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**Between State and Market: The Changing Role of  
Institutions and Political Actors  
in East European Pension Reforms**

A Dissertation in  
Sociology

by

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## Preface

This dissertation entitled “Between State and Market: The Changing Role of Institutions and Political Actors in East European Pension Reforms” is a publication-based, cumulative thesis. It includes an introductory framework and four research papers. The framework paper seeks to summarize and complement the research papers that constitute the core of the dissertation. Moreover, it seeks to link the theoretical claims made in each of the four paper and provide an over-arching theoretical argument. The four papers discussed are as follows:

- I. Adascalitei, Dragos and Federico Vegetti. (under review). “From State to Market and Back: The Politics and Economics of Pension Privatization in Eastern Europe.”, submitted on 18 January 2016 to *Comparative Political Studies*
- II. Adascalitei Dragos and Stefan Domonkos. (2015). “Reforming Against all Odds: Multi-pillar Pension Systems in the Czech Republic and Romania.”, *International Social Security Review* 68(2): 85-104.
- III. Adascalitei Dragos. (2015) “From Austerity to Austerity: The Political Economy of Public Pension Reforms in Romania and Bulgaria.”, *Social Policy & Administration Article First Published Online*, (DOI: 10.1111/spol.12173).
- IV. Adascalitei Dragos. (under review). “What about the non-reformers? The political economy of pension reforms in Belarus and Ukraine.”, submitted on 14 of January 2016 to *Communist and Post-Communist Studies*.

The studies are appended to the manuscript in the aforementioned order in their most advanced form, as published or submitted for publication/review. Where possible, page numbering consistent with the page numbering of the dissertation has been included centered in the footer of each page.

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Dragos Adascalitei  
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## **Framework**

## **1. Introduction**

The economic and political transition that marked the developmental paths of Central and Eastern European countries was accompanied by a host of institutional changes that completely reorganized the way in which welfare states in the region function. Beginning with the 1990s, the moment when most of the countries started their transition to a market economy, national welfare institutions underwent numerous changes that sought to diminish their universalist character and reorganize them around individualist principles. Various national and international political actors fought to influence this process of change, in a bid to defend their interests. As the literature studying the last two and a half decades of welfare state transformation in Central and Eastern European countries notes, the institutional outcomes of this process of change, bear the imprints of the diverse, and sometimes contradictory interests that these political actors aimed to defend (Armeanu 2010; Orenstein 2008; Adascalitei and Domonkos 2016).

The literature that emphasizes the path dependence of welfare states sees the changes of the last decades of transformation as mostly marginal adaptations, in a process that added new institutional layers over a core of institutions (Inglot 2008). From this point of view, the new welfare state arrangements that emerged in CEECs, did not succeed in reaching the institutional consistency of the “welfare regimes” that populate advanced Western democracies, but remained caught in a stage of partial equilibrium punctuated by frequent attempts to renegotiate their core principles. In contrast, the literature that studies the political origins of the recent welfare state transformations, argues that the scale of changes that were passed during transition contributed to paradigmatic institutional shifts that re-oriented the new welfare states

towards particular regional models that borrow both universalist and individualist elements (Kuitto 2011).

This dissertation engages with the above debates by taking the case of pension policy as a key example that epitomizes the most important changes which marked welfare state transformations in Eastern Europe. Publicly managed *pay-as-you-go* (PAYG) pension systems are the most important welfare institutions in Eastern Europe both in terms of expenditure levels and coverage. In consequence, attempts to restructure the welfare states inherited from the state socialist period, are likely to target public pension systems. On the other hand, public PAYG pension systems are politically important, since a large number of constituents have a present or future interest in pension provision. In this respect, Eastern European countries are similar with their Western counterparts, where retrenchment attempts have been met with significant opposition from different societal groups and prompted governments to use a diverse array of obfuscation strategies (Pierson 1994).

The purpose of the dissertation fourfold. First, it seeks to investigate the determinants of pension policy reforms by focusing both on explaining the outcomes of the World Bank (WB) campaign for the adoption of mandatory private accounts as well as of the parametric adjustments that were passed by governments in response to political and economic pressures. Second, it seeks to test whether the type of the political regime that emerged during transition in different countries impacted the choice of pension policies that have been used to adjust public pension systems. The impact of the regime type on pension reform outcomes remains an undertheorized field, with findings pointing to contradictory effects. Third, it aims to show how national elites have responded to international pressures to reform public pension systems and how they related to different alternatives of reform. While the impact of international



pressures on pension privatization outcomes is a relatively developed field, much less is known about their impact on the reforms concerning public pillars. Fourth, the dissertation aims to expand existing knowledge on the determinants of pension reforms in Eastern Europe by analyzing country cases that are less known, even in the regional studies literature. Therefore the case studies analyzed in each of the articles of the dissertation seek to bring new empirical material to explain the dynamics of pension reforms, in countries that do not belong to Western rim of Eastern Europe.

The main argument of the dissertation is that the compromises forged between national elites and international actors around key institutional elements of pension systems explain the growing diversity in welfare state pathways in Eastern Europe. In particular, I show that whereas international actors such as the World Bank have prioritized parametric adjustments aimed at ensuring the long-term fiscal sustainability of public pension systems together with an agenda of privatization, national elites promoted reforms that focused predominantly on short-term goals. Furthermore, I argue that, an analysis of the wider group of Eastern European countries over a time-span that includes both the expansion and the contraction phases of the mandatory funded pillars in the region, shows that, on average, the more authoritarian countries are less likely to privatize. I show that the type of the regime that emerged during transition has impacted the responsiveness of national elites to the agenda of pension reform promoted by International Financial Institutions (IFIs) as well as the political sustainability of pension reforms. In particular, in the case of authoritarian countries, the choice of pension reforms was linked to the importance of pensioner constituencies for the survival of the regime. In contrast, in more democratic regimes, pension reforms were carried out by taking into account the interests of different societal groups, and depended on the political compromises that

were forged between policy makers and societal constituents. Still, a commonality between pension policy-making in authoritarian and non-authoritarian regimes was that ultimately national executives could pursue an agenda of reforms that was disconnected from the interests of societal stakeholders. Thus oftentimes, the interests of trade unions or pensioner associations were sidelined when passing pension reforms.

The dissertation makes use of both of a large N statistical analysis as well as of in-depth historical comparative case study evidence based on data obtained from semi-structured interviews. The statistical analysis is based on a database of pension reforms that includes both Eastern European countries that introduced mandatory funded pillars as well as the countries that did not opt for adopting the reform. The database contains information on the size of the mandatory funded pillars from 1995 to 2014, thus covering the early stages when the reform was negotiated but none of the countries implemented it (1995 -1998); the decade between 1998 and 2008, when the policy was adopted in most of the countries and witnessed a period of expansion; as well as the post-crisis period, when many of the early pension privatizers have either partially rolled back or fully nationalized their mandatory funded pillars. Thus, the statistical analysis section of the dissertation seeks to provide a systematic account of the determinants of pension privatization in Eastern Europe by analyzing (i) why some countries chose to introduce mandatory funded pillars; (ii) in the countries that privatized, what explains the variation between the size of the mandatory funded pillars; and (iii) why some countries in the region chose to avoid the reform altogether and instead retained a public PAYG pension system.

Furthermore, the statistical analysis is complemented by a series of in-depth case study analyses of pension policy making in five countries: Bulgaria, Romania, Czech

Republic, Belarus and Ukraine. In each of the countries, interviews with policy-makers involved in pension reforms were conducted with the aim of gaining insights into the political and economic rationales that motivated particular reform episodes. In addition, leaders of various civil society groups involved in the reforms (trade unionists, members of non-governmental organizations) were also carried out, in order to assess how these actors were involved (if at all) in the process of pension reforms. Finally, employees from the World Bank and the International Monetary Fund were also interviewed in order to gain insights on how these institutions have sought to influence national pension reform agendas.

The five countries epitomize the diverse political regimes and economic development strategies that consolidated in Eastern Europe during and after the transition from state socialism. While the Czech Republic and Belarus are countries that recovered fast from the perils of transition but built diametrically opposed political regimes, Ukraine is a country that still has not entirely recovered from the transition crisis and whose political regime alternated between phases of authoritarianism and democratization. In contrast, Bulgaria and Romania, are two countries that underwent prolonged economic transitions but where the political regimes that emerged after the fall of the socialist regimes have consolidated into full-fledged democracies.

The logic of the comparative historical analysis follows Mill's method of difference or the most similar cases design (Ragin 1989, Ebbinghaus 2005). The method is used in order to identify explanations for different outcomes of pension reforms in countries that display similar political and institutional features. In each of the chapters, the country cases are paired in order to identify the causal mechanism that explains the divergent reform outcomes between them. Thus, three of the papers of the dissertation use the most similar case design in order to investigate different

aspects of the determinants of pension reform in Eastern Europe. The first paper investigates the variation in PAYG parametric reforms and compares two structurally similar countries, Romania and Bulgaria, arguing that the two countries have increasingly diverged in terms of reform outcomes and pension system generosity. The second paper compares two late pension privatizers, the Czech Republic and Romania, showing that the two countries introduced private pillars because right-wing political elites preferred the policy as an alternative to parametric reforms, even a time when other countries in the region were scaling back their mandatory funded pillars. The third case oriented paper, compares Belarus and Ukraine, two non-privatizers and shows that the political regime type mattered both for the rejection of the WB privatization agenda, as well as for the particular parametric pension system adjustments that each of the two comparators opted for.

In the following section I critically discuss the literature on the determinants of pension policy reforms in Eastern Europe. Since most of the current debates have focused on the determinants of reforms that have changed the institutional structure of publicly managed PAYG pension systems through the introduction of mandatory private accounts, I begin by outlining the main claims stemming from this literature. I show that the main variables used in the literature for explaining pension privatization reform outcomes have been: the presence of economic constraints, veto points, the political regime types, the ideological preferences of national political elites, and the influence exercised by various international actors. I show that these factors have also influenced the type of parametric pension adjustments that each country chose to undertake. However, in spite of being equally important to pension privatization measures, I argue that parametric adjustments have received much less attention in the literature.

Building on the literature review, I then outline the elements of my theory that describes the political and economic determinants of pension reforms in Eastern Europe. I separate between reforms that seek to shift part of the social security contributions to mandatory private accounts and reforms that preserve the institutional structure of the pension system but, nonetheless, adjust the present or future size of the pension benefits. I then contextualize the theoretical claims by using the empirical findings of each of the papers included in the dissertation.

## **2. Conceptual Debates on the Determinants of Pension Reforms**

### **2.1. Economic Constraints**

The fiscal crisis of public PAYG pension systems has been amongst the most important factors associated in the literature with increased reform activity. Ever since the influential report published by the World Bank (1994), *Averting the World Age Crisis*, the need to limit the growing expenditures of public PAYG pension systems has been cited as a reason for retrenchment. As the report notes, there are several sources of growing expenditures that contribute to the emergence of fiscal crises in public pension systems: demographic factors, economic crises, and labor market imbalances.

The existence of adverse demographics has been pointed out as one of the main variables explaining the fiscal crisis of public pension systems in both Western and Eastern Europe (Pierson 1996; Cerami and Vanhuyse 2009; European Commission 2012, Adascalitei 2012). Low birth rates combined with increased life expectancy amongst the elderly impacted the fiscal sustainability of public PAYG pension

systems through increased elderly dependency ratios. In addition, in Eastern Europe, the impact of the demographic challenge on public pensions was enhanced by two regional peculiarities. First, the pro-natalist policies promoted by many governments during socialism have created disproportionately large cohorts that began to retire around 2000s, at a time when the public PAYG pension systems began to mature. This added a large fiscal burden to public pension systems, requiring governments to increasingly rely on additional income from general taxes in order to cover social security deficits. Second, the free movement of labor within the European Union (EU) has led to massive waves of migration amongst the working age population from the New Member States (NMS) towards Western Europe – thus decreasing the number of potential contributors to social security budgets.

The region has been also impacted by numerous economic crises that have put public finances under strain. The link between the presence of economic crises and pension reforms has been tested numerous times, although with mixed results. Müller (1999) argues that economic crises increase the likelihood of radical pension reforms since, during crisis moments, reform minded ministries gain more power. In this sense, Ministries of Finance, the traditional supporters of pension privatization can push for their agenda, while bypassing the more social oriented ministries, such as the Ministry of Labor.

Economic crises also impact the likelihood of pension reforms through their direct effect on benefit levels. Brooks (2006) argues that economic crises signal the problems that public PAYG pension systems face, and create a “negative consensus” amongst present or future pensioners who begin to demand systemic reforms of the present pension system. Thus the demand for pension reforms that introduce new institutional designs, such as mandatory private accounts, increases because both

retirees and those about to retire perceive the existent system as unfair. Furthermore, economic crises increase the likelihood of pension reforms by enhancing the influence exercised by international actors and by reducing the power of the actors that traditionally oppose pension reforms, such as trade unions, left wing parties or pensioner associations (Müller 2003; Orenstein 2008). Since governments in the region have usually sought external financial help when faced with fiscal crises, external actors, such as the International Monetary Fund (IMF) or the World Bank (WB), advanced their agenda either directly, through conditionalities attached to loan agreements, or indirectly by providing technical and financial support to elites who supported privatization and retrenchment reforms.

Still, the impact of crisis on pension privatization remains controversial as countries that underwent significant crisis episodes have not necessarily introduced private pensions and vice-versa (Armeanu 2010). Rather, crisis episodes seem to act as an intervening variable that create the need to reform. More so, economic crises alone cannot explain whether pension reforms will go in a liberalizing or nationalizing direction. Indeed, comparing the impact of different crisis episodes on mandatory second pillar reforms shows a changing relationship: whereas during the early and late 1990s economic crises have been accompanied by episodes of privatization, during the recent economic crisis, cash strapped governments have rolled back some of the reforms adopted earlier (Drahokoupil and Domonkos 2012).

Still, in the very least, crisis episodes triggered the need of adjusting pensions in the short term through changes in the benefit generosity. Indeed, the crises that marked the transitions from state socialism have been associated with episodes of “hidden retrenchment” (Hacker 2004, Pierson 1996) in which governments sought ease the fiscal pressure on social security budgets by not applying indexation rules, and thus

leaving the real value of pension benefits to fall against inflation. Hidden retrenchment was one of the most widespread measures used by cash-stripped governments since its impact on budgets was immediate and its visibility amongst constituents was low.

Besides, economic crises generated labor market imbalances which impacted the revenue side of social security budgets. High levels of informality and widespread tax evasion decreased significantly revenues gathered from contribution rates. State owned enterprises typically defaulted on their social security contributions while small and medium enterprises usually opted for using illegal employment contracts in order to avoid paying social security taxes. In addition, public pension systems have been used as alternatives to taking up unemployment. Since unemployment systems were initially underdeveloped and paid extremely low benefits, redundant workers were allowed to take early retirement in order to avoid entering extreme poverty. The liberalization of retirement rules led to rapidly growing numbers of early retirees that amounted to “pensioner booms” during the first decade of transition (Vanhuyse 2006). Subsequently, the intake of new pensioners required governments to increase contribution levels in a bid to keep social security deficits under control.

## **2.2. Veto Points and Interest Groups**

A broad literature has focused on the impact of domestic actors on the outcomes of pension reforms around the world. Given that pension reforms are generally highly visible measures that are likely to affect the interests of different societal groups involved in the political process, their adoption might be met with opposition. In this respect, depending on the political resources that each of the actors with a stake in



pension policy is endowed with, their “veto” on particular policies can derail substantially the reform path. Veto players can be represented by different political entities such as parts of the bureaucratic apparatus, political parties or trade unions.

The influence of bureaucracies over the pension reforms has been long established. Orenstein (2000) finds that government agencies influenced the design and implementation of privatizing reforms in three East European cases. Notably he shows that in countries where the number of bureaucratic veto players was lower the reform was more radical and was implemented faster. Furthermore, Cook (2007) argues that pension reforms have been above all shaped by different statist elites that had not been in any way accountable to societal constituencies prior to the collapse of the socialist regimes. These elites included trade union leaderships, welfare sector administrators or welfare ministries. Since these elites had privileged access to welfare state resources, they had the capacity to influence the scope of pension reforms. Thus, pension reform outcomes ultimately depended on how these actors split themselves during transition between reformist and statist oriented groups. In countries where reformist groups embodied by liberalizing technocrats prevailed, pension systems were privatized and retrenched. By comparison, in countries where bureaucratic elites favored the status-quo and aligned themselves with organizations that began to represent societal interests such as old trade unions, pension privatization reforms did not take place. At the same time, the retrenchment of public PAYG pension systems has been much less radical, with pensioners being better protected against poverty in comparison with other societal groups (young workers, the unemployed).

Furthermore, party competition influences pension policy reform outcomes by making political agreements over reforms more or less likely. Both qualitative and

quantitative analyses underline the importance of legislative decision-making when it comes to pension policies. Cashu (2002) finds that the high fractionalization of the party system impacts negatively the likelihood of introducing mandatory private accounts. As privatization is a policy that impacts the interests of a wide range of actors who have a stake in pension policy, its adoption requires policy-makers to generate inclusive pro-reform coalitions. Besides, policy makers aim to include a broader array of interests, because this can ensure that in the post adoption phase, reforms are less likely to be reversed (Guardiancich 2013). However, when political fractionalization is high, reaching agreements on pension reforms that have long lasting distributive implications for present and future pensioners is politically unattainable as the presence of a high number of parties increases the political costs of creating a compromise. On a similar note, Brooks (2002; 2005) argues that the higher the number of political parties inside legislatures, the lower the chances of introducing mandatory private accounts. The finding holds across a sample of both Eastern European and Latin American countries and confirms insights from the political economy literature suggesting that, in general, in fractionalized systems, welfare reforms are less likely to occur because governments will be reluctant to search for support in contentious policy areas.

In contrast, Armeanu (2010) is more cautious in linking the number of veto points with welfare reform outcomes. While acknowledging the empirical evidence that assigns explanatory power to the veto-points theory, she contends that the sheer number of veto-points existent in a system does not tell much about pension reform outcomes. However, her approach consists of analyzing the impact of veto points that stem from the institutional organization of the political power which distinguishes between presidential, semi-presidential, and parliamentary systems. From this point of

view, she finds no relationship between the type of political organization and reform activity, showing that, despite the fact that on average presidential systems have been more successful in passing radical pension reforms than parliamentary systems, variation amongst countries with presidential systems remains wide, which lends little explanatory power to the above distinction.

Finally, the influence of trade unions in pension and welfare state reforms has been much more limited in comparison with that of bureaucratic and partisan interests. As much of the literature on trade union survival in Eastern Europe shows, unions became marginalized ever since the beginning of the transition period and suffered a process of organizational and institutional decline that reduced their influence on national level policy making (Crowley and Ost 2001; Crowley 2004). Despite the fact that pension reforms have been oftentimes negotiated within national tripartite institutions, agreements reached within these institutions never had a binding character for governments. With few exceptions (Bernaciak, Duman, and Šćepanović 2011, Adascalitei and Muntean 2014, Adascalitei and Guga 2015), trade unions could not constitute a serious threat for welfare reforms. Instead, governments in search for political support for pension reforms sought to subordinate trade unions to their agenda of reform, in a bid to make unions accept reforms that oftentimes went against trade union interests.

At the same time, unions themselves had a mixed agenda towards pension reforms. While openly opposing retrenchment of public PAYG pension systems and especially the increase in retirement ages and the elimination of special retirement regimes, their relationship with reforms that introduced mandatory private accounts has been mixed. While sometimes unions have openly supported privatization, out of concerns that public pension systems could not cater to future pensioners due to their growing fiscal

problems (Müller 1999), in other cases they opposed the policy because privatization envisioned no place for unions in the management of the future pension funds (Cashu 2002). Therefore, in the absence of a well-defined position on pension reforms and facing a decline in their institutional and political power, trade unions could only rarely constitute a serious threat for pension privatization.

### **2.3. Political Regime Types**

The impact of political regime types on pension and welfare state outcomes has been usually subsumed to the question of how capable are various regime types to pass particular reforms. Beginning with the Chilean experience, where an authoritarian political regime has succeeded in fully privatizing its pension system, the scholarship studying the impact of regime types on pension reform outcomes has tended to associate the presence of authoritarianism with the introduction of mandatory private accounts and the retrenchment of the public PAYG pension systems. In a study of nine Latin American countries over a period of twenty years, Mesa-Lago and Müller (2002) find that the degree of pension privatization is negatively correlated with the presence of democratic institutions: the more authoritarian the regime is at the time of the reform, the more it will downsize the public pension system. In comparison, democratic regimes are found to be more likely to strengthen the public pension system at the expense of opting for complete or partial privatization (Mesa-Lago and Müller 2002, 704–706). In more authoritarian regimes, right wing economists, IFIs, as well as business and financial sector interests could exercise their influence outside the control of democratic political decision making. Thus, the institutional arrangements in authoritarian regimes, which allowed these interests to exercise influence over unconstrained executives, paved the way for pension privatization in

several Latin American countries. In comparison, in democratic regimes, competing interests, represented by left-wing political parties, state sector bureaucracies, trade unions or pensioners' associations could exercise their voice and stop or reverse attempts to privatize public pension systems.

Similarly, in an analysis of a wider sample of countries, including both Latin American and Eastern European states, Brooks (2002) finds that less democratic countries are more likely to pass more radical pension privatizations. Therefore, the more open the political process is, the more accountable the political elites to competing demands for redistribution.

The relationship between regime types and pension reform outcomes has also been theorized in the context on Eastern European countries. In a comparison of three East European cases, Poland, Hungary and Kazakhstan, Orenstein (2000) finds that the more authoritarian regime present in Kazakhstan has implemented a much more radical pension reform in comparison with its democratic counterparts. Following the Chilean model of pension reform, the Kazakhstani reform proceeded in a quick manner since it met no opposition from internal political actors. As Cook (2007) notes, the presence of a strong, liberalizing executive in a context of powerless statist elites allowed a full replacement of the public pension system with a private alternative.

Still, the impact of regime types on pension reforms in Eastern Europe is not as straightforward. Looking at the entire sample of countries, reveals mixed results. While none of the democratic regimes in the region have fully privatized their pension systems, in a majority of countries partial privatization has taken place. At the same time, democratic regimes have pursued much more reforms that retrenched their public pension systems including increasing retirement ages, shifting social security

contributions to workers, tightening eligibility criteria, and eliminating special retirement regimes.

Moreover, the relationship between regime types and pension reforms is complicated by the wave of pension reform reversals triggered by the recent economic crisis. The fiscal problems created by the crisis together with the declining performance of pension funds, has prompted a wave of fund nationalizations and partial reversals in both authoritarian and democratic regimes (Drahokoupil and Domonkos 2012; Zhandildin 2015). The crisis has called into question theories of pension reform that claimed that the sustainability of private pillars depends on how inclusive was the political bargaining process during their adoption phase (Guardiancich 2013). Rather, the crisis has revealed that reversals took place both in cases in which private pillars were introduced with a wide support from various actors as well as in cases where they were adopted without reaching consensus.

As Forrat (2012) notes, authoritarian regimes are as diverse as democracies it comes to the choice of welfare policies that they employ. Variation stems from the different logics that underpin the functioning of welfare policies in authoritarian regimes, which can, for example, seek to create loyalty or control different groups, serve clientelistic relationships, or represent elite efforts to respond to social needs. Still, one common factor that unites the manner in which welfare policy-making is carried out in authoritarian cases is that elites are the main actors responsible for maintaining welfare provisions. In the absence of serious opposition coming either from the civil society or political parties, welfare policies respond to ruling elite ideas about developmental trajectories of their respective countries.

## **2.4. Party Ideologies**

The analysis of the impact of political ideologies on welfare reforms has a long tradition in the “power resources theory” that sought to explain parties’ political influence on welfare state expenditures in Western democracies (Huber and Stephens 2001; Bonoli and Natali 2012). In the case of Western European welfare states, the power resources theory held that distributive conflicts organized along class lines that take place between different interest groups shape the amount of resources that each country allocated for their welfare state expenditures (Korpi 2006). Thus the impact of governing parties on welfare state policies is significant: when in power, strong left-wing parties whose main constituents are working-class groups support generous welfare state states. In comparison, governments dominated by right-wing parties seek to cut back welfare state spending. While the theory remained an important analytical tool for understanding welfare state change, its explanatory power was questioned by those who observed that in an era of permanent austerity, parties lacked the capacity to cut back popular welfare state programs (Pierson 1994).

In Eastern Europe, the traditional left-right divide between parties was also found to matter for how parties chose to manage welfare state expenditures. In an early study on how party competition influences welfare state policies Lipsmeyer (2000) shows that legislatures dominated by right-wing parties are more likely to pass policies that restrict welfare expenditures through the introduction of means-testing of benefits, alterations of benefit duration, and the individualization of welfare services. Pension spending was particularly affected by right-wing legislatures which decreased spending through lowering benefit replacement rates, switching to flat rate pension schemes, and shifting social security contributions from employers to employees.

In contrast, the role that left-wing party ideologies play in welfare reform is not as clear-cut. Although some authors find that the effect of the left-wing parties on welfare expenditures goes in the expected direction, with left-wing parties being more likely to increase welfare expenditures (Careja and Emmenegger 2012), the issue remains contested. Cook et al. (1999) show that left-wing parties can be divided into three main groups, with different preferences for welfare reforms and different genealogical roots: the unreformed left, which are the direct successors of the communist parties and who seek to preserve the socialist values or to fully reinstate the socialist system and to preserve the inherited welfare institutions, the reformed social democrats who advocate for a slow transition to market with the state assuming a central role in the provision of social benefits, and the historically-based social democrats who also advocate a social market approach. As a result, generally when in power, left parties assume a pro-welfare discourse “seeking to defend or re-establish the welfare state values in the new political context” but without pursuing broadly social democratic welfare state policies (Cook et al. 1999: 241). Instead they either defended the welfare state against neo-liberal or ad-hoc full dismantling, or adopted a centrist position, speaking more to the median voter rather than to a purely left constituency. The ambivalent position of left-wing parties towards welfare policies was generated by the conflicting pressures they faced: while having to remain consistent with their left-wing ideology, they needed to prove their commitment to the democratic capitalist system. And, since left-wing parties need to prove themselves as credible political competitors, they pursued policies that endorsed fiscal responsibility and not redistributive or protectionist policies (Tavits and Letki 2009).

Furthermore, the effect of ideology on preferences for pension privatization also remains unclear. Since pension privatization became a highly politicized issue and



parties both on the left and right lacked coherent programs, the policy found supporters in both camps (Orenstein 2000; Appel and Orenstein 2013). Armeanu (2010) confirms this view and claims that the traditional division between left-wing and right-wing parties needs reassessment if it is to help in explaining why some countries privatized while others chose not to do so. With the exception of small right-wing parties, which consistently supported the reform, political parties in the region did not have a consistent stance towards the policy. Left-wing parties did not necessarily oppose privatization, nor did they automatically support the policy. Instead, their position depended on whether they underwent a process of modernization that moved them towards embracing social democratic values.

While ideology effects are not straightforward, one can understand support for privatization in terms of diffuse and concentrated costs and benefits. The policy does have diffuse costs which are spread across different groups in the population (Pierson 2000). Despite the fact that private pension funds favor high income workers at the expense of low income workers, its benefits cut across different organizational groups. At the same time, although privatization favors younger workers, its distributional impact is not immediate and does not affect current pensioners, making the policy easy to defend both from a right-wing as well as from a left-wing position. The only parties that openly opposed privatization were nationalist parties. They did so because of their anti-capitalist discourse that framed the policy along national interest lines as well as because of their connections with special interest groups that held pension privileges under the state managed system (Armeanu 2010, 32–34).

Within the context of the recent wave of reversals of privatizing reforms that took place in Eastern Europe, ideological stances also played a diminished role. As the literature shows, pension privatization reversals took place in response to short term

financing needs triggered by the economic crisis of the late 2000s rather than because of ideological reasons (Datz and Dancsi 2013). In fact, the volatility of East European private pension arrangements during the recent crisis, shows that during the short period since their adoption, private pillars did not succeed in creating a coherent constituency in their favor nor amongst political parties neither amongst pension system contributors.

## **2.5. International Actors**

International actors have been directly involved in the reform of East European public pension systems. Ever since the publication of the World Bank's programmatic report, *Averting the Old Age Crisis* (World Bank 1994), international actors have sought to influence the way in which public pension systems were changed. The report contained the main ideas that international actors endorsed in the domain of pension reforms. The World Bank (WB) argued that, especially in developing countries, public pay-as-you-go pension systems faced an impending fiscal crisis due to pressures stemming from population ageing, the maturation of public PAYG pension systems, high levels of social security coverage, easy access to early retirement benefits, already high contribution rates, and insufficient increases in national productivity levels (World Bank 1994, 140). The antidote, as the WB famously claimed, is the retrenchment of the public PAYG pension systems to paying minimum flat-rate pensions and the introduction of earnings related benefits to be provided through mandatory savings accounts (Adascalitei and Domonkos 2015).

The above recipe for reforms has been promoted through the region with different degrees of success. Orenstein (2000; 2008) finds that pressure exercised by

International Financial Institutions (IFIs) and especially by the WB, has been vital for the introduction of mandatory private accounts in the region. The WB has endorsed the adoption of private pillars with the help of “campaign coalitions” that employed both international and domestic resources. At the international level, the WB made use of its influence in order to spread ideas about privatization through publications, working groups, and conferences. At the national level, the institution sought to push the reform by providing technical assistance, seminars, and loans while seeking to identify national policy entrepreneurs that were receptive to the idea of privatization. Support from national actors was sought at different stages of the policy process: commitment building, coalition building, and implementation (Orenstein 2008, 59).

The influence that IFIs exerted on national policies varied widely within the region. The literature that focuses on countries belonging to the Community for Independent States (CIS) argues that while international pressure for welfare reforms existed, this pressure has been strongly filtered by the preferences of domestic actors (Cook 2007). Thus, the international efforts towards pension privatisation have been conditioned by the outcomes of national political conflicts. The weaker role played by IFIs in the CIS region led to fewer cases of privatization and subsequently to less retrenchment in public pension systems.

Additionally, as the literature on the diffusion of pension privatization notes, an intra-regional peer effect is noticeable in the case of Eastern European countries. Brooks (2005) finds that in Eastern Europe countries are more likely to privatize if their neighbours have done so. At the same time, she finds no support for the influence of IFIs through constraints associated with loan agreements. In this respect she lends credibility to the hypothesis that the more effective means of promoting pension

privatization made use of “soft power” resources such as the dissemination of ideas about welfare reforms (Weyland 2005).

Furthermore, while IFIs have indeed actively promoted the spread of pension privatization and retrenchment during the 1990s and early 2000s, their preferences regarding the policy have gradually shifted, resulting in a decline in the number of countries that opted for privatization. The turn in preferences towards the advice given to countries regarding pension reforms took place because of two reasons. First, the large costs associated with the adoption of pension privatization became evident, making policy makers question the effectiveness of the policy in addressing the demographic ageing problem (Drahokoupil and Domonkos 2012). Second, the crisis has exposed the volatility of private funds in the context of financial downturns and gave credibility to critics of privatization (Orenstein 2011). In this context, IFIs seemed to have recently retreated from actively promoting privatization.

### **3. Changing the East European Pension Systems**

In light of the literature discussed above, this dissertation seeks to explain the determinants of both parametric and structural pension reforms. Thus, its main contribution lies in providing a more systematic and accurate account of the numerous ways in which East European pension systems have been transformed during the past two and a half decades. Taken together, the four papers of the dissertation emphasize the interplay between domestic and international actors in determining the pension reform pathway that each of the five countries undertook.

In the case of the structural pension reforms, the dissertation finds evidence for partisan effects in the adoption of private pillars. In particular, it shows that right-

wing governments were more likely to defend second pillars once these were in place. Furthermore, in the case of late privatisers, the dissertation shows that right-wing parties have been strongly in favour of mandatory funded pillar reforms, even if, at the time, other countries in the region were turning against the policy. However, even though right-wing parties strongly supported pension privatization out of ideological concerns, they had to take into account the experience of countries that privatized earlier. In this sense, the dissertation shows that the ideological preference for the pension privatization is moderated by the experience of problems faced by early privatizers, resulting in smaller and more regulated mandatory funded pillars.

The dissertation also brings evidence that public pension system adjustments have been passed in response to a variety of domestic and international pressures. Importantly, it finds that public pensions have been reformed primarily in response to short-term fiscal and political concerns. However, public pension reforms passed in response to short-term pressures have had a significant fiscal impact on public PAYG pension systems, which ultimately led to an increased cross-national divergence in pension system characteristics. Furthermore, the divergence between countries also stemmed from the unintended consequences of pension reforms: in contexts of weak enforcement capacity by state institutions, retrenchment reforms led workers to massively take up early retirement benefits, out of fears that, in the future, it would take too long to reach the retirement age.

Furthermore, the dissertation finds evidence that political fractionalization of the legislative impacted the choice of pension reforms. In particular it finds that extreme fractionalization levels, resulted in competition through generosity increases that went beyond sustainable levels of expenditure. At the same time party fractionalization

ultimately impacted the success of reforms that sought to introduce mandatory funded pillars.

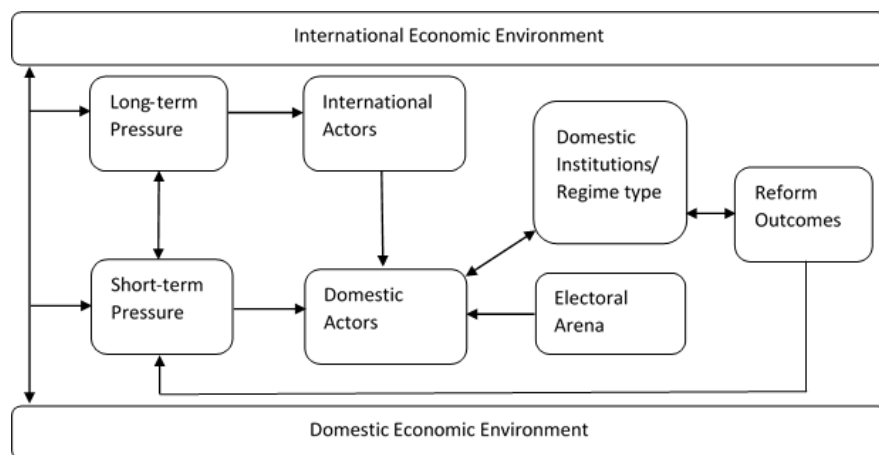
Moreover, the political regime type did matter for whether a country opted for introducing mandatory private accounts or not. In particular, more democratic Eastern European countries have been more likely to introduce private pillars. The finding goes against the veto player literature which suggests that, since more authoritarian regimes can bypass societal interests, they will be more likely to introduce private pillars. In the context of Eastern European cases, this does not necessarily hold for several reasons. First, while more democratic regimes have been indeed more accountable to their constituents, this did not preclude them from reforming public pensions without including the interests of the opponents of the reform. In fact, in many democratic regimes, pension and other welfare policies have been changed without the consultation of the interest groups that could oppose reforms (Haggard and Kaufman 2008). Second, in democratic regimes, traditional veto players have been either too weak to oppose pension reforms that went against their interests or have openly supported the reforms. Therefore, in many Eastern European countries pension privatization has been actively supported by left-wing parties and trade unions alike. Third, in the case of Eastern Europe, more democratic regimes have been more open to international advice regarding pension reforms. This is a peculiarity of the region that sets it apart from Latin America – where authoritarian regimes have been heavily involved in promoting privatization measures with the support of IFIs.

### 3.1. A model of Pension Reforms

As the literature review has shown, there is a variety of domestic and international actors and institutions that can impact pension reform outcomes. What is evident, is that no single variable can account for the diversity of outcomes that marked pension policy making in Eastern Europe. Pension systems went through different phases of expansion and austerity over the last two and a half decades that responded to different pressures to reform coming from both national and international levels.

While paying attention to the findings outlined in the literature review, the theoretical model presented in Figure 1 below illustrates the determinants of pension reform outcomes.

*Figure 1. A model of Pension Reforms in Eastern Europe*



The model assigns an important role to the economic constraints created by economic changes at the national and international levels. While, economic constraints alone do not determine reform outcomes, they contribute nonetheless to creating pressures to reform. Since East European economies are heavily integrated in world markets, changes in the international economic environment are especially important for

domestic policies (Bohle and Greskovits 2012). At the same time, the domestic economic environment matters equally for what policies governments chose to pursue. As much of the literature focused on the economic transition has argued, given the deep economic domestic crises that many of the countries in the region have underwent, governments had to resort to a host of emergency welfare policies in order to adapt pension systems to the new economic environment, but also to ensure a minimum of benefit generosity for pensioners (Inglot 2008; Makszin 2013).

Furthermore, the model distinguishes between long-term and short-term pressures. Ageing is the most important long-term pressure that pension systems face. The model theorises that ageing influences in particular the position that international actors have on pension reforms and the advice that they pass to governments. In this respect, the model suggests that while international actors have changed their position *vis a vis* pension privatization since the advent of the economic crisis, their policy stance towards public pension reform has remained unchanged during the past two decades. As a result, their policy advice on reforming public PAYG pension systems, emphasizes the long-term fiscal pressures created by ageing and advocates for policies that are consequential for future generations of pensioners. They include: increasing and equalizing retirement ages for men and women, increasing the minimum contributory ages for obtaining full pension benefits, elimination of special retirement regimes, and suppressing early retirement policies.

In comparison, domestic actors pay attention predominantly to short-term pressures, and react with policies that seek to address them. Thus, the model predicts that short-term pressures stemming from changes in the domestic or international environments will have a comparatively larger impact on policy preferences of domestic actors than long-term pressures. Thus, during periods of economic decline, pension systems will



be retrenched through policies such as changes in the indexation procedures or increases in the contribution rates. In contrast, during periods of growth, pension benefits will be indexed generously, since the domestic actors will have inflated expectations about the state of the economy. At the same time, national political actors react to short-term pressures generated by the electoral competition and will seek to gain votes through increasing the generosity of pension benefits especially during times of economic growth. The model thus suggests that, short-term adjustments in pension benefit levels will be tied to the electoral cycle.

Since long-term retrenchment policies are politically costly and require substantial political resources, domestic actors will pursue such reforms mainly when international actors will be involved in the policy-arena. The model thus expects that retrenchment through increases in retirement ages for example, is more likely to take place when domestic actors cooperate with international actors. Furthermore, the involvement of international actors in pension policy making will provide a political resource for domestic actors. Thus, retrenchment reforms are likely to be blamed on international actors, since domestic actors will employ “blame avoidance” strategies (Pierson 1994) in order to avoid electoral punishment.

The model also suggests that because public pension policies react primarily to short-term pressures generated by economic shifts or the electoral arena, they can become fiscally unsustainable and therefore add to the long-term fiscal problems that pension systems already face. Thus, reforms that respond to short-term pressures can generate even more pressures to reform since they do not have a base in the real economy. This was the case of most of the parametric pension system adjustments passed during periods of economic growth in Eastern Europe. Adjustments in benefit generosity of public pensions usually bypassed automatic indexation rules and mandated numerous

increases ahead of electoral moments. This practice led to peculiar developments in some countries in the region in which average public pensions grew faster than average wages.

### **3.2. An Overview of the Contributions**

The first paper of the dissertation analyses the determinants of pension privatization in Eastern Europe (see Table 1). Using a novel dataset of data on pension privatization, that includes a continuous measure of the size of the mandatory funded pillar, the paper argues that non-democratic regimes are less likely to privatize pensions. Furthermore, the paper uses a novel statistical technique, a zero one inflated beta regression (ZOIB), to distinguish between three qualitatively different events: the option to introduce mandatory private accounts (privatize), the option to avoid privatization altogether (reject privatization), and once the decision to privatize has been made, the option to decide about the size of the mandatory funded pillar. The paper also shows that the political ideologies impact differently the decision to privatize versus the option to adjust the size of mandatory funded pillars. It finds that, on average, right-wing governments do not support the introduction of the mandatory funded pillars in Eastern Europe, but once these welfare institutions are in place, governments are likely to defend privatization and support larger funded pillars.

At the same time, the paper finds no effect of left-wing governments neither on the decision to introduce mandatory funded pillars nor on their size. This finding is echoed in the literature by much case study evidence which shows that left-wing parties have had an ambivalent position towards pension privatization. Whereas in some countries they have openly promoted the reform, in others they have either

openly opposed it or have been indifferent to it. As Armeanu (2010) notes, except for the unreformed communist left parties, which strongly opposed the reform as part of their anti-market discourse, social-democratic and leftist parties have indeed varied in their stances towards the reform.

Furthermore, the paper finds evidence for the impact of economic conditions on the decisions to introduce private pillars. In particular, it shows that domestic external debt crises as well as economic crises reflected by drops in GDP levels have had a negative impact on the countries' decisions to privatize. The findings go against arguments that emphasize the benefits of the economic crises for welfare reforms and suggest that when including both the transitional and the recent economic crises in the analysis, the likelihood of adopting mandatory funded pillars decreases. The finding suggests that the transitional crises that have marked the transition from socialist regimes in Eastern Europe have been in many aspects unique. They have been accompanied by a tendency of governments to reduce the state involvement in welfare provision that was not present during the recent economic crisis.

If something, the recent crisis has showed the limits of pension privatization, and in most of the countries in the region, has led to a reversal of early reforms. In this respect, even countries that privatised late, such as Romania, have attempted to reverse their reforms, whereas even later privatizers, such as the Czech Republic are already entirely reversing the reform. Furthermore, the transitional crises and the recent economic crises differ in the type of advice that IFIs have given to governments with respect to pension reforms. Whereas during the crises of the late 1990s IFIs have unequivocally advocated for the privatisation of public pension systems, and sought to hide the long-term fiscal impact of the reform (the double payment problem), by the time the recent economic crisis has hit the region, they have

moderated their position regarding pension privatization and focused more on promoting the retrenchment of public pension systems.

Building on these findings, the second paper of the dissertation analyses the passing of reforms that introduced mandatory private accounts in two countries, Romania and the Czech Republic. It explains why, in a context of a turn against the pension privatization in both national and international circles, some countries still opted to adopt the reform.

The paper shows that, the two cases of late privatization are explained by the ideological preferences of the domestic elites, who strongly supported the reforms. In both countries, the advocates of the private pillars were political elites (political parties, non-governmental institutions) who supported the privatization agenda a decade earlier but failed to push for the reform in the past. In this respect, the paper finds evidence for traditional party politics theories of welfare reforms that posit that right-wing ideology is associated with support for the individualization and marketization of welfare services.

Furthermore, the paper finds that the two cases of late-privatization differed in important aspects from what early privatizers have done. It shows that the policy debate in the case of these two late reformers was informed by the discussions that motivated the adoption of mandatory private accounts a decade earlier but that a limited amount of learning has also taken place. In particular, late-privateers have paid more attention to issues concerning the fiscal impact of the mandatory funded pillar adoption and to the regulatory problems that early adopters faced. Therefore the paper finds that domestic right-wing elites have also learned from earlier reformers and as a result have followed a more conservative path to mandatory funded pillar reforms. Therefore, in the case of the two late-privatizers policy learning resulted in

much smaller and more regulated private pillars in comparison with the countries that privatized earlier. Still, policy learning was uneven and was limited to the above aspects of the reform. Many of the policy mistakes done by early-privatizers, including the poor regulation of the pay-out phase were replicated by late reformers as well.

The third paper investigates the link between the domestic retirement policies and short-term pressures to adjust public pension systems. Unlike the first two papers, it aims to explain how public pension systems in two Eastern European countries, Romania and Bulgaria, were reformed through parametric adjustments.

It shows that, small or parametric reforms had large consequences both for the generosity of pension benefits as well as for the institutional architecture of the pension systems. Comparing two similar countries, Romania and Bulgaria, the paper finds that the small adjustments passed in each country in response to short-term economic and political pressures, have led to an increased divergence between the two welfare states. It finds that in Bulgaria, the pension system has become fiscally unsustainable under the current regime of extremely small contribution rates, coupled with austere benefits and a large private pillar. The paper also finds that since pension benefits have become less and less generous, pensioners are heavily affected by poverty. In contrast, in Romania the pension system has remained more generous as contribution rates have remained relatively high. The generosity of pensions recovered especially after 2005, a period when the country experienced high levels of economic growth which allowed political parties to compete through promises pension increases.

**Table 1. An overview of the paper contributions by the four papers.**

Paper title	Main Research Questions	Country Selection	Data Sources	Main Findings
From State to Market and Back: The Politics and Economics of Pension Privatization in Eastern Europe	What explains variation in pension privatization outcomes in Eastern Europe?	18 Eastern European countries	Own coding of the dependent variable, Quality of Government database	Political regime type → privatization Right-wing governments → larger mandatory funded pillars Economic crises → negative impact privatization
Reforming against all odds: Multi-pillar pension systems in the Czech Republic and Romania	Why some countries opted for the introduction of private pillars at a time when others were scaling back the reform?	Czech Republic; Romania	International and domestic statistical databanks; Semi-structured expert interviews.	Right-wing parties → mandatory funded pillar reforms Late reformers → limited learning
From Austerity to Austerity: The Political Economy of Public Pension Reforms in Romania and Bulgaria	What are the consequences of public pension parametric reforms in the two countries? What explains divergence in reform outcomes?	Romania; Bulgaria	International and domestic statistical databanks; Semi-structured expert interviews.	Parametric pension reforms → short term concerns Parametric adjustments → unintended consequences
What about the non-reformers? The political economy of pension reforms in Belarus and Ukraine.	Why some countries avoided pension privatization altogether? What pension reform alternatives have they opted for?	Belarus; Ukraine	International and domestic statistical databanks; Semi-structured expert interviews.	Opening of political regime → pension privatization International influence → long-term retrenchment

The paper thus outlines how two apparently similar welfare states have increasingly diverged as a result of the cumulative pension system adjustments that were passed by governments in response to short term political and economic pressures. The paper also shows that the regulatory capacity of the state played a key role in how workers reacted to retrenchment. In the case of Bulgaria, fears of retrenchment, and especially higher retirement ages in the future, coupled with the lack of capacity of the state to regulate entry into early retirement allowed workers to escape into early retirement in massive numbers, a move that had major fiscal consequences for the public pension system.

The last paper builds on the empirical findings of the first paper regarding the effects of the political regime type on pension reforms, and seeks to explain pension reform outcomes in two countries that did not privatize: Belarus and Ukraine. It shows that, the political regime type indeed impacted how the two countries reacted to the pension privatization agenda promoted by the WB as well as what parametric adjustments they used for managing their public pension systems. In contrast with the veto-actor literature, it finds that authoritarian regimes do not reform more their pension systems but, on the contrary, avoid both to openly retrench their public pension systems as well as to introduce mandatory private accounts.

Furthermore, the paper finds that the opening up of the political regime in Ukraine was associated with a shift in the pension reform policy. Like the majority of its regional peers, the country sought to privatize its pension system but the reform failed as electoral competition generated by the regime change relied more and more on promises of pension benefit increases. This made the public PAYG pension system to become fiscally unsustainable as competition through pension increases generated large budget deficits. The paper thus argues that in the case of the competitive-

authoritarian regime that emerged in Ukraine after the Orange Revolution, the pension system was captured by parties seeking to use it in order to gain electoral advantages over their competitors. The paper shows that, in the case of Ukraine pension generosity shifted from a radical austerity phase in the 1990s to a radical generosity phase in the mid' 2000s, financed through a series of government mandated increases in benefit levels. Importantly, it also shows that IFIs have sought to directly influence pension policy making in Ukraine by forcing parties into passing electorally sensitive reforms such as increases in the retirement ages for women.



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**Paper 1. From State to Market and Back: The Politics and Economics of Pension  
Privatization in Eastern Europe**

# From State to Market and Back: The Politics and Economics of Pension Privatization in Eastern Europe

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## Abstract

During the past two decades, Eastern European governments have increasingly opted for assigning a greater responsibility to market forces in the area of old age provision. Before the Great Recession, the privatization of pension systems became one of the most widely accepted solutions to the problem of ageing in the region and around the world. However, the fiscal problems that governments faced as a result of the crisis, have shaken the political support for the reform and consequently have sparked a wave of policy reversals that ranged from temporary cut-backs in second pillar contribution rates, to full scale nationalizations of funds' assets. In this paper we ask what factors account the decisions to introduce and then roll back private pension pillars. Using a data-set that covers both privatizing and non-privatizing Eastern European countries between 1995 and 2014, we estimate a zero one inflated beta regression model to account for the degree of pension privatization. Our results show that domestic political and economic variables best account for variation in reform outcomes. We find evidence that the degree of pension privatization is shaped by the political regime type, with democracies being on average more likely to have larger second pillars. However, authoritarian regimes are more likely to opt for policy extremes: choosing either to entirely reject privatization or to fully privatize their pension systems.

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## Introduction

The wave of pension privatizations<sup>1</sup> that swept Eastern Europe since 1998, represents an unprecedented attempt to introduce market principles in welfare provision. Promoted by international actors, such as the World Bank, and supported by reformist national political elites, the policy has rapidly spread across a diverse set of political and economic contexts. Its impressive appeal was fostered by the belief that cutting back the state interference with pension provision will solve both present and future fiscal problems that public *pay-as-you-go* (PAYG) pension systems were facing. As World Bank (1994) argued, pension privatization could contribute to securing a fairer distribution of the retirement burden between generations, reduce political interference in pension benefit provision, and, in the long run, provide a solution to the emerging fiscal crisis of the welfare state triggered by population ageing.

By the time the financial crisis of 2008 hit the region, thirteen Eastern European countries had adopted the reform, albeit to different extents. Variation in the implementation of pension privatization ranged from full privatization of public pension assets in Kazakhstan, to partial privatization in most of the Central and Eastern European countries, and failed attempts to introduce the policy in Ukraine or outright rejection of the policy in Belarus (Adascalitei and Domonkos, 2015; Orenstein, 2008). More so, the crisis itself represented a turning point in the spread of pension privatization. A wave of privatization reversals has been implemented across the region, ranging from full nationalizations of private pension funds in Hungary and Kazakhstan to cutting back contribution rates in Poland and Romania (Drahokoupil and Domonkos, 2012; Zhandildin, 2015). Thus, the redesign of Eastern European pension systems involved a remarkable variation in institutional outcomes during both the expansion and the contraction phase of the policy.

In this paper we take stock of the full range of privatization outcomes and begin by explaining why some countries opted for partial privatization while others have opted for rejecting the policy altogether. In a second step, we analyse the sub-sample of privatizing countries, and explain why some countries opted for larger second-pillars. Our results show that the type of the political regime matters for whether a country opted for pension privatization or not. We find that democratic regimes are on average more likely to opt for the reform. Furthermore, we find evidence that authoritarian regimes are more likely to opt for extreme policy cases of policy

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<sup>1</sup>Pension privatization refers to the total or partial replacement of public pension systems with mandatory private accounts following the pillar model proposed by the World Bank in its seminal 1994 report, *Averting the Old Age Crisis*.

reforms: opting for either full privatization of public pension systems or complete rejection of the reform. We argue that the extreme outcomes of reforms in the case of authoritarian regimes are the result of discretionary choices by power holders. In the case of partial privatization outcomes, we find that, when in government, right-wing parties have supported larger second pillars, while left-wing parties have no effect on the size of second pillars.

## Variations of the Pension Privatization Policy in Eastern Europe

The spread of pension privatization in Eastern Europe provided an important case of welfare state change that focused scholarly attention on the political actors and actor constellations that could shape the direction of reforms. Case study research, seeking to explain the political processes that led countries to opt for privatization showed that both the decision-making dynamics as well as the actors involved in political bargaining mattered for reform outcomes. At the same time, comparative analysis studying the political and economic factors that the way for the privatization public pension systems in Eastern Europe has underlined either the role played by domestic actors or the power excerpted by liberalizing international elites.

Domestic power holders matter both because of their position in the decision-making process as well as because of their ideological preferences regarding pension reforms. Since pension privatization is a costly reform that impacts the interests of different stakeholders, the number of veto players involved in the reform can influence its outcome. Indeed, as Brooks (2002) notes, in highly fragmented political systems, reform minded governments might shy away from costly welfare reforms because of the low likelihood of creating a consensus around it. Highly fragmented executives, or executives facing highly fragmented legislative bodies will therefore update their reform agenda and give up on contentious proposals, opting instead for alternatives that are less costly in terms of political resources. Similarly, Orenstein (1999) finds that, while partially driven by *path dependent* fiscal problems, pension privatization outcomes depend on the number of veto actors that participate in deliberations during the proposal stage of the reform, with countries where less actors were involved in the reform having passed larger second pillars.

Other scholars have focused on how the ideological preferences of various veto players impact their support for pension privatization. Müller (1999, 2003) analyses the interactions between the Ministries of Finance



and Labour, pointing that pension privatization did not succeed when the Ministry of Finance was not involved in the reform. While the former institutional actor favoured a market based solution to pension reform due to the growing fiscal deficit of the state managed pension scheme, the latter preferred to promote the use of parametric pension system adjustments, that would preserve the institutional architecture of the inherited schemes. The Ministry of Labour often-times defended the public pension systems because it catered to many of its constituents that had an interest in preserving the *status quo* (bureaucratic elites within the ministry, public sector trade unions or other statist associations). However, in reality, this clear division between the preferences of the two ministries did not emerge in all cases of pension privatization in Eastern Europe, or, in some instances, it was even entirely reversed, with the Ministry of Labour assuming the leading role in promoting pension privatization (Arza and Kohli, 2007).

The pervasiveness of the reform was instead ensured by the presence of liberalizing elites within the cadres of most of the state institutions. These elites tended to endorse welfare restructuring and retrenchment as part of the macroeconomic stabilization programmes promoted by executives under the guidance of International Financial Institutions (IFIs). Furthermore, they drew their political support from the newly formed political parties, whose stance on pension and welfare reforms was in most cases unclear. On the one hand, some scholars (Careja and Emmenegger, 2009; Lipsmeyer, 2002) argue that the traditional left-right divide can explain welfare reform outcomes, with left parties being more likely to support higher welfare expenditure and right-wing parties supporting retrenchment. On the other other hand, these effects are contested by findings which show that in Eastern Europe, left wing parties adopt a right-wing policy position in the welfare domain in order to prove their attachment to the new political systems that emerged after the downfall of socialism (Tavits and Letki, 2009). Thus, left wing parties often-times supported fiscal austerity measures whereas right-wing parties have been more likely to advance welfare enhancing policies.

The reversed roles assumed by left and right parties in pension and welfare reforms, also suggests that elite support for privatization is not bounded by party lines and is instead connected with the costs and benefits that various interest groups can extract from the reform or its absence. Thus, with the exception of nationalist or unreformed left parties, whose position has been constantly against pension privatization, both the social democrat left-wing parties and right wing parties have alternated in their stance towards the reform, depending on the interest groups that they catered for. As Armeanu (2010) notes, the issue of pension policy reform reflects only partially the left-right dimension and is instead better explained by

the coalitions between partisan and non-partisan interest groups. Thus, parties tend to support pension privatization when their interests converge with those of interest groups from the financial industry such as banks or insurance companies. By comparison, they will reject the privatization of pensions when their interests are aligned with those groups that hold an interest in the pension privileges that exists under the state managed system. In general these groups are represented by public sector workers such as the police, the army, or the heavy industry employees who have an interest in preserving generous public occupational pension systems.

Their effectiveness in promoting the individualization of welfare policies varied significantly across countries, depending on whether liberalizing elites had unconstrained power in pushing for reforms (Cook, 2007). Thus, in cases where governments could pass rapid non-negotiated liberalizing reforms, pension privatization was accomplished with little opposition. In contrast, in countries where power was dispersed, pension privatization achieved much less. This suggests that in less politically accountable regimes, the pension privatization will proceed faster due to its insulation from outside interests. Still, the empirical evidence on the impact of regime type on pension privatization is mixed. On the one hand, some suggest that in non-democratic regimes privatization is more likely to proceed because autocrats can bypass societal interests. Indeed, case study evidence from authoritarian regimes such as Chile or Kazakhstan seems to point out that, indeed autocracies are more likely to pursue the reform (Brooks, 2002; Orenstein, 1999).

However, a look at the entire set of Eastern European countries suggests that the impact of the regime type on pension reforms is more complex than the literature suggests. First, with the exception of Kazakhstan, where the state system has been entirely replaced by a market-based one, no authoritarian regime has followed the Chilean example. In fact, the success of pension privatization within the sample of East European authoritarian regimes has varied greatly, with most countries rejecting the policy entirely. Second, hybrid or *competitive-authoritarian* regimes (Levitsky and Way, 2010) have also varied in their support for the privatization. Third, in the aftermath of the financial crisis, a variety of policy reversals have been passed in Eastern Europe, with countries where governments could bypass societal interests, introducing larger or full reversals. Amongst them, Kazakhstan, the former poster-child of the privatization supporters, and Hungary, have entirely nationalized private pensions.

Furthermore, International Financial Institutions (IFIs) have been involved in promoting the individualization public pensions, especially during the first wave of privatizations. In particular, the World Bank (WB) has ad-

vanced the privatization agenda by using both hard and soft power resources. WB has exercised its hard power mainly through conditionalities attached to loans for countries that faced fiscal and debt crises. However, the influence exercised through loan conditionalities was problematic as countries have often-times simply avoided to obey the conditions attached to international loans (Orenstein, 2008). In comparison, soft power interventions, using the spread of ideas as vehicles for policy influence have been received with less opposition by local policy entrepreneurs (Béland and Orenstein, 2013). The well-known WB campaign that promoted pension privatization around the world employed a combination of coercion and campaigning in order to exert influence on national policies.

While IFIs have clearly promoted the introduction of mandatory private accounts in the 1990s, during the first wave of reforms, more recently they have re-evaluated their support for the policy. The WB diminished its advocacy for the policy primarily because of doubts raised about the effectiveness of the policy from its own experts (Béland and Orenstein, 2013). As a result, the spread of pension privatization in the region came to a halt around mid 2000s and was replaced by a shift in international support for less radical solutions to pension reforms. These included recommending parametric pension reforms such as raising retirement ages, strengthening the link between contributions and benefits or promoting active ageing (Chawla et al., 2007).

## Hypotheses

As evidenced in the previous section, the literature remains split over the effects of many of the factors thought to contribute to the spread of pension privatization. Given the changing nature of economic and political conditions in the region, as well as the diversity of privatization outcomes both before and after the economic crisis, there were only few attempts at arriving at general statements about the determinants of privatization that aim to provide a systematic explanation of reform outcomes in the wider sample of Eastern European countries. Importantly, while the focus of most of the analyses has been on why some of the countries in the region have opted for pension privatization, there is comparatively less attention paid to non-privatizers. To fill these gaps, our analysis includes both privatizing and non-privatizing countries on a period that spans between 1995 and 2014.

Our first hypothesis concerns the role of right wing parties in pension privatization. Drawing on the wider literature that discusses partisan effects

on pension privatization, we expect that right wing parties will be more likely to promote the policy, given their preferences for promoting market mechanisms in welfare state provisions. Since privatization was widely advocated in Eastern Europe as a cost neutral measure, that did not have immediate redistributive consequences for workers, we expect that right wing parties will support the policy.

**Hypothesis 1:** *Right wing governments will increase the likelihood of pension privatization.*

Secondly, we expect that, once in place, right wing parties will be more likely to defend the existent private pension systems. The literature remains ambiguous on the stances that right-wing parties take regarding the size of the second pillars, with case-study evidence showing both negative and positive affects in different countries. However, since right-wing parties are more likely to reject state involvement in welfare state provision and protect the individualization of welfare services, we expect that they will protect the existent arrangements.

**Hypothesis 2:** *In privatizing countries, right wing governments will support larger second pillars.*

Furthermore, we also expect that debt crises will have positive affect on the likelihood to privatize pensions. Crises impact the fiscal condition of public budgets and are usually accompanied by expenditure cuts and retrenchment. At the same time, economic crises exposed the poor fiscal situation of social security budgets that, in spite of the high contribution rates were running fiscal deficits while paying very low pension benefits. Thus, crises provided the supporters of pension privatization with a political opportunity to pursue their agenda, given that both workers and pensioners perceived the public pension system as dysfunctional. Therefore, crises episodes exacerbated the "negative consensus" on the deficiencies of state managed pensions and provided reformers with a mandate to shift towards private alternatives (Brooks, 2006).

**Hypothesis 3:** *The higher the external debt, the higher the likelihood of privatization.*

Contrary to the theories inspired by the "veto player" arguments, which predict that non-democratic regimes will be more likely to opt for pension privatization, we argue that more democratic regimes will be more likely to pass the reform. This expectation is driven both by case study evidence, which shows that democracies in the region have been more successful in passing the reform. At the same time, we expect that more democratic regimes are more likely to pass the reform because of their desire to catch-up with developed economies. As a result, they are more susceptible to pass favour policies that are close to the position of international actors.

**Hypothesis 4:** *The likelihood of pension privatization is greater in more democratic countries.*

Summing up, we expect that partisan effects will follow the traditional left-right ideological divide, while regime effects will run against findings stemming from the "veto player" frameworks. Moreover, we expect that worsening economic conditions will have a positive impact on the policy, with more indebted countries being more likely to pass the policy. In the next sections we discuss our data and methodological strategy, followed by a discussion of our findings. The last section of the paper concludes.

## Data

Our dependent variable is the size of the second pillar, measured as the share of the mandatory contributions to private accounts, relative to the total pension contributions. Thus, our variable captures the size of the private pillar relative to that of the state managed public *pay-as-you-go* pension system. In comparison with studies that operationalize the adoption of mandatory private accounts in dichotomous terms (Müller, 1999), our dependent variable allows us to take into account the full gamut of institutional outcomes that dominated the pension policy making in Eastern Europe. These outcomes include the expansionary phase of second pillars that took place before the economic crisis of the late 2000s, the temporary and permanent changes that were adopted during and after the crisis, as well as the cases that avoided privatization altogether. As Figure 1 shows, the relative size of the second pillar varies substantially across Eastern European countries.

In this sense, our study builds on Brooks (2002) and proposes a continuous measure of pension privatization. However, unlike Brooks (2002) we do

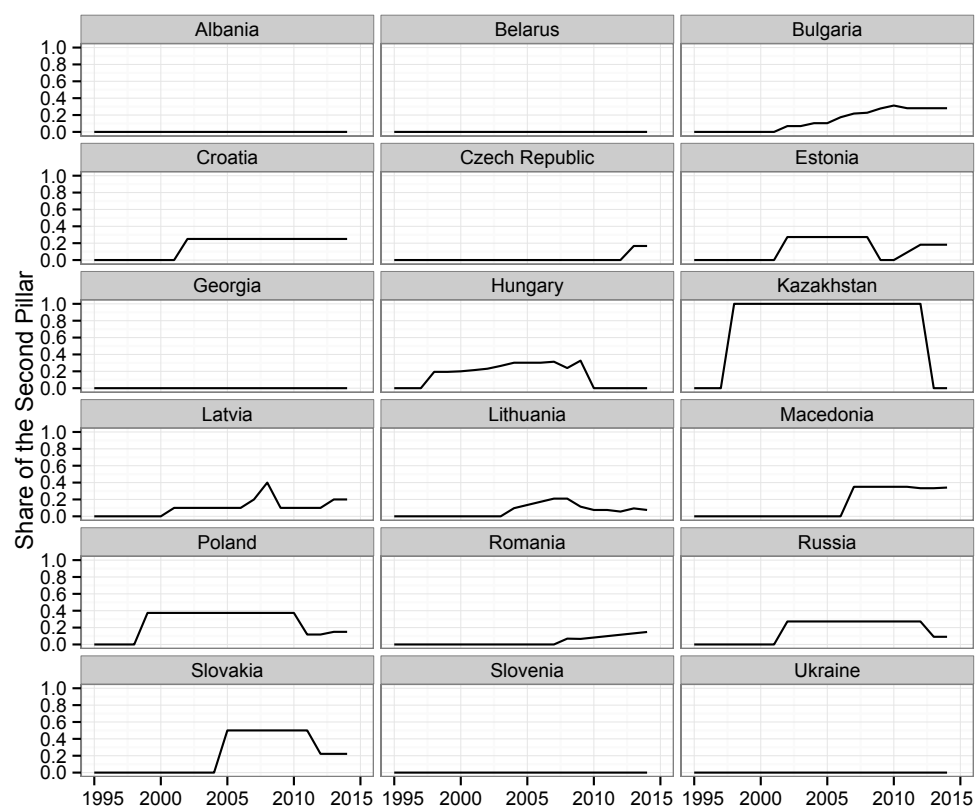


Figure 1: Share of private pension plan in Central and Eastern Europe, 1995–2014

not use an estimation of a worker's average income derived from the second pillar for several reasons. First, as the crisis has shown, it is difficult to predict the size of the second pillar since the policy has been unstable recently, with governments introducing numerous changes that concern both the structure of the contributions as well as rules regarding wider regulatory issues. Second, the fate of the private pillars in the region remains a hotly debated political issue, that makes it impossible to predict whether the system will survive in the future. To take just one example, the most recent reformer, the Czech Republic has already begun the process to eliminate the second pillar starting from 2016 (Adascalitei and Domonkos, 2015). Third, in some countries, the regulatory framework of the second pillar for the payout phase remains underdeveloped, making almost impossible to predict how much income future pensioners will derive from their private accounts.

We also use a set of independent variables to operationalize the adoption and size of the second pillars. To capture the impact of the macroeconomic conditions on the reform we use gross domestic product and the level of external debt. While the first variable describes how second pillars react to economic crises, the second shows to what extent governments used external sources to cover their financing needs. Furthermore, following Madrid (2005) we also include the size of the pension expenditures as a share of the gross domestic product.

To test our hypothesis regarding the effect of political regimes types on the likelihood to introduce private pillars, we include a measure of democratization that ranks countries based on the characteristics of the political authority. The revised version of the combined polity score, which we use, represents a scale running from -10 (fully authoritarian regime) to 10 (fully democratic regime) that provides an index for the characteristics of the political regime. This is an ideal measure for our sample of countries, since many are neither fully authoritarian nor fully democratic regimes. Rather, they combine characteristics of both types of political regimes, generating *competitive authoritarian* political regimes in which formal democratic institutions exist but are altered in order to allow incumbents to preserve or gain more power (Levitsky and Way, 2010).

Furthermore, we also include two measures of government ideology that take into account, first, whether the executive is left-wing or right-wing, and second, how ideologically homogeneous the coalition supporting the executive at the legislative level is. Operationally, we take two dummy variables indicating whether the executive is "left-wing" or "right-wing" (with "center" being the baseline category) and multiply them by the share of legislative seats owned by parties of the same ideological color. Hence, for

instance, in case of a single-party right-wing government, the executive will be supported by a 100% homogeneous coalition, and our variable will have value 1 for an ideologically-coherent right-wing executive. Alternatively, when a right-wing executive is supported by a coalition made of a right-wing party owning 70% of the seats and a left-wing or center party owning 30% of the seats, the variable will have value 0.7. In both cases, the second variable indicating whether the executive is left-wing will have value 0.<sup>2</sup>

## Modeling Pension Systems: A Zero-One Inflated Beta Model

To test our hypotheses we use a zero-one inflated beta (henceforth ZOIB) regression model with random intercepts at the country level (see Liu and Li, 2014). We argue that a ZOIB regression is ideal to model the size of the second pillar for different reasons, both statistical and conceptual. Statistically, we need to take into account the fact that our response variable is a fraction, and therefore its possible values are bounded between zero and one. This implies that, first, modeling it as a linear function of the explanatory variables might produce out-of-bound predictions, and second, its variance depends on the conditional mean (Cox, 1996; Papke and Wooldridge, 1996). Hence, using a linear regression estimated via OLS is likely to produce estimates that are both biased and inconsistent (Cook et al., 2008).

However, while statistical concerns are important, the main reason to use a ZOIB model is that it is a more suitable option given the data generating process of the dependent variable than other available alternatives. Conceptually, pension privatization can be regarded as a two-stage choice. When moving from a status quo of fully-public pension systems, national governments may decide, first, whether to privatize at all, and second, how prominent the second pillar should be within a pension plan. In terms of measurement, the step between a fully public pension plan and one that includes a private component of, say, 10%, is qualitatively different from the same increment occurring when part of the pension plan has already been privatized before. In the former case privatization has a greater symbolic value, as it represents a real "paradigm shift" from the previous system

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<sup>2</sup>We take both the measure of executive ideology and the seat shares of the government coalition parties from the Quality of Government database (see Teorell et al., 2015). Note that the QoG data allow us to observe the ideological direction and the seat share for the three largest coalition partners only. While this limit might introduce noise in our measurement, we have no reason to believe that this should systematically bias our results in a given direction.



(Orenstein, 2013). Moreover, it requires establishing a brand new administrative infrastructure, which will be already in place for future adjustments of the pension plan (World Bank, 1994). For these reasons, a reform introducing privatization should be more sensitive, and therefore prompt more accurate scrutiny from the veto players, than one expanding it. The same argument applies to the inverse process, i.e. the choice to make the pension system fully public versus simply decreasing the private component. Both of these are *discrete choices*, and should be treated differently from the choices to increase or decrease the share devoted to the second pillar in an already-privatized system.

In terms of measurement, this process introduces a discontinuity in the distribution of the dependent variable, generating a non-negligible amount of zeros.<sup>3</sup> These cases include the countries in our sample which never privatized, such as Albania, Belarus, Slovenia and Ukraine, as well as all the years of observation where other countries have not yet (or not anymore) adopted a private pillar. These are not "sampling zeros", i.e. accidents of the sample whereas the true probability in the population has a non-zero value, but rather "structural zeros", i.e. observations where the *true* value is indeed a zero. Moreover, our sample also contains a few values stacked on the upper limit of the 0–1 range: the observations from Kazakhstan between 1998 and 2012, where the systems was fully privatized. While this scenario is the exact opposite to the one behind the zero outcomes, the process producing such outcomes is likely to be similar: going for a fully-private pension system is a discrete choice, and should be treated separately from the rest of the fractional observations.<sup>4</sup> Thus, in sum, the data generating process of our response variable is composed of three parts: one part determining the probability to have a pension system with at least a private component against the probability to have a fully-public one; a second part determining the size of the private component (among the systems that privatized to some extent); and a third part determining the probability to have a fully-private pension system against the probability to have a pension system at least partially public.

The ZOIB model takes into account the threefold nature of our dependent variable by assuming that the data are generated by a piecewise mixed distribution defined as:

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<sup>3</sup>See Figure 4 in Appendix B for a visualization of the distribution of the dependent variable.

<sup>4</sup>A peculiarity of Kazakhstan, well shown in Figure 1, is that the pension system has always been either 100% public or 100% private. While this strengthens our argument about the discrete or "categorical" nature of the 0–1 values, it also raises legitimate doubts regarding the comparability of the choice process between Kazakhstan and the remaining countries. Therefore, as a robustness check, we will repeat our analyses excluding Kazakhstan from the sample.

$$f(y|p, q, \mu, \phi) = \begin{cases} p & \text{if } y = 0, \\ (1 - p)q & \text{if } y = 1, \\ (1 - p)(1 - q)g(y|\mu, \phi) & \text{if } 0 < y < 1 \end{cases}$$

where  $p$  is the probability to observe a value of zero (i.e. the pension plan is fully public),  $q$  is the probability to observe a value of one (i.e. the pension plan is fully private), and  $g(y|\mu, \phi)$  is the density function of the beta distribution given the mean  $\mu$  and the precision parameter  $\phi$ . The two boundary values 0 and 1 are typically assumed to follow a Bernoulli distribution, and therefore their probabilities  $p$  and  $q$  can be modeled in the same way as in other common regression models where the dependent variable is a dichotomy. However, the beta part of the model requires a somewhat more complex parametrization.

The beta distribution is a very flexible probability function governed by two shape parameters,  $\alpha$  and  $\beta$ . These parameters can take only positive values, and their combination determines whether the distribution has a unimodal, bimodal, uniform, symmetric or asymmetric shape.<sup>5</sup> Moreover,  $\alpha$  and  $\beta$  determine both the mean and dispersion/precision of the distribution. More specifically, the mean is given by:

$$E(y) = \mu = \frac{\alpha}{\alpha + \beta}$$

where  $\alpha, \beta > 0$ , the variance is given by:

$$Var(y) = \frac{\mu(1 - \mu)}{\alpha + \beta + 1}$$

and the precision is defined as  $\phi = \alpha + \beta$ . In general, when  $\mu$  is constant, a larger value of  $\phi$  indicates a lower variance, hence the name "precision parameter". However, knowing its value provides meaningful information only when the mean is taken into account as well. This parametrization shows that the variance depends on the conditional mean, as it is usually the case with bounded distributions, and that both mean and variance depend on  $\alpha$  and  $\beta$ . While early studies applying regression on beta-distributed variables linked the predictors directly to the two shape parameters (e.g. Brehm and Gates, 1993), more recent applications focused on modeling the mean and, when needed, the precision (see Ferrari and Cribari-Neto, 2004; Kieschnick and McCullough, 2003; Paolino, 2001; Simas et al., 2010;

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<sup>5</sup>See Appendix C for a detailed discussion of the beta distribution and some visual examples of how different parameter values convert to different shapes.

Smithson and Verkuilen, 2006). This is more convenient as researchers are typically interested, as in our case, to know the effect of different predictors on the mean of the dependent variable. We look here at the impact of our predictors on three quantities: the probability to have a fully-public pension system ( $p$ ), the probability to have a fully-private pension system ( $q$ ) and the size of the second pillar ( $\mu$ ). These three parameters are linked to our predictors via *logit* link functions, hence the coefficients can be interpreted as log-odds.<sup>6</sup>

Next to the unusual shape of our dependent variable, our data also present a complex structure with repeated observations nested within countries. While one could reasonably argue that the extent of pension privatization in Hungary is independent from the size of the second pillar in Poland, this argument is hardly defensible when comparing values for Hungary in different years. In other words, observations belonging to the same country will share more common information than observations belonging to different countries. Failing to take into account the non-independence between observations from the same higher-level units typically results in overconfidence regarding the amount of information at our disposal, producing smaller error terms. Hence, we specify a mixed-effects model with observations clustered within countries and a random component on the intercepts.<sup>7</sup>

Once implemented, pension reforms usually stay in place for several years, and the following adjustments usually build on previous reforms. That is to say, pension reforms are not renegotiated every year as if it were the first. As a consequence, the data generating process of our dependent variable at any given time point is dependent on its past value. This process generates autocorrelation, and it is likely to produce biased estimates of the effects of the predictors. To take this into account, we introduce among the predictors a lagged dependent variable, that is, the size of the second pillar on the year prior the one considered. While this is likely to produce very conservative estimates of our parameters (Achen, 2000), it is also necessary in our case, given the severe autocorrelation of our response variable.<sup>8</sup>

In sum, our ZOIB model is made of four equations:

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<sup>6</sup>We choose not to model  $\phi$  because we have no theoretical reasons why our predictors should have an impact on the precision of the beta portion of our data. However, the ZOIB model will estimate by default an intercept for  $\phi$ , that is its value when all predictors have value zero. The default link function for  $\phi$  is the log function.

<sup>7</sup>We assume that the effect of the other predictors is fixed because we have no theoretical reasons to expect their impact on the response variable to be context-dependent.

<sup>8</sup>The Pearson correlation between the size of the second pillar measured at time  $t_0$  and at time  $t_{-1}$  is about 0.9.

$$\text{logit}(\mu_{ij}) = (\beta_{0,1} + u_j) + \beta_{1,1}\text{Lag DV}_{ij} + \beta_{N,1}X_{Nij}$$

$$\text{logit}(p_{ij}) = (\beta_{0,2} + u_j) + \beta_{1,2}\text{Lag DV}_{ij} + \beta_{N,2}X_{Nij}$$

$$\text{logit}(q_{ij}) = \beta_{0,3} + \beta_{1,3}\text{Lag DV}_{ij} + \beta_{N,3}X_{Nij}$$

$$\log(\phi_{ij}) = \beta_{0,4}$$

Where  $X_N$  are the independent variables discussed in the previous section, and  $u_j \sim N(0, \sigma^2)$  is the random component associated to the intercepts of the models for  $\mu$  and  $p$ .<sup>9</sup> We do not include the random term in the model for  $q$  as in our sample the only country in which we observe a fully-private pension system is Kazakhstan, hence assuming that the baseline probability to observe a value of 1 is randomly distributed across countries would be unrealistic. Moreover, given this characteristic of our data, we do not wish to generalize the findings regarding the effect of our predictors on  $q$  to any other country beyond Kazakhstