 0 to 6 where a higher score indicates stricter employment regulation.[7] Furthermore, we

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[6] The indicator includes six sub-measures for restrictions on the hiring of temporary employment: valid cases for the use of fixed-term contracts, the maximum number of successive fixed-term contracts, the maximum cumulated duration of successive fixed-term contracts, the types of work for which temporary work agency employment is legal, restrictions on the number of renewals and the maximum cumulated duration of temporary work agency contracts.

[7] A limitation of this indicator is that some characteristics of EPL may be not fully reflected. For instance, since notice periods and severance pay are not legally regulated in some countries, they might be provided by collective agreements or contractual extensions. Because there is no detailed information about such contractual provisions, the EPL index often relies on minimal requirements as provided by labour law. Another disadvantage is the lack of incorporation of judicial practices deviating from the minimal legal

analyze expenditures on ALMPs as a percentage of GDP. The main programmes included are public employment service, labour market training, job rotation, employment incentives, supported employment, direct job creation and start-up incentives. For this measure, data are taken from the OECD (2012).

Furthermore, the study controls for the possible impact of globalization. The linkages between international economic integration and national welfare state reform have been analyzed extensively (Rodrik, 1998; Garrett and Mitchell, 2001). To date, the scholarly debate is centered around two hypotheses. The efficiency hypothesis states that in reaction to increased economic integration, governments reduce their social protection levels to offer attractive conditions for firms. Hence, policy competition among countries results in a social race to the bottom. According to the compensation hypothesis welfare states are expanded in order to compensate the increased labour market risks faced by people due to economic integration. Leibrecht et al (2011) found that compensation effects are dominant in Western European countries, whereas efficiency effects prevail in CEECs. To control for the impact of globalization on national unemployment programmes, two types of international economic integration are included, namely trade openness and financial openness. The first variable is measured as the sum of imports and exports as a percentage of GDP. The second variable is measured as the sum of the inflows and outflows of foreign direct investments (FDI) as a percentage of GDP. For both measures, data are taken from the World Development Indicators (World Bank, 2012).

In addition, the study accounts for a number of socio-economic variables. Data on the unemployment rate, measured as the percentage of the labour force unemployed, are taken from the World Development Indicators (World Bank, 2012). GDP per capita is included in the model to control for the economic development of a country. More economically developed countries usually have more generous social protection systems, because people are prepared to spend larger shares of their income on the provision of social security when income rises (Meltzer and Richard, 1983). Therefore, a positive impact of GDP per capita on the level of unemployment benefits can be expected. Data on real GDP per capita are taken from the Penn World Tables (Heston et al, 2011). Finally, the model controls for the impact of fiscal stresses that flow from structural demographic changes on unemployment benefit programs by including the age dependency ratio. Data on this variable, measured as the ratio of people younger than 15 and older than 64 to the working-age population (15-64), are taken from the World Development Indicators (World Bank, 2012).

3.4   Method

To analyze the variation in the time series cross-section data the study relies on an error correction model, which is a conventional estimator in the political economy literature to examine welfare state reform (Iversen and Cusack, 2000; Swank, 2011). In an error correction specification, changes of the dependent variable are regressed on both the lagged levels and the changes of the independent variables and on the lagged level of the dependent variable. As such, the estimator is able to capture both short-term transitory effects and long-term structural effects of the independent variables by

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requirements (OECD, 2004). Despite these limitations, the index is a conventional summary measure to analyse a relatively large number of countries over a longer period.

modeling first differences and levels respectively (Beck, 1991; De Boef and Keele, 2008; Podestà, 2006).

In the framework of this study, error correction models offer a number of advantages. First, analyzing changes in the dependent variable enables us to examine the determinants of the developments in unemployment benefit programs from 1990 onwards. There are many differences between welfare state programs of West and East EU countries. Most notably is the fact that social benefits are generally more generous in West than in East EU countries. As explanations for this difference in benefit levels are mainly related to the different paths of welfare state development in East and West European countries in the twentieth century, corporatism and the partisan composition of governments cannot be expected to explain absolute replacement rate levels (cf. Jensen, 2012).[8] Furthermore, welfare state institutions such as unemployment benefits demonstrate high levels of serial correlation. An important advantage of error correction models is that they are better able to cope with such problems than specifications in levels only (Beck, 1991; De Boef and Keele, 2008). Hence, the estimating equation for the empirical model is:

$$\Delta y_{it} = \alpha + \theta y_{it-1} + \Sigma \ \beta^j \ X^{j}_{it-1} + \Sigma \ \gamma^j \Delta X^{j}_{it} + \varepsilon_{it}$$

where Δy_{it} denotes the first difference in the dependent variable in country i and year t; α is the intercept and ε is the error term. X is a vector of independent variables, for which the short-term effects are indicated by the γ coefficient. The long-term effects of the independent variables are estimated by dividing the coefficient for the level variable (β) by the negative coefficient of the lagged dependent variable (θ). Furthermore, the lagged level of the replacement rate captures cross-national convergence of replacement rates (Plümper and Schneider, 2009). A negative coefficient θ would imply that below average benefit levels are catching up and that above average benefits are related to cuts, conditional on the other independent variables.

We employ ordinary least squares regression analyses. The main model specification does not include country fixed effects because of two reasons. First, the inclusion of both a lagged dependent variable and country fixed effects renders the estimator inconsistent (Nickell, 1991). Second, country fixed effects completely absorb differences in the level of independent variables across countries (Plümper et al, 2005). Because there is not much variation over time in one of the theoretically important independent variables of this study, corporatism, we follow the emerging convention in the literature for such cases which is not including country fixed effects (Jensen, 2012; Swank, 2011). Panel-corrected standard errors are applied to correct for panel-heteroscedasticity and contemporaneous spatial correlation (Beck and Katz, 1995).[9]

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[8] Nevertheless, estimation results of specifications using level variables are shown in the section on sensitivity analyses.

[9] In the section on sensitivity analyses, we also present estimation results with country and year fixed effects.

4.   Results

4.1   Descriptive statistics

Table 2 presents the means and the standard deviations of the dependent and the independent variables. In line with the findings in the existing literature, the corporatism index, for which the standardized z-scores range from -1.76 for weak corporatism to +1.76 for strong corporatism, indicates that corporatism is weaker in CEE countries than in Western Europe. The globalization variables trade and FDI indicate that Eastern European countries have opened up their economies rapidly. The socio-economic conditions vary considerably across West and Eastern European countries. In Western Europe, the GDP per capita is higher and the unemployment rates are lower, but the age dependency ratio is higher.

Table 2. Descriptive statistics

	Net replacement rate			Left government			Right government		
	1990	*2000*	*2009*	*1990*	*2000*	*2009*	*1990*	*2000*	*2009*
Mean 34 countries	0.61	0.58	0.57	28.2	38.5	36.3	41.3	37.1	41.7
Standard Deviation	0.17	0.14	0.13	30.0	33.4	29.6	35.7	32.6	32.4
Mean 27 EU	0.61	0.58	0.57	27.0	44.0	37.1	37.3	34.8	38.0
Standard Deviation	0.18	0.15	0.13	27.6	33.9	28.8	34.3	31.6	31.5
Mean 15 West-EU	0.63	0.62	0.61	31.5	57.6	36.1	38.0	20.1	38.7
Standard Deviation	0.18	0.15	0.13	27.7	34.6	30.2	38.9	26.1	37.1
Mean 10 CEE-EU	0.57	0.53	0.52	24.7	30.3	41.5	39.9	55.2	42.1
Standard Deviation	0.17	0.14	0.11	27.5	24.6	26.5	27.5	22.9	21.0

	Corporatism (-/+ 1.76)			FDI as % GDP			Trade as % GDP		
	1990	*2000*	*2009*	*1990*	*2000*	*2009*	*1990*	*2000*	*2009*
Mean 34 countries	0.13	-0.02	-0.07	4.2	20.5	30.6	77.0	93.8	103.1
Standard Deviation	0.73	0.82	0.74	11.4	65.5	113.6	40.4	48.8	54.1
Mean 27 EU	0.21	0.10	0.03	4.6	24.4	36.7	85.0	103.7	115.1
Standard Deviation	0.66	0.78	0.71	12.8	73.3	126.8	40.5	48.5	53.3
Mean 15 West-EU	0.41	0.45	0.41	7.3	39.8	54.9	73.6	95.4	105.7
Standard Deviation	0.68	0.69	0.63	17.0	97.2	167.4	40.8	56.4	64.3
Mean 10 CEE-EU	-0.11	-0.43	-0.53	1.5	5.3	13.2	91.7	109.0	125.3
Standard Deviation	0.52	0.66	0.47	1.2	2.4	16.2	30.3	30.7	29.4

	Unemployment rate			GDP per capita			Age dependency ratio		
	1990	*2000*	*2009*	*1990*	*2000*	*2009*	*1990*	*2000*	*2009*
Mean 34 countries	8.2	8.0	6.6	20.570	24.903	30.253	50.2	48.9	47.3
Standard Deviation	4.6	4.0	2.1	9.589	11.674	13.782	3.5	2.8	3.9
Mean 27 EU	8.6	8.7	7.1	18.455	22.547	28.028	50.4	48.6	46.9
Standard Deviation	4.9	4.1	2.0	9.397	11.626	14.276	3.5	2.8	4.1
Mean 15 West-EU	8.3	7.3	6.9	25.191	30.701	36.453	49.8	49.6	49.9
Standard Deviation	4.0	3.5	2.0	6.921	8.812	13.782	4.2	2.7	2.2
Mean 10 CEE-EU	10.4	11.5	7.8	9.177	11.212	16.890	50.8	47.3	43.3
Standard Deviation	5.9	3.9	1.8	2.997	3.990	4.829	2.0	2.6	2.7

Notes:
- Around 1990 =average 1990-93; 2000 = average 1998-2001; around 2009 = average 2006-09
- Replacement rates are calculated as unweighted averages of net benefits for two family situations
- Real GDP per capita, PPP converted, at 2005 dollars, constant prices

Table 3 shows the variation across countries and over time for the EPL indicator and for expenditures on ALMPs as percentage of GDP. Because data on these measures is not available for most of the CEE countries, means and standard deviations are only presented for two country groups.[10] The data show that the strictness of EPL declined between 1990 and 2009.[11] Furthermore, the scores on the EPL indicator and the expenditures on ALMPs are in most of the EU countries higher than in non-EU countries.

Table 3. Employment protection legislation and ALMP expenditure

	EPL			ALMP as % GDP		
	1990	2000	2009	1990	2000	2009
Australia	0.9	1.2	1.2	0.4	0.4	0.3
Austria	2.2	2.2	1.9	0.3	0.5	0.7
Belgium	3.2	3.2	2.2	1.1	1.2	1.2
Canada	0.8	0.8	0.8	0.6	0.4	0.3
Czech Republic	1.9	1.9	2.0	0.2	0.2	0.3
Denmark	2.4	1.5	1.5	0.9	1.8	1.4
Finland	2.2	2.1	2.0	1.3	1.0	0.9
France	3.0	3.0	3.0	0.9	1.2	0.9
Germany	3.2	2.3	2.1	1.2	1.2	0.8
Greece	3.5	3.5	2.7	0.2	0.3	0.2
Hungary	1.3	1.3	1.6	0.6	0.4	0.3
Ireland	0.9	0.9	1.1	1.1	0.9	0.6
Italy	3.6	2.5	1.8	0.3	0.6	0.5
Japan	1.8	1.5	1.4	0.3	0.3	0.2
Netherlands	2.7	2.3	2.0	1.4	1.5	1.1
New Zealand	0.9	1.2	1.4	0.9	0.5	0.4
Norway	2.9	2.6	2.7	1.0	0.7	0.6
Poland	1.4	1.4	1.9	0.3	0.3	0.5
Portugal	3.9	3.7	3.2	0.5	0.6	0.6
Slovak Republic	1.8	1.8	1.4	0.6	0.3	0.3
Spain	3.8	3.0	3.0	0.6	0.7	0.7
Sweden	-	2.5	2.4	2.4	2.0	1.2
Switzerland	1.1	1.1	1.1	0.3	0.6	0.6
United Kingdom	0.6	0.6	0.8	0.5	0.2	0.3
United States	-	0.7	0.7	0.2	0.2	0.1
Mean 25 countries	2.2	1.9	1.8	0.7	0.7	0.6
Standard deviation	1.1	0.9	0.7	0.5	0.5	0.4
Mean 18 EU countries	2.4	2.2	2.0	0.8	0.8	0.7
Standard deviation	1.0	0.9	0.7	0.6	0.6	0.4

Notes:
- Around 1990 =average 1990-93; around 2000 = average 1998-2001; around 2009 = average 2006-09
- EU-18 countries: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Netherlands, Poland, Portugal, Slovak Republic, Spain, Sweden and the United Kingdom

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[10] Because the values for EPL for Sweden and the United States are missing, we also calculated the means and the standard deviations for a group of 23 countries and a group of 17 EU countries. For both country groups, the trends between 1990 and 2009 are similar to the trends presented in Table 3.
[11] It has been well documented that reforms aimed at flexibilisation have regularly resulted in two-tier reforms, in which the employment protection for temporary contracts has been reduced, while the employment protection for permanent contracts has remained unchanged (Saint-Paul, 2004; Boeri and Garibaldi, 2007; Van Vliet and Nijboer, 2012).

NEUJOBS

- 25 countries: Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, United Kingdom and the United States

4.2   Regression results

Table 4 shows the results of the regression analyses of net unemployment benefit replacement rates for four different country groups for the period 1990-2009. For all country samples the models show a negative association between left-wing governments and replacement rates. These results do not provide support for the argument that leftist governments are associated with expansions or less retrenchments of unemployment protection. In fact, the findings suggest an opposite relationship. In contrast, the results for right-wing governments are in line with the argument that right-wing parties are associated with unemployment benefit cuts.[12]

With respect to corporatism, the models show a positive and strongly significant effect of corporatism. In line with our hypothesis, this result tends to indicate that social partners are better able to resist benefit cuts when they are more involved in national policy-making processes. The result for the group of CEE countries indicates that the variation in corporatism is also significantly correlated to the variation in replacement rates within the group of East European countries. Furthermore, the combination of the findings for the group of 27 EU countries and the 10 CEE countries sheds light on the variation in the role of industrial relations between Western and Eastern Europe. The findings suggest that it is the variation in the strength and the organization of the social partners across Western and Eastern countries that accounts for different unemployment benefit reforms rather than the variation in the effectiveness of collective bargaining. The lack of significance for the group of the 15 Western countries is probably due to the fact that this is a rather homogenous group with less variation (over time), because the coefficient for corporatism is strongly significant for the estimation for 27 countries. Moreover, this result is in line with Swank (2011), who did not find a significant effect of national coordination for Western countries either.

Regarding the globalization variables, the results presented Table 4 indicate that within the group of 15 West-EU countries, high levels of capital mobility are positively and significantly related to changes in unemployment benefit levels. This implies that the compensation effect dominates in the West-EU countries, which is in line with the findings of Leibrecht et al (2010). However, this effect cannot be found for trade openness. In the CEE-EU countries, changes in capital mobility are positively associated with changes in unemployment schemes, but this effect has not culminated in a significant structural effect. The transitory and structural effects of trade openness show opposite coefficients for the CEE-EU countries. It could be the case that in the short run increases in trade openness have resulted in benefit cuts. Especially during the transition period, many Eastern European governments have been active in applying fiscal policy tools to create attractive conditions for firms, such as cuts in corporate income taxes (Drahokoupil, 2009; Leibrecht et al, 2010). Then, benefit cuts may be necessary to balance the budget again. In the long run, after a period of trade

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[12] However, these effects for right-wing governments are not robust. When the effects of left-wing governments and right-wing governments are estimated in separate models, the effects of right-wing governments are not significant. This is in line with the results presented below.

liberalization, the demand for social benefits has increased to compensate the risks stemming from the increased dynamics on the labour market as a result of the high levels of trade openness. Indeed, unemployment levels have increased and labour force participation among elderly people and women has decreased considerably after the transition crisis (Avdagic, 2005; Havlik and Landesmann 2004; Onaran 2008). Interestingly, in the EU as a whole, the changes and the levels of trade openness are negatively and significantly related to changes in replacement rates. These results lend support to the efficiency hypothesis, stating that increases in trade openness lead to policy competition among countries resulting in cuts in unemployment benefits.

Turning to the socio-economic variables, the results indicate that the unemployment rate is negatively related to the replacement rate. This is in line with the expectation that persistently high levels of joblessness generate budgetary problems and therefore lead to cuts in unemployment benefits. However, the coefficients for the long term effects are only significant in the group of 15 West-EU countries and the 10 CEE countries. The results for the short term effects are not significant. Interestingly, the results show rather mixed effects of GDP per capita. In the large country groups of 34 countries and 27 EU countries, GDP per capita is positively and significantly related to unemployment replacement rates, whereas in the groups of the 15 West-EU countries and the 10 CEE-EU countries the relationship between these two variables is negative and significant. This difference can probably be explained by the fact that there is much more variation in GDP per capita in the large groups than in the small groups. The large groups consist of both Western countries with relatively high levels of GDP per capita and Eastern countries with relatively low GDP per capita. Hence, the GDP per capita variable captures the effect that economically more developed countries have more generous welfare states. In the smaller and more homogenous groups, this co-variation cannot be found. Here, the negative coefficients for GDP per capita are probably indicative of a denominator effect. If incomes grow at a faster rate than unemployment benefit levels, replacement rates become lower. Subsequently, the results for the age dependency ratio do not provide much evidence for the expectation that demographic changes in the ratio between dependent people and the labour force reduce the fiscal room for income replacement schemes for the unemployed. Only in the 10 CEE countries there is a negative and strongly significant relationship between age dependency ratios and unemployment replacement rates.

The negative and strongly significant coefficients for the lagged dependent variable indicate convergence of the replacement rates in the period 1990-2009 in all four models. The convergence of unemployment benefit replacement rates in the 15 West-EU countries is in line with the convergence across those countries indicated by other welfare state indicators (Caminada et al, 2010). Interestingly, the magnitude of the coefficients indicate that the trend of convergence is the strongest across the 10 CEE countries. This is in line with the trends presented in Table 1. The estimates for the 27 EU countries indicate that convergence of the level of unemployment benefits has also taken place in the EU as a whole, which is stronger than in the group of 34 countries. Moreover, the fact that the coefficient for the lagged replacement rate for the 27 countries is higher than the coefficient for the group of the 15 West-EU countries indicates that, keeping other explanatory variables constant, the new member states

have caught up.[13] These results for the CEE countries are at variance with the findings of Draxler and Van Vliet (2010) who found neither welfare state convergence among the CEE countries, nor between the West and East EU member states for the years 2000-2006.

Table 4. Net unemployment benefit replacement rates, 1990-2009

	34 countries	27 EU countries	15 West-EU countries	10 CEE-EU countries
Δ Left government	-0.003	-0.002	0.003	-0.015
	(0.004)	(0.008)	(0.009)	(0.028)
Left government (t-1)	-0.011***	-0.011***	-0.011***	-0.050***
	(0.002)	(0.004)	(0.004)	(0.019)
Δ Right government	-0.005	-0.004	0.005	-0.021
	(0.004)	(0.009)	(0.011)	(0.024)
Right government (t-1)	-0.008**	-0.006	-0.013***	-0.038
	(0.003)	(0.005)	(0.005)	(0.024)
Corporatism (t-1)	0.381***	0.299***	-0.004	2.894***
	(0.066)	(0.111)	(0.166)	(0.863)
Δ Capital mobility	0.000	0.000	0.002	0.015**
	(0.001)	(0.002)	(0.001)	(0.007)
Capital mobility (t-1)	0.000	-0.000	0.004**	0.016
	(0.001)	(0.002)	(0.002)	(0.013)
Δ Trade openness	-0.055***	-0.059***	-0.009	-0.071***
	(0.021)	(0.023)	(0.015)	(0.027)
Trade openness (t-1)	-0.002	-0.005*	0.006*	0.037***
	(0.002)	(0.003)	(0.003)	(0.010)
Δ Unemployment rate	0.147	0.163	-0.128	0.429*
	(0.120)	(0.131)	(0.081)	(0.227)
Unemployment rate (t-1)	-0.032	-0.048	-0.070***	-0.342***
	(0.041)	(0.052)	(0.024)	(0.106)
Δ GDP per capita (x 10^{-2})	0.020*	0.026**	-0.016	-0.001
	(0.011)	(0.012)	(0.010)	(0.070)
GDP per capita (x 10^{-2}) (t-1)	0.003**	0.004**	-0.006***	-0.046***
	(0.001)	(0.002)	(0.002)	(0.013)
Δ Age dependency ratio	0.251	0.036	1.312***	-3.738***
	(0.174)	(0.245)	(0.398)	(1.229)
Age dependency ratio (t-1)	-0.030	-0.030	0.059	-0.587***
	(0.040)	(0.057)	(0.038)	(0.135)
Replacement rate (t-1)	-0.051***	-0.058***	-0.049***	-0.211***
	(0.011)	(0.012)	(0.011)	(0.035)
Constant	4.362***	4.812***	2.625	45.020***
	(1.258)	(1.813)	(2.206)	(8.711)
N x T	515	382	269	99
Adj. R-Squared	0.060	0.066	0.085	0.197

Notes: Unstandardized coefficients; panel-corrected standard errors in parentheses.
* $p<0.10$; ** $p<0.05$; *** $p<0.01$
Replacement rates are calculated as unweighted averages of net benefits for two family situations (single person and one earner couple with two children), for an unemployment spell of 1 year and for the average production worker wage.

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[13] Interestingly, the descriptive statistics presented in Table 1 and Table 2 indicate that this is indeed only the case if we control for other explanatory variables.

In the next set of regressions we examine to what extent the relationship between partisan differences and corporatism on the one hand and unemployment benefit reforms on the other is conditional on the socio-economic situation. The results presented in Table 5 indicate that left-wing governments are positively and significantly related to unemployment protection, but that this positive effect becomes smaller at higher unemployment rates. At high unemployment rates, leftist governments are even negatively associated with unemployment protection levels. Interestingly, this result suggests that the constraining effect of rising unemployment stemming from budgetary pressure dominates the effect of the higher demand for unemployment protection from the median voter. The estimations for the 27 EU countries indicate that the positive effect of leftist governments turns into a negative effect around an unemployment rate of 8 percent. This effect is graphically illustrated in Figure 1. Furthermore, the results indicate that the relationship between leftist governments and unemployment benefits is comparable across West- and CEE-EU countries.[14] The results for right-wing governments are not significant. Hence, the findings do not provide empirical evidence for the argument that the effect of right-wing governments is conditional on the unemployment rate.

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[14] For the 15 West-EU countries, the coefficient for 'Left government (t-1)' does not reach significance. However, this variable is significant in models where the effects of left-wing and right-wing governments are estimated separately.

Table 5. Net unemployment benefit replacement rates and interaction effects, 1990-2009

	34 countries	27 EU countries	15 West-EU countries	10 CEE-EU countries
Δ (Left government x Unemployment rate)	-0.001	-0.003	-0.002**	0.001
	(0.001)	(0.002)	(0.001)	(0.006)
Left government (t-1) x Unemployment rate (t-1)	-0.004***	-0.005***	-0.002**	-0.016***
	(0.001)	(0.001)	(0.001)	(0.004)
Δ Left government	0.010	0.020	0.024*	-0.033
	(0.011)	(0.018)	(0.013)	(0.064)
Left government (t-1)	0.027***	0.041***	0.009	0.156***
	(0.005)	(0.007)	(0.009)	(0.050)
Δ (Right government x Unemployment rate)	-0.002	-0.003	0.001	-0.005
	(0.002)	(0.002)	(0.002)	(0.006)
Right government (t-1) x Unemployment rate (t-1)	-0.001	-0.001	-0.000	-0.010**
	(0.001)	(0.001)	(0.001)	(0.004)
Δ Right government	0.008	0.020	0.001	0.028
	(0.015)	(0.022)	(0.015)	(0.063)
Right government (t-1)	0.003	0.008	-0.005	0.117**
	(0.006)	(0.007)	(0.008)	(0.053)
Corporatism (t-1)	0.375***	0.365***	0.022	2.027**
	(0.060)	(0.104)	(0.167)	(0.842)
Δ Capital mobility	0.001	0.001	0.002	0.011
	(0.002)	(0.002)	(0.001)	(0.017)
Capital mobility (t-1)	0.001	0.000	0.004**	-0.004
	(0.001)	(0.002)	(0.002)	(0.020)
Δ Trade openness	-0.057***	-0.062***	-0.010	-0.078***
	(0.019)	(0.020)	(0.014)	(0.024)
Trade openness (t-1)	-0.003**	-0.006***	0.005	0.024**
	(0.001)	(0.002)	(0.003)	(0.011)
Δ Unemployment rate	0.305*	0.417**	-0.017	0.608
	(0.160)	(0.191)	(0.127)	(0.577)
Unemployment rate (t-1)	0.179***	0.214***	0.037	0.623**
	(0.058)	(0.057)	(0.044)	(0.276)
Δ GDP per capita (x 10^{-2})	0.021**	0.026**	-0.013	0.024
	(0.010)	(0.012)	(0.009)	(0.058)
GDP per capita (x 10^{-2}) (t-1)	0.004***	0.006**	-0.005***	-0.037***
	(0.001)	(0.002)	(0.002)	(0.013)
Δ Age dependency ratio	0.228	-0.035	1.139***	-3.626***
	(0.179)	(0.296)	(0.423)	(1.137)
Age dependency ratio (t-1)	-0.058	-0.070	0.026	-0.525***
	(0.043)	(0.058)	(0.041)	(0.136)
Replacement rate (t-1)	-0.048***	-0.056***	-0.044***	-0.216***
	(0.009)	(0.010)	(0.012)	(0.033)
Constant	3.525*	3.753	2.553	28.654***
	(1.920)	(2.519)	(2.391)	(9.144)
N x T	515	382	269	99
Adj. R-Squared	0.088	0.103	0.089	0.262

Notes: Unstandardized coefficients; panel-corrected standard errors in parentheses.
* p<0.10; ** p<0.05; *** p<0.01

Figure 1.   Marginal effect of left-wing governments at various levels of unemployment, 27 EU countries

————	Marginal effect of left-wing governments
– – – –	95% Confidence Interval
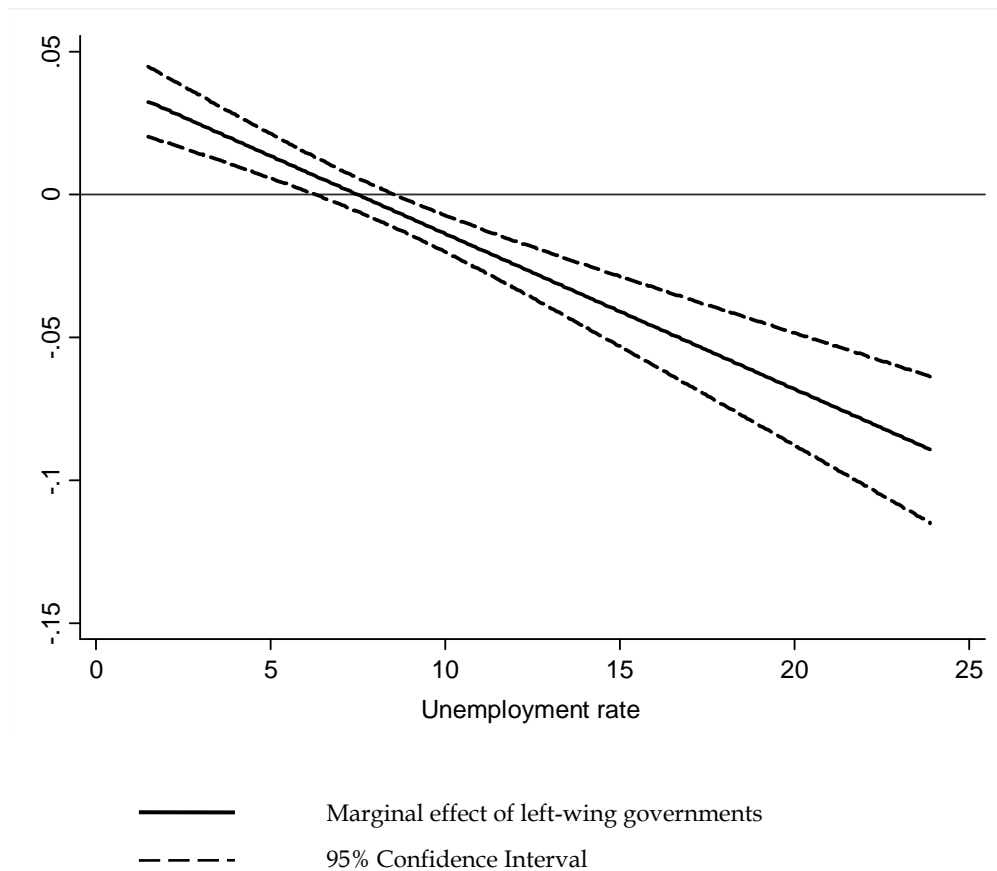
In the models presented in Table 6 we examine whether also the association between industrial relations and unemployment protection is conditional on the socio-economic situation. For the group of 27 EU countries, the results show a positive and significant interaction effect between corporatism and unemployment rates. This finding supports our expectation that in times of high unemployment rates labour unions are more willing to accept wage moderation in exchange for less harsh retrenchments on unemployment benefits. However, the evidence for this relationship is rather weak as it does not reach significance in the other country groups.

Table 6. Net unemployment benefit replacement rates, with corporatism interaction, 1990-2009

	34 countries	27 EU countries	15 West-EU countries	10 CEE-EU countries
Δ Left government	-0.003	-0.003	0.005	-0.010
	(0.004)	(0.008)	(0.009)	(0.031)
Left government (t-1)	-0.011***	-0.011***	-0.011***	-0.046**
	(0.002)	(0.004)	(0.004)	(0.021)
Δ Right government	-0.006	-0.003	0.006	-0.016
	(0.005)	(0.010)	(0.011)	(0.027)
Right government (t-1)	-0.008**	-0.006	-0.014***	-0.034
	(0.004)	(0.006)	(0.005)	(0.026)
Corporatism (t-1) x Unemployment rate (t-1)	0.035	0.068**	-0.056	0.118
	(0.023)	(0.028)	(0.045)	(0.225)
Corporatism (t-1)	0.140	-0.231	0.386	1.857
	(0.153)	(0.257)	(0.298)	-2.379
Δ Capital mobility	0.000	0.000	0.002	0.015**
	(0.001)	(0.002)	(0.001)	(0.007)
Capital mobility (t-1)	0.000	-0.000	0.004**	0.015
	(0.001)	(0.002)	(0.002)	(0.013)
Δ Trade openness	-0.055***	-0.058**	-0.007	-0.075***
	(0.021)	(0.023)	(0.015)	(0.028)
Trade openness (t-1)	-0.002	-0.006*	0.007*	0.033**
	(0.002)	(0.003)	(0.004)	(0.014)
Δ Unemployment rate	0.142	0.154	-0.129	0.383
	(0.123)	(0.137)	(0.080)	(0.259)
Unemployment rate (t-1)	-0.033	-0.053	-0.054**	-0.279*
	(0.042)	(0.055)	(0.026)	(0.157)
Δ GDP per capita (x 10^{-2})	0.019*	0.025**	-0.016*	-0.006
	(0.011)	(0.012)	(0.010)	(0.074)
GDP per capita (x 10^{-2}) (t-1)	0.003**	0.005**	-0.006***	-0.044***
	(0.001)	(0.002)	(0.002)	(0.015)
Δ Age dependency ratio	0.237	-0.009	1.346***	-3.720***
	(0.180)	(0.246)	(0.393)	-1.254
Age dependency ratio (t-1)	-0.031	-0.037	0.065*	-0.582***
	(0.040)	(0.058)	(0.037)	(0.142)
Replacement rate (t-1)	-0.051***	-0.058***	-0.050***	-0.216***
	(0.011)	(0.012)	(0.011)	(0.039)
Constant	4.459***	5.241***	2.390	44.445***
	(1.263)	(1.858)	(2.187)	(9.216)
N x T	515	382	269	99
Adj. R-Squared	0.059	0.066	0.084	0.189

Notes: Unstandardized coefficients; panel-corrected standard errors in parentheses.
* p<0.10; ** p<0.05; *** p<0.01

Subsequently, we examine the role of employment protection legislation and active labour market policies in reforms of unemployment benefit schemes. The results of the estimations are presented in Table 7, indicating that the strictness of EPL is positively and significantly associated with unemployment protection. This is not in line with the hypothesis that the strictness of EPL is negatively related to the generosity of unemployment benefits. Accounting for ALMP expenditures does not alter these results and ALMP expenditures are not significantly related to unemployment protection. As the flexicurity strategy is a typical European model, we also estimated the models for a group of 18 EU countries. Again, the results do not lend support for the argument that unemployment benefits and EPL are considered as substitutes. The findings can probably be explained by the fact that the lagged levels of the independent variables capture the between-country variation, as the regressions do not include fixed effects. As such, the results indicate that countries with strict employment regulation have also high unemployment benefit levels.

Furthermore, the results for left-wing and right-wing governments are largely in line with the estimations of the previous presented models. However, the coefficients for corporatism have lost their significance. This is probably due to the fact that corporatism is correlated with EPL and ALMP (correlation coefficients of 0.47 and 0.54 respectively).

Table 7. Net unemployment benefit replacement rates, EPL and ALMP, 1990-2009

	25 countries	25 countries	25 countries	18 EU countries	18 EU countries	18 EU countries
Δ (Left government x Unemployment rate)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.003*** (0.001)	-0.003*** (0.001)	-0.003*** (0.001)
Left government (t-1) x Unemployment rate (t-1)	-0.003*** (0.001)	-0.003*** (0.001)	-0.003*** (0.001)	-0.003*** (0.001)	-0.003*** (0.001)	-0.003*** (0.001)
Δ Left government	0.015* (0.008)	0.013* (0.007)	0.015* (0.008)	0.047*** (0.016)	0.038*** (0.013)	0.047*** (0.014)
Left government (t-1)	0.015*** (0.006)	0.015*** (0.005)	0.014*** (0.005)	0.026** (0.010)	0.022** (0.009)	0.021** (0.009)
Δ (Right government x Unemployment rate)	-0.001 (0.001)	-0.000 (0.001)	-0.000 (0.001)	-0.003* (0.002)	-0.002 (0.002)	-0.002 (0.002)
Right government (t-1) x Unemployment rate (t-1)	-0.001 (0.001)	-0.001* (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Δ Right government	0.017 (0.012)	0.001 (0.011)	0.005 (0.012)	0.043** (0.017)	0.025 (0.017)	0.026 (0.017)
Right government (t-1)	0.005 (0.007)	0.005 (0.006)	0.005 (0.006)	0.003 (0.010)	0.004 (0.010)	-0.000 (0.010)
Corporatism (t-1)	0.106 (0.155)	0.205* (0.119)	0.056 (0.152)	0.131 (0.185)	0.207 (0.188)	-0.007 (0.172)
Δ Capital mobility	0.003 (0.009)	0.003 (0.009)	-0.000 (0.010)	-0.001 (0.011)	-0.001 (0.011)	-0.009 (0.012)
Capital mobility (t-1)	-0.025** (0.010)	-0.019 (0.012)	-0.023* (0.012)	-0.040*** (0.013)	-0.034** (0.014)	-0.044*** (0.015)
Δ Trade openness	-0.079*** (0.016)	-0.085*** (0.016)	-0.078*** (0.016)	-0.081*** (0.019)	-0.096*** (0.019)	-0.081*** (0.018)
Trade openness (t-1)	0.006* (0.003)	0.006 (0.004)	0.008* (0.004)	0.015*** (0.005)	0.009* (0.005)	0.019*** (0.005)
Δ Unemployment rate	0.054 (0.145)	0.039 (0.129)	0.025 (0.130)	0.155 (0.158)	0.115 (0.146)	0.095 (0.147)

Unemployment rate (t-1)	0.163***	0.175***	0.172***	0.190***	0.187***	0.176***
	(0.049)	(0.046)	(0.050)	(0.058)	(0.058)	(0.061)
Δ GDP per capita (x 10⁻²)	-0.024	-0.030*	-0.027	-0.044*	-0.056**	-0.053*
	(0.020)	(0.018)	(0.019)	(0.025)	(0.027)	(0.027)
GDP per capita (x 10⁻²) (t-1)	0.004***	0.004***	0.005***	0.004*	0.004*	0.005**
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
Δ Age dependency ratio	0.679**	0.699**	0.688**	0.783	0.737**	0.717**
	(0.308)	(0.280)	(0.287)	(0.477)	(0.368)	(0.355)
Age dependency ratio (t-1)	-0.002	0.003	0.004	0.066*	0.024	0.073*
	(0.029)	(0.026)	(0.028)	(0.038)	(0.038)	(0.037)
Replacement rate (t-1)	-0.036***	-0.031***	-0.034***	-0.057***	-0.037***	-0.060***
	(0.012)	(0.010)	(0.010)	(0.017)	(0.012)	(0.011)
Δ EPL	1.379		0.934	1.605		1.189
	(1.019)		(0.806)	(1.053)		(0.859)
EPL (t-1)	0.273		0.310**	0.667**		0.771***
	(0.169)		(0.127)	(0.276)		(0.201)
Δ ALMP expenditure		0.254	-0.328		0.119	-0.390
		(0.718)	(0.830)		(0.745)	(0.888)
ALMP expenditure (t-1)		-0.270	-0.203		-0.278	0.122
		(0.275)	(0.282)		(0.278)	(0.267)
Constant	-0.528	-0.365	-1.369	-4.493**	-1.304	-5.224***
	(1.397)	(1.428)	(1.470)	(1.814)	(1.892)	(2.021)
N x T	403	391	375	285	272	264
Adj. R-Squared	0.083	0.079	0.078	0.119	0.092	0.112

Notes: Unstandardized coefficients; panel-corrected standard errors in parentheses.
EU-18 countries: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Netherlands, Poland, Portugal, Slovak Republic, Spain, Sweden and the United Kingdom
25 countries: Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, United Kingdom and the United States
* p<0.10; ** p<0.05; *** p<0.01

4.3 Sensitivity analyses

To examine the robustness of the results, we run a number of additional regressions. First, we take into account that the error correction models presented above do not control for country and year fixed effects. Therefore, we also estimate level specifications of the models, which take the following form:

$$y_{it} = \alpha + \Sigma \, \beta X_{it-1} + \mu_i + \lambda_t + \varepsilon_{it}$$

Here, y_{it} denotes the level of the dependent variable, α is the intercept, X is a vector of independent variables and country and year dummies are modelled by μ and λ respectively. The error term ε follows and AR(1)-process to correct for autocorrelation. Furthermore, panel-corrected standard errors are used to correct for panel-heteroscedasticity and contemporaneous spatial correlation.

The first three columns of Table 8 present the results of estimation for the 27 EU countries. The results in the first column indicate that the effects for left-wing governments are in line with the results presented above. Remarkably, the results suggest that the effects of right-wing governments are comparable to the effects of left-wing governments. However, the third column indicates that this effect for right-wing governments is not robust, whereas the second column shows that the results for left-

wing governments are robust. As to corporatism, the regressions yield similar results as the models presented above.

The next three columns present the results of the models with the EPL indicator and ALMP expenditures. Interestingly, these results differ strongly from the results presented above. In line with the hypotheses, the strictness of EPL is negatively associated with the generosity of unemployment benefit schemes and ALMP expenditures are positively related to unemployment protection. However, the result for ALMP expenditure does not hold when EPL and ALMP expenditure are both included. The results indicate that when we focus on the within-country variation with a fixed effects specification, EPL and unemployment benefits can be considered as substitutes. This result provides support for the idea behind the flexicurity model that lower levels of EPL for employees can be compensated with more generous unemployment benefits. Finally, the results for the globalization variables and the socio-economic variables are largely in line with the estimations of the previous models.

Table 8. Fixed effects regressions of net unemployment benefit replacement rates, 1990-2009

	27 EU countries	27 EU countries	27 EU countries	18 EU countries	18 EU countries	18 EU countries
Left government (t-1) x	-0.007***	-0.003***		-0.005***	-0.006***	-0.005***
Unemployment rate (t-1)	(0.002)	(0.001)		(0.002)	(0.002)	(0.002)
Left government (t-1)	0.085***	0.036***		0.076***	0.083***	0.077***
	(0.023)	(0.010)		(0.022)	(0.026)	(0.023)
Right government (t-1) x	-0.004**		0.001	-0.005**	-0.007***	-0.004*
Unemployment rate (t-1)	(0.002)		(0.001)	(0.002)	(0.003)	(0.002)
Right government (t-1)	0.064**		-0.009	0.057**	0.072***	0.048**
	(0.028)		(0.015)	(0.024)	(0.028)	(0.024)
Corporatism (t-1)	1.556*	1.680*	1.706*	-0.034	0.154	-0.158
	(0.850)	(0.874)	(0.947)	(1.058)	(1.191)	(1.100)
Capital mobility (t-1)	0.000	0.000	0.000	-0.035***	-0.051***	-0.045***
	(0.001)	(0.001)	(0.001)	(0.012)	(0.017)	(0.015)
Trade openness (t-1)	-0.070***	-0.071**	-0.076***	-0.054*	-0.072**	-0.043
	(0.027)	(0.028)	(0.029)	(0.031)	(0.030)	(0.032)
Unemployment rate (t-1)	0.415**	0.109	-0.042	0.210	0.267	0.208
	(0.182)	(0.156)	(0.156)	(0.164)	(0.190)	(0.177)
GDP per capita (x 10⁻²) (t-1)	0.019***	0.022***	0.023***	-0.024	-0.017	-0.008
	(0.007)	(0.007)	(0.007)	(0.020)	(0.023)	(0.021)
Age dependency ratio (t-1)	0.567***	0.579***	0.572***	0.538***	0.662***	0.560***
	(0.094)	(0.106)	(0.128)	(0.154)	(0.132)	(0.167)
EPL (t-1)				-3.357***		-3.758***
				(1.293)		(1.337)
ALMP expenditure (t-1)					2.477**	0.190
					(1.232)	(1.036)
Constant	30.776***	32.226***	34.229***	53.742***	38.385***	48.585***
	(5.108)	(6.006)	(7.289)	(12.520)	(11.720)	(13.945)
Rho	0.579	0.568	0.569	0.651	0.599	0.632
N x T	385	385	385	303	293	285
Adj. R-Squared	0.917	0.916	0.915	0.909	0.910	0.913

Furthermore, in the models presented in Table 4 - 7, we used the average of the net unemployment benefit replacement rates for two household types, namely a single person and a one earner couple with two children. Because social partners and political parties may pursue different tax and benefit policies for families than for singles, we analyze the net replacement rates for the two family types separately. The estimations presented in Table A3, Table A4, Table A5 of and Table A6 of Appendix C indicate that the use of other replacement rates does not alter the results.

5. Conclusion

Unemployment benefits, employment protection legislation and active labour market policies are important building blocks of the most important labour market models in European policy debates, namely flexicurity and the transitional labour market. In this paper we analysed the cross-country variation in net unemployment benefit replacement ratios. We tested a number of hypotheses from the political economy literature on the role of partisan politics, employment relations and EPL and ALMPs in unemployment benefit reform. These factors haven been extensively studied in the political economy literature, but hardly for Eastern European countries, because of a lack of data. Relying on newly constructed indicators for Western and Eastern European countries, we employed pooled time series cross-section regression analyses to analyze the variation of the benefit generosity across countries and over time we.

With respect to the effect of partisan politics, the results indicate that left-wing governments are positively and significantly related to benefit replacement ratios, but this positive effect becomes smaller at higher unemployment rates. These results provide empirical support for the argument that the impact of partisan politics depends on the economic and budgetary situation. In periods of high unemployment and fiscal pressure, left-wing parties are forced to cut unemployment benefits. However, our findings are not in line with the argument that high unemployment levels constrain right-wing governments to pursue benefit cuts for electoral reasons. Moreover, we do not find substantial differences between Western and Eastern countries as far as the impact of partisan politics is concerned.

As to the effect of employment relations, our estimates show a positive and significant correlation with unemployment protection levels. Coordinated bargaining by strong and centrally organized labour unions has a positive impact on benefit generosity. Furthermore, we found some weak evidence for a positive and significant interaction between employment relations and unemployment rates. This suggests that labour unions in times of high unemployment try to safeguard unemployment protection levels, possibly in exchange for wage moderation. Interestingly, we find a much stronger linkage between corporatism and unemployment benefits for the group of CEE countries than for the other countries in the sample. This is a surprising result,

because several authors have argued that social partners are less effective in exerting influence on labour market and welfare state reforms in Eastern Europe than in Western Europe. Corporatism is less developed in CEE countries according to several earlier studies. An explanation for our findings may be that the variation of the strength and organization of social partners over time has been larger in CEE countries than in the rest of the EU. Our results suggest that the differences in corporatism do have an impact on unemployment protection in CEE countries.

In addition, the results of the fixed effects regressions show a negative relationship between the strictness of employment protection legislation and the generosity of unemployment benefit schemes. In line with the flexicurity model, this result supports the idea that more flexibility on the labour market is compensated with more generous unemployment benefits. Hence, flexicurity seems to be more than a theoretical labour market model.

A final important result is that our estimates indicate convergence of net unemployment benefit replacement rates in the period 1990-2009. This trend of convergence is relatively strong for the group of CEE countries. As such, our findings indicate that the new EU member states have caught up.

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Appendix A

Table A1. Country Profiles for Net Unemployment Replacement Rates Single Person, 1990–2009

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Australia	0.30	0.31	0.32	0.31	0.30	0.30	0.31	0.30	0.29	0.29	0.28	0.27	0.26	0.25	0.25	0.25	0.25	0.24	0.23	0.22
Austria	0.58	0.58	0.58	0.58	0.58	0.57	0.57	0.57	0.57	0.56	0.56	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
Belgium	0.64	0.64	0.63	0.63		0.65		0.65		0.64	0.63	0.62	0.66	0.64	0.63	0.61	0.60	0.59	0.58	0.59
Bulgaria			0.67	0.71	0.70	0.51	0.34	0.66	0.53	0.55	0.59	0.66	0.56	0.58	0.57	0.67	0.64	0.61	0.54	0.60
Canada	0.66	0.66	0.66	0.63	0.62	0.64	0.64	0.64	0.63	0.63	0.63	0.63	0.62	0.61	0.60	0.58	0.57	0.57	0.57	0.59
Cyprus		0.65	0.67	0.68	0.68	0.69	0.61	0.61	0.61	0.62	0.60	0.61	0.58	0.57	0.58	0.58	0.58	0.57		
Czech Republic				0.55	0.55	0.49	0.50	0.51	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.48	0.48	0.49
Denmark	0.68	0.67	0.67	0.66	0.68	0.65	0.64	0.63	0.61	0.62	0.62	0.61	0.59	0.59	0.58	0.57	0.56	0.55	0.55	0.55
Estonia			0.23	0.20	0.19	0.22	0.18	0.19	0.20	0.22	0.23	0.47	0.47	0.47	0.47	0.47	0.47	0.46	0.46	0.45
Finland	0.63	0.65	0.63	0.63	0.62	0.63	0.63	0.60	0.60	0.59	0.57	0.57	0.59	0.58	0.57	0.56	0.56	0.55	0.53	0.54
France	0.70	0.71	0.71	0.72	0.72	0.72	0.72	0.70	0.70	0.70	0.69	0.70	0.69	0.69	0.69	0.69	0.69	0.70	0.70	0.69
Germany	0.63	0.63	0.63	0.63	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Greece		0.34	0.32	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.35	0.35	0.34	0.38	0.36	0.33	0.34	0.39	0.39
Hungary	0.72	0.63	0.70	0.68	0.66	0.60	0.51	0.48	0.48	0.48	0.42	0.45	0.42	0.40	0.39	0.39	0.37	0.36	0.35	0.34
Ireland	0.35	0.35	0.35	0.36	0.35	0.37	0.32	0.31	0.31	0.30	0.28	0.29	0.29	0.30	0.30	0.32	0.34	0.34	0.35	0.36
Italy	0.20	0.20	0.27	0.27	0.27	0.28	0.36	0.36	0.36	0.40	0.42	0.45	0.45	0.53	0.52	0.51	0.53	0.54	0.63	0.63
Japan	0.57	0.61	0.61	0.61	0.62	0.60	0.59	0.60	0.59	0.62	0.59	0.60	0.63	0.59	0.60	0.59	0.59	0.60	0.60	0.61
Lithuania						0.79	0.42	0.43	0.41	0.42	0.43	0.43	0.43	0.42	0.42	0.48	0.48	0.48	0.49	0.51
Latvia		0.32	0.28	0.30	0.41	0.37	0.69	0.69	0.69	0.69	0.69	0.69	0.70	0.70	0.70	0.57	0.57	0.56	0.51	0.51
Luxembourg	0.87	0.83	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Malta							0.26	0.26	0.25	0.28	0.30	0.30	0.32	0.32	0.32	0.31	0.31	0.30	0.30	0.30
Netherlands	0.74	0.74	0.73	0.73	0.75	0.74	0.76	0.74	0.73	0.73	0.74	0.73	0.69	0.70	0.68	0.68	0.67	0.68	0.68	0.68
New Zealand	0.34	0.30	0.30	0.30	0.29	0.29	0.28	0.28	0.27	0.27	0.26	0.26	0.26	0.26	0.26	0.25	0.26	0.25	0.25	0.23
Norway	0.68	0.67	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.65	0.66	0.66	0.66	0.66	0.66	0.67	0.66	0.66	0.67
Poland			0.42	0.39	0.39	0.38	0.37	0.32	0.32	0.30	0.30	0.30	0.31	0.30	0.30	0.29	0.29	0.26	0.25	0.24
Portugal	0.79	0.78	0.79	0.79	0.80	0.79	0.79	0.79	0.79	0.79	0.79	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Romania	0.67	0.69	0.72	0.71	0.71	0.70	0.70	0.71	0.72	0.72	0.70	0.72	0.72	0.73	0.74	0.56	0.55	0.55	0.61	0.65
Spain	0.75	0.75	0.65	0.65	0.54	0.54	0.54	0.54	0.54	0.55	0.55	0.54	0.54	0.53	0.53	0.52	0.51	0.51	0.50	0.49
Slovak Republic		0.71	0.71	0.63	0.65	0.61	0.60	0.54	0.56	0.66	0.51	0.55	0.53	0.54	0.64	0.64	0.64	0.64	0.65	0.63
Slovenia		0.65	0.64	0.65	0.64	0.64	0.64	0.65	0.65	0.64	0.65	0.65	0.64	0.64	0.64	0.66	0.67	0.65	0.65	0.65
Sweden	0.85	0.87	0.86	0.90	0.81	0.80	0.75	0.72	0.71	0.71	0.68	0.72	0.78	0.76	0.74	0.72	0.71	0.66	0.62	0.60
Switzerland	0.72	0.71	0.73	0.73	0.72	0.73	0.73	0.73	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.70	0.70	0.70	0.71	0.71
United Kingdom	0.20	0.20	0.21	0.21	0.22	0.21	0.20	0.20	0.20	0.19	0.19	0.19	0.18	0.19	0.18	0.18	0.17	0.17	0.17	0.17
United States	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.57	0.58	0.59	0.59	0.58	0.58	0.58	0.57	0.57
Mean	0.60	0.59	0.57	0.57	0.56	0.56	0.54	0.54	0.53	0.54	0.53	0.55	0.54	0.54	0.54	0.53	0.53	0.53	0.53	0.53
N	23	28	31	32	31	33	33	34	33	34	34	34	34	34	34	34	34	34	33	33
Coef of Var	0.31	0.32	0.33	0.33	0.32	0.32	0.34	0.33	0.33	0.32	0.33	0.30	0.31	0.31	0.30	0.30	0.30	0.30	0.31	0.31

Source: *Unemployment replacement rates dataset among 34 welfare states 1971-2009* (Van Vliet and Caminada, 2012)

Table A2. Country Profiles for Net Unemployment Replacement Rates One Earner Couple with Kids, 1990–2009

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Australia	0.66	0.68	0.69	0.70	0.67	0.66	0.68	0.69	0.66	0.66	0.64	0.68	0.65	0.64	0.61	0.61	0.61	0.57	0.55	0.54
Austria	0.72	0.72	0.72	0.74	0.73	0.73	0.72	0.72	0.71	0.72	0.72	0.67	0.67	0.67	0.67	0.68	0.68	0.68	0.68	0.68
Belgium	0.60	0.61	0.60	0.60		0.61		0.61		0.60	0.59	0.59	0.62	0.60	0.60	0.60	0.59	0.60	0.59	0.60
Bulgaria			0.70	0.74	0.73	0.55	0.41	0.70	0.58	0.59	0.62	0.69	0.60	0.65	0.63	0.72	0.68	0.65	0.59	0.66
Canada	0.70	0.71	0.71	0.70	0.67	0.70	0.70	0.76	0.76	0.77	0.76	0.74	0.73	0.72	0.72	0.70	0.70	0.72	0.70	0.72
Cyprus		0.80	0.81	0.83	0.84	0.85	0.76	0.78	0.78	0.78	0.77	0.78	0.77	0.76	0.76	0.76	0.76	0.76		
Czech Republic				0.61	0.54	0.49	0.60	0.60	0.50	0.50	0.50	0.50	0.50	0.50	0.49	0.49	0.49	0.50	0.50	0.52
Denmark	0.73	0.72	0.72	0.71	0.72	0.68	0.69	0.67	0.66	0.67	0.66	0.65	0.64	0.64	0.64	0.64	0.63	0.62	0.61	0.62
Estonia			0.35	0.27	0.25	0.28	0.25	0.26	0.28	0.30	0.29	0.49	0.49	0.49	0.50	0.49	0.54	0.52	0.52	0.51
Finland	0.73	0.75	0.73	0.71	0.75	0.74	0.74	0.71	0.71	0.68	0.68	0.67	0.69	0.67	0.66	0.66	0.65	0.64	0.63	0.63
France	0.63	0.64	0.64	0.64	0.63	0.64	0.66	0.63	0.62	0.64	0.72	0.71	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Germany	0.70	0.70	0.70	0.70	0.69	0.69	0.71	0.71	0.71	0.71	0.71	0.71	0.72	0.71	0.71	0.71	0.71	0.71	0.71	0.72
Greece		0.35	0.35	0.36		0.39	0.40	0.40	0.40	0.39	0.39	0.41	0.41	0.39	0.44	0.42	0.39	0.39	0.44	0.44
Hungary	0.80	0.73	0.79	0.76	0.74	0.69	0.60	0.55	0.66	0.60	0.53	0.55	0.53	0.51	0.51	0.51	0.51	0.49	0.48	0.47
Ireland	0.64	0.65	0.65	0.66	0.65	0.62	0.56	0.61	0.58	0.55	0.50	0.53	0.58	0.58	0.57	0.60	0.63	0.61	0.61	0.64
Italy	0.29	0.28	0.34	0.34	0.34	0.34	0.52	0.50	0.50	0.50	0.49	0.60	0.63	0.63	0.63	0.62	0.65	0.62	0.73	0.73
Japan	0.53	0.57	0.57	0.58	0.58	0.57	0.56	0.57	0.55	0.59	0.56	0.58	0.60	0.56	0.57	0.56	0.56	0.56	0.56	0.56
Lithuania						0.77	0.41	0.42	0.40	0.41	0.42	0.42	0.42	0.41	0.44	0.53	0.52	0.51	0.52	0.52
Latvia		0.34	0.31	0.32	0.43	0.43	0.65	0.67	0.67	0.68	0.68	0.68	0.68	0.69	0.69	0.56	0.55	0.54	0.47	0.47
Luxembourg	0.86	0.86	0.86	0.83	0.85	0.86	0.86	0.86	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.91	0.92	0.91	0.90
Malta							0.46	0.46	0.45	0.48	0.50	0.50	0.51	0.52	0.51	0.49	0.49	0.48	0.49	0.49
Netherlands	0.78	0.81	0.77	0.77	0.78	0.78	0.79	0.77	0.77	0.77	0.78	0.78	0.73	0.75	0.74	0.74	0.73	0.74	0.72	0.72
New Zealand	0.72	0.65	0.65	0.65	0.66	0.65	0.61	0.60	0.58	0.58	0.57	0.57	0.57	0.61	0.58	0.54	0.47	0.48	0.48	0.47
Norway	0.73	0.73	0.73	0.73	0.73	0.74	0.73	0.73	0.72	0.74	0.72	0.73	0.73	0.73	0.73	0.73	0.72	0.72	0.72	0.72
Poland			0.52	0.46	0.43	0.44	0.43	0.38	0.37	0.36	0.35	0.36	0.39	0.36	0.35	0.36	0.35	0.29	0.27	0.27
Portugal	0.76	0.76	0.76	0.76	0.77	0.77	0.77	0.79	0.79	0.79	0.80	0.77	0.77	0.76	0.76	0.75	0.75	0.75	0.75	0.75
Romania	0.73	0.74	0.76	0.74	0.74	0.73	0.73	0.76	0.77	0.76	0.73	0.76	0.75	0.77	0.76	0.63	0.58	0.60	0.64	0.68
Spain	0.85	0.86	0.73	0.74	0.69	0.69	0.70	0.69	0.70	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.70	0.69	0.69
Slovak Republic		0.77	0.76	0.69	0.70	0.67	0.65	0.60	0.61	0.67	0.59	0.58	0.54	0.53	0.58	0.58	0.58	0.58	0.58	0.57
Slovenia		0.65	0.64	0.64	0.64	0.64	0.65	0.65	0.66	0.66	0.68	0.68	0.67	0.67	0.65	0.65	0.65	0.66	0.66	0.66
Sweden	0.81	0.89	0.88	0.91	0.83	0.82	0.78	0.75	0.75	0.74	0.72	0.75	0.81	0.79	0.77	0.75	0.74	0.70	0.66	0.64
Switzerland	0.82	0.82	0.83	0.83	0.82	0.85	0.82	0.82	0.83	0.82	0.82	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
United Kingdom	0.36	0.36	0.37	0.38	0.39	0.38	0.37	0.55	0.54	0.54	0.54	0.54	0.54	0.55	0.57	0.50	0.51	0.47	0.50	0.52
United States	0.60	0.60	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.57	0.57	0.55	0.55	0.54	0.54	0.54	0.54	0.52	0.52
Mean	0.68	0.67	0.65	0.65	0.65	0.64	0.62	0.63	0.63	0.63	0.62	0.64	0.64	0.63	0.63	0.63	0.62	0.61	0.61	0.61
N	23	28	31	32	30	33	33	34	33	34	34	34	34	34	34	34	34	34	33	33
Coef of Var	0.20	0.24	0.24	0.25	0.23	0.24	0.23	0.21	0.23	0.22	0.22	0.19	0.19	0.20	0.19	0.19	0.19	0.20	0.20	0.20

Source: *Unemployment replacement rates dataset among 34 welfare states 1971-2009* (Van Vliet and Caminada, 2012)

Appendix B: Labour relations index

This measure, that is based on a measure developed by Swank (2011), is an additive index (standardized scores) of several dimensions highlighted in the variaties-of-capitalism literature. The standardized z-scores range from -1.76 for weak labour relations to +1.76 for strong labour relations. The first sub-indicator is a scale of the level of wage bargaining where a low score indicates fragmented bargaining, mostly at the company level, and a high score indicates economy-wide bargaining. The second measure gives an indication of the extent of involvement of the main union confederation in consultation with the government. The third measure is an index of the centralization of union confederation power, which includes the confederal control over appointment of leaders of affiliates, the confederal involvement in wage agreements negotiated by affiliate unions, the relative size of a joint strike fund and the confederal power over strikes by affiliates. The fourth indicator is the union density rate, measured as the net union membership as a proportion of wage and salary earners in employment. A higher score on the aggregate index indicates greater corporatism.

Coordination of wage bargaining

5 = economy-wide bargaining, based on a) enforceable agreements between the central organisations of unions and employers affecting the entire economy or entire private sector, or on b) government imposition of a wage schedule, freeze, or ceiling.

4 = mixed industry and economy-wide bargaining: a) central organisations negotiatenon-enforceable central agreements (guidelines) and/or b) key unions and employers associations set pattern for the entire economy.

3 = industry bargaining with no or irregular pattern setting, limited involvement of central organizations, and limited freedoms for company bargaining.

2 = mixed or alternating industry- and firm level bargaining, with weak enforceability of industry agreements

1 = none of the above, fragmented bargaining, mostly at company level

Note: this classification is based on Kenworthy's 5-point classification of wage-setting coordination scores and in most countries and years the scores are the same as his. Source: ICTWSS data set (Visser, 2011).

Political involvement of main union confederation

Main confederation(s) represent(s) the affiliates politically and is routinely involved in consultation with government – either through bipartite or tripartite contacts.

2 = extensive routine involvement in consultation.

1 = moderate routine involvement in consultation.

0 = little routine involvement in consultation.

Source: ICTWSS data set (Visser, 2011).

Centralization of union confederation power

This measure consists of an aggregate score of the following four dimensions (standardized to 0.0 – 4.0 scale):

1. Confederal (political) control over appointment of leaders of affiliates

   2 = confederation appoints or has veto (directly or through government approval)

   1 = affiliates and confederations share control

   0 = confederation has no control over appointment process

2. Confederal involvement in wage agreements negotiated by its affiliate unions

   2 = confederation has mandate to negotiate agreement with employers and/or

   government on wage issues

   1 = confederation has mandate to negotiate agreement with employers and/or government on non-wage issues

   0 = none of above

3. Confederal or joint strike fund from which member unions are reimbursed

   2 = joint strike or resistance fund has significant size (>=50 percent of total union expenditure on official strikes)

   1 = joint strike or resistance fund is limited (< 50 percent of total union expenditure on official strikes)

   0 = no joint strike or resistance fund held by confederation

4. Confederal power over strikes by affiliates

   2 = all strikes need prior approval from confederation

   1 = confederation can end strikes through central procedures of conflict settlement (arbitration)

   0 = confederation has no power over strikes organized by its affiliates

Source: ICTWSS data set (Visser, 2011).

Union density

Union density rate, net union membership as a proportion of wage and salary earners in employment. Source: ICTWSS data set (Visser, 2011).

Appendix C: Replacement rates for two family types

Table A3: Replacement rates single person, governments with interaction, 1990-2009

	34 countries	27 EU countries	15 West-EU countries	10 CEE-EU countries
Δ (Left government x Unemployment rate)	-0.002	-0.003	-0.002**	0.000
	(0.002)	(0.002)	(0.001)	(0.007)
Left government (t-1) x Unemployment rate (t-1)	-0.005***	-0.006***	-0.002***	-0.017***
	(0.001)	(0.001)	(0.001)	(0.003)
Δ Left government	0.012	0.018	0.020	-0.033
	(0.015)	(0.022)	(0.013)	(0.070)
Left government (t-1)	0.031***	0.045***	0.013	0.149***
	(0.008)	(0.009)	(0.009)	(0.047)
Δ (Right government x Unemployment rate)	-0.002	-0.003	0.000	-0.005
	(0.003)	(0.003)	(0.002)	(0.007)
Right government (t-1) x Unemployment rate (t-1)	-0.001	-0.001	0.000	-0.010**
	(0.001)	(0.001)	(0.001)	(0.004)
Δ Right government	0.010	0.018	0.005	0.018
	(0.019)	(0.027)	(0.014)	(0.072)
Right government (t-1)	0.005	0.008	-0.004	0.106**
	(0.007)	(0.009)	(0.007)	(0.051)
Corporatism (t-1)	0.338***	0.370***	0.117	2.065**
	(0.072)	(0.115)	(0.136)	(0.871)
Δ Capital mobility	0.000	0.000	0.002	0.009
	(0.002)	(0.002)	(0.001)	(0.021)
Capital mobility (t-1)	0.001	0.001	0.005***	-0.017
	(0.001)	(0.002)	(0.002)	(0.023)
Δ Trade openness	-0.062***	-0.066***	-0.003	-0.097***
	(0.022)	(0.022)	(0.013)	(0.024)
Trade openness (t-1)	-0.004***	-0.005***	0.002	0.027***
	(0.001)	(0.001)	(0.003)	(0.010)
Δ Unemployment rate	0.366	0.454*	-0.031	0.614
	(0.224)	(0.257)	(0.137)	(0.640)
Unemployment rate (t-1)	0.198**	0.241***	0.034	0.639**
	(0.091)	(0.094)	(0.049)	(0.263)
Δ GDP per capita (x 10⁻²)	0.019**	0.023**	-0.020**	0.014
	(0.009)	(0.011)	(0.009)	(0.066)
GDP per capita (x 10⁻²) (t-1)	0.003***	0.005***	-0.004**	-0.039***
	(0.001)	(0.002)	(0.002)	(0.013)
Δ Age dependency ratio	0.064	-0.115	0.979**	-3.953***
	(0.186)	(0.261)	(0.436)	-1.125
Age dependency ratio (t-1)	-0.083*	-0.104	-0.023	-0.574***
	(0.048)	(0.069)	(0.048)	(0.141)
Replacement rate (t-1)	-0.032***	-0.040***	-0.029***	-0.206***
	(0.007)	(0.009)	(0.008)	(0.032)
Constant	3.653**	4.198*	3.776	30.386***
	(1.756)	(2.449)	(2.677)	(8.513)
N x T	517	384	271	99
Adj. R-Squared	0.093	0.107	0.104	0.280

Notes: Unstandardized coefficients; panel-corrected standard errors in parentheses.
* p<0.10; ** p<0.05; *** p<0.01

Table A4: Replacement rates one earner couple, governments with interaction, 1990-2009

	34 countries	27 EU countries	15 West-EU countries	10 CEE-EU countries
Δ (Left government x Unemployment rate)	-0.001	-0.002	-0.002	0.001
	(0.001)	(0.001)	(0.001)	(0.006)
Left government (t-1) x Unemployment rate (t-1)	-0.004***	-0.005***	-0.002*	-0.016***
	(0.001)	(0.001)	(0.001)	(0.004)
Δ Left government	0.009	0.024	0.028*	-0.033
	(0.010)	(0.018)	(0.015)	(0.062)
Left government (t-1)	0.024**	0.037***	0.006	0.164***
	(0.010)	(0.013)	(0.010)	(0.056)
Δ (Right government x Unemployment rate)	-0.001	-0.003	0.002	-0.005
	(0.002)	(0.002)	(0.002)	(0.006)
Right government (t-1) x Unemployment rate (t-1)	-0.001	-0.001	-0.001	-0.011**
	(0.001)	(0.001)	(0.001)	(0.004)
Δ Right government	0.008	0.023	-0.002	0.039
	(0.013)	(0.019)	(0.018)	(0.059)
Right government (t-1)	0.001	0.007	-0.007	0.130**
	(0.006)	(0.009)	(0.009)	(0.058)
Corporatism (t-1)	0.396***	0.378*	-0.069	2.012**
	(0.124)	(0.212)	(0.250)	(0.894)
Δ Capital mobility	0.001	0.001	0.002*	0.014
	(0.002)	(0.002)	(0.001)	(0.014)
Capital mobility (t-1)	0.000	-0.000	0.003	0.011
	(0.002)	(0.003)	(0.002)	(0.016)
Δ Trade openness	-0.053***	-0.056***	-0.014	-0.059**
	(0.017)	(0.018)	(0.018)	(0.027)
Trade openness (t-1)	-0.002*	-0.006**	0.009**	0.020*
	(0.001)	(0.003)	(0.004)	(0.012)
Δ Unemployment rate	0.250**	0.391***	0.016	0.605
	(0.109)	(0.148)	(0.142)	(0.564)
Unemployment rate (t-1)	0.164***	0.187***	0.045	0.612**
	(0.044)	(0.044)	(0.052)	(0.307)
Δ GDP per capita (x 10^{-2})	0.023*	0.027*	-0.006	0.034
	(0.013)	(0.015)	(0.011)	(0.056)
GDP per capita (x 10^{-2}) (t-1)	0.005***	0.008**	-0.005**	-0.036**
	(0.002)	(0.004)	(0.002)	(0.014)
Δ Age dependency ratio	0.307	-0.073	1.121**	-3.291***
	(0.242)	(0.471)	(0.473)	-1.181
Age dependency ratio (t-1)	-0.028	-0.030	0.072*	-0.472***
	(0.043)	(0.049)	(0.042)	(0.135)
Replacement rate (t-1)	-0.065***	-0.077***	-0.067***	-0.228***
	(0.007)	(0.008)	(0.018)	(0.035)
Constant	3.191	3.322	1.906	26.866***
	(2.463)	(2.850)	(2.532)	(9.970)
N x T	515	382	269	99
Adj. R-Squared	0.072	0.088	0.062	0.215

Notes: Unstandardized coefficients; panel-corrected standard errors in parentheses.
* p<0.10; ** p<0.05; *** p<0.01

Table A5: Replacement rates single person, corporatism interaction, 1990-2009

	34 countries	27 EU countries	15 West-EU countries	10 CEE-EU countries
Δ Left government	-0.008	-0.010	-0.004	-0.018
	(0.006)	(0.011)	(0.009)	(0.034)
Left government (t-1)	-0.012***	-0.012**	-0.011***	-0.058***
	(0.004)	(0.005)	(0.004)	(0.022)
Δ Right government	-0.010	-0.008	0.001	-0.025
	(0.006)	(0.014)	(0.011)	(0.029)
Right government (t-1)	-0.007	-0.005	-0.010**	-0.044*
	(0.004)	(0.007)	(0.004)	(0.027)
Corporatism (t-1) x	0.042*	0.059**	-0.003	0.053
Unemployment rate (t-1)	(0.026)	(0.029)	(0.039)	(0.213)
Corporatism (t-1)	0.053	-0.170	0.110	2.538
	(0.205)	(0.304)	(0.254)	(2.344)
Δ Capital mobility	-0.000	-0.000	0.002	0.014*
	(0.002)	(0.002)	(0.001)	(0.008)
Capital mobility (t-1)	0.000	-0.000	0.005***	0.003
	(0.001)	(0.001)	(0.002)	(0.016)
Δ Trade openness	-0.059**	-0.062**	-0.002	-0.090***
	(0.025)	(0.025)	(0.015)	(0.028)
Trade openness (t-1)	-0.002	-0.005**	0.003	0.039***
	(0.002)	(0.002)	(0.004)	(0.013)
Δ Unemployment rate	0.142	0.161	-0.192**	0.423
	(0.134)	(0.146)	(0.084)	(0.261)
Unemployment rate (t-1)	-0.040	-0.045	-0.082***	-0.299*
	(0.047)	(0.057)	(0.018)	(0.156)
Δ GDP per capita (x 10⁻²)	0.017*	0.023**	-0.023**	-0.014
	(0.010)	(0.011)	(0.010)	(0.083)
GDP per capita (x 10⁻²) (t-1)	0.002*	0.004**	-0.006***	-0.047***
	(0.001)	(0.002)	(0.002)	(0.015)
Δ Age dependency ratio	0.077	-0.074	1.209***	-4.076***
	(0.225)	(0.265)	(0.394)	-1.286
Age dependency ratio (t-1)	-0.053	-0.065	0.026	-0.645***
	(0.045)	(0.071)	(0.042)	(0.150)
Replacement rate (t-1)	-0.035***	-0.042***	-0.034***	-0.207***
	(0.008)	(0.011)	(0.007)	(0.038)
Constant	4.697***	5.563***	3.260	47.317***
	(1.233)	(2.080)	(2.415)	(9.204)
N x T	517	384	271	99
Adj. R-Squared	0.055	0.057	0.089	0.210

Notes: Unstandardized coefficients; panel-corrected standard errors in parentheses.
* p<0.10; ** p<0.05; *** p<0.01

Table A6: Replacement rates one earner couple, corporatism interaction, 1990-2009

	34 countries	27 EU countries	15 West-EU countries	10 CEE-EU countries
Δ Left government	0.002	0.003	0.013	-0.001
	(0.003)	(0.005)	(0.010)	(0.030)
Left government (t-1)	-0.010***	-0.011***	-0.011**	-0.033
	(0.002)	(0.003)	(0.005)	(0.022)
Δ Right government	-0.001	0.001	0.011	-0.007
	(0.004)	(0.007)	(0.013)	(0.027)
Right government (t-1)	-0.008***	-0.008*	-0.017***	-0.023
	(0.003)	(0.005)	(0.006)	(0.027)
Corporatism (t-1) x Unemployment rate (t-1)	0.038	0.093**	-0.095	0.188
	(0.029)	(0.043)	(0.063)	(0.251)
Corporatism (t-1)	0.136	-0.384	0.570	1.162
	(0.222)	(0.458)	(0.441)	-2.485
Δ Capital mobility	0.001	0.001	0.002*	0.018*
	(0.001)	(0.002)	(0.001)	(0.009)
Capital mobility (t-1)	-0.000	-0.001	0.004*	0.029**
	(0.002)	(0.002)	(0.002)	(0.013)
Δ Trade openness	-0.051***	-0.052***	-0.010	-0.059*
	(0.018)	(0.020)	(0.018)	(0.031)
Trade openness (t-1)	-0.001	-0.006*	0.011**	0.027*
	(0.001)	(0.004)	(0.004)	(0.015)
Δ Unemployment rate	0.136	0.145	-0.057	0.340
	(0.114)	(0.132)	(0.089)	(0.273)
Unemployment rate (t-1)	-0.026	-0.066	-0.030	-0.259
	(0.035)	(0.051)	(0.039)	(0.165)
Δ GDP per capita (x 10^{-2})	0.022	0.025	-0.012	0.001
	(0.014)	(0.015)	(0.011)	(0.067)
GDP per capita (x 10^{-2}) (t-1)	0.004**	0.007*	-0.006***	-0.040***
	(0.002)	(0.004)	(0.002)	(0.015)
Δ Age dependency ratio	0.308	-0.072	1.277***	-3.353***
	(0.225)	(0.414)	(0.455)	-1.262
Age dependency ratio (t-1)	-0.005	-0.005	0.099**	-0.516***
	(0.041)	(0.048)	(0.038)	(0.137)
Replacement rate (t-1)	-0.067***	-0.080***	-0.074***	-0.227***
	(0.009)	(0.010)	(0.017)	(0.041)
Constant	4.015**	5.124***	2.179	41.648***
	(1.816)	(1.981)	(2.396)	(9.525)
N x T	515	382	269	99
Adj. R-Squared	0.054	0.068	0.066	0.147

Notes: Unstandardized coefficients; panel-corrected standard errors in parentheses.
* $p<0.10$; ** $p<0.05$; *** $p<0.01$

ABOUT NEUJOBS

"Creating and adapting jobs in Europe in the context of a socio-ecological transition"

NEUJOBS is a research project financed by the European Commission under the 7th Framework Programme. Its objective is to analyse likely future developments in the European labour market(s), in view of four major transitions that will impact employment - particularly certain sectors of the labour force and the economy - and European societies in general. What are these transitions? The first is the **socio-ecological transition:** a comprehensive change in the patterns of social organisation and culture, production and consumption that will drive humanity beyond the current industrial model towards a more sustainable future. The second is the **societal transition,** produced by a combination of population ageing, low fertility rates, changing family structures, urbanisation and growing female employment. The third transition concerns **new territorial dynamics** and the balance between agglomeration and dispersion forces. The fourth is **a skills (upgrading)** transition and and its likely consequences for employment and (in)equality.

Research Areas

NEUJOBS consists of 23 work packages organised in six groups:

- o **Group 1** provides a conceptualisation of the **socio-ecological transition** that constitutes the basis for the other work-packages.
- o **Group 2** considers in detail the main drivers for change and the resulting relevant policies. Regarding the drivers we analyse the discourse on **job quality**, **education**al needs, changes in the organisation of production and in the employment structure. Regarding relevant policies, research in this group assesses the impact of changes in **family composition**, the effect of **labour relations** and the issue of financing transition in an era of budget constraints. The regional dimension is taken into account, also in relation to **migration** flows.
- o **Group 3** models economic and employment development on the basis of the inputs provided in the previous work packages.
- o **Group 4** examines possible employment trends in key sectors of the economy in the light of the transition processes: energy, health care and goods/services for the **ageing** population, **care services**, housing and transport.
- o **Group 5** focuses on impact groups, namely those vital for employment growth in the EU: **women**, the **elderly**, immigrants and **Roma**.
- o **Group 6** is composed of transversal work packages: implications NEUJOBS findings for EU policy-making, dissemination, management and coordination.

For more information, visit: www.neujobs.eu

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