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Globalization and Protection of Employment

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Abstract

Unionists and politicians frequently claim that globalization lowers employment protection of workers. This paper tests this hypothesis in a panel of 28 OECD countries from 1985 to 2003, differentiating between three dimensions of globalization and two labor market segments. While overall globalization is shown to loosen protection of the regularly employed, it increases regulation in the segment of limited-term contracts. We find the economic one to drive deregulation for the regularly employed, but the social one to be responsible for the better protection of workers in atypical employment. We offer political economy arguments as explanations for these differential effects.

JEL Codes: C33, F15, F16, J81, J83, O57.

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1. Introduction

The question of a harmonization of labor standards is on the agenda of nearly all intergovernmental meetings on international trade, be it in the framework of the European Union, NAFTA, or WTO. Such labor standards comprise workers' right to form unions, fix maximum number of working hours and protect against unjustified and mass dismissals – from a producer's point of view thereby imposing additional production costs and threatening the international competitiveness of their firms. Consequently, international competition among producers in countries with heterogeneous labor standards may trigger a race-to-the-bottom (Sinn, 2001; OECD, 2000, ILO, 2009). To prevent such development some international organizations (e.g. WTO, ILO) try to set minimum labor standards, but often do not have the necessary legal means to enforce them (see Krueger, 1996, on the missing enforcement of compulsory schooling laws to prevent child labor). As described in ILO (2009), the means of international enforcement are weak as they include only instruments of 'social dialogues' and 'technical assistance'.² In response, domestic politicians mainly from the political left typically demand a legally binding harmonization of labor standards above the minimum level, or argue even against further expansion of free trade.

² The *ILO Declaration on Fundamental Principles and Rights at Work*, adopted in 1998 and laid down in several separate conventions (no. 29, 87, 98, 105, 111, 138), covers only so-called *core* labor standards, in particular "(1) freedom from forced labor in the form of compulsory labor and slavery, (2) the abolition of exploitative forms of child labor that put the safety and health of children at significant risk, (3) equal opportunity in employment, and (4) fundamental union rights like freedom of association and collective bargaining" (Busse, 2004, p. 212). Thus, certain aspects of protection of employment are not covered. The ILO labor standards are summarized and introduced in ILO (2009).

This paper is among the first to test the claim that globalization leads to such a race-to-the-bottom process that weakens workers' employment protection. Using a panel on measures of globalization and employment protection of 28 OECD countries from 1985 to 2003, we find a substantial influence of globalization on employment protection. A novelty is that this influence is found to differ both across the dimensions of globalization (economic, political, and social) as well as across the different labor market sectors (short-term contract and regular-contract workers). While the economic and political dimensions of globalization are shown to loosen protection of the regularly employed, we find that political and social globalization tighten the laws regulating the possibility of offering/extending limited- or short-term contracts. We argue that these differential effects by dimension of globalization and labor market sector are well in line with recent political economy models of international trade, which have three characteristics: lobbying of agents (workers, producers), credibility of politicians necessary to fulfill their transmission channel functions with respect to the agents' opposing preferences, and taking into account the relative economic importance of the two labor market sectors.

The remainder of the paper is organized as follows: the next section describes previous mostly empirical literature, illustrates more thoroughly the research gap to be filled, and articulates testable hypotheses that guide our empirical analysis. Section 3 describes the data on globalization, employment protection and the controlling variables that form part of the empirical model, which is introduced in the consecutive section. Section 5 presents the empirical results for the direct effects of economic, political and social globalization on workers' employment conditions, while section 6 investigates how globalization may

amplify the pressure exerted by domestic economic or political conditions. The findings in this paper are finally discussed and concluded in section 7.

2. Previous literature, contribution of this paper and hypotheses

2.1 Previous literature

Most theoretical models of international trade such as the ones by Bhagwati and Srinivasan (1995) and Stern (2003) predict that globalization lowers labor standards, supporting the race-to-the-bottom view.³ As already argued in the review by Brown (2000), free trade prevents passing the additional production costs of complying with certain labor standards on to the consumer, who has the possibility to substitute with cheaper imported goods. Therefore, in open economies these additional production costs have to be borne by the firms and their workers alone. The race to the bottom of labor standards is then the outcome of a prisoners' dilemma game, in which the firm/country that deviates first reaps excessive profits/welfare gains from trade. However, trade theorists emphasize that such race to the bottom does not occur among *small* open economies – labor standards are then not able to spill-over across borders -, but well in the case of large countries or when small countries have formed large trading blocks that

³ Theoretical arguments may well go into the opposite direction, predicting the impact of labor standards on trade volume, see also Krueger (1996).

strategically interact. In the case of the economically advanced OECD countries, the latter arguments apply.⁴

In contrast to the theoretical models that predict a negative relation between globalization with labor standards, existing empirical evidence is rather scarce and provides mixed results.⁵

Most of the early empirical studies employ only flows of FDI as measure of economic globalization and focus only on core labor standards set by the ILO (see footnote 1), but not on general employment protection. Moreover, the research question is rather how costs of labor and social stability affect location decisions of investors, not how globalization affects the level of labor standards in a country (for an example, see Kucera, 2002, and literature cited therein).

One of the first contributions to empirically relate openness to trade, replacing FDI of the previous analyses, with some specific core labor standards appear to be Shelburne (2001), and Cigno et al. (2002): both groups of researchers find independently from each other

⁴ As an exception, Dimitrova and Tchipev (2004) develop a theoretical model in which more international capital mobility is associated with a stricter protection of workers' rights, which then spills over to trading partners' less regulated labor markets. However, they also predict that the effect of economic integration on labor standards depends on the endogenous policy response in that country, which, in turn, depends on the relative lobbying power of agents (unions and capital owners) and size of the economy: Small open countries will fare policies *against* the strongest lobbying groups, while large open countries are predicted to follow them. Thus, small open economies with weak unions will strengthen workers' protection, while large open economies with weak unions are hypothesized to deregulate their labor markets.

⁵ Early empirical analyses on the effect of international trade on relative wages (skilled-unskilled) in the USA, wage inequality worldwide, wage stability for production workers, trade and freedom-of-association-rights, trade and rights to non-discrimination, are described in Brown (2000).

that trade openness reduces the prevalence of child labor – abolition of child exploitation is one of the core ILO labor conventions.

Busse (2004) uses this research as a starting point and extends it to incorporate also the remaining core labor standards covered by the ILO conventions. He finds in a fixed effects panel analysis of 71 developing countries from 1970 to 2000 that more openness to trade appears to lead to increased gender discrimination in the labor market, growing prevalence of child labor, and less unions rights (freedom of association). Providing the rationale for the deterioration of certain labor standards as national economies become more globalized, Busse and Spielman (2006) show in a panel fixed effects analysis of a world sample (1975-2000) that gender inequality in wages creates a comparative advantage in the production of labor-intensive commodities. Already ten years earlier, Rodrik (1996) identified long working hours and child labor (controlling for human capital) as determinants of having a comparative advantage in the production of labor-intensive goods. While the empirical analysis by Busse (2004) is an important contribution to the literature on the impact of trade on core labor standard, it does not cover the effects on general employment protection.

Turning to the question of union rights which comes closest to measuring general ‘employment protection’ of adult workers against e.g. mass dismissals and exploitative work contracts, Dreher and Gaston (2005) find in a cross-section time-series of 17 OECD countries from 1980 to 1999 (with country fixed effects) that globalization adversely affects density and attractiveness of unions – as a consequence of, as they argue, their lower (relative) bargaining power. Testing several dimensions of globalization, one of the few empirical contributions making such a distinction, they find that this development is

driven by the social dimension of globalization – that includes worldwide communication, exchange of ideas, and homogenization of local cultures (‘Americanization’). In contrast, the economic and political dimensions do not appear to exert any impact. This is a noteworthy result given that most arguments that link globalization with deunionization are rather economic or political (see e.g. Wallerstein and Western, 2000). In this paper, we will equally distinguish between three dimensions of globalization, using an updated version of the index used in Dreher and Gaston (2005).

In contrast, contradictory findings are reported in the preceding empirical studies by e.g. Wallerstein and Western (2000) or Golden (2000): Wallerstein and Western (2000) study the development of union density and coverage during the post-war period until 1992 for 18 OECD countries: they find that, first, an increase occurred until the seventies, followed by a decline in the eighties, on average. Wallerstein and Western (2000) provide then verbal-descriptive arguments for why trade openness may have such a positive or negative impact. Similarly, in a cross-section of 15 OECD countries for the 1980s (1980-1990) Golden’s empirical model (Golden, 2000) reveals a convergence of union strength towards a certain mean, in some countries developing even upwards, but a divergence in union density. In her study, this union development appears rather unaffected by growing economic integration (measured by trade openness and the absence of restrictions to capital mobility).

2.2. Contribution of this paper

In the light of our research question, the main critique of these preceding studies is that none of them provides a direct linkage between the phenomenon ‘globalization’ and the economic outcome ‘employment protection’ through laws and administrative regulations: In particular, these studies focus largely on aspects of union strength – aiming to capture wage levels, wage inequality, and job security (e.g. Blau and Kahn, 1996; Fortin and Lemieux, 1997) as labor market outcomes of globalization – in other words, these studies merely assume a positive link between unionization and labor protection, but fail to empirically show that this link actually exists.

In addition, these studies do not account for the multifacetedness of globalization, focusing on either trade or FDI, ignoring additional economic channels of globalization and their interplays. In addition, these studies entirely neglect the social and political aspects of globalization.

Furthermore, the literature either largely neglects worker heterogeneity or focuses only on differential effects, if at all, for low-skilled and high-skilled workers. Finally, from a methodological viewpoint, most of these studies neglect the problem of potential endogeneity of international trade, as the study by e.g. Dewit et al. (2009) suggests.⁶

Taken altogether, an issue that has not yet been in the focus of empirical studies on the effects of economic integration is legislation that aims at protecting average workers’ employment. In addition, previous studies have approximated international economic

⁶ Their empirical analysis for OECD countries with the same index of employment protection used in this study suggests that relatively stricter protection of workers’ rights deters foreign direct investment, and keeps domestic firms anchored in their home countries.

integration only incompletely. To fill this gap, this paper is the first to address the question to what extent *globalization* (in place of international trade) affects workers' *employment protection* (in place of union power or child labor). While the violations of core labor standards employed in the previous literature (e.g. child labor) rather address differences between developed and developing countries, we use a measure of employment protection that varies even across economically and institutionally well advanced countries: employment protection of workers measures e.g. the difficulty of (unfairly) dismissing them, their rights for compensation payments, and their exploitation through 'flexible contract' arrangements. To take account of the economic phenomenon of a growing importance of temporary work contracts in the European economies, we do not only look at the protection of regular (mostly permanent-contract) employment, but equally analyze the effects for short-term contracts and temporary work agency employment. By using the sub-indices of the *KOF Index of Globalization*⁷, we take account of the multifacetedness of economic integration that goes beyond simple trade openness and foreign direct investment flows; in addition, using this index allows us to study whether the effects of globalization differ across its various dimensions, namely its economic, social and political dimensions. A battery of robustness tests completes the empirical analysis.

⁷ See Dreher (2006).

2.3. Hypotheses

As argued above, strict employment protection legislation comes at a cost to domestic firms, possibly leading to their competitive disadvantage. Arguably, producers will lobby for a reduction of employment protection the stronger, the more intense international economic integration is. In analogy to the weakening effect of international trade on some core labor standards (Busse, 2004), we expect *economic globalization* to weaken the more broadly defined employment protection of workers through labor laws. For *social* and *political globalization*, the effects on employment protection might not be the same, and our prediction is rather ambiguous. Dreher and Gaston (2005) find that the ‘social dimension’ of globalization leads to a decrease in union power; however, the diffusion of ideas and values across nations – either interventionist or market-oriented in nature – might well influence a society’s choice of the level of labor protection in either direction. The same ambiguity holds for the propagation of political ideas: A key aspect of political globalization is membership in international organizations, which often implies the signing of agreements to promote the integration of markets (e.g. the EU), but also to strengthen core labor standards (e.g. the ILO conventions). Put differently, such international organizations might either strengthen and trigger economic liberalization, or might help the international coordination and harmonization of labor standards, preventing a race to the bottom among economically well advanced countries.

