



Large-scale Transformations of Socio-economic Institutions

Working Paper no 75

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December 2014



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Work Package 105

MS25 “Research paper on large-scale transformation of socio-economic institutions”

Working Paper no 75

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THEME SSH.2011.1.2-1

*Socio-economic Sciences and Humanities Europe
moving towards a new path of economic growth
and social development - Collaborative project*

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no. 290647.

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Abstract

We explain economic growth by both politics, i.e. government activity including spending as well as regulation, and institutional quality and its interaction with politics. This extends previous work on institution building in transition by looking at its impact and, at the same time, considering endogeneity problems. While initially planned in two stages, the modified approach is able to integrate the arguments developed in the cluster approach on varieties of capitalism and their potential explanatory power for economic growth. As foreseen for the second stage, we estimate the determinants of transition based on the exogenous components of institution building only as well as on other factors, especially welfare policies. This approach also allows to integrate various measures of income or well-being as soon as panel data becomes available.

Contribution to the Project

Lessons from CEECs seem to be highly relevant for the transition of the EU towards 2020 goals because of the most profound and ambitious transfer of institutions in recent history which took place in these countries at different speed. This experience can be analysed against clearly defined benchmarks. MS attempts to analyze the relative importance of policies vs. institutional structures for determining socio-economic transition.

Keywords:

Economic strategy, Institutional reforms, Political economy of policy reform

Jel codes:

F15, H50, P10, P20

Research Paper on Large-scale Transformations of Socio-economic Institutions

Esther Ademmer, Joscha Beckmann & Rainer Schweickert

1. Introduction

The socio-economic transition of Central and Eastern European Countries (CEECs) entails interesting lessons for the transition of the EU towards its 2020 goals. This is not only due to the fact that CEECs have been a vibrant part of the EU since 2004 and 2007, respectively, but also due to their unique experience of an ambitious institutional transformation in the context of major socio-economic pressures. This research paper presents the findings of three distinct analyses that aim at shedding light into the drivers of this socio-economic transition and their outcomes. In particular, the three sections stepwise present novel evidence of the convergence and divergence of Eastern and Western member states with view to their capitalist systems and economic performance, as well as to the underlying political processes that shape economic and social policy-making in European member states. In this regard, the first section starts with analyzing whether there is a convergence to a specific capitalist variety in the enlarged EU or whether some CEECs remain distinct Dependent Market Economies, as suggested in the literature (Nölke and Vliegthart 2009). Based on these findings, the second section puts the question whether there is a unique government size that optimizes growth strategies and hence the economic performance of all EU member states or whether this relationship is contingent on the different capitalist varieties under closer scrutiny here. As this research suggests that one (government) size does not fit all, the third section finally seeks to explain the emergence of differently sized governments throughout Europe.

The sections rally around the common theme of highlighting the relevance of capitalist diversity and complementary institutional structures in understanding divergence and convergence and in explaining growth strategies and government size in the enlarged EU. Our analyses focus on the explanatory power of the Varieties of Capitalism approach (VoC; see Hall and Soskice 2001) that we combine with Esping-Anderson's work on Worlds of Welfare States (WWS; see Esping-Andersen 1990). We do so in order to better capture the role of the state in these processes and to adjust the VoC concept to the transition context of Central and Eastern Europe. In combining this approach with various other drivers of change and stagnation, such as partisan preferences, democratic or economic development, we also hope to generate knowledge about the relative importance of discrete policy-making versus comparatively stable institutional structures for determining socio-economic transition.

Finally, the analyses control for post-accession effects in Central and Eastern European states, if possible. We investigate whether institutional structures change after CEECs accede to the EU and also whether accession alters potential constraints on governmental behavior and economic growth.

The paper is structured as follows: section 2 presents the results of a cluster analysis that provides an in-depth assessment of convergence and divergence of capitalist systems in the enlarged EU. In doing so, we avoid *ex ante* assumptions about country clusters frequently represented by predetermined dummy variables in regression analyses. Our cluster analysis allows us to empirically identify dummy variables for clusters of countries representing different varieties of capitalism, which are used as exogenous variables for the panel regressions discussed in sections 3 and 4. Generally, the use of dummy variables for groups of countries to some extent serves as a substitute for the assumption of country fixed effects. Therefore, we apply Pooled OLS but provide robustness checks using Fixed Effects estimations where possible (section 3) and instrumentation with 2SLS where necessary (section 4). Robustness checks have been carried out for all estimations. Accordingly, section 3 investigates the question of whether there is a uniform government size that optimizes growth strategies or whether the effect of government size on growth depends on the prevalent capitalist variety. Section 4 presents preliminary findings on the scope conditions for partisan preferences to impact government size. Again we control for the possibility that this depends on capitalist systems and/or integration into the EU. The final section concludes with a synopsis of findings related to the three broad themes outlined above and touches upon possible policy implications to be derived out of this.

2. Large-Scale Transition of Economic Systems – Do CEECs Converge Towards Western Prototypes?¹

Motivation

As described and analyzed by the VoC approach (see, e.g., Hall and Soskice 2001), different market regimes, i.e. capitalist variations, are characterized by different institutional matrices in the economy. These institutional environments and arrangements provide incentive structures for the behavior of firms, households and also policymakers. Moreover, these institutional settings reflect, influenced by distinct incentive patterns, different economic and societal preferences with respect to the role of the government in the economy. The VoC literature classifies market economies into two polar types of capitalism. In Liberal Market Economies (LMEs), coordination is primarily characterized by price signals and formal contracting in competitive markets. In contrast, Coordinated Market Economies (CMEs) are largely driven

¹ This section presents an extended version of the respective chapter of the midterm report (Schweickert *et al.* 2013) that includes parts of a Kiel Working Paper (Ahlborn *et al.* 2014). We would therefore like to direct the reader to consult the working paper for information on data sources and details.

by specific non-market institutions which play critical roles and influence processes of strategic interaction. This analytical division is conceived as a bipolar continuum on which countries cluster as follows: CMEs include the Scandinavian countries, Continental European countries and Japan. LMEs comprise the USA, the UK, Ireland, Canada, New Zealand and Australia (Hall and Soskice 2001). Despite increased international competition due to globalization processes as well as domestic adjustment pressure due to demographic changes, there has not been a convergence of different economic regimes of advanced economies towards a universal economic order (Schustereder 2010). LMEs and CMEs have adjusted, but not converged. Each regime has largely maintained its peculiarities. This confirms Hall and Soskice's (2001) hypothesis that institutional convergence will be unlikely.

Until recently, however, the VoC literature suffered from two shortcomings: It has concentrated on advanced economies (especially in an OECD context), and, although pointing at the importance of governance issues, neglected the role of the state. However, there is an increasing amount of research which seeks to explain capitalist variations in less developed, emerging, or transition economies within a VoC framework (see e.g. Lane and Myant 2007). In those countries, especially formal institutions tend to change at a broader scale and a faster pace than in the OECD world, and governments have played influential roles in initiating and enforcing formal institutional change.

There are also a few studies which started to focus on the role of the state. Amable and Azizi (2011) and Schustereder (2010) observe that LMEs usually exhibit more limited social protection, while CMEs and particularly social-democratic (Nordic or Scandinavian) welfare regimes are based on governance structures which provide significantly more generous social protection both in kind and monetary terms. One explanation is provided by a direct link between labour market institutions and the welfare state as analyzed in the literature on Worlds of Welfare States (e.g. Esping-Andersen 1990). There is, however, also an argument which goes well beyond a narrow focus on the welfare system and related spending for social protection. Lijphart (1999) points out that CMEs usually have a consensus-oriented political system, in which large (at times heterogeneous) coalitions ensure government support. Such regimes provide an institutional setting in which vested interest groups participate in, or indirectly influence, policy making. Thereby, interest groups help to generate a consensus between firms and unions to establish, extend, or at least maintain a developed welfare regime. On the contrary, LMEs are often based on majoritarian political regimes that favor two-party political competition as well as a pluralism of interest groups, while a relatively powerful government faces fragmented partners in the social realm.

In this section, we present the findings of an analysis of the evolution of economic systems in CEECs, i.e. European transition countries, on the basis of a modified and extended VoC approach. Rather than focusing on the micro level, we argue that economic systems are characterized by government activity in spending and/or regulating the economy and that the resulting politics should be evaluated in the context

of economic performance measures, such as economic growth. For doing this, we conduct a cluster analysis for European and OECD countries using broad macro indicators for government activity, i.e. regulation and spending, as well as performance to investigate whether CEECs converge to established capitalist varieties of advanced economies. Basically, we consider three variables measuring government activity, i.e. *govsize*, *govtransfer*, and *govreg* measuring government's overall size, transfers and subsidies and regulation respectively, as well as three variables measuring economic performance, along the lines of the so-called trilemma of welfare state objectives², i.e. *gini*, *innocap*, and *fiscstab* measuring equality, innovation capacity, and fiscal stability.³

In addition, we consider the aspect of transition by looking at cluster histories, i.e. cluster analyses for different time spans, to trace the development of this process over time. And finally, we sort the revealed clusters in the two-dimensional space of dominant principal components to uncover qualitative changes in the underlying structures of clusters over time.

Our analysis shows that there is consolidation rather than convergence with CEECs being divided in clusters leaning towards CME and LME prototypes, respectively. Accordingly, there are two distinct worlds: the CME world of equality/redistribution and the LME world of inequality/non-redistribution. Within these worlds, countries cluster with respect to their mix of – negatively correlated – regulation and innovation. Interestingly, CEECs do not mix up with Southern European Mixed Market Economies (MMEs), while Scandinavian CMEs as well as traditional LMEs provide a kind of role model within their respective worlds of redistribution.

Empirical Results

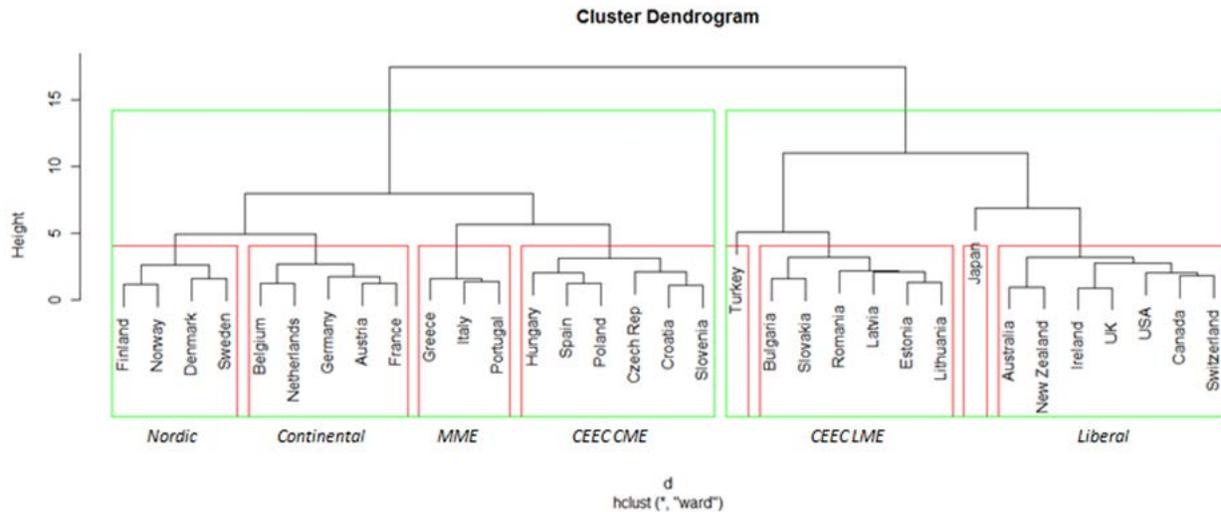
We first analyze whether CEECs converge to prototypes of established capitalist systems in the West. In this vein, Figure 1 shows that the macro level of our analysis is able to reveal the clusters highlighted in the VoC and WWS literature. With regard to the question of convergence or divergence of CEECs, Figure 1 suggests that if one allows for a level of heterogeneity where different varieties of coordinated market economies are to be distinguished, CEECs still form separate clusters and are not integrated into the traditional OECD clusters. Yet, the macro analysis also reveals, that there are two distinct clusters of CEECs, which cluster either with the CME-clusters (CEEC CME) or with the LME-group (CEEC LME).

² There is a potential trilemma because it is challenging to reduce inequality, increase income perspectives, and keep fiscal stability at the same time. Only two of these aims can be achieved simultaneously. Hence, focusing at the reduction of inequality only would not be adequate for evaluating the achievements of welfare systems because this could be achieved by neglecting overall income perspectives and/or stability.

³ For the definition of variables, see Appendix Table A1. For the cluster analysis all variables except *fiscstab* have been transformed to range from 0 (min) to 100 (max).

Hence, on a level of heterogeneity at which the traditional OECD world is divided into only two groups - CME and LME – CEECs become integrated.

Figure 1 – Clusters of Liberal and Coordinated Market Economies, 2007-09 (period average)



We also conducted a cluster history for comparable levels of heterogeneity to compare the patterns of clusters for different time periods. Our results show a mixed pattern of stable clusters, convergence and divergence since the mid-1990s. The most stable clusters are the *Liberals*, both traditional LMEs and the *CEEC LMEs*, mainly the Baltic countries. This stable pattern was yet interrupted in the period immediately preceding the CEECs' entry into the EU. The fact that the groups of CEECs merge rather early compared to other periods would be consistent with some enforced but unsustainable convergence due to the accession process. Another stable cluster comprises a core group of Continental countries – Austria, France, Germany, and, to some extent, Belgium and the Netherlands. The *CEEC CME* cluster always ends up in the cluster with *Nordic* and *Continental*. Although there is not a clear pattern how they integrate into this group, this confirms the conclusion that there are indeed two separate groups of CEECs with respect to the economic system implemented during transition. The most unstable behavior is revealed by the *MMEs* mainly formed by Southern European countries. In line with the VoC literature, which argues that these countries suffer from an inconsistent mix of varieties of economic systems, *MMEs* end up in either the large cluster of rather coordinated or in the large cluster of rather liberal countries. Overall, there is no indication from the cluster behavior of the three groups of countries that CEEC groups show a similar behavior as *MMEs*, while Spain even converged into the *CEEC CME* cluster. Hence, from the perspective of our macro analysis of policy and performance, CEECs do not converge towards MME-type economic systems but rather sort themselves into the coordinated or liberal worlds.

The discussion of convergence of clusters during transition seems to indicate that the distribution of countries to clusters and the way how these clusters integrate themselves into the two worlds of economic systems is stabilizing. Hence, we conducted principal component analyses to reveal the qualitative structures of the clusters. There are two main principal components,

- PC1 is negatively correlated with government spending (overall and transfers) as well as with equality and, to a minor extent, with innovation,
- PC2 is positively correlated with innovation but negatively correlated with regulation

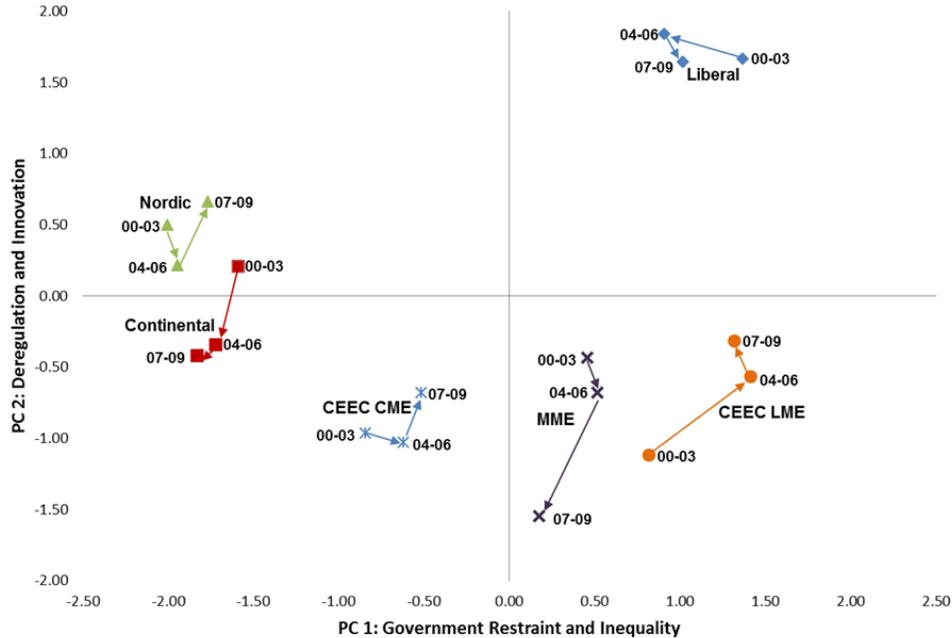
In addition to the PC-analysis of the most recent time period, PC-analyses for the two previous periods (2000-03 and 2004-6) allow an integrated examination of cluster movements in time, because correlations between PCs and original variables remain remarkably stable for all three periods.⁴ If we sort the clusters revealed for different periods into the PC1/PC2-space (see Figure 2), we discover some interesting insights.

First, there are two “worlds of redistribution”: the traditional LMEs joined by the more liberal CEECs, which spent less and have a higher degree of inequality compared to all the other groups. This confirms a positive interdependence between spending and distribution and that some groups of countries have a preference for equality while others do not.

Second, there is also a distinction according to a regulation/innovation mix within these two “worlds of redistribution”. Clearly, the *Nordic* countries are distinct from the other CMEs by revealing a rather low degree of regulation going together with a high degree of innovation. While this is not an analysis of causality, it fits to the argument made by Kitschelt that it is especially the *Continental* group of CMEs facing a problem of inefficiency. Regulation and spending constitute rather complements than substitutes. On the contrary, *Nordic* countries are running large (redistributive) welfare states but increasingly liberal regulation regimes. If we assume some causality for lower regulation allowing for higher innovative capacity, comparing *Nordic* and *Liberal* clusters in Figure 2 seems to reveal some kind of “unavoidable trade-off” involved in having (efficient) redistribution by a welfare state. And third, while the CEEC countries on the left hand side are distributed somewhere in the area of the *Continental* group, the Southern Europeans again are quite distinct. Except for Spain, the *MMEs* seem to represent the worst mix of high regulation/low innovation together with a rather undetermined spending/equality mix. As was revealed by the cluster analysis in general, CEECs do not mix up in such a scenario.

⁴ Before 2000, data is available for 1995 only. This is not shown in Figure 2 because, at that time, CEECs’ performance was dominated by their very recent transformation from planned to market economies, which distorts the cluster analysis. The 1995 data is discussed in the full paper in greater detail.

Figure 2 – Average PC: Historical Model Comparison



If we compare the cluster movements over time, one can discover a certain institutional stability as predicted by Hall and Soskice (2001) for the traditional OECD clusters. Especially the Liberal and the Nordic clusters hardly move, while the Continental European cluster shows a rather clear movement in the direction of a less favorable mix of more regulation and/or less innovation between the periods 2000-03 and 2004-06. The clear cut pattern indicated by the cluster analysis with the *Nordic/Continental* model, i.e. the CMEs on one the end of the spectrum and the *Liberal* or LME countries on the other, is again confirmed here. The *Liberal* countries form the most distinct group with a stable mix of government restraint/inequality (PC 1) with low regulation/high innovative capacity (PC 2). The CMEs possess a more active government and less inequality, indicated by low values of PC 1, while within this group, especially since the time period 04-06, there seems to be a distinction between the *Nordic* and the *Continental* European countries along the lines of PC 2: the *Nordics* possess a more favorable mix of low regulation/high innovation than their Continental European counterparts, outperforming that model in this respect.

A certain degree of institutional stability can also be discovered for the *CEEC CME* cluster, where - if anything - a step towards a more *Liberal* model is revealed, which could be asserted to the effects of EU accession. While this movement is rather small for the *CEEC CME* cluster, the movement pattern of the *CEEC LME* cluster is much clearer: There seems to be a clear step into the direction of more restraint of government and less regulation/more innovation, i.e. a more *Liberal* model after the pre-EU period 2000-03. Hence, our data indicates that the CEECs have established a more liberal type of capitalism after they

joined the European Union, which remained fairly stable in the following periods. This is especially apparent for the *CEEC LME* cluster which quite clearly converged towards a more liberal type of capitalism after EU accession. Nevertheless there is still a clear dichotomy among the CEECs with the *CEEC CME* cluster being close to the *Continental* or CME model as opposed to their neighbors of the *CEEC LME* cluster and their more *Liberal* types of capitalism. The future development of these clusters is unclear. For now one could conclude that the convergence of the *CEEC LME* countries has come to a halt (no clear movement from 2004-06 to 2007-09), but it remains to be seen if (maybe after the end of the global financial crisis) convergence will continue or if a stable consolidation of institutional design has been reached among these countries.

The Mediterranean countries of the *MME* cluster show a certain institutional stability concerning the values of PC 1. This suggests that these countries have indeed implemented a rather inconsistent pattern concerning the role of the state in their economy, i.e. a fairly big government not leading to a comparable level of equality (see Figure 2 for 2007-09). While this characteristic seems to remain stable throughout the three different time periods, the values for PC2 for the latest period reveal a large step towards a very unfavorable mix of low innovation and high regulation, which could be one reason for the economic crisis which troubles these countries since 2008.

Box 1. Convergence of Political Budget Cycles?

We also expanded the focus of studying convergence or divergence in Europe by revisiting Political Budget Cycles (PBCs) in the enlarged EU (Ademmer and Dreher 2014). We show - based on a panel of 25 current EU member states from 1996 to 2012 - that governments frequently fiscally stimulate the economy prior to elections. This phenomenon is seemingly not only an 'Eastern problem' of the EU's new members, but relatively widespread in the entire EU. We show that fiscal institutions help to reduce the extent of opportunistic fiscal behavior both in these younger democracies as well as in other EU member states that lack a strong press to hold governments accountable. We conclude, however, that it is especially a powerful press that helps to fully eradicate these cycles.

Concerning a comparison of the CEECs' models with their Mediterranean counterparts, this analysis again reveals that the CEECs have established rather distinct types of capitalism which show a certain degree of convergence towards the institutional patterns of the developed countries, but not towards a mixed *MME*-type of model as in the Mediterranean countries, which seem to constitute their own (underperforming) type of institutional configuration. Based on the established classification, we now proceed by incorporating these aspects into a comprehensive analysis of government activity and economic growth in the next section.

3. Government Activity and Economic Growth – One Size Fits All?⁵

Motivation

Since endogenous growth theories challenged the neoclassical theory of Solow (1956), stating that national policies can be one of the factors that have implications for long-run growth (e.g. Barro 1990; Devarajan *et al.* 1996), numerous empirical studies have tried to come up with conclusive evidence of this. Basically, investigations of government policy have led to the categorization of productive and unproductive state expenditures and the respective structures of taxes. Approaches varying in the specification, the method and the country selection have resulted in a wide array of observations concerning the impact of public policy on growth and do not allow for a general conclusion on government activity (see e.g. Nijkamp and Poot 2004; Tabellini 2005).

While it is certainly true that some categories of government spending (taxation) are more likely to support (distort) long-term growth than others, the empirical investigation of government activity in growth empirics based on specific government budget categories may be misleading because government activity usually comes as a package. This implies that the overall mix of spending and taxation matters for the growth implications. In addition, government activity covers more than spending because government regulations may be complements to or substitutes for budgetary action.

This study argues that the literature on the impact of government spending on growth has neglected the quality and variety of institutions under which policies are implemented. Against this background, we provide a novel contribution by dissecting different patterns of government activity. We also suggest that a proper consideration of the institutional framework is of importance when analyzing the growth implications of overall government activity. We hypothesize that the impact of government activity on growth depends on institutional complementarities, as given by a country's economic system. Institutional complementarities described in the VoC literature (e.g. Hall and Soskice 2001) predict different roles for governments in LMEs (mainly the Anglo-Saxon countries) and CMEs (mainly the Scandinavian and Continental European countries). We also hypothesize that the quality of institutions is important through government activity. The literature on institutions and growth is rather conclusive on the positive role of better institutions (Acemoglu and Robinson 2005; see, e.g., Rodrik *et al.* 2004). Government activity is embedded in a framework of institutional constraints, and the effectiveness of government policy as well as the innovative capabilities of an economy depend on the institutional design (Acemoglu *et al.* 2001; Hall and Soskice 2001).

⁵ This section sums up the results of a recent working paper (Beckmann *et al.* 2014) which has been resubmitted to an academic journal after revision. We would therefore like to direct the reader to consult this paper for information on data sources and further details.

In the next section, we summarize the empirical framework and results. Relying on a panel which comprises 111 countries for the years 1971 to 2010, we are able to show that the impact of government activity on growth is (i) inverse u-shaped with low impact at the extreme ends, (ii) increases with the quality of institutions, and, most importantly, (iii) depends on institutional complementarities. Polar cases of LMEs and Scandinavian CMEs exhibit the highest growth rates but this is reached by above-average government activity in CMEs and below-average government activity in LMEs. To some extent, the same divide is evident between developing and Eastern European countries.

Empirical Framework and Results

Testing the relevance of economic systems, which are assumed to be stable over time, requires adopting the POLS model which is given as

$$\gamma_i = \beta \log(\hat{y}_i(0)) + \psi X_i + a_t + \varepsilon_{it}, t=1,2,\dots T \quad (1)$$

γ_i contains the endogenous variable GDP per capita growth rate γ_i , the initial level of GDP per capita $\hat{y}_i(0)$, the exogenous variables X_i , the time fixed effect a_t and the error term ε_{it} . For a consistent estimation by OLS the orthogonality condition must be satisfied.

$$(X_{it}' \varepsilon_{it}) = 0, t=1,2,\dots T \quad (2)$$

However, the Hausman test confirms the advantage of the fixed-effects against the random-effects estimation by rejecting the hypothesis of no correlation between the regressors and the individual effects.⁶

The extended model we consider as a next step can be expressed as

$$\gamma_i = \beta \log(\hat{y}_i(0)) + \psi X_i + a_t + u_i + \varepsilon_{it}, t=1,2,\dots T \quad (3)$$

u_i is the country fixed effect, and the strict exogeneity assumption of the explanatory variables conditioning on a_i ,

$$E(\varepsilon_{it}|X_i, a_i) = 0, t=1,2,\dots T \quad (4)$$

holds. As a next step, we check for robustness by estimating a basic model without regional dummies using both FE and POLS, while we refer to POLS when estimating an extended model with regional dummies. We also considered some regressors, namely investment and FDI, to be endogenous and implemented 2-stage least squares as robustness checks. Overall, our findings are remarkably robust with regard to different estimation techniques.

The theoretical basic model is provided Equation (5):

$$\gamma = \beta_0 + \beta_1 \cdot pol + \beta_2 \cdot fraser + \beta_3 \cdot fraser^2 + \beta_4 \cdot pol * fraser + \beta_6 \Psi \quad (5)$$

fraser is the sum of government size and regulation, obtained from the Economic Freedom of the World index (EFW) of the Fraser Institute (Gwartney *et al.* 2012) and ranges between 0 and 20. Note that according to the EFW code, a high value of *fraser* represents an economy with a low level of government interference. The inclusion of a squared term of *fraser* (*fraser*²) allows for a non-linear relationship between government activity and economic growth. *pol* is the Polity IV index, measuring the quality of democracy. We take this as an indicator of the quality of institutions in general. This is necessary because more comprehensive and internationally comparable measurements of institutional quality, such as the World Bank Governance Indicators, have been available only since the mid-1990s. *pol*fraser* is the interaction of *fraser* and *pol*, and accounts for the effect of institutions on government policy. Finally, the variable Ψ comprises various other factors which represent a standard set of economic controls. *log(GDPpcini)* covers the generally-observed catch-up process of poor countries, and we expect the convergence factor β_6 to be negative for the implication of convergence. Population growth *popg*, investment *gfcf* as gross fixed capital formation in percentage of GDP, as well as foreign direct investments *FDI* as a percentage of GDP are internal and external economic factors and we expect them to be growth-enhancing. The same effect is predicted for the openness variable *open_res*, which is cleared for country size effects by regressing the trade-to-GDP ratio on population size. The WDI inflation measure *inf* acts as a proxy for macroeconomic stability, while the indicator for financial crises *fin_cr* is compiled from the Laeven and Valencia (2012) database on banking crises.⁷ The extended model examines the complementarity of government activity within clusters.

$$\gamma = \beta_0 + \beta_1 \cdot fraser + \beta_2 \cdot cme_all + \beta_3 \cdot lib_all + \beta_4 \cdot lib_all \cdot fraser + \beta_5 \cdot cme_all \cdot fraser + \beta_6 \Psi \quad (6)$$

The cluster dummies are determined on the basis of an extended VoC approach in section 2 (see also Amable 2003; Bohle and Greskovits 2012). The composite dummy for LME (*lme_all*) and CME (*cme_all*) shown in Equation (6) is based on clusters allowing for a high extent of heterogeneity within clusters. We also implement variants of Equation (6) with the disaggregated clusters. Other countries are clustered according to geographic region (*Latin, Asia, Africa*) because as yet no papers are available which analyze a clear convergence towards OECD clusters. The interaction of the regional dummies with government activity, e.g., *lib_all*fraser* and *cme_all*fraser* in Equation (6), aims to identify the different growth effects of government activity in the two different clusters. According to the complementarity argument, we expect CMEs to require a large State role to ensure efficiency, innovation and growth in the economy, while a small government is coherent within the institutional regime of LMEs.

⁷ For the definition and source of variables, see Appendix Table A1.

The regression results for the basic model are presented in Table 1 for both FE (Eq. 1 and 2) and POLS (Eq. 3 and 4) estimations. The coefficients of the standard growth factors are in line with the theoretical and empirical predictions and stable throughout variations in the econometric model. As an example, the coefficient of the initial level of GDP per capita is consistently negative and significant, which indicates a catch-up process in poor countries.

**Table 1: Government activity, institutions and growth – basic model
(Fixed effects with time effects and pooled OLS, 1971 – 2010)**

<i>Variable</i>	(1) <i>GDPG</i>	(2) <i>GDPG</i>	(3) <i>GDPG</i>	(4) <i>GDPG</i>
<i>lgdpini</i>	-4.969*** (-9.242)	-5.004*** (-9.120)	-0.435*** (-5.624)	-0.383*** (-3.962)
<i>popg</i>	0.582** (2.148)	0.605** (2.254)	0.309* (1.888)	0.326** (1.984)
<i>gfcf</i>	0.148*** (5.470)	0.144*** (5.320)	0.166*** (7.281)	0.163*** (7.145)
<i>inf</i>	-0.00403*** (-3.287)	-0.00388*** (-3.160)	-0.00276** (-2.058)	-0.00257* (-1.946)
<i>open_res</i>	0.0184*** (2.863)	0.0191*** (2.966)	0.00798*** (3.240)	0.00818*** (3.327)
<i>fdi</i>	0.146*** (3.122)	0.148*** (3.157)	0.113** (2.186)	0.123** (2.291)
<i>fin_cr</i>	-2.397*** (-7.050)	-2.374*** (-7.095)	-2.844*** (-6.558)	-2.802*** (-6.540)
<i>fraser</i>	0.577** (1.977)	0.712** (2.454)	0.729* (1.915)	0.954** (2.446)
<i>fraser2</i>	-0.0344*** (-2.658)	-0.0344*** (-2.653)	-0.0449** (-2.566)	-0.0456*** (-2.685)
<i>pol</i>	-0.145 (-1.627)		-0.181* (-1.842)	
<i>pol*fraser</i>	0.0123 (1.544)		0.0174** (2.154)	
<i>pol_res</i>		-0.227** (-2.102)		-0.278*** (-2.630)
<i>pol_res*fraser</i>		0.0177* (1.872)		0.0247*** (2.785)
<i>Constant</i>	36.65*** (7.626)	35.36*** (7.592)	1.333 (0.555)	-1.291 (-0.536)
Observations	654	654	654	654
R-squared	0.466	0.470	0.396	0.400
Number of country	111	111		

Note: The table provides fixed effects (Eq. 1 and 2) and pooled OLS (Eq. 3 and 4) estimations for the basic model (see text). Robust t-statistics in parentheses. *** p<0.01, ** p<0.05, * p<0.1

The results for the growth effect of government activity are in line with our hypothesis that the relationship is u-shaped and that institutional quality matters. As is revealed by the positive coefficient of

fraser and the negative coefficient for *fraser2*, the growth effect of government activity follows an inverse u-shaped function, i.e. it decreases towards extreme ends on both sides. Not considering the influence of institutions, to be discussed below, the maximum impact (based on the point estimates) ranges between *fraser* values of 8.1 (Eq. 3) and 10.5 (Eq. 4). In the latter case, the u-shape is almost symmetrical with respect to the possible values of *fraser*, and the growth impact ranges between 0.9 percentage points at the (theoretical) extremes and 5.0 percentage points at the maximum. In the case of an asymmetric u-shape, as in Eq. 3, the implication would be of a negative growth impact for extremely small governments (high values of *fraser*).

Interestingly, government activity, measured by the sum of government size and regulation, is higher than 9.0 for the most recent year. This implies that, nowadays, almost all countries fall within a certain range, where a higher level of government activity would rather improve growth performance. Looking at countries representing the traditional VoC cases of LME and CME, even Sweden, with a *fraser* value of 12.0, could not be blamed for running a government that is too large, concerning the growth impact. Other countries, like Germany (13.0), the US (14.7) and Singapore (17.1), have lower government activity compared with Sweden. However, not considering the impact of institutions, would lead to biased conclusions.

As a next step, the basic relationship is modified by institutional quality and its interaction with government activity. We test the two versions of our polity variable *pol* and its residual, not explained by the income level, *pol_res*. A first important result is that we do not observe a direct positive effect of institutions on growth if we model government activity allowing for non-linearity and interaction with institutions. However, the positive coefficient of the cross-term indicates that, for any given value of *fraser*, good institutions do increase the growth effect of government activity.

In addition, this shifts the u-shaped growth impact discussed above. Taking the point estimates from Eq. 3, which is run with initial values for *pol*, the level of government activity that allows for the maximum growth impact lies at a *fraser* value of 10.1 for countries with an institutional quality at the mean value of the score (*pol* = 10) and at a *fraser* value of 12.0, i.e. lower government activity, for countries with the best score for institutional quality (*pol* = 20). The fact that, at the same time, the growth impact increases from 4.5 to 6.5 percentage points implies that government activity in well governed countries is clearly more effective.

The insights gained from the basic model remain valid in case of an extension to include regional dummies representing groups of countries with similar economic systems (Table 2). The results are slightly more stable when comparing the FE and POLS estimations for the *pol_res* variable, which, at the same time, avoids potential problems with the endogeneity of the variable. Hence, we rely on this variable in the following, when examining the regime-specific effects of government activity as described below.

**Table 2: Government activity, economic systems and growth – extended model
(Fixed effects with time effects and POLS, 1971 – 2010)**

<i>Variable</i>	(1) <i>GDPG</i>	(2) <i>GDPG</i>	(3) <i>GDPG</i>	(4) <i>GDPG</i>
<i>lgdpcini</i>	-0.299** (-2.569)	-0.437*** (-3.842)	-0.378*** (-3.116)	-0.518*** (-4.459)
<i>popg</i>	0.277 (1.489)	0.326* (1.975)	0.317* (1.916)	0.380** (2.143)
<i>gfcf</i>	0.160*** (7.322)	0.167*** (7.344)	0.161*** (7.159)	0.140*** (6.638)
<i>inf</i>	-0.00294** (-2.147)	-0.00248* (-1.874)	-0.00269** (-2.009)	-0.00189 (-1.310)
<i>open_res</i>	0.00892*** (3.598)	0.00889*** (3.543)	0.00950*** (3.626)	0.00419 (1.312)
<i>fdi</i>	0.125** (2.563)	0.123** (2.342)	0.126** (2.606)	0.162*** (3.219)
<i>fin_cr</i>	-2.645*** (-6.019)	-2.802*** (-6.544)	-2.837*** (-6.615)	-2.581*** (-6.247)
<i>fraser</i>	1.145*** (2.776)	1.097*** (2.659)	1.168*** (2.914)	1.197*** (3.555)
<i>fraser2</i>	-0.0567*** (-3.288)	-0.0528*** (-2.939)	-0.0568*** (-3.251)	-0.0674*** (-4.471)
<i>pol_res</i>	-0.253** (-2.262)	-0.270** (-2.494)	-0.276** (-2.588)	-0.201* (-1.968)
<i>pol_res*fraser</i>	0.0231** (2.448)	0.0240*** (2.632)	0.0248*** (2.777)	0.0175* (1.959)
<i>cme_all</i>	1.491 (0.855)			
<i>lib_all</i>	-2.550 (-1.496)			
<i>nordic</i>		4.157** (2.610)	3.799** (2.349)	
<i>lib</i>		-4.127** (-2.233)	-4.678** (-2.492)	-7.260*** (-3.718)
<i>cont</i>			-0.770** (-2.057)	-0.914*** (-2.753)
<i>mme</i>				-0.778*** (-3.076)
<i>cme_ee</i>				-1.086** (-2.194)
<i>lib_ee</i>				-3.094* (-1.797)
<i>afr</i>				-6.108*** (-4.982)
<i>asia</i>				1.540*** (2.905)
<i>latin</i>				-6.178*** (-2.976)
<i>cme_all*fraser</i>	-0.225 (-1.514)			

Table 2 cont'd

	(1)	(2)	(3)	(4)
<i>Variable</i>	<i>GDPG</i>	<i>GDPG</i>	<i>GDPG</i>	<i>GDPG</i>
<i>lib_all*fraser</i>	0.191 (1.495)			
<i>nordic*fraser</i>		-0.378** (-2.563)	-0.367** (-2.491)	
<i>lib*fraser</i>		0.345** (2.464)	0.372*** (2.646)	0.601*** (4.136)
<i>cont*fraser</i>				
<i>mme*fraser</i>				
<i>cme_ee*fraser</i>				
<i>lib_ee*fraser</i>				0.235* (1.957)
<i>afr*fraser</i>				0.434*** (4.609)
<i>asia*fraser</i>				
<i>latin*fraser</i>				0.500*** (2.919)
<i>constant</i>	-2.194 (-0.814)	-1.627 (-0.638)	-2.071 (-0.823)	0.600 (0.264)
Observations	654	654	654	654
R-squared	0.410	0.406	0.409	0.464

Note: The table provides pooled OLS estimations for the extended model (see text). Robust t-statistics in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

As a first result, splitting the OECD sample countries into the broad categories of liberal (*lib_all*) and coordinated (*cme_all*) countries does not yield a significant coefficient for the dummies (Eq. 1). This is an indication that clustering all countries into only two broad categories is not appropriate because heterogeneity with respect to the growth impact of government activity within clusters is too high. This changes, however, when we reduce the heterogeneity of country clusters. Most importantly, *nordic* (Scandinavian countries) and *lib* (Anglo-Saxon countries) do in fact also create extreme cases with respect to the effectiveness of government activity (Eq. 2). *nordic* countries reveal a higher average growth rate (positive coefficient for *nordic*), but a lower impact of government activity on growth as compared with the sample average (negative coefficient for *nordic*fraser*). The reverse is true for the *lib* countries. It is important to note that these regional effects are relative because the overall coefficient of *fraser*, including the region-specific difference, remains positive and, hence, the basic u-shaped relationship discussed above remains in place.

This result is confirmed by including other groups of countries, as we do in Eq. 3 and 4. In addition, Eq. 3 shows that the Continental European countries (*cont*) are strikingly different from the Scandinavian countries. They experience lower average growth but no significant balancing effect through government activity. Eq. 4 even shows that this is quite similar to the performance of Southern European countries (*mme*), which are marked as inconsistent by the traditional VoC literature. While this does not prove the optimality of the *nordic* model, it is in line with the fact that Scandinavian countries are able to combine equity and innovation with a lower level of regulation as compared with Continental European countries (see section 2). Looking at Eastern Europe, the countries with a more liberal economic system require relatively less government interference for more growth, which is quite similar to the performance of the *lib* countries. As regards the other regional clusters, we observe that the institutional structures of the African and the Latin American groups are coherent with less government activity, and in the Asian group we find a positive growth effect in general. Except for the fact that we do not find a positive coefficient for *asia_fraser*, these results indicate that Asian countries tend rather towards a CME role model, while African and Latin American countries are more similar to the LME role model. Yet, as argued above, the literature on economic systems in developing countries does not yield deeper insights and future research would have to confirm our tentative results in this respect.

If we look at the region-specific growth impact, i.e. regional dummies, government activity and the related cross-terms, for the two role models of *nordic* and *lib* (point estimates taken from Eq. 2), results in maximum growth effects for *fraser* values of 6.7 (*nordic*) and 13.3 (*lib*), while the maximum of the full sample is at 10.4.⁸ Again, government activity in the US (14.7), and especially in Sweden (12.0), seems to be too low rather than too high. However, the negative value for *nordic*fraser* implies that the growth impact in *nordic* countries is less sensitive to variations in government activity. Indeed, the resulting growth impact for the two countries is rather similar: 5.2 percentage points for Sweden vs. 6.0 for the US in the most recent values of *fraser*.

Our results support the hypothesis that one size of government is unlikely to fit all. There is no indication that overall government activity is too high or even produces a negative contribution to economic growth. Rather, the opposite seems to be true. In addition, optimum government activity with respect to its impact on economic growth is strikingly different in clusters of countries characterized by different economic systems. Our findings are remarkably congruent with our predictions of the role of government activity within different institutional structures. We observe that institutional quality increases the effectiveness of government activity and acts as a requirement for the positive growth effects of government policy. In addition, in line with the results of Hall and Gingerich (2009), growth effects depend on the compatibility

⁸ In this calculation, we have assumed that institutional quality, on average, fits the level of development, i.e. the average value of *pol_res* is zero).

with institutional design. In particular, the distinct clusters of *nordic* and *lib* countries reflect a clear comparative institutional advantage. Despite their differing institutional structures and the varying roles of government policy, the induced incentive structures produce quite similar growth effects, which are superior to those in other clusters. Having established the importance of government activity in different economic systems for economic growth, we now turn to possible drivers of government activity in order to determine how triggering reforms might enhance economic growth through government activity.

4. Government Activity, Partisan Preferences and Capitalist Varieties in Eastern and Western Europe⁹

Motivation

The study of what drives governments to become active by redistributing resources through transfers or subsidies, by enlarging the public sector or by adopting regulations to safeguard citizens against social risks has flourished for quite some time. Since the 1980s, partisan preferences have attracted particular attention as one crucial determinant of government activity in this regard (Castles 1982; Castles and McKinlay 1979). Classic partisan theory assumes that left-leaning governments increase the role of the state, while right-leaning governments seek to minimize state intervention in an economy. Ample empirical research has been done to test this hypothesis resulting in highly ambiguous findings (see Imbeau *et al.* 2001 for a meta-analysis of this literature).

More recently, students of government activity have thus turned towards the study of specific scope conditions under which partisan preferences impact government activity in more coherent ways, highlighting several region- and time specific effects. In this vein, Tavits and Letki (2009) show that until 2004 partisan preferences have been reversed in post-communist Central and Eastern Europe, with left-wing parties reducing government consumption in an attempt to demonstrate their firm commitment to market economic reforms and to dissociate themselves from the communist past. International constraints are further likely to limit how partisan programs can be translated into government activity, especially in this region. The integration into the EU's single market has been widely considered to drive deregulation and liberalization and thus reduce governmental activity in EU accession- and member states (see e.g. Adascalitei 2012: 67). Yet, since the early 2000s, others have claimed the opposite pointing at an increasing amount of *acquis* legislation in the realm of EU social policy since the adoption of the Treaty of Maastricht in 1992 (Göcke *et al.* 2004; Tupy 2003). With regard to time-specific effects, Lipsmeyer (2011) shows that economic context matters: she argues that partisan preferences require a certain

⁹ This section sums up the results of a forthcoming working paper (Ademmer, Beckmann, & Schweickert, *forthcoming*) that is still work in progress. Information on data sources and details are available upon request. Note that this analysis differs from the analyses portrayed in the previous sections, as it uses yearly data instead of 5-year averages.

economic leeway to emerge. In bust times, partisan preferences hence reside in the back, as governments have little room of manoeuvre to implement party programs but reactively chose their economic policies to best respond to crises. Dyson (2007) argues for CEECs, however, that the degree of welfare stress that governments face also differs among different capitalist varieties. Combining these arguments, there is ample reason to assume that the type of capitalist variety and the related modes of coordination in a market economy shape the way in which partisan preferences can be translated into government activity in both CEECs and non-CEECs.

Our study therefore seeks to contribute to the debate on scope conditions for partisan preferences to impact government activity. We combine established theories on government size and government characteristics with the literature on varieties of capitalism and EU accession. Our hypothesis is that government characteristics translate differently into government activity depending on the region, the time period, and the Variety of Capitalism the government operates in. We additionally control for multiple other drivers of government activity, such as institutional development, trade openness, demography and business cycle volatility. We test these hypotheses in two-stage-least squares (2SLS) regressions in a sample of 38 EU and non-EU countries from 1990 to 2011. Our results suggest that the variety of capitalism that a government operates in substantially alters the extent to which the type of government and partisan preferences impact government activity. Our results also provide evidence that the loss of the accession incentive changes the impact of partisan preferences on government activity.

Empirical Framework and Results

This analysis is based on an extended version of the dataset already described in section 3.¹⁰ Differences with respect to the sample size stems from restrictions due to data availability for government characteristics, which excludes most developing countries and reduces the cross section to 38 countries. We adopt a 2-stage least squares (2SLS) estimation technique because our endogenous variable (government activity) and the exogenous governance variable (*pol*) may be jointly determined by the level of income and, hence, the regressors are possibly correlated with the error term. We use the one-period lagged average value of *pol* for instrumentation. In the second stage of the procedure, each endogenous covariate is replaced with the predicted values from the first stage. The F-statistics of the test for weak instruments show that the correlation between the endogenous variables and the instrument is strong enough.

¹⁰ For additional variables measuring government activity, partisan preferences, and controls used for determining the drivers of government activity, see Appendix Table A1.

In order to see whether there are region and time specific differences in government activity, we first split our sample into new and old EU member states¹¹ and run a 2SLS panel regression analysis with various endogenous variables that capture different levels of aggregated government activity (see Table 3). The relatively high R^2 hints at a well-defined model, but the fact that it is constantly larger for the Eastern sample despite fewer observations suggests there is a greater homogeneity among the ten post-socialist countries that entered the EU in 2004 and 2007, respectively, than among old member states.

We account for the ideological position and construct the variable *ideology* by using the Party Government Data Set that measures the Ideological Complexion of Parliament and Government (CPG) on a 1 (right-wing) to 5 (left-wing) scale (see Seki and Williams 2014 for updates; original dataset by Woldendorp *et al.* 2011)¹². When comparing the impact of government ideology in different regional settings, the results shown in Table 3 suggest that *ideology* has a positive and significant impact on regulation and government consumption in old member states, indicating that left-leaning governments in the ‘West’ indeed increase government activity in these two categories.¹³ Tavits and Letki (2009) prominently show that this classic partisan effect has been reversed for the new member states of the EU until 2004. In line with their findings, the results in Table 3 (Column 7) suggest that left governments in Eastern Europe reduce their consumption expenditures and thereby diminish governmental activity, but this effect is not statistically significant. In addition, these results are sensitive to the level of aggregation of the endogenous variable and to alternative time periods. The reversed partisan effect does not occur when using *Fraser*, defined as the sum of regulations and government size, as the dependent variable (Column (1)). It also does not hold if we employ the variable *Gov’Size* (Column (3)) that is defined as extent of government consumption, including transfers and subsidies, as well as government enterprises and investments and the top marginal tax rate. Interestingly, there is also no reversed partisan effect if we study CEECs after their accession to the EU. As shown by the positive and significant coefficient of the interaction term *eu*ideology* in Table 3 (Column 7), the reversed partisan effect ‘normalizes’ after the accession countries gain membership to the EU, but this effect is again losing its significance if we additionally control for the type of capitalism. This suggests that the sample split East into West does not capture the underlying conditions very well that drive the impact of partisan preferences on government activity in the enlarged EU.

¹¹ We therefore exclude all non-accession or non-EU countries from our sample.

¹² Data taken from the Party Government Data Set has been recalculated to derive yearly data while respecting within-year changes of governments.

¹³ Note that in the empirical analysis in this section, variables for government activity have been redefined so that higher values represent more government activity. Due to this redefinition, the single components (Reg and Gov’size) range from -10 to 0, while the composite Fraser values ranges from -20 to 0. Gov’Con is defined as government consumption expenditure in percent of GDP.

Table 3: Government characteristics and different aggregates of government activity

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Sample	FRASER East	FRASER West	GOVSIZE East	GOVSIZE West	GOVREG East	GOVREG West	GOVCON East	GOVCON West
<i>lgdppc_ini</i>	1.87*** (10.27)	0.28 (0.81)	1.90*** (11.84)	1.81*** (7.45)	-0.04 (-0.45)	-1.53*** (-7.43)	4.39*** (6.31)	4.91*** (7.07)
<i>lpop</i>	0.74*** (8.14)	-0.32*** (-3.93)	0.74*** (10.25)	-0.20** (-2.54)	-0.00 (-0.02)	-0.13*** (-2.60)	0.45 (1.63)	-0.53** (-2.40)
<i>eld</i>	0.13** (2.47)	0.30*** (7.38)	0.22*** (5.66)	0.23*** (7.30)	-0.09*** (-3.21)	0.07*** (2.95)	0.71*** (4.70)	0.44*** (3.92)
<i>pol</i>	-0.31** (-2.52)	-0.49*** (-2.62)	-0.25*** (-3.24)	-0.63*** (-5.82)	-0.06 (-0.74)	0.14 (1.40)	0.28 (1.40)	-1.49*** (-4.47)
<i>unemp</i>	0.01 (0.52)	0.01 (0.43)	0.03** (2.47)	-0.03 (-1.36)	-0.02** (-2.25)	0.04** (2.58)	0.44*** (6.17)	-0.25*** (-5.70)
<i>lopen</i>	-0.00 (-1.14)	-0.00 (-0.46)	0.00** (2.11)	-0.00 (-1.57)	-0.01*** (-5.84)	0.00 (1.43)	0.04*** (4.40)	-0.03*** (-4.45)
<i>crises</i>	0.78*** (3.17)	0.93*** (3.32)	0.45** (2.32)	0.78*** (3.70)	0.33*** (3.12)	0.15 (0.88)	-0.90* (-1.79)	0.81 (1.39)
<i>eu</i>	-0.86 (-1.24)		-0.65 (-1.20)		-0.21 (-0.69)		-2.51 (-1.34)	
<i>ideology</i>	0.16 (0.86)	-0.00 (-0.01)	0.06 (0.45)	-0.09 (-1.32)	0.10 (1.08)	0.09* (1.65)	-0.52 (-1.63)	0.38** (2.20)
<i>eu*ideology</i>	0.16 (0.72)		0.19 (1.23)		-0.03 (-0.30)		1.07** (2.20)	
<i>type of gov</i>	-0.22*** (-3.16)	0.11 (1.27)	-0.16*** (-2.96)	0.20*** (3.49)	-0.07* (-1.88)	-0.09** (-2.05)	0.04 (0.18)	0.86*** (5.70)
<i>constant</i>	-35.11*** (-10.87)	-13.59*** (-4.08)	-31.46*** (-13.75)	-19.95*** (-9.38)	-3.64** (-2.19)	6.36*** (2.75)	-49.30*** (-5.16)	-15.71* (-1.95)
<i>Year FE</i>	yes	yes	Yes	Yes	yes	yes	yes	yes
<i>Observations</i>	123	191	123	191	123	191	175	268
<i>R-squared</i>	0.84	0.49	0.78	0.61	0.82	0.59	0.54	0.49

Note: Robust z-statistics in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Apart from ideological preferences, other political constraints, such as power limitations to pass legislation or power-sharing between coalition partners, may affect government activity (Lipsmeyer 2011). We therefore again use the Party Government Data Set that measures the Type of Government (*type of gov*) on a 1 (single-party government) to 6 (caretaker government) scale (Seki and Williams 2014; Woldendorp *et al.* 2011). Table 3 suggests that except for government consumption, multiple-party and weaker governments in the East reduce government activity. In the West, however, government size and consumption increase, but regulations decrease once the parties in power are increasingly constrained. The hypotheses that an increasing number of parties in government increases government transfers to please an even larger constituency (see e.g. Lipsmeyer 2011: 961), hence does not seem to apply to the East. There are further interesting differences between new and old member states: the results suggest that well

governed democracies (*pol*) tend to decrease government activity in the West and the East, except for regulation and government consumption (in the East). A higher initial GDP of a country is associated with an increase in government activity in the East and the West, but its impact on regulation is negative and significant in the West. Eastern and Western states also respond differently to unemployment. The coefficient of *unempl* is positive and significant for regulatory activities in the West and negative and significant in the East; a pattern that is turned upside down for government consumption.

Next, we investigate whether the distinction of different varieties of capitalism further adds to explaining government activity. Towards this end, we ran 2SLS regressions on a larger sample of democratic countries, including all current 28 EU members, as well as Australia, Canada, Macedonia, Japan, Israel, India, Iceland, Turkey, Switzerland, Norway. We included the dummy variable *lme* that is 1 if the country is identified to belong to the larger group of liberal market economies if we allow for a certain level of heterogeneity as presented in section 2. Table 4 shows the results for *Fraser* that can be considered the most encompassing measurement of government activity.¹⁴ The liberal type of capitalism is classically characterized by little coordination and minimal state regulation of the economy, and an ad hoc inclusion of social partners, whereas regulation, coordination, and inclusion are greater in CME-leaning economies (cf. Cernat 2006). It thus does not come as a surprise that we find a highly negative and significant effect of *lme* (Column (3)) on government activity in terms of the sum of regulations and government size. Likewise, LMESs respond to demographic pressures (*eld*) with a significant and substantial decrease in aggregated regulation and government size, while CMEs slightly increase it.

What is more interesting, however, is that the LME sample (Column 5) seems to be far more homogenous than the CME sample, as indicated by a relatively high R^2 . In addition, the ideology effects are only visible in LMEs in Eastern Europe. Our results show that the reversed partisan effect does not hold for liberal CEECs prior to accession, but that it is detectable after accession. In other words, in the sample of Liberal Market Economies in Eastern Europe, we find that left-leaning governments further reduce the state after accession, while this effect is seemingly insignificant and substantially smaller in Coordinated Market Economies in the East. This pattern is visible for different degrees of aggregation (see Appendix, Tables A2-A4): left-leaning governments in LMEs appear to also reduce regulation and the overall government size after accession to the EU. It does not hold for government consumption though. Here, the reversed post-accession effect is only noticeable in CMEs.

¹⁴ The results for the sub-categories of government activity are shown in the Appendix Tables A2-A4.

**Table 4: Economic systems, government characteristics and activity
(Results for effects on 'Fraser')**

<i>Variable</i>	(1)	(2)	(3)	(4)	(5)	(6)
<i>Sample</i>	<i>FRASER</i> all	<i>FRASER</i> all	<i>FRASER</i> all	<i>FRASER</i> all	<i>FRASER</i> lib	<i>FRASER</i> cme
<i>lgdppc_ini</i>	-0.00 (-0.05)	-0.03 (-0.30)	0.15 (1.49)	-0.05 (-0.43)	-0.40 (-1.14)	0.13 (1.28)
<i>lpop</i>	-0.10** (-2.01)	-0.11** (-2.16)	-0.13*** (-3.03)	-0.13** (-2.38)	-0.10 (-0.87)	-0.17*** (-3.23)
<i>eld</i>	0.05** (2.36)	0.05** (2.12)	0.03 (1.47)	0.04* (1.66)	-0.26*** (-6.81)	0.07*** (2.78)
<i>pol</i>	-0.20* (-1.91)	-0.16 (-1.27)	-0.26** (-2.04)	-0.19 (-1.63)	-0.58*** (-3.33)	-0.08 (-0.99)
<i>unemp</i>	0.02** (2.03)	0.04** (2.16)	0.05*** (3.55)	0.04** (1.98)	0.03 (1.41)	0.04** (2.31)
<i>lopen</i>	-0.00 (-1.15)	-0.00 (-1.01)	-0.00 (-0.03)	-0.00 (-1.08)	-0.01** (-2.18)	0.00 (0.48)
<i>crises</i>	0.92*** (5.34)	0.91*** (4.65)	0.71*** (4.30)	0.55** (2.35)	0.91*** (3.26)	0.78*** (3.92)
<i>eu</i>	0.61*** (3.66)	0.63*** (3.53)	0.11 (0.97)	1.07*** (4.99)	0.95*** (5.62)	0.00 (0.02)
<i>ideology</i>		0.19** (2.49)	0.15*** (2.63)	0.03 (0.38)	-0.08 (-0.93)	0.11 (1.58)
<i>type of gov</i>		0.15*** (2.67)	0.01 (0.38)	0.15*** (2.67)	-0.09 (-1.59)	0.00 (0.09)
<i>east</i>			0.78*** (4.42)	-2.02*** (-3.13)	-0.84 (-1.09)	1.03 (1.53)
<i>ideology*east</i>				0.90*** (4.54)	0.68*** (3.95)	-0.05 (-0.22)
<i>eu*ideology*east</i>				-0.46*** (-4.20)	-0.52*** (-5.71)	-0.13 (-1.25)
<i>crises*east</i>				0.14 (0.39)	-0.28 (-0.76)	-0.35 (-1.23)
<i>lib</i>			-2.17*** (-19.88)			
<i>constant</i>	-11.83*** (-9.01)	-13.30*** (-9.05)	-12.19*** (-9.42)	-11.77*** (-8.16)	0.27 (0.07)	-13.72*** (-9.09)
<i>Year FE</i>	yes	yes	Yes	yes	yes	yes
<i>Observations</i>	468	423	423	423	142	281
<i>R-squared</i>	0.39	0.40	0.69	0.44	0.84	0.59

Note: Robust z-statistics in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Apart from the ideological complexion of government and parliament, the impact of government type (*type of gov*) on government activity also seems to vary depending on the variety of capitalism that a government operates in. While this is not the case with view to the aggregated sum of regulations and government size as represented by *Fraser*, the importance of capitalist variety shows especially for government size and government consumption. Weaker governments that rely on a larger number of supporting parties significantly and substantially reduce the size of a government and government consumption in LMEs, while weaker governments in CMEs significantly and substantially increase it.

The results suggest that there are relevant regional, time and institutional scope conditions that affect how government characteristics shape concrete regulatory and expenditure decisions. In comparison to broader institutional factors such as democratic development (*pol*) or initial gdp per capita, government characteristics and arguable policy preferences hence seem to carry comparatively more weight to explain government activity. Further research needs to show, whether these results hold, also for a larger sample of countries and a larger time frame. If they are substantiated, however, they suggest that any strategy to put government finances to their feet or increase welfare spending to soften social vulnerabilities in crisis countries, for example, needs to be tailor-made to the cooperation mechanisms prevailing in certain capitalist varieties and confront potential pitfalls of government types and ideologies.

Box 2. Interdependence as a Driver of Reform?

We also enquired how the process of convergence with EU policies develops beyond EU member states, especially in the Eastern European neighbourhood, in which states are highly dependent on Russia. A recent publication (Ademmer 2014) analyses the scope conditions under which this dependence, often driven by resource scarcity and import needs, supports or constrains reform momentum in affected countries. Its findings suggest that the form of interdependence, namely sensitivity or vulnerability and its interplay with Russia's quid pro quo bargaining, as well as with political preferences of domestic incumbents crucially matters for policy change or stagnation.

5. Conclusion and Policy Implications

This paper has presented and summarized research findings of three distinct research papers that all centered on the common themes of convergence and divergence in Europe, the explanatory power of Variety of Capitalism patterns in accounting for government size and growth strategies, as well as the impact of the eventual accession of CEECs to the EU on large scale economic transformations.

To begin with the first study, we detect substantial heterogeneity between member states that, however, operates less along the East-West divide than along the cleavages of different varieties of capitalism. We show that while CEECs still form distinct clusters, they are embedded in broader varieties of capitalism with coordinated or liberal market economies, but less with the dysfunctional mixed-market economies. As a next step, we consider the role of the provided classification with regard to the growth impact of

government activity. We find that there is obviously a divide between a group of Eastern European and Asian countries, which perform similarly to the CME role model, while less advanced Eastern European, African, and Latin American countries rather follow the LME role model. Hence, the role of institutional development and government activity in economic development needs to be modeled more explicitly. And lastly, we investigated whether the variety of capitalism that a government operates in alters the way in which the type of government and partisan preferences impact government activity. Our results suggest that this is indeed the case. They also suggest that the loss of the accession incentive changes the impact of partisan preferences on government activity in different capitalist systems.

The provided findings open several perspectives for further research. An interesting topic may be to disentangle the importance of government type for government activity while studying the resulting impact on economic growth in this context. In this vein, the question of necessary changes in institutions of modern market economies in order to internalize the current social and ecological externalities and to decrease volatility and divergence in Europe is of obvious importance.

A related issue is the support of reforms towards sustainable growth paths through incentives for economic agents. The broad literature on Political Business Cycles possibly offers some insights in this context. Recent evidence suggests for example that fiscal institutions are not sufficient to eliminate Political Budget Cycles in the absence of a strong and free press, although they reduce them to some degree (Ademmer and Dreher 2014). Against the background, press freedom might offer a possible transmission channel for the link between institutional changes and economic growth. Another possible extension corresponds to the analysis of government activity impact on financial integration. Financial integration has been a main catalyst of both economic growth and financial crisis. The role of government politics in this context has yet to be analyzed. The literature on Political Budget Cycles once again offers a good starting point for these considerations.

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Appendix

Table A1: Overview of Variable Definitions and Data Sources

VARIABLE	DEFINITION	DATA SOURCE
ENDOGENOUS VARIABLES		
<i>GDPG</i>	Growth rate of GDP per capita	WDI
<i>FRASER</i>	Unweighted sum of <i>GOVSIZE</i> and <i>REG</i> (inverted: 0-min, 20-max)	EFW, own calc.
<i>GOVSIZE</i>	Size of Government (Index Area 1)	EFW
<i>GOVCON</i>	Government consumption (Index Area 1A)	EFW
<i>GOVREG</i>	Regulation (Index Area 5)	EFW
EXOGENOUS VARIABLES		
Government activity and performance		
<i>fraser</i>	Unweighted sum of <i>govsize</i> and <i>reg</i>	EFW, own calc.
<i>fraser2</i>	square term for <i>fraser</i>	EFW, own calc.
<i>govsize</i> (Cluster)	see <i>GOVSIZE</i>	EFW
<i>govtrans</i> (Cluster)	Government transfers and subsidies (Index Area 1B)	EFW
<i>govreg</i> (Cluster)	see <i>GOVREG</i>	EFW
<i>gini</i> (Cluster)	Inverse of Gini coefficient	WDI
<i>fiscstab</i> (Cluster)	Fiscal debt (% of GDP)	WDI
<i>innocap</i> (Cluster)	Innovation capacity	KAM
Governance		
<i>pol</i>	Polity IV democracy score (aggregate: 0-min; 10-max)	Polity IV
<i>pol_res</i>	Residual from regression of <i>pol</i> on GDP per capita	Polity IV, own calc.
Government characteristics		
<i>ideology</i>	Ideological complexion of government and parliament (CPG), (1=right to 5=left)	PGD, own calc.
<i>type of gov</i>	Number and parliamentary status of participating parties (1=single party gov'; 6=caretaker gov')	PGD, own calc.
Variety of Capitalism and regional dummies (1 if; 0 otherwise)		
<i>nordic</i>	Finland, Norway, Denmark, and Sweden	Figure 1
<i>lib</i>	Australia, New Zealand, Ireland, UK, USA, Canada, Switzerland	Figure 1
<i>cont</i>	Belgium, Netherlands, Germany, Austria, France	Figure 1
<i>mme</i>	Greece, Italy, Portugal	Figure 1
<i>east</i>	Bulgaria, Czech Rep., Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia	
<i>cme_ee</i>	Hungary, Poland, Czech Rep., Croatia, Slovenia, Spain	Figure 1
<i>lib_ee</i>	Slovakia, Latvia, Estonia, Lithuania, Bulgaria, Romania	Figure 1
<i>cme_all</i>	<i>nordic</i> , <i>cont</i> , <i>cme_ee</i> or <i>mme</i>	
<i>lib_all</i>	<i>lib</i> or <i>lib_ee</i>	
<i>eu</i>	EU member states (time-variant)	
<i>afr</i>	African countries	
<i>asia</i>	Asian countries	
<i>latin</i>	Latin American countries	
Control variables used in growth regressions (Tables 1 and 2)		
<i>lgdpini</i>	Log of initial GDP per capita	WDI
<i>popg</i>	Population growth rate	WDI
<i>gfcf</i>	Fixed capital formation (% of GDP)	WDI
<i>inf</i>	Consumer price inflation	WDI
<i>open_res</i>	Residual from regression of openness ratio on GDP; own calc.	WDI
<i>fdi</i>	Foreign direct investment (% of GDP)	WDI
<i>fin_cr</i>	Financial Crisis (Index)	Laeven/Valencia (2012)

VARIABLE	DEFINITION	DATA SOURCE
Additional controls used in government activity regressions (Tables 3 and 4; Appendix Tables)		
<i>lpop</i>	Log of total population, absolute value in thousands	UNCTAD; own calc.
<i>eld</i>	Elderly ratio (population over 65, % of total population)	WDI
<i>unemp</i>	Unemployment, total (% of total labor force)	WDI
<i>lopen</i>	1 year lag of the sum of imports and exports (% of GDP)	UNCTAD; own calc.
<i>crises</i>	ongoing debt, banking or currency crisis dummy	Based on Laeven/Valencia (2012)
Abbreviations of and links to data sources:		
<i>EFT</i>	Economic Freedom of the World, Database: Fraser Institute (Link)	
<i>KAM</i>	Knowledge Assessment Methodology, Database: World Bank (Link)	
<i>PGD</i>	Party Government Dataset: Woldendorp et al. (2011) (Link), update by Seki and Williams (2014)	
<i>Polity IV</i>	Polity IV Project, Database (Link)	
<i>WDI</i>	World Development Indicators, Database: World Bank (Link)	

Table A2: Results for Effects on Government Size

<i>Variable</i>	(1)	(2)	(3)	(4)	(5)	(6)
<i>Sample</i>	<i>GOVSIZE</i>	<i>GOVSIZE</i>	<i>GOVSIZE</i>	<i>GOVSIZE</i>	<i>GOVSIZE</i>	<i>GOVSIZE</i>
	all	all	all	all	lib	cme
<i>lgdppc_ini</i>	0.37*** (5.57)	0.33*** (4.72)	0.67*** (7.46)	0.54*** (5.33)	-0.23 (-0.86)	0.53*** (5.08)
<i>lpop</i>	0.02 (0.52)	0.05 (1.11)	0.06 (1.34)	0.06 (1.31)	-0.03 (-0.38)	0.02 (0.42)
<i>eld</i>	0.08*** (4.65)	0.08*** (4.45)	0.05*** (2.81)	0.06*** (2.99)	-0.13*** (-5.69)	0.09*** (4.02)
<i>pol</i>	-0.10 (-1.48)	-0.07 (-0.92)	-0.17** (-2.21)	-0.13* (-1.83)	-0.44*** (-3.99)	-0.09 (-0.97)
<i>unemp</i>	0.03*** (3.91)	0.02 (1.64)	0.03** (2.53)	0.02 (1.48)	0.07*** (3.59)	0.00 (0.27)
<i>lopen</i>	0.00*** (3.43)	0.01*** (3.62)	0.00*** (3.68)	0.00** (2.55)	-0.00 (-1.59)	0.01*** (4.23)
<i>crises</i>	0.39*** (2.76)	0.46*** (3.00)	0.39*** (2.74)	0.24 (1.26)	0.13 (0.71)	0.47** (2.35)
<i>eu</i>	0.29** (2.15)	0.37*** (2.58)	0.09 (0.86)	0.67*** (3.88)	0.70*** (6.17)	0.09 (0.54)
<i>ideology</i>		0.05 (0.94)	0.01 (0.25)	-0.07 (-1.06)	-0.14** (-2.03)	-0.04 (-0.61)
<i>type of gov</i>		0.23*** (5.54)	0.14*** (4.04)	0.22*** (5.32)	-0.14*** (-3.53)	0.26*** (6.96)
<i>east</i>			1.00*** (6.58)	-0.98* (-1.95)	-1.53*** (-2.92)	0.76 (1.47)
<i>ideology*east</i>				0.63*** (4.21)	0.43*** (3.56)	0.10 (0.62)
<i>eu*ideology*east</i>				-0.28*** (-3.30)	-0.27*** (-3.62)	-0.10 (-1.07)
<i>crises*east</i>				0.20 (0.80)	0.19 (0.61)	-0.45** (-2.02)
<i>lme</i>			-1.33*** (-14.46)			
<i>constant</i>	-10.97*** (-12.58)	-12.17*** (-12.18)	-13.31*** (-11.75)	-12.94*** (-11.26)	3.00 (0.98)	-13.19*** (-9.07)
<i>Year FE</i>	Yes	yes	Yes	yes	yes	yes
<i>Observations</i>	468	423	423	423	142	281
<i>R-squared</i>	0.34	0.37	0.57	0.41	0.75	0.55

Note: Robust z-statistics in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table A3: Results for Effects on Regulation

<i>Variable</i>	(1)	(2)	(3)	(4)	(5)	(6)
<i>Sample</i>	<i>GOVREG</i>	<i>GOVREG</i>	<i>GOVREG</i>	<i>GOVREG</i>	<i>GOVREG</i>	<i>GOVREG</i>
	all	all	all	all	lib	cme
<i>lgdppc_ini</i>	-0.38*** (-8.15)	-0.36*** (-7.83)	-0.52*** (-6.03)	-0.59*** (-6.70)	-0.17 (-0.93)	-0.40*** (-5.65)
<i>lpop</i>	-0.13*** (-3.55)	-0.16*** (-4.35)	-0.19*** (-5.89)	-0.19*** (-5.12)	-0.07 (-0.97)	-0.19*** (-5.42)
<i>eld</i>	-0.03** (-2.53)	-0.03** (-2.56)	-0.02** (-2.03)	-0.02* (-1.68)	-0.12*** (-4.68)	-0.03* (-1.95)
<i>pol</i>	-0.10 (-1.56)	-0.09 (-1.22)	-0.10 (-1.21)	-0.07 (-0.85)	-0.14 (-1.06)	0.00 (0.03)
<i>unemp</i>	-0.01 (-1.38)	0.02* (1.92)	0.02** (2.55)	0.02 (1.63)	-0.03** (-2.16)	0.04*** (3.64)
<i>lopen</i>	-0.01*** (-5.90)	-0.01*** (-6.00)	-0.00*** (-4.72)	-0.01*** (-4.82)	-0.00* (-1.79)	-0.01*** (-6.42)
<i>crises</i>	0.53*** (5.51)	0.45*** (4.35)	0.32*** (3.65)	0.31** (2.44)	0.78*** (5.35)	0.31** (2.41)
<i>eu</i>	0.32*** (4.53)	0.26*** (3.40)	0.02 (0.31)	0.39*** (4.32)	0.24** (2.27)	-0.09 (-0.93)
<i>ideology</i>		0.14*** (3.08)	0.13*** (3.75)	0.11** (2.03)	0.05 (0.89)	0.15*** (3.51)
<i>type of gov</i>		-0.08*** (-2.67)	-0.13*** (-4.87)	-0.08** (-2.45)	0.05 (1.58)	-0.26*** (-9.22)
<i>east</i>			-0.22* (-1.80)	-1.05*** (-3.45)	0.69 (1.57)	0.27 (0.80)
<i>ideology*east</i>				0.28*** (3.08)	0.26** (2.41)	-0.15 (-1.23)
<i>eu*ideology*east</i>				-0.18*** (-3.71)	-0.25*** (-4.93)	-0.03 (-0.68)
<i>crises*east</i>				-0.06 (-0.31)	-0.47** (-2.40)	0.10 (0.54)
<i>lib</i>			-0.85*** (-13.89)			
<i>constant</i>	-0.86 (-1.01)	-1.13 (-1.21)	1.11 (1.26)	1.17 (1.22)	-2.73 (-1.19)	-0.52 (-0.56)
<i>Year FE</i>	yes	yes	yes	yes	yes	yes
<i>Observations</i>	469	423	423	423	142	281
<i>R-squared</i>	0.43	0.47	0.65	0.51	0.83	0.67

Note: Robust z-statistics in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table A4: Results for Effects on Government Consumption

<i>Variable</i>	(1)	(2)	(3)	(4)	(5)	(6)
<i>Sample</i>	<i>GOVCON</i>	<i>GOVCON</i>	<i>GOVCON</i>	<i>GOVCON</i>	<i>GOVCON</i>	<i>GOVCON</i>
	all	all	all	all	lib	cme
<i>lgdppc_ini</i>	1.21*** (5.83)	1.28*** (5.82)	1.50*** (6.98)	1.39*** (6.52)	1.96** (2.27)	1.24*** (4.46)
<i>lpop</i>	-0.92*** (-6.88)	-0.86*** (-6.44)	-0.88*** (-6.26)	-0.87*** (-6.29)	-0.28 (-0.87)	-1.08*** (-7.73)
<i>eld</i>	0.11* (1.88)	0.08 (1.29)	0.05 (0.81)	0.05 (0.76)	-0.12 (-1.04)	0.08 (1.09)
<i>pol</i>	-0.04 (-0.41)	-0.06 (-0.53)	-0.05 (-0.48)	-0.10 (-0.76)	-0.44 (-1.34)	-0.27*** (-2.98)
<i>unemp</i>	0.11*** (4.79)	0.16*** (4.33)	0.20*** (5.14)	0.15*** (3.91)	0.69*** (7.41)	0.00 (0.00)
<i>lopen</i>	-0.01* (-1.71)	-0.01 (-1.15)	-0.00 (-0.40)	-0.01 (-1.52)	-0.02** (-2.38)	-0.00 (-0.22)
<i>crises</i>	1.30*** (3.13)	1.22*** (2.74)	0.67 (1.55)	1.13* (1.82)	-1.71 (-1.47)	0.93 (1.54)
<i>eu</i>	0.81** (2.23)	0.81** (2.10)	0.17 (0.47)	1.25*** (2.61)	1.78*** (3.05)	0.45 (1.05)
<i>ideology</i>		-0.08 (-0.48)	-0.19 (-1.15)	-0.01 (-0.06)	-0.50* (-1.74)	0.11 (0.56)
<i>type of gov</i>		0.41*** (3.63)	0.24** (2.09)	0.43*** (3.68)	-0.99*** (-5.73)	1.11*** (9.73)
<i>east</i>			0.92** (2.09)	1.34 (1.05)	2.46 (1.09)	0.99 (0.71)
<i>ideology*east</i>				-0.13 (-0.30)	-0.18 (-0.33)	0.05 (0.12)
<i>eu*ideology*east</i>				-0.53** (-2.10)	-0.49 (-1.39)	-0.57** (-2.32)
<i>crises*east</i>				-0.15 (-0.18)	-0.74 (-0.54)	-0.10 (-0.12)
<i>lme</i>			-2.94*** (-8.13)			
<i>Year FE</i>	yes	yes	yes	yes	yes	yes
<i>Constant</i>	13.26*** (4.58)	10.83*** (3.43)	11.12*** (3.36)	10.81*** (3.19)	5.18 (0.44)	16.26*** (4.76)
<i>Observations</i>	669	625	625	625	210	415
<i>R-squared</i>	0.22	0.23	0.32	0.24	0.51	0.44

Note: Robust z-statistics in parentheses, *** p<0.01, ** p<0.05, * p<0.1



Project Information

Welfare, Wealth and Work for Europe

A European research consortium is working on the analytical foundations for a socio-ecological transition

Abstract

Europe needs change. The financial crisis has exposed long-neglected deficiencies in the present growth path, most visibly in the areas of unemployment and public debt. At the same time, Europe has to cope with new challenges, ranging from globalisation and demographic shifts to new technologies and ecological challenges. Under the title of Welfare, Wealth and Work for Europe – WWForEurope – a European research consortium is laying the analytical foundation for a new development strategy that will enable a socio-ecological transition to high levels of employment, social inclusion, gender equity and environmental sustainability. The four-year research project within the 7th Framework Programme funded by the European Commission was launched in April 2012. The consortium brings together researchers from 34 scientific institutions in 12 European countries and is coordinated by the Austrian Institute of Economic Research (WIFO). The project coordinator is Karl Aiginger, director of WIFO.

For details on WWForEurope see: www.foreurope.eu

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