In a second step, we investigate whether the forces of globalization interplay with the economic and political condition a country is in, or whether the effects of globalization are independent from such developments at the local level. In particular, we test whether globalization aggravates the pressure to liberalize labor markets exerted by growing

unemployment spending. In addition, we conjecture that the adverse effects of globalization are diminished in case national governments are left-wing.

3. Data

3.1. Employment Protection Legislation

For our analysis, we use the index of Employment Protection Legislation (EPL), Version 1, provided by OECD for 28 OECD countries, from 1985 to 2003.⁸ The EPL is based on government information and measures, in general, the protection of workers against specific forms of economic and financial exploitation through their employers.⁹

For regularly employed workers, the relevant EPL index ('EPL_reg') measures the overall strictness of protection with respect to four areas: the difficulty of individual dismissals, notice and severance pay for no-fault individual dismissals, the overall strictness of protection against dismissals, and regular procedural inconveniences. Thus, this measure takes into account the possible reasons for an individual lay-off, the

⁸ The excluded countries are Iceland and Luxembourg with no observations of EPL. The included countries are: Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Rep., Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States of America.

⁹ This index excludes aspects of mass dismissals that are taken into account in a more recent version of the EPL index ("Version 2"), which, however, covers a much smaller time span. The first time point of measurement of EPL version 2 is 1998, that of version 1 the year 1985. Notably, as stated in OECD (2004) p.102, the regulation of mass dismissals forms only an additional protection against a rather rare form of lay-off, and in many countries regulations of individual and mass dismissals are fairly identical.

regulation of advance notice and severance pay, trial periods, conditions under which layoffs are unjustified, and compensation payment in case of such unjustified dismissals.

In contrast, for workers with fixed-term work contracts or employment through temporary work agencies (so-called atypical work contracts), EPL ('EPL_temp') captures the overall strength of restrictions on establishing and maintaining such temporary employment. OECD names the three areas covered by this EPL index 'fixed-term contracts', 'overall strictness of regulation', and 'temporary work agencies (TWAs)'. These areas include the regulation of the number of possible renewals of fixed-term contracts, the maximum accumulated contract duration (in months), whether fixed-term contracts are generally permitted or restricted to certain industry sectors only, or restricted to certain types of work (e.g. to temporarily replacing a long-term sick worker or a worker on parental leave).

Each PL index (EPL_reg, EPL_temp) ranges from 0 to 6 with continuous intervals, and higher values indicate a stronger employment protection of workers. In general, each EPL index is calculated as an average of points awarded to its specific sub-dimensions in a 4-step aggregation procedure (see OECD Employment Outlook 2004 (OECD, 2004, chapter 2), and Table A8). Due to the four-step construction procedure of the index, small changes in the overall index may reflect considerable institutional changes: for example, a change from the oral notification of dismissal to a procedure where a written statement giving reasons must be provided and a work council must be notified increases the EPL index of regular employment by just 0.33 points (see also OECD (2004), p. 103 and 106; see also Table A8). Similarly, a move from restricting the number of (consecutive) short-term contracts renewals to having no restrictions decreases the EPL for temporary

employment by only 0.125 points. Table A5 of the Appendix provides descriptive statistics of the indices of employment protection in OECD countries.

An overview of the legal and institutional changes in OECD countries with respect to employment protection from 1985 on is reported in Table A6 in the Appendix. Table A6 also illustrates in what directions these institutional changes influenced the two EPL indices of regular and temporary employment. The general impression is that, on average, since 1985 the EPL index has been falling – for either type of employment. However, in some countries specific labor market reforms had a neutral effect on the index (e.g. Belgium, Germany, Ireland, Japan, Norway, Sweden), while, contrary to the general impression, a few reforms even improved on workers’ employment protection (Australia, France, Great Britain, New Zealand). Notably, the effects of these labor market reforms are not even heterogeneous across countries or time, but also within a country across types of employment. For example, Finland and Portugal appear to have liberalized the regular employment sector, while the employment protection index for temporary employment remained unaffected. The exact opposite observation is made for Germany, Italy and Japan, in which only the protection of the temporarily employed was lowered.

3.2. Globalization: economic, political and social dimensions

Globalization is measured by the annual *KOF Globalization Index* developed by Dreher (2006), which measures the degree of globalization from 1970 on, on a 0 to 100 scale. Its three sub-indices cover a country’s economic, political, and social dimensions of

globalization – all three dimensions contribute with equal weights to the overall index of globalization.¹⁰

Economic globalization includes not only the traditional aspects of cross-national flows of goods and services, but also measures of foreign investment (direct, portfolio), the absence of traditional barriers to trade and capital flows, as well as indicators of internationalization of a country's labor force. The *political dimension* of globalization is captured mainly by a country's number of memberships in international organizations, foreign embassies, and participations in UN peace missions. Finally, *social globalization* aims at measuring the spread and exchange of ideas, values, images and people. This aspect is captured by, for example, fast food chain prevalence (as indicator of U.S. culture influence), cross-national trade in books and newspapers, but also international tourism and number of internet users. Overall, aspects of social globalization can be grouped into 'personal contacts', 'information flow' and 'cultural proximity' (see also Dreher and Gaston, 2005).

Table A5 of the Appendix provides descriptive statistics of the globalization measures in our sample of OECD countries, which all endorse the principles of free trade. The index of economic globalization has a considerably large mean of 73.5 points, but ranges still from 37.8 to 96.0, resulting in a standard deviation of 12.5. The development of globalization is not uniform in our sample: the speed by which a nation opened it self abroad economically (as well as politically and socially) varies by country and world region, even among OECD member states which share, by definition of their

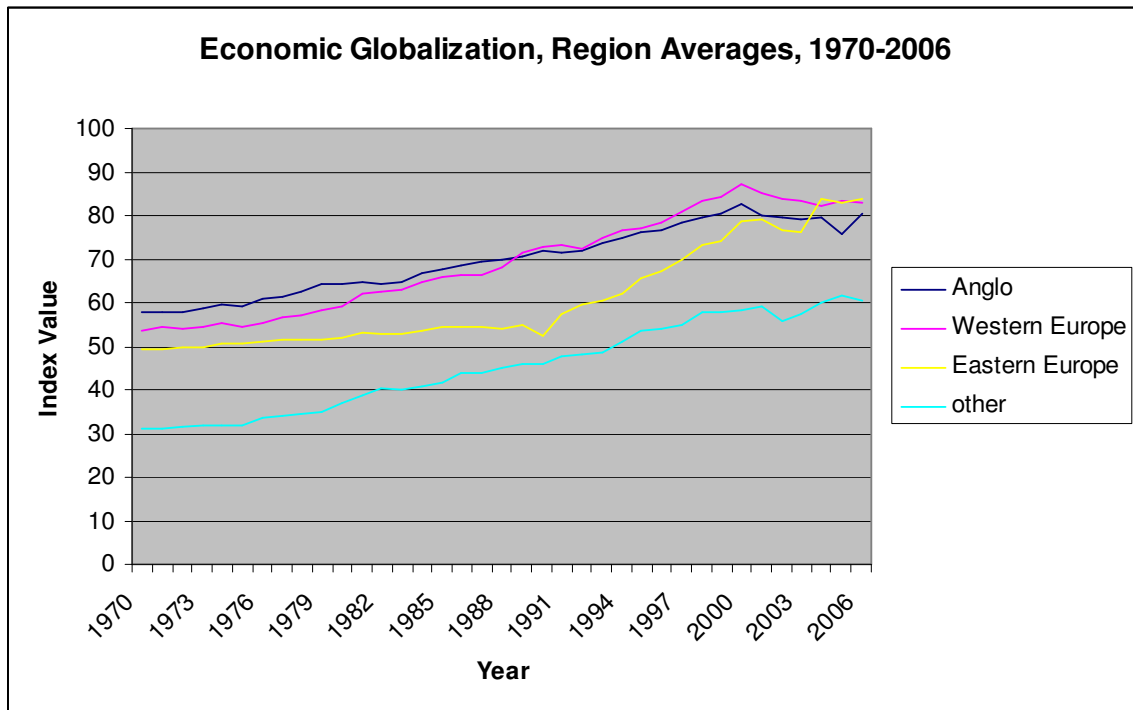
¹⁰ The index is now widely used, e.g. by Aidt and Gassebner (2007), Torgler (2007), Gemmell, Kneller and Sanz (2008) and Lamo, Pérez and Schuknecht (2008).

membership, similar economic and political institutions. The following graph depicts the development of the economic dimension of globalization in the OECD from 1980 on, for four different geographic-cultural regions: anglophone countries with strong free-trade traditions (Australia, Canada, New Zealand, Great Britain, Ireland, USA), Western European continental countries¹¹, a group that overlaps largely with core-EU member states, Eastern European, mostly post-communist countries (Poland, Slovakia, Czech Republic, Hungary, Greece), and a heterogeneous group of remaining countries (Korea, Mexico, Japan, Turkey).

Graph 1 shows for all four geographic areas a steady increase in economic globalization from 1970 to 2006. Contrary to expectations, the Western-European countries (pink line) are nearly as globalized as the Anglophone countries (dark blue line) over the whole time span, suggesting that differences in national political ideology are not approximated by differences in economic integration. Thus, in both geographic groups did the levels and the change over time develop in a fairly identical fashion (from about 55 points to roughly 80 points). Different is the situation for the group of ‘other’ core OECD countries (turquoise line): they start at a considerably lower level of economic globalization (30 points), but grow continuously achieving a substantially higher level in 2003 (60 points). In other words, the quite constant distance from the two Western geographic areas (of about 30 points) indicates that growth rates are quite similar across the core OECD countries. This is also reflected in the roughly parallel development of the three corresponding lines in Graph 1 – however, please note that the small unparallelled

¹¹ Austria, Belgium, Denmark, Finland, France, Germany, Italy, Netherlands, Norway, Portugal, Spain, Sweden, and Switzerland.

‘blips’ and ‘drops’, which are unique to one geographic area, and also the crossing of the dark-blue and pink curves suggest that variation in the data for these core OECD countries is not only cross-sectional (= constant distance between lines), but also across time (= local differences in steepness), even when the model includes time fixed effects that take out the common development pattern.



Graph 1: Development of Economic Globalization 1970 - 2007

In contrast, in Eastern European countries (yellow line) economic globalization remained at a fairly stable level of around 50 points prior to 1991, still under the old communist regime, but then, after the regime change, took off, growing at a higher speed compared to the three remaining geographic regions, as the steepness of the yellow line indicates. Roughly around the year 2000 this catching up-process ended, and from then on the

globalization levels for Western Europe, Eastern Europe and the Anglophone countries appear quite equalized (around 80 points). To take account of the special development of these post-communist countries, the robustness test in section 5.7. estimates our model for the smaller sample of core OECD countries.

3.3. Controlling variables

In this analysis, as controlling variables we also employ data on unemployment rate, unemployment benefit spending (as share of GDP), population size, and national income (GDP), its 5-year growth rate, all obtained from the World Bank's World Development Indicator (WDI) database (World Bank, 2007). Furthermore, we measure the political leaning of the government in two different ways. First, we use a dummy indicating a left-wing government, which has been constructed from data available in the updated version (2005) of Beck et al. (2001). Second, we use the index developed in Bjørnskov (2008), which is based on the number of seats held by the parties in government and, thus, continuous. This index of government ideology ranges between the values -1 and 1, where -1 indicates a fully left-wing government, and 1 a right-wing government. Although the maximum number of observations is 486 country-years, due to some missing values in the remaining explanatory variables, we obtain an unbalanced panel with a maximum of 480 observations. For further descriptive statistics, see Appendix Table A5.

4. Model

In our model we view employment protection legislation in country i at time t (EPL_{it}) as a function of globalization in the same country ($GLOB_{it}$), and a set of country-specific controlling factors (X_{it}) that might be correlated with both the focal variable and the dependent variable. Country (FE_i) and year (T_t) fixed effects account for unobserved country heterogeneity due to time-invariant national characteristics (such as certain labor market regulations and features of the insurance system) and year-specific (but country-unspecific) factors (such as world-wide economic shocks). A preliminary Hausman test rejected the random effects specification in favor of the fixed effects model, which we employ. An F-test of joint significance indicates that the year effects should not be omitted from the equation.¹² An error term (e_{it}) completes the model.

Potential simultaneity might bias the estimated coefficient vector. We address this issue by employing country fixed effects and lagging the explanatory variables by two periods.¹³ This specific lag structure is chosen on theoretical grounds, particularly because in most OECD countries the legislature period is four years, so that a 2-year lag might account for the duration of the legislating process and politicians' response time to changes in their party majorities triggered by new economic developments, particularly changes in the degree of globalization. Furthermore, as robustness test for the effects of

¹² A Tobit model would yield inconsistent estimates due to the inclusion of fixed-effects.

¹³ Lack of suitable instruments does not allow for testing the exogeneity assumption. Although the dependent variable may be viewed as truncated below 0 and above 5, a fixed effects estimation using unconditional Tobit might yield biased estimates.

globalization we estimate a more parsimonious model that excludes some of the potentially endogenous determinants. The complete model looks as follows:

$$EPL_{it} = GLOB_{it-2} + X_{it-2} + FE_i + T_t + e_{it} \quad (1)$$

The vector X_{it-2} contains the following controlling variables: first, the unemployment rate and unemployment spending (in log), as a pressure to loosen employment protection might not only emerge from international competition, but also from the situation in the domestic labor market, and its economic impacts on social security systems and the government budget. We furthermore control for the 5-year GDP growth rate and national income, as faster growing and richer countries are more likely to have strong unions, possibly leading to stricter employment protection (see Dreher and Gaston, 2005; Wallerstein and Western, 2000). Vector X_{it-2} also includes the logarithm of the population size that accounts for the size the domestic market, with a larger domestic demand possibly implying less ‘need’ for domestic firms to internationally expand and hence lower competitive pressure by foreign competitors on domestic labor standards. Based on the arguments in Wallerstein and Western (2000), the set of controlling factors is complemented by a measure of government ideology, as we conjecture left-wing governments to prefer protecting workers to a greater extent than center- or right-wing governments. The exact definitions of the variables in the empirical model are provided in Table A5.

5. Results

In general, the results of our estimations confirm our predictions made above. In Tables 1 and 2 we find empirical support for our hypothesis that overall globalization impacts workers' employment protection. In particular, according to Table 1, the protection of regular employment appears lowered, while Table 2 suggests that protection of the temporarily employed is strengthened.

5.1. Regular Employment

For the regularly employed, we find the protection-lowering effect of overall globalization (Table 1 column 1) to be driven by its political and economic dimensions. Both exert a significant negative impact on employment protection – independently as well as when simultaneously included in the regressions (Table 1 columns 2 to 5). Simultaneous inclusion lets us rule out the possibility that one dimension simply proxies the other in the single dimension regressions (Table 1, column 2).¹⁴ In contrast, the social dimension of globalization, the world-wide dissemination of ideas through the media, does not appear to contribute to this phenomenon (Table 1 column 5). For the regular employment sector, a simple comparison of the estimated coefficients indicates that economic globalization has quantitatively the largest effect on employment protection. The size of the effect is quite considerable: an increase in economic globalization (running from 0 to 100) by 10 score points lowers employment protection by roughly 0.1

¹⁴ The dissimilarity of coefficients on globalization measures across models 2, 3, 4, and 5 suggests that the three dimensions do not approximate each other in the single-dimension regressions, despite of their considerable correlation, particularly of the economic dimension with the political one ($\rho = 0.72$).

points – a change in EPL that could be triggered by e.g. liberalizing the dismissal procedure from one in which a third party approval is required to a regulation according to which only a simple notification of a work council is needed (decreases EPL by 0.15 points).

Taken the results of Table 1 together, mainly economic, but to some extent also political globalization appear to weaken the laws protecting regular employment. This finding is in support of traditional and political economy models of international trade suggesting that fiercer international market competition makes domestic firms lobby for more domestic labor market flexibility.

5.2. Fixed-term contracts and other forms of atypical employment

In contrast, Table 2 shows that protection of fixed-term and temporary-work-agency (TWA) employed workers ('atypical contracts') is enhanced by globalization, measured by its general index (column 1). However, this time it is not the economic dimension of globalization that gives rise to this finding, which exerts a negative but (statistically only weakly significant) effect (Table 2 columns 2 and 3). Instead, it is the social and political dimensions of globalization that strengthen employment protection (Table 2, columns 4 and 5), outweighing the labor standards lowering effect of economic globalization. However, this positive effect of overall globalization is dominated by its social dimension: The estimated coefficients in columns 4 and 5 of Table 2 show that the social dimension dominates the political dimension (0.018 versus 0.009). Again, an increase in globalization of 10 points would result in a substantial increase in EPL for 'atypical' forms of employments that mirrored, for example, restricting the number of contract

renewals, or changing the maximum of cumulated contract duration from ‘no limitation’ to ‘24 months’ (= + 0.125 points). Column 2 includes all three dimensions of globalization. It confirms the preceding single-dimension analyses, i.e. the positive net effect of globalization on protection of temporary employment, being driven entirely by its non-economic dimensions (social and political).

Taken the results of Table 2 altogether, we find that globalization in its social dimension, namely the international exchange of ideas and people, puts an upward pressure on protection of workers with ‘atypical’ contracts. In contrast, the economic dimension equally appears labor standards lowering, albeit statistically weak. In contrast, social globalization is strongest for the more vulnerable temporarily employed workers. Tables 1 and 2 suggest that political globalization influences both labor market sectors, but into opposite directions.

5.3. Controlling variables

Turning to the effects of our controlling variables, we observe some similarities and some dissimilarities across the two different labor market segments. For both segments, more populous countries tend to protect their workers better, while economic growth does not appear to play a decisive role. For regular employment, supporting our reasoning above, we also find that left-wing governments tend to support a higher level of employment protection (at least at the 5 percent level). In tendency, this effect is also observable for temporary employment, albeit statistically much weaker. The same result is found when we employ a continuous variable as alternative measure of government ideology in lieu of the dummy variable (Tables 1B and 2B). Tables 1 and 2 also show that a larger burden

of unemployment spending in the economy, measured as share of GDP, exerts a pressure to deregulate labor markets for both regular and temporary employment sectors, as predicted. The negative correlation between the generosity of unemployment benefits and employment protection was already reported in OECD (2004) (reprinted as Table A7). Finally, we find that richer countries protect temporarily employed workers better, as predicted. In contrast, the protection of regularly employed laborers is lower in richer countries, possibly because higher incomes serve as risk premium in a neo-classical sense.

5.4 Summary of main findings

Apparently, our analyses of the direct effects of globalization on employment protection show that the *economic* forces of globalization and international competition lower protection of both regular and temporary employment, albeit less strongly. In contrast, it is the *social* dimension of globalization that is most decisive for a stronger protection of employees with ‘atypical’ work contracts. *Political* international integration affects both labor market segments likewise: it works in the same protection lowering direction as economic globalization for regular employment, but strongly in the opposite direction for temporary employment, contributing to the positive impact of international connectedness.

5.6. Discussion of main findings

5.6.1. The political economy perspective

One possible interpretation is that domestic politicians and unions trade off the detrimental effects of globalization in one sector with stronger protection in the other sector, at least during the years 1985 to 2003. This is an extremely interesting conjecture, given that the share of the active labor force with temporary employment and atypical work contracts has increased over the last 20 years in developed countries, possibly due to the growing need for more labor market flexibility and lower wage levels. To illustrate, e.g., according to Franco and Winqvist (2002), in the EU-15 the share of temporary employment in total dependent employment has risen from 4 percent in 1983 to 15 percent in 2007.¹⁵ Hence, it may well be that producer-supporting politicians buy support of the electorate for labor market deregulation in the (traditional and economically more important) regular employment sector by granting stronger employment protection in the ‘younger’ temporary employment sector, – a strategy, which, given this latter sector’s minor economic importance, still leads to an increase in overall labor market flexibility.

From a theoretical political economy viewpoint, the observation that globalization exerts a protectionist impact on one labor market sector, but a deregulative one on the other, can be explained by *linkage politics*. This phenomenon was first described in the political science and political economy literature on international negotiations between two

¹⁵ Recent numbers for Germany (2008) indicate that the share of regularly employed (permanent contracts with at least 20 working hours per week) has declined since 1998 from 72,6% to 66%, while the share with ‘atypical’ contracts has increased from 16,2% to 22,2%. The same study reveals that the atypically employed earns only about 2/3 of the wage of a regularly employed (see Statistisches Bundesamt, 2009).

countries. Stein (1980), argues that consent to a specific reform or treaty that benefits one group (here: the producers) can be reached by linking the decision to reciprocal consent on a second reform that benefits the other group (here: the workers/the unions). Mayer and Riezman (1987) take a more formal approach and find that such policy mixtures (two interlinked reforms) constitute an equilibrium outcome of a bargaining game between two players, which makes both players better off compared to a situation without an agreement and without any reform.

This 'linkage politics' interpretation above rests on the general assumption that the employment protection increasing effect of globalization is driven by union and worker preferences, whereas the employment lowering effect is triggered by producer's lobbying activities – transmission channels this study is not able to account for directly, due to their nature of non-observability. In other words, this interpretation assumes that the lobbying pressure exerted by producers is the stronger, the fiercer international competition and economic globalization is. In contrast, the lobbying pressure exerted by unions or the dependently employed rises with exposure of a wider public to the forces of globalization – reflected in the social dimension of globalization: To some extent, people may mainly experience or become aware of globalization through own cross-national travel and information exchange through mass media and the internet; notably, without this international communication infrastructure, the existence and success of non-governmental organizations such as attac, Greenpeace or Amnesty International would be unthinkable.

Thus, the analyses of the three single dimensions of globalization appear to support this 'policy mixture' interpretation of the opposing effects of globalization: we find that it is

the *economic* dimension, the integration into the world product market, which lowers employment protection in the economically dominant labor market segment of the regularly employed. On the other hand, it is the *social* dimension, the cross-national connectedness among people and specifically workers (majority of the population), that drives the protection strengthening effect in the temporary employment segment.

That the *political* dimension of globalization is found relevant for both processes (in opposing directions) is in congruence with the view that policy-making by politicians serves as transmission channel of the preferences of both antagonists in the globalization game (producers – workers): in a political-economy view, political globalization may give rise to politicians' transmission channel functionality, as one of politicians' commitment device constitutes the signing of international treaties , which increases the credibility of their promises and the actual likelihood of realization at the national level (Dreher and Voigt, 2008). To illustrate, the EU-Maastricht treaty is often viewed as such commitment and enforcement device that aided national politicians to cut budgets and reduce debts even in countries with traditionally 'spending-friendly' governments (Italy, Greece).¹⁶

5.6.2. *The classical economics perspective*

An alternative, but less convincing, explanation may be that this policy mixture is chosen by politicians to deliberately set incentives for employers that are overall welfare-improving: politicians might increase regulation in the temporary-contract sector with the

¹⁶ See Fatás and Mihov (2003) for a survey.

intention to make employers not substitute regular employment with short-term contract/TWA positions. This argument rests on the fact that, even though employment protection for the regularly employed has declined over the last years, their job security still remains substantially higher than that for those in ‘atypical’ employment. In general, one can expect the working population to have a preference for employment in regular and permanent positions as opposed to limited-term or TWA employment. One weakness of this argument is that it cannot well explain why in our empirical analysis economic globalization exerts no effect on the temporary-employment sector. In addition, we find this explanation also less convincing from a theoretical point of view: we would have to assume that politicians act as ‘benevolent dictators’ who aim at maximizing the societal welfare of their country - an assumption the political economy explanation above (5.6.1.) rejects.

5.7. Robustness of findings

We obtain results that are qualitatively similar (in terms of coefficient sizes and direction of influence of globalization measures) if a more parsimonious model is estimated that omits those variables that are potentially endogenous to employment protection, such as unemployment rate, GDP growth, and left-wing ideology of the government (see Tables A1 and A2 in the Appendix). Moreover, the findings are robust to estimating our models with a reduced sample that excludes the former communist countries Czech Republic, Poland, Hungary and Slovak Republic (see Tables A3 and A4); this test rejects the claim that our findings were driven by transition countries that, from 1991 on, underwent extreme changes in their economic international integration, as discussed in section 3.2.

The results are also qualitatively unaltered when we take the autocorrelation of the residuals into account or when we replace the dichotomous indicator of government ideology with a continuous measure (see Tables 1B and 2B).

Our results remain also unaltered when we include union density as an additional control variable (see Tables 1C and 2C). Again, we find a negative effect of the overall index of globalization on protection of regularly employed workers, and an increase in regulation of the temporary-contract sector. Turning to the sub-indices of globalization, in line with our previous findings, the coefficients of economic and political globalization turn out negative and significant for the regular employment sector; in contrast to our findings above, also social globalization seems to exert now a negative influence on employment protection. For the 'atypical'-contract sector, we find again that political and social globalization overcompensate the negative effect of economic globalization, yielding a total effect of overall globalization that is protection-increasing.

6. The aggravating effect of globalization for employment protection

The impact exerted by globalization might not only be direct, but also indirect. More specifically, the effects of domestic macroeconomic and political factors that weaken employment protection might be amplified through the pressures of the international market and international politics. Put differently, we can expect interplays of these domestic factors with the three dimensions of globalization. In the following we test this conjecture for unemployment spending and a right-wing ideology of the government -

both of which were previously found to lower employment protection, at least of the regularly employed.

Tables 3 through 6 show the results of this exercise. In order to allow for statistically interpretable interaction effects between the measures of globalization and unemployment spending or government ideology, respectively, we center the variables in question. Moreover, we employ the continuous measure of right-wing government ideology by Bjørnskov (2008) in place of the previously employed dichotomous indicator for left-wing governments. The models with the odd numbers (1, 3, and 5) report the findings for the baseline specification of Tables 1 to 2, while the models with the even numbers (2, 4, and 6) add interaction terms to the empirical model.

6.1. Globalization and Unemployment Spending

In Table 3, unemployment spending lowers protection of the regularly employed in almost all model specifications. This finding was already observed in Table 1. Indeed, inclusion of the interaction term with globalization makes this result even more statistically robust. Again, both political and economic globalization are negatively associated with employment protection of regular workers (columns 1 to 4), while globalization in the social dimension exerts no significant influence (columns 5 and 6).

In line with our hypothesis, we find negative (and significant) interaction terms between unemployment spending and the economic and political dimensions of globalization for the protection of the regularly employed (column 2 and 4). Thus, stronger linkages with international markets and international political organizations aggravate the pressure to

deregulate labor markets exerted by domestic macroeconomic structures such as a generous and budget-burdening unemployment benefit system.¹⁷

Simultaneous inclusion of all measures of globalization and its interaction terms with unemployment spending confirms the results for the direct effects of economic and political globalization, but also for the interaction with economic globalization; however, not for the interaction with the political dimension, which is now insignificant. This result suggests that the latter interaction approximated the one with the economic dimension (column 4),¹⁸ Overall, the main finding of Table 3 is that in a globalized world particularly international *economic* linkages (and not so much the political ones) add to the pressure of a bad labor market performance to lower protection of regularly employed workers.

Table 4 analyzes the same question for workers with ‘atypical’ work contracts. As in Table 2, it is the political and social dimensions of globalization that lead to an increase in regulation of the temporary sector (columns 3 to 6), while the economic dimension plays no role (columns 1 and 2). Again, unemployment spending is associated with lower employment protection in all regressions.

The estimates of the interaction terms show that unemployment spending in its interplay with political globalization lowers the protection of the temporarily employed (column 4). It also appears that social globalization equally aggravates the negative direct effects

¹⁷ Notably, as we have controlled for the unemployment rate, unemployment spending is also interpretable as a measure of generosity rather than sheer size.

¹⁸ Results are available on request from the authors. The estimates for political and economic globalization are -0.007 and -0.011, respectively, both significant at the 1 percent level. The significant interaction term with economic globalization is -0.005.

of unemployment spending on employment protection (column 6). However, a model that includes all three measures of globalization and their interaction terms simultaneously reveals that it is only the interaction with the political dimension of globalization that drives these results. The negative coefficient on the interaction term, however, is negligibly small, so that for a mean level of unemployment spending the total effect of political globalization on the temporarily employed remains positive.¹⁹

Taken all together, Tables 3 and 4 show that globalization interplays with the domestic macro-economic condition: the employment protection lowering effect of unemployment spending appears aggravated by the forces of globalization – by economic globalization for the regularly employed and by political globalization for the temporarily employed.

6.2. Globalization and Government Ideology

Tables 5 and 6 include interactions between globalization and government ideology in the baseline model.

For the regularly employed, Columns 1, 3, and 5 of Table 5 corroborate the negative and significant direct effects of economic and political globalization and the insignificant effect of social globalization: these have all already been observed in Table 1. Analogous to Table 1, the direct effect of right-wing government ideology on employment protection appears negative and significant. Looking at the interactions between globalization and government ideology, we find that employment protection is reduced further with

¹⁹ Results are available from the authors on request. The estimate on political globalization* unemployment spending is -.007 (at the 10 percent level), while that on political globalization is .012 (at the 5 percent level) and that on social globalization is .0134 (at the 5 percent level).

increasing economic globalization, the more right-wing the government is. We find no such interaction effect for the political and social dimensions of globalization (columns 2, 4 and 6).

For the temporarily employed, again corroborating Table 2, only social and political globalization matter directly to their better protection (columns 1, 3 and 5 of Table 6), while government ideology *per se* plays no significant role (all of Table 6). Nevertheless, its interaction with the political dimension of globalization turns out significant. Political globalization is found to increase the strengthening effect of right-wing governments on the regulation of short-term work contracts (column 4) – from an alternative viewpoint, right-wing government ideology aggravates the protection increasing effect of political globalization.

Taken all together, investigating the interplay between the political positioning of national governments and globalization, with respect to employment protection of permanent contract workers we find that right-wing governments respond more strongly to the forces exerted by economic globalization - as one would expect. Put differently, left-wing governments attempt to counteract the liberalization pressure exerted by economic globalization.

For workers with atypical contracts, the protection-increasing effect of political globalization is re-enforced by a right-wing government. This result indicates that the ‘policy mixture’ strategy (see section 5.6.1.) of particularly right-wing governments – namely to appease the work force and unions by stronger protecting the (economically far less important) ‘atypical contract’ employees – works the better, the stronger the political

international integration of a country is, namely the better the politicians can signal their credibility to the opposing interest groups.

7. Conclusion

This paper is among the first to empirically investigate whether globalization exerts a downward pressure on the protection of workers' employment conditions. It is clearly the first contribution to account for the various dimensions of globalization, the economic, the political and the social one. It is also the first to differentiate between regular and temporary/TWA ('atypical') employment.

Using a panel of 26 OECD countries from 1985 to 2003, we test for the impact of globalization in its economic, political and social dimensions on the strictness of employment protection legislation. We reveal that overall globalization lowers employment protection of the regularly employed, but tightens that of workers in 'atypical' employment relations, stricter regulating the establishing, continuing, and premature ending of short-term work contracts. We argue that stricter protection of the economically less important group of short-term workers may serve as *symbolic* political act by vote-maximizing politicians intending to 'buy' workers' acceptance of labor market liberalization for the regularly employed.

The analysis for the single dimensions of globalization is supportive of this political economy interpretation: We find that it is mainly the economic dimension of globalization, possibly triggering producer's lobbying activities, that lowers employment

protection for regularly employed workers, as predicted by international trade models. We also find that political globalization, possibly one of the transmission channels of producer preferences, adds to this downward pressure. However, for workers in limited-term or TWA employment, economic globalization plays no significant role, while international social integration, making the common workers aware of the phenomenon of globalization through international travel and worldwide communication, strongly prevents such development. Again, political globalization (as transmission channel of workers' preferences) appears to add to this upward pressure.

Furthermore, we find that globalization aggravates the effects of domestic political or economic determinants of labor protection: The deregulative influence of adverse macroeconomic conditions is the larger, the more globalized a country is. This result holds for both sectors of the labor market, with the deregulative effects for the regularly employed enforced by the economic dimension, and for the temporarily employed by the political dimension. In line with common expectations, we find that right-wing governments decrease protection of the regular labor market sector the stronger, the more the country is integrated into the world market. In contrast, right-wing governments make regulation of the temporary employment sector the stricter, the more the country is globalized in the political dimension. We view the relevance of political globalization in its interplay with local economic and political conditions for increasing the protection of the 'atypical' and economically less important employments as another support for the political economy interpretation of our results, now suggesting that particularly right-wing politicians trade off deregulation of one labor market sector by a stronger regulation of the other.

Overall, this analysis suggests that the economic and societal effects of globalization are not as clear-cut as some public discussions may suggest. The common intuition that globalization is detrimental to the well-being of the dependently employed can only be partly supported – it appears that workers in atypical employment contracts – commonly viewed as more vulnerable as compared to the regularly employed – even profit from the forces exerted by globalization. Our analysis also reveals that it is rather domestic economic and political conditions that are the main drivers of labor market liberalization, the impact of which is the stronger the more globalized a country is. Furthermore, our interplay analysis also suggests that the process of globalization is used as an argument in the political debate, so that, depending on government ideology, government response either aggravates or counteracts the effects of globalization. Our analysis also reveals that this government response does not necessarily follow traditional ideological lines, contradicting common views and simple truths. However, to identify the exact mechanism behind this development in greater detail, and to analyze whether these developments continue in a linear fashion beyond 2003, further research is needed.

Appendix

Table A1: Parsimonious model, regular employment

| | (1) | (2) | (3) | (4) |
|-----------------------------|---------------------|---------------------|---------------------|---------------------|
| <i>log GDP (-2)</i> | -0.529*** [4.26] | -0.448*** [3.50] | -0.464*** [3.64] | -0.489*** [3.94] |
| <i>log Population (-2)</i> | 1.194*** [3.44] | 1.549*** [4.43] | 1.402*** [3.91] | 1.083*** [3.08] |
| <i>Economic Glob. (-2)</i> | -0.012*** [5.45] | | | -0.012*** [5.28] |
| <i>Political Glob. (-2)</i> | | -0.004** [2.33] | | -0.004** [2.29] |
| <i>Social Glob. (-2)</i> | | | -0.004** [2.15] | -0.002 [1.23] |
| <i>Observations</i> | 480 | 480 | 480 | 480 |
| <i>Number of countries</i> | 28 | 28 | 28 | 28 |
| <i>R-squared (within)</i> | 0.19 | 0.15 | 0.15 | 0.21 |

Notes: Dependent variable is the Employment Protection Index for regularly employed workers (OECD, 2004), ranging from 0 to 6. OLS estimation with country and year fixed effects (not reported). Globalization is measured on a scale ranging from 0 to 100 (Dreher, 2006). Absolute value of t-statistics in brackets. ‘*’, ‘**’, ‘***’ denotes statistical significance at 10%, 5% and 1% levels respectively.

Table A2: Parsimonious model, temporary employment

| | (1) | (2) | (3) | (4) |
|-----------------------------|--------------------|--------------------|--------------------|--------------------|
| <i>log GDP (-2)</i> | 1.018*** [3.19] | 0.944*** [2.97] | 0.961*** [3.06] | 0.882*** [2.79] |
| <i>log Population (-2)</i> | 6.522*** [7.29] | 6.624*** [7.61] | 7.279*** [8.22] | 7.190*** [8.03] |
| <i>Economic Glob. (-2)</i> | -0.001 [0.20] | | | -0.004 [0.66] |
| <i>Political Glob. (-2)</i> | | 0.009** [2.37] | | 0.008** [2.00] |
| <i>Social Glob. (-2)</i> | | | 0.016*** [3.64] | 0.015*** [3.46] |
| <i>Observations</i> | 480 | 480 | 480 | 480 |
| <i>Number of countries</i> | 28 | 28 | 28 | 28 |
| <i>R-squared (within)</i> | 0.33 | 0.33 | 0.35 | 0.35 |

Notes: Dependent variable is the Employment Protection Index for temporarily employed workers (OECD, 2004), ranging from 0 to 6. OLS estimation with country and year fixed effects (not reported). Globalization is measured on a scale ranging from 0 to 100 (Dreher, 2006). Absolute value of t-statistics in brackets. ‘*’, ‘**’, ‘***’ denotes statistical significance at 10%, 5% and 1% levels respectively.

Table A3: OECD countries with no communist past, regular employment

| | (1) | (2) | (3) | (4) |
|------------------------------|---------------------|---------------------|---------------------|---------------------|
| <i>log GDP (-2)</i> | -1.643*** [4.51] | -1.664*** [4.44] | -2.091*** [5.31] | -1.344*** [3.33] |
| <i>log Population (-2)</i> | 2.244*** [5.70] | 2.457*** [6.14] | 2.388*** [5.82] | 2.452*** [6.18] |
| <i>Unemployment (-2)</i> | 0.000 [0.03] | -0.007 [1.04] | -0.007 [1.11] | 0.000 [0.05] |
| <i>Unempl. spending (-2)</i> | -0.070** [2.03] | -0.034 [0.97] | -0.050 [1.43] | -0.051 [1.48] |
| <i>GDP Deflator (-2)</i> | 0.000*** [3.88] | 0.000*** [3.85] | 0.000*** [4.52] | 0.000*** [3.03] |
| <i>Left-wing Govt. (-2)</i> | 0.040** [2.02] | 0.051** [2.53] | 0.040** [2.00] | 0.052*** [2.62] |
| <i>Economic Glob. (-2)</i> | -0.011*** [4.00] | | | -0.012*** [4.51] |
| <i>Political Glob. (-2)</i> | | -0.006*** [2.88] | | -0.007*** [3.56] |
| <i>Social Glob. (-2)</i> | | | 0.002 [0.68] | 0.002 [0.89] |
| <i>Observations</i> | 370 | 370 | 370 | 370 |
| <i>Number of id</i> | 22 | 22 | 22 | 22 |
| <i>R-squared (within)</i> | 0.35 | 0.33 | 0.31 | 0.37 |

Notes: Dependent variable is the Employment Protection Index for regularly employed workers (OECD, 2004), ranging from 0 to 6. OLS estimation with country and year fixed effects (not reported). Globalization is measured on a scale ranging from 0 to 100 (Dreher, 2006). Absolute value of t-statistics in brackets. ‘*’, ‘**’, ‘***’ denotes statistical significance at 10%, 5% and 1% levels respectively.

Table A4: OECD countries with no communist past, temporary employment

| | (1) | (2) | (3) | (4) |
|------------------------------|---------------------|--------------------|---------------------|---------------------|
| <i>log GDP (-2)</i> | 5.170*** [5.12] | 4.157*** [4.04] | 3.114*** [2.97] | 3.171*** [2.85] |
| <i>log Population (-2)</i> | 9.447*** [8.65] | 9.371*** [8.53] | 10.383*** [9.49] | 10.102*** [9.23] |
| <i>Unemployment (-2)</i> | 0.032* [1.75] | 0.022 [1.25] | 0.013 [0.76] | 0.022 [1.25] |
| <i>Unempl. spending (-2)</i> | -0.170* [1.77] | -0.170* [1.76] | -0.13 [1.38] | -0.177* [1.86] |
| <i>GDP Deflator (-2)</i> | -0.000*** [3.10] | -0.000** [2.27] | 0.000 [1.15] | 0.000 [1.16] |
| <i>Left-wing Govt. (-2)</i> | 0.074 [1.35] | 0.058 [1.05] | 0.068 [1.26] | 0.053 [0.98] |
| <i>Economic Glob. (-2)</i> | -0.015** [2.05] | | | -0.014* [1.95] |
| <i>Political Glob. (-2)</i> | | 0.009* [1.71] | | 0.007 [1.36] |
| <i>Social Glob. (-2)</i> | | | 0.023*** [3.80] | 0.022*** [3.80] |
| <i>Observations</i> | 370 | 370 | 370 | 370 |
| <i>Number of id</i> | 22 | 22 | 22 | 22 |
| <i>R-squared (within)</i> | 0.44 | 0.44 | 0.46 | 0.47 |

Notes: Dependent variable is the Employment Protection Index for regularly employed workers (OECD, 2004), ranging from 0 to 6. OLS estimation with country and year fixed effects (not reported). Globalization is measured on a scale ranging from 0 to 100 (Dreher, 2006). Absolute value of t-statistics in brackets. ‘*’, ‘**’, ‘***’ denotes statistical significance at 10%, 5% and 1% levels respectively.

Table A5: Descriptive Statistics

| Variable | Obs | Mean | Std. Dev. | Min | Max | Definition | Source |
|---------------------------------|-----|---------|-----------|-------|-------|--|-------------------|
| Employment protection regular | 401 | 2.19 | 0.96 | 0.17 | 5 | Index from (0) to (5) | OECD (2004) |
| Employment protection temporary | 401 | 2.19 | 1.59 | 0.25 | 5.38 | Index from (0) to (5) | OECD (2004) |
| Economic globalization (-2) | 401 | 73.49 | 12.47 | 37.75 | 96.04 | Indicator from (0) to (100) | Dreher (2006) |
| Political globalization (-2) | 401 | 79.93 | 12.95 | 39.41 | 99.00 | Indicator from (0) to (100) | Dreher (2006) |
| Social globalization (-2) | 401 | 67.86 | 16.93 | 19.83 | 92.04 | Indicator from (0) to (100) | Dreher (2006) |
| Log GDP (-2) | 401 | 9.90 | 0.35 | 8.54 | 10.46 | National income | WDI (2007) |
| Log Population (-2) | 401 | 12.13 | 1.20 | 10.42 | 14.86 | Population | WDI (2007) |
| Unemployment rate (-2) | 401 | 8.43 | 4.08 | 1.60 | 23.90 | Share of unemployed in active population | OECD Statistics |
| Log unemployment spending (-2) | 401 | 0.11 | 0.80 | -2.30 | 1.67 | Unemployment spending as share of GDP | OECD Statistics |
| 5-year GDP growth (-2) | 401 | 0.11 | 0.09 | -0.16 | 0.51 | $(GDP - GDP(-5)) / GDP(-5)$ | |
| Left-wing government_(-2) | 401 | 0.45 | 0.50 | 0 | 1 | Dummy variable. | Beck et al (2001) |
| Right-wing government_(-2) | 401 | 0.26 | 0.36 | -0.57 | 1 | Continuous measure | Bjørnskov (2008) |
| Year | 401 | 1994.98 | 5.30 | 1985 | 2003 | | |

Notes: based on regression sample of Tables 1 and 2.

Table A6: Break points of Employment Protection Legislation (EPL) indices

| | | Reform description | EPL overall | EPL regular contracts | EPL temp. contracts |
|-----------------------|------|--|-------------|-----------------------|---------------------|
| Australia | 1996 | Workplace Relations Act 1996 set out factors that Australian Industrial Relations Commission must have regard to when determining whether a termination is unfair | + | + | = |
| | 2004 | The scale for employers with 15 or more employees has also increased in March 2004 (the small business exemption to severance pay has been removed, now requiring employers with less than 15 employees to pay). | + | + | = |
| Austria | 2003 | Employees Income Provision Act eliminated severance paid and integrated into individual saving accounts accessible during unemployment spells | - | - | = |
| Belgium | 1997 | Restriction on TWA were reduced and FTC were made renewable | - | = | - |
| | 2000 | Tightening of rule concerning notice period and compensation in case of unjustified dismissal for blue collar workers | = | = | = |
| | 2002 | The maximum total duration of TWA was lengthened for contracts justified by temporary increase in work-load (Dec. 2001) | = | = | = |
| Canada | | No changes | | | |
| Czech Republic | | No changes | | | |
| Denmark | 1995 | Since the mid-1990s the role of TWA has been recognized by social partners and their scope increased | - | = | - |
| Finland | 1991 | The delay before notice can start was shortened from 2 months (as set in the Act on the Dismissal Procedure) to 1-2 weeks (as set in the Act of Employment Contracts) | - | - | = |
| | 1996 | Notice period was halved for workers with tenure less than 1 year | - | - | = |
| | 2001 | The new employment contract act came into force reducing notice periods further | - | - | = |
| France | 1986 | Prior administrative authorization for dismissals for economic reasons was abolished | - | - | = |
| | 1990 | The list limiting the circumstances in which the use of FTC and TWA is permissible is restored and the maximum total duration of FTC and TWA was reduced | + | = | + |
| | 2001 | Severance pay entitlements were increased | = | + | = |
| Germany | 1985 | FTC were allowed without specifying an objective reason | | | |
| | 1993 | Notice period for blue collar workers was extended and aligned with that of white collar workers | = | + | = |
| | 1994 | TWA legislation was loosened | - | = | - |
| | 1996 | The renewal period for FTC and TWA and admissible frequency of renewals were increased | - | = | - |
| | 2002 | Maximum total duration of TWA was brought to 24 months | - | = | - |
| | 2004 | The limit on the maximum total duration of TWA was lifted. (from 1. Jan 2004) | - | = | - |
| Greece | 1990 | Notice period or severance pay entitlements were reduced (law 1989) amending law 3198/55 of 1955) | - | - | = |
| | 2003 | National General Collective Labour Agreement (2002-2003) changes dismissal rules and raises slightly entitlements to severance pay | - | - | = |
| | 2003 | PD 81/2003 changes FTC and TWA | - | = | - |
| Hungary | 2003 | The amended labour code introduced stricter regulations on renewal of fixed term contracts | + | = | + |
| Ireland | 2003 | The Protection of Employees act tightened regulation on valid cases for FTC and limited their maximum overall duration to 4 years | + | = | + |
| | 2003 | The Redundancy Payments Bill (dismissal laws) raised severance pay entitlements | = | = | = |

Notes: Source: OECD (2004), pp.119-120. The equal sign indicates that the change in a sub-item was not large enough to be visible in the overall EPL index ; '-' ('+') indicates less (more) protection.

Table A6: Break points of Employment Protection Legislation (EPL) indices (contd.)

| | | Reform description | EPL overall | EPL regular contracts | EPL temp. contracts |
|------------------------|------|--|-------------|-----------------------|---------------------|
| Italy | 1987 | Fixed term contracts use was widened through collective agreements specifying target groups and employment shares | = | = | = |
| | 1997 | Treu package on FTC widened the number of valid cases for the use of FTC | - | = | - |
| | 1998 | TWA were permitted | - | = | - |
| | 2000 | Reform of TWA 2000 extended the use of TWA and removed the restrictions concerning unskilled workers | - | = | - |
| Japan | 1985 | TWA were permitted for 13 occupations only | | | |
| | 1996 | The use of TWA was extended to 26 occupations | - | = | - |
| | 1999 | The use of TWA was extended to all occupations with some exclusions | - | = | - |
| Korea | 1998 | TWA were liberalized | - | = | - |
| | 1998 | Dismissals for managerial reasons are allowed (<i>i.e.</i> redundancy and economic restructuring). Whereas this new law may be used for dismissing a single person for urgent business needs, it was mainly introduced with collective dismissals in mind | - | - | = |
| Mexico | | No changes | | | |
| Netherlands | 1999 | The flexibility and security law increased the maximum possible number of FCT and lengthened the maximum total duration of contracts with TWA | - | = | - |
| | 2001 | The EU directive on fixed-term work came into effect reducing the maximum total duration of TWA contracts | = | = | = |
| New Zealand | 2000 | Employment relations act tightened the legislation on individual and collective dismissals | + | + | = |
| | 2000 | Employment relations act also tightened the legislation on FTC and TWA | + | = | + |
| Norway | 1995 | TWA legislation was eased | - | = | - |
| | 2000 | TWA legislation was further eased | - | = | - |
| Poland | 2002 | The new labour code lifted some restrictions in the use of FTC (from 2 renewals permitted to unlimited – until accession) | - | = | - |
| | 2003 | A new law tightened regulations on temporary work agencies limiting the cases when TWA contracts are allowed and reducing their maximum total duration | + | = | + |
| Portugal | 1989 | Firing restrictions were eased (dismissals for individual redundancy were authorised) | | | |
| | 1991 | Firing restrictions were eased further (dismissals for unsuitability were authorised) | - | - | = |
| | 1996 | A strategic social plan between social partners was agreed to widen the use of FTC and TWA | - | = | - |
| | 2004 | New Labour Code came into force in December 2003 | - | = | - |
| Slovak Republic | 2003 | A new Labour code was approved that relaxed regulations on dismissal of regular contract employees and collective dismissals | - | - | = |
| | 2003 | The new Labour code also increased valid cases for FTC, raised the number of possible renewals and the maximum overall duration of FTC | - | = | - |

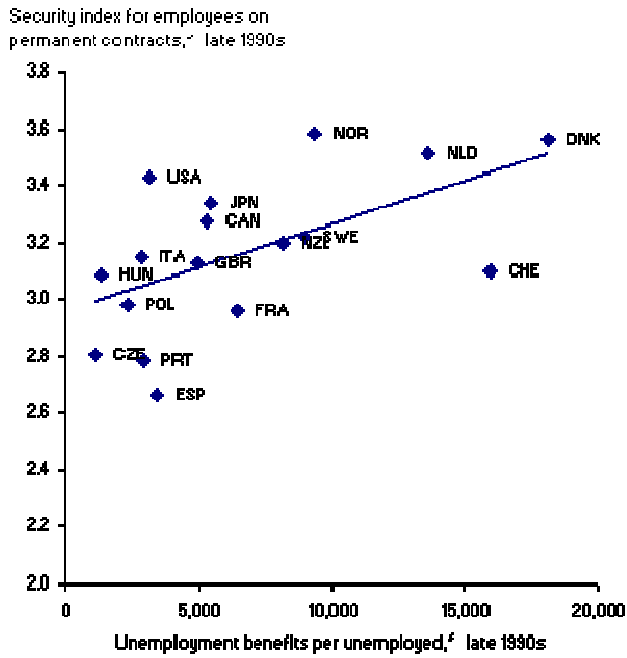
Notes: Source: OECD (2004), pp.119-120. The equal sign indicates that the change in a sub-item was not large enough to be visible in the overall EPL index ; ‘-’ (‘+’) indicates less (more) protection.

Table A6: Break points of Employment Protection Legislation (EPL) indices (contd.)

| | | Reform description | EPL overall | EPL regular contracts | EPL temp. contracts |
|----------------------|------|--|-------------|-----------------------|---------------------|
| Spain | 1984 | Restrictions for FTC were substantially relaxed | | | |
| | 1994 | Procedural requirements for dismissals for economic reasons were relaxed, notice periods shortened | - | - | = |
| | 1994 | Rules governing renewals of FTC were tightened and temporary work agencies permitted | - | = | - |
| | 1997 | Maximum compensation for unfair dismissal was reduced and some changes were made to the definition of fair dismissal | - | - | = |
| | 2001 | Law 12/2001 tightened the rules governing valid cases for the use of FTC | + | = | + |
| Sweden | 1993 | TWA were permitted | - | = | - |
| | 1997 | FTC were made possible without objective reason | - | = | - |
| Switzerland | | No changes | | | |
| Turkey | | No changes | | | |
| Great Britain | 1985 | The period of service to claim unfair dismissal increased to 2 years | | | |
| | 2000 | Trial period was halved | + | + | = |
| | 2002 | Maximum total duration of FTC was reduced to 4 years (from unlimited) | = | = | + |
| United States | | No changes | | | |

Notes: Source: OECD (2004), pp.119-120. The equal sign indicates that the change in a sub-item was not large enough to be visible in the overall EPL index ; '-' ('+') indicates less (more) protection.

Table A7: Employment protection and generosity of unemployment benefits



Source: OECD Economic Outlook, 2004, chart 1.

Expenditure on unemployment defined as compensation divided by LFS unemployment. For the unemployment benefits per unemployed, Pearson correlation coefficient is 0.58** for permanent contracts and 0.59** for temporary contracts. ‘*’, ‘**’, ‘***’ denotes statistical significance at 10%, 5% and 1% levels respectively.

Table A8: Construction of the Employment Protection Index (Version 1)

| EPL summary indicators at four successive levels of aggregation | | | |
|--|---|--|--|
| And weighting scheme | | | |
| Level 4 Scale 0-6 | Level 3 Scale 0-6 | Level 2 Scale 0-6 | Level 1 Scale 0-6 |
| Overall summary indicator | Regular contracts (version 2: 5/12) (version 1: 1/2) | Procedural inconveniences (1/3) | 1. Notification procedures (1/2) 2. Delay to start a notice (1/2) |
| | | Notice and severance pay for no-fault individual dismissals (1/3) | 3. Notice period after 9 months (1/7) 4 years (1/7) 20 years (1/7) 4. Severance pay after 9 months (4/21) 4 years (4/21) 20 years (4/21) |
| | | Difficulty of dismissal (1/3) | 5. Definition of unfair dismissal (1/4) 6. Trial period (1/4) 7. Compensation (1/4) 8. Reinstatement (1/4) |
| | Temporary contracts (version 2: 5/12) (version 1: 1/2) | Fixed term contracts (1/2) | 9. Valid cases for use of fixed-term contracts (1/2) 10. maximum number of successive contracts (1/4) 11. Maximum cumulated duration (1/4) |
| | | Temporary work agency employment (1/2) | 12. Types of work for which is legal (1/2) 13. Restrictions on number of renewals (1/4) 14. Maximum cumulated duration (1/4) |
| | Collective dismissals (version 2: 2/12) (version 1: 0) | | 15. Definition of collective dismissal (1/4) 16. Additional notification requirements (1/4) 17. Additional delays involved (1/4) 18. Other special costs to employers (1/4) |

Notes: Source: OECD (2004), p.106. Weights are displayed in round brackets.

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Tables

Table 1: Globalization and protection of regularly employed 1985-2003

| | (1) | (2) | (3) | (4) | (5) |
|---------------------------------------|---------------------|--------------------|---------------------|---------------------|---------------------|
| <i>log GDP (-2)</i> | -0.838** [2.54] | -0.711** [2.18] | -1.112*** [3.65] | -1.127*** [3.60] | -1.402*** [4.48] |
| <i>log Population (-2)</i> | 2.121*** [5.55] | 2.283*** [5.99] | 2.158*** [5.67] | 2.387*** [6.19] | 2.238*** [5.68] |
| <i>Unemployment (-2)</i> | 0.003 [0.58] | 0.006 [1.15] | 0.006 [1.03] | -0.001 [0.12] | 0.000 [0.09] |
| <i>Log Unemployment spending (-2)</i> | -0.068** [2.24] | -0.076** [2.51] | -0.095*** [3.14] | -0.058* [1.89] | -0.075** [2.44] |
| <i>GDP growth (-2)</i> | 0.000** [2.04] | 0.000* [1.87] | 0.000*** [2.98] | 0.000*** [3.02] | 0.000*** [3.62] |
| <i>Left-wing government (-2)</i> | 0.054*** [2.89] | 0.059*** [3.21] | 0.047** [2.56] | 0.059*** [3.11] | 0.048** [2.55] |
| <i>Globalization (-2)</i> | -0.015*** [4.03] | | | | |
| <i>Economic Glob. (-2)</i> | -0.011*** [4.57] | | -0.010*** [4.12] | | |
| <i>Political Glob. (-2)</i> | -0.007*** [3.71] | | -0.006*** [3.15] | | |
| <i>Social Glob. (-2)</i> | 0.000 [0.18] | | -0.001 [0.38] | | |
| <i>Observations</i> | 401 | 401 | 401 | 401 | 401 |
| <i>Number of countries</i> | 26 | 26 | 26 | 26 | 26 |
| <i>R-squared (within)</i> | 0.3227 | 0.3498 | 0.3239 | 0.3107 | 0.2914 |
| <i>R-squared (overall)</i> | 0.32 | 0.35 | 0.32 | 0.31 | 0.29 |

Notes: Dependent variable is the Employment Protection Index for regularly employed workers (OECD, 2004), ranging from 0 to 6. OLS estimation with country and year fixed effects (not reported). Globalization is measured on a scale ranging from 0 to 100 (Dreher, 2006), political orientation of the government is measured by a dummy for left-wing governments. Absolute value of t-statistics in brackets. ‘*’, ‘**’, ‘***’ denotes statistical significance at 10%, 5% and 1% levels respectively.

Table 2: Globalization and protection of temporarily employed 1985-2003

| | (1) | (2) | (3) | (4) | (5) |
|---------------------------------------|--------------------|--------------------|---------------------|---------------------|--------------------|
| <i>log GDP (-2)</i> | 3.769*** [4.13] | 3.932*** [4.35] | 5.083*** [6.03] | 4.165*** [4.85] | 3.883*** [4.63] |
| <i>log Population (-2)</i> | 9.447*** [8.94] | 9.492*** [8.99] | 9.100*** [8.63] | 9.049*** [8.54] | 9.787*** [9.28] |
| <i>Unemployment (-2)</i> | 0.011 [0.69] | 0.023 [1.48] | 0.025 [1.59] | 0.016 [1.07] | 0.014 [0.96] |
| <i>Log Unemployment spending (-2)</i> | -0.142* [1.71] | -0.199** [2.37] | -0.156* [1.86] | -0.157* [1.86] | -0.153* [1.85] |
| <i>GDP growth (-2)</i> | -0.000** [2.28] | -0.000** [2.40] | -0.000*** [3.74] | -0.000*** [2.85] | -0.000** [2.43] |
| <i>Left-wing government (-2)</i> | 0.079 [1.54] | 0.075 [1.48] | 0.085* [1.67] | 0.07 [1.35] | 0.090* [1.77] |
| <i>Globalization (-2)</i> | 0.022** [2.13] | | | | |
| <i>Economic Glob. (-2)</i> | | -0.013* [1.95] | -0.014** [2.05] | | |
| <i>Political Glob. (-2)</i> | | 0.007 [1.42] | | 0.009* [1.77] | |
| <i>Social Glob. (-2)</i> | | 0.018*** [3.31] | | | 0.018*** [3.33] |
| <i>Observations</i> | 401 | 401 | 401 | 401 | 401 |
| <i>Number of countries</i> | 26 | 26 | 26 | 26 | 26 |
| <i>R-squared (within)</i> | 0.4305 | 0.4511 | 0.4299 | 0.4282 | 0.4408 |
| <i>R-squared (overall)</i> | 0.43 | 0.45 | 0.43 | 0.43 | 0.44 |

Notes: Dependent variable is the Employment Protection Index for temporarily employed workers (OECD, 2004), ranging from 0 to 6. OLS estimation with country and year fixed effects (not reported). Globalization is measured on a scale ranging from 0 to 100 (Dreher, 2006). Absolute value of t-statistics in brackets. ‘*’, ‘**’, ‘***’ denotes statistical significance at 10%, 5% and 1% levels respectively.

Table 1B: Globalization and protection of regularly employed 1985-2003

| | (1) | (2) | (3) | (4) | (5) |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|
| <i>log GDP (-2)</i> | -0.537 [1.43] | -0.415 [1.11] | -0.944*** [2.74] | -0.871** [2.41] | -1.194*** [3.32] |
| <i>log Population (-2)</i> | 2.376*** [5.42] | 2.484*** [5.64] | 2.279*** [5.17] | 2.735*** [6.10] | 2.480*** [5.48] |
| <i>Unemployment (-2)</i> | 0.002 [0.39] | 0.005 [0.98] | 0.005 [0.92] | -0.003 [0.63] | -0.003 [0.46] |
| <i>Log Unemployment spending (-2)</i> | -0.055* [1.84] | -0.062** [2.05] | -0.087*** [2.89] | -0.042 [1.37] | -0.063** [2.07] |
| <i>GDP growth (-2)</i> | 0.000 [1.03] | 0.000 [0.85] | 0.000** [2.19] | 0.000* [1.76] | 0.000** [2.52] |
| <i>Rightwing government (continuous) (-2)</i> | -0.088*** [2.93] | -0.095*** [3.22] | -0.074** [2.50] | -0.078*** [2.59] | -0.064** [2.11] |
| <i>Globalization (-2)</i> | -0.016*** [4.32] | | | | |
| <i>Economic Glob. (-2)</i> | | -0.012*** [4.78] | -0.011*** [4.30] | | |
| <i>Political Glob. (-2)</i> | | -0.007*** [3.81] | | -0.006*** [3.21] | |
| <i>Social Glob. (-2)</i> | | -0.001 [0.58] | | | -0.001 [0.61] |
| <i>Observations</i> | 396 | 396 | 396 | 396 | 396 |
| <i>Number of countries</i> | 25 | 25 | 25 | 25 | 25 |
| <i>R-squared (within)</i> | 0.3244 | 0.3523 | 0.3242 | 0.3085 | 0.2888 |
| <i>R-squared (overall)</i> | 0.32 | 0.35 | 0.32 | 0.31 | 0.29 |

Notes: Dependent variable is the Employment Protection Index for regularly employed workers (OECD, 2004), ranging from 0 to 6. OLS estimation with country and year fixed effects (not reported). Globalization is measured on a scale ranging from 0 to 100 (Dreher, 2006), political orientation of the government is measured by the continuous ideology index developed by Bjørnskov (2008). Absolute value of t-statistics in brackets. ‘*’, ‘**’, ‘***’ denotes statistical significance at 10%, 5% and 1% levels respectively.

Table 2B: Globalization and protection of temporarily employed 1985-2003

| | (1) | (2) | (3) | (4) | (5) |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|
| <i>log GDP (-2)</i> | 4.608*** [4.47] | 4.579*** [4.45] | 5.991*** [6.31] | 4.982*** [5.07] | 4.895*** [5.11] |
| <i>log Population (-2)</i> | 11.158*** [9.26] | 10.802*** [8.87] | 10.708*** [8.81] | 10.563*** [8.67] | 11.379*** [9.45] |
| <i>Unemployment (-2)</i> | -0.004 [0.30] | 0.008 [0.53] | 0.011 [0.72] | 0.004 [0.27] | 0 [0.03] |
| <i>Log Unemployment spending (-2)</i> | -0.123 [1.51] | -0.182** [2.17] | -0.133 [1.60] | -0.149* [1.78] | -0.125 [1.54] |
| <i>GDP growth (-2)</i> | -0.000*** [3.52] | -0.000*** [3.41] | -0.000*** [4.86] | -0.000*** [3.91] | -0.000*** [3.90] |
| <i>Rightwing government (continuous) (-2)</i> | 0.096 [1.17] | 0.096 [1.18] | 0.046 [0.56] | 0.087 [1.06] | 0.081 [1.01] |
| <i>Globalization (-2)</i> | 0.024** [2.31] | | | | |
| <i>Economic Glob. (-2)</i> | | -0.011 [1.47] | -0.012* [1.67] | | |
| <i>Political Glob. (-2)</i> | | 0.010* [1.90] | | 0.011** [2.09] | |
| <i>Social Glob. (-2)</i> | | 0.016*** [2.93] | | | 0.016*** [2.93] |
| <i>Observations</i> | 396 | 396 | 396 | 396 | 396 |
| <i>Number of countries</i> | 25 | 25 | 25 | 25 | 25 |
| <i>R-squared (within)</i> | 0.4305 | 0.4511 | 0.4299 | 0.4282 | 0.4408 |
| <i>R-squared (overall)</i> | 0.4413 | 0.4567 | 0.4373 | 0.4398 | 0.4465 |

Notes: Dependent variable is the Employment Protection Index for temporarily employed workers (OECD, 2004), ranging from 0 to 6. OLS estimation with country and year fixed effects (not reported). Globalization is measured on a scale ranging from 0 to 100 (Dreher, 2006), political orientation of the government is measured by the continuous ideology index developed by Bjørnskov (2008). Absolute value of t-statistics in brackets. *, **, *** denotes statistical significance at 10%, 5% and 1% levels respectively.

Table 1C: Globalization and protection of regularly employed 1985-2003, controlling for union density

| | (1) | (2) | (3) | (4) | (5) |
|---------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| <i>log GDP (-2)</i> | -2.752*** [5.83] | -2.735*** [5.78] | -3.336*** [6.92] | -3.321*** [7.33] | -3.488*** [7.53] |
| <i>log Population (-2)</i> | 0.746 [1.63] | 0.930* [1.94] | 1.179** [2.51] | 1.349*** [2.93] | 0.721 [1.45] |
| <i>Unemployment (-2)</i> | 0.004 [0.61] | 0.001 [0.18] | -0.001 [0.15] | -0.006 [1.03] | -0.002 [0.25] |
| <i>Log Unemployment spending (-2)</i> | -0.01 [0.31] | 0.012 [0.37] | -0.032 [0.95] | 0.02 [0.60] | -0.018 [0.53] |
| <i>Union density (-2)</i> | -0.019*** [8.68] | -0.019*** [7.86] | -0.015*** [6.59] | -0.018*** [8.27] | -0.019*** [8.03] |
| <i>GDP growth (-2)</i> | 0.000*** [5.54] | 0.000*** [5.53] | 0.000*** [6.12] | 0.000*** [6.70] | 0.000*** [6.84] |
| <i>Left-wing government (-2)</i> | -0.111*** [3.75] | -0.119*** [4.01] | -0.079*** [2.64] | -0.101*** [3.38] | -0.089*** [2.93] |
| <i>Globalization (-2)</i> | -0.022*** [5.50] | | | | |
| <i>Economic Glob. (-2)</i> | | -0.006* [1.96] | -0.007** [2.43] | | |
| <i>Political Glob. (-2)</i> | | -0.010*** [5.12] | | -0.009*** [4.60] | |
| <i>Social Glob. (-2)</i> | | -0.007*** [2.79] | | | -0.007*** [2.64] |
| <i>Observations</i> | 340 | 340 | 340 | 340 | 340 |
| <i>Number of countries</i> | 20 | 20 | 20 | 20 | 20 |
| <i>R-squared (within)</i> | 0.48 | 0.5 | 0.44 | 0.47 | 0.45 |
| <i>R-squared (overall)</i> | 0.485 | 0.4966 | 0.4433 | 0.4702 | 0.4451 |

Notes: Dependent variable is the Employment Protection Index for regularly employed workers (OECD, 2004), ranging from 0 to 6. OLS estimation with country and year fixed effects (not reported). Globalization is measured on a scale ranging from 0 to 100 (Dreher, 2006), political orientation of the government is measured by the continuous ideology index developed by Bjørnskov (2008). Absolute value of t-statistics in brackets. *, **, *** denotes statistical significance at 10%, 5% and 1% levels respectively.

Table 2C: Globalization and protection of temporarily employed 1985-2003, controlling for union density

| | (1) | (2) | (3) | (4) | (5) |
|---------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| <i>log GDP (-2)</i> | 4.061*** [2.91] | 4.698*** [3.41] | 5.834*** [4.23] | 4.911*** [3.70] | 4.496*** [3.44] |
| <i>log Population (-2)</i> | 11.151*** [8.24] | 12.354*** [8.85] | 10.645*** [7.91] | 10.409*** [7.72] | 12.180*** [8.68] |
| <i>Unemployment (-2)</i> | 0.005 [0.25] | 0.012 [0.63] | 0.023 [1.21] | 0.018 [0.99] | 0.003 [0.16] |
| <i>Log Unemployment spending (-2)</i> | -0.131 [1.39] | -0.207** [2.13] | -0.14 [1.45] | -0.161 [1.64] | -0.122 [1.30] |
| <i>Union density (-2)</i> | -0.007 [1.17] | 0.006 [0.79] | -0.008 [1.21] | -0.009 [1.38] | -0.002 [0.26] |
| <i>GDP growth (-2)</i> | -0.000** [2.12] | -0.000*** [2.74] | -0.000*** [3.14] | -0.000*** [2.70] | -0.000** [2.57] |
| <i>Left-wing government (-2)</i> | 0.109 [1.25] | 0.146* [1.69] | 0.06 [0.69] | 0.089 [1.02] | 0.109 [1.28] |
| <i>Globalization (-2)</i> | 0.029** [2.45] | | | | |
| <i>Economic Glob. (-2)</i> | | -0.018** [2.06] | -0.01 [1.11] | | |
| <i>Political Glob. (-2)</i> | | 0.012** [2.14] | | 0.010* [1.66] | |
| <i>Social Glob. (-2)</i> | | 0.030*** [4.06] | | | 0.024*** [3.37] |
| <i>Observations</i> | 340 | 340 | 340 | 340 | 340 |
| <i>Number of countries</i> | 20 | 20 | 20 | 20 | 20 |
| <i>R-squared (within)</i> | 0.48 | 0.5 | 0.47 | 0.47 | 0.49 |
| <i>R-squared (overall)</i> | 0.4786 | 0.5029 | 0.4702 | 0.4729 | 0.4878 |

Notes: Dependent variable is the Employment Protection Index for regularly employed workers (OECD, 2004), ranging from 0 to 6. OLS estimation with country and year fixed effects (not reported). Globalization is measured on a scale ranging from 0 to 100 (Dreher, 2006), political orientation of the government is measured by the continuous ideology index developed by Bjørnskov (2008). Absolute value of t-statistics in brackets. '*', '**', '***' denotes statistical significance at 10%, 5% and 1% levels respectively.

Table 3: Interaction between globalization and unemployment spending for regular employment

| | (1) | (2) | (3) | (4) | (5) | (6) |
|--|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|
| <i>log GDP (-2)</i> | -0.545 [1.43] | -0.619 [1.63] | -0.948*** [2.71] | -1.096*** [3.07] | -0.873** [2.37] | -0.837** [2.28] |
| <i>log Population (-2)</i> | 2.354*** [5.29] | 2.201*** [4.93] | 2.251*** [5.03] | 2.133*** [4.74] | 2.717*** [5.97] | 2.749*** [6.06] |
| <i>Unemployment (-2)</i> | 0.002 [0.43] | 0.004 [0.72] | 0.006 [1.02] | 0.004 [0.67] | -0.003 [0.52] | -0.003 [0.56] |
| <i>Log Unemployment spending (-2) (centered)</i> | -0.060* [1.92] | -0.077** [2.42] | -0.095*** [3.02] | -0.094*** [3.00] | -0.049 [1.51] | -0.053* [1.66] |
| <i>GDP growth (-2)</i> | 0.000 [0.97] | 0.000 [1.17] | 0.000** [2.14] | 0.000** [2.27] | 0.000* [1.74] | 0.000* [1.71] |
| <i>Rightwing government (continuous) (-2)</i> | -0.086*** [2.84] | -0.075** [2.47] | -0.072** [2.42] | -0.059* [1.94] | -0.077** [2.53] | -0.068** [2.21] |
| <i>Economic Glob. (-2) (centered)</i> | -0.011*** [4.30] | -0.009*** [2.89] | | | | |
| <i>Political Glob. (-2) (centered)</i> | | | -0.006*** [3.17] | -0.008*** [3.63] | | |
| <i>Social Glob. (-2) (centered)</i> | | | | | -0.001 [0.58] | -0.002 [0.91] |
| <i>globalization * log unemployment spending</i> | | -0.004** [1.97] | | -0.002* [1.94] | | -0.001 [1.02] |
| <i>Observations</i> | 385 | 385 | 385 | 385 | 385 | 385 |
| <i>Number of countries</i> | 24 | 24 | 24 | 24 | 24 | 24 |
| <i>R-squared (within)</i> | 0.3267 | 0.3344 | 0.3102 | 0.3178 | 0.2903 | 0.2926 |
| <i>R-squared (overall)</i> | 0.33 | 0.33 | 0.31 | 0.32 | 0.29 | 0.29 |

Notes: Dependent variable is the Employment Protection Index for regularly employed workers (OECD, 2004), ranging from 0 to 6. OLS estimation with country and year fixed effects (not reported). Globalization is measured on a scale ranging from 0 to 100 (Dreher, 2006), political orientation of the government is measured by the continuous ideology index developed by Bjørnskov (2008). Absolute value of t-statistics in brackets. ‘*’, ‘**’, ‘***’ denotes statistical significance at 10%, 5% and 1% levels respectively.

Table 4: Interaction between globalization and unemployment spending for temporary employment

| | (1) | (2) | (3) | (4) | (5) | (6) |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| <i>log GDP (-2)</i> | 6.151*** [6.40] | 5.842*** [5.96] | 5.176*** [5.20] | 5.333*** [5.43] | 4.976*** [5.17] | 4.784*** [4.95] |
| <i>log Population (-2)</i> | 10.736*** [8.75] | 10.489*** [8.49] | 10.605*** [8.63] | 10.747*** [8.85] | 11.475*** [9.48] | 11.088*** [9.03] |
| <i>Unemployment (-2)</i> | 0.015 [0.92] | 0.011 [0.65] | 0.007 [0.49] | 0.006 [0.42] | 0.004 [0.25] | 0.009 [0.58] |
| <i>Log Unemployment spending (-2) (centered)</i> | -0.148* [1.71] | -0.146* [1.69] | -0.161* [1.85] | -0.182** [2.11] | -0.148* [1.75] | -0.189** [2.16] |
| <i>GDP growth (-2)</i> | -0.000*** [4.75] | -0.000*** [4.66] | -0.000*** [3.85] | -0.000*** [3.97] | -0.000*** [3.67] | -0.000*** [3.39] |
| <i>Rightwing government (continuous) (-2)</i> | 0.035 [0.42] | 0.062 [0.74] | 0.074 [0.90] | 0.115 [1.39] | 0.071 [0.88] | 0.087 [1.07] |
| <i>Economic Glob. (-2) (centered)</i> | -0.012 [1.61] | -0.006 [0.72] | | | | |
| <i>Political Glob. (-2) (centered)</i> | | | 0.011** [1.99] | 0.005 [0.90] | | |
| <i>Social Glob. (-2) (centered)</i> | | | | | 0.019*** [3.36] | 0.015** [2.51] |
| <i>globalization * log unemployment spending</i> | | -0.007 [1.50] | | -0.010*** [3.18] | | -0.004* [1.73] |
| <i>Observations</i> | 385 | 385 | 385 | 385 | 385 | 385 |
| <i>Number of countries</i> | 24 | 24 | 24 | 24 | 24 | 24 |
| <i>R-squared (within)</i> | 0.445 | 0.4486 | 0.4472 | 0.4633 | 0.4589 | 0.4636 |
| <i>R-squared (overall)</i> | 0.44 | 0.45 | 0.45 | 0.46 | 0.46 | 0.46 |

Notes: Dependent variable is the Employment Protection Index for temporarily employed workers (OECD, 2004), ranging from 0 to 6. OLS estimation with country and year fixed effects (not reported). Globalization is measured on a scale ranging from 0 to 100 (Dreher, 2006), political orientation of the government is measured by the continuous ideology index developed by Bjørnskov (2008). Absolute value of t-statistics in brackets. ‘*’, ‘**’, ‘***’ denotes statistical significance at 10%, 5% and 1% levels respectively.

Table 5: Interaction between globalization and government ideology for regular employment

| | (1) | (2) | (3) | (4) | (5) | (6) |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| <i>log GDP (-2)</i> | -0.948*** [2.71] | -1.053*** [2.99] | -0.873** [2.37] | -0.858** [2.32] | -1.203*** [3.30] | -1.185*** [3.22] |
| <i>log Population (-2)</i> | 2.251*** [5.03] | 2.436*** [5.36] | 2.717*** [5.97] | 2.715*** [5.96] | 2.461*** [5.36] | 2.442*** [5.29] |
| <i>Unemployment (-2)</i> | 0.006 [1.02] | 0.005 [0.92] | -0.003 [0.52] | -0.003 [0.50] | -0.002 [0.37] | -0.002 [0.35] |
| <i>Log Unemployment spending (-2) (centered)</i> | -0.095*** [3.02] | -0.091*** [2.89] | -0.049 [1.51] | -0.051 [1.56] | -0.069** [2.17] | -0.070** [2.18] |
| <i>GDP growth (-2)</i> | 0.000** [2.14] | 0.000** [2.47] | 0.000* [1.74] | 0.000* [1.68] | 0.000** [2.47] | 0.000** [2.38] |
| <i>Rightwing government (continuous) (-2)</i> | -0.072** [2.42] | -0.063** [2.07] | -0.077** [2.53] | -0.078** [2.53] | -0.063** [2.04] | -0.064** [2.08] |
| <i>Economic Glob. (-2) (centered)</i> | -0.011*** [4.30] | -0.012*** [4.34] | | | | |
| <i>Political Glob. (-2) (centered)</i> | | | -0.006*** [3.17] | -0.006*** [3.18] | | |
| <i>Social Glob. (-2) (centered)</i> | | | | | -0.001 [0.58] | -0.001 [0.63] |
| <i>globalization * rightwing government</i> | | -0.007** [2.08] | | 0.001 [0.42] | | 0.001 [0.50] |
| <i>Observations</i> | 385 | 385 | 385 | 385 | 385 | 385 |
| <i>Number of countries</i> | 24 | 24 | 24 | 24 | 24 | 24 |
| <i>R-squared (within)</i> | 0.3267 | 0.3352 | 0.3102 | 0.3106 | 0.2903 | 0.2909 |
| <i>R-squared (overall)</i> | 0.33 | 0.34 | 0.31 | 0.31 | 0.29 | 0.29 |

Notes: Dependent variable is the Employment Protection Index for regularly employed workers (OECD, 2004), ranging from 0 to 6. OLS estimation with country and year fixed effects (not reported). Globalization is measured on a scale ranging from 0 to 100 (Dreher, 2006), political orientation of the government is measured by the continuous ideology index developed by Bjørnskov (2008). Absolute value of t-statistics in brackets. ‘*’, ‘**’, ‘***’ denotes statistical significance at 10%, 5% and 1% levels respectively.

Table 6: Interaction between globalization and government ideology for temporary employment

| | (1) | (2) | (3) | (4) | (5) | (6) |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| <i>log GDP (-2)</i> | 6.151*** [6.40] | 6.157*** [6.33] | 5.176*** [5.20] | 5.395*** [5.43] | 4.976*** [5.17] | 4.995*** [5.16] |
| <i>log Population (-2)</i> | 10.736*** [8.75] | 10.725*** [8.56] | 10.605*** [8.63] | 10.571*** [8.65] | 11.475*** [9.48] | 11.455*** [9.42] |
| <i>Unemployment (-2)</i> | 0.015 [0.92] | 0.015 [0.92] | 0.007 [0.49] | 0.009 [0.59] | 0.004 [0.25] | 0.004 [0.26] |
| <i>Log Unemployment spending (-2) (centered)</i> | -0.148* [1.71] | -0.148* [1.70] | -0.161* [1.85] | -0.197** [2.23] | -0.148* [1.75] | -0.149* [1.76] |
| <i>GDP growth (-2)</i> | -0.000*** [4.75] | -0.000*** [4.69] | -0.000*** [3.85] | -0.000*** [4.12] | -0.000*** [3.67] | -0.000*** [3.66] |
| <i>Rightwing government (continuous) (-2)</i> | 0.035 [0.42] | 0.034 [0.41] | 0.074 [0.90] | 0.072 [0.88] | 0.071 [0.88] | 0.069 [0.85] |
| <i>Economic Glob. (-2) (centered)</i> | -0.012 [1.61] | -0.012 [1.61] | | | | |
| <i>Political Glob. (-2) (centered)</i> | | | 0.011** [1.99] | 0.010* [1.85] | | |
| <i>Social Glob. (-2) (centered)</i> | | | | | 0.019*** [3.36] | 0.019*** [3.31] |
| <i>globalization * rightwing government</i> | | 0 [0.04] | | 0.012** [2.28] | | 0.001 [0.20] |
| <i>Observations</i> | 385 | 385 | 385 | 385 | 385 | 385 |
| <i>Number of countries</i> | 24 | 24 | 24 | 24 | 24 | 24 |
| <i>R-squared (within)</i> | 0.445 | 0.445 | 0.4472 | 0.4556 | 0.4589 | 0.4589 |
| <i>R-squared (overall)</i> | 0.44 | 0.44 | 0.45 | 0.46 | 0.46 | 0.46 |

Notes: Dependent variable is the Employment Protection Index for temporarily employed workers (OECD, 2004), ranging from 0 to 6. OLS estimation with country and year fixed effects (not reported). Globalization is measured on a scale ranging from 0 to 100 (Dreher, 2006), political orientation of the government is measured by the continuous ideology index developed by Bjørnskov (2008). Absolute value of t-statistics in brackets. ‘*’, ‘**’, ‘***’ denotes statistical significance at 10%, 5% and 1% levels respectively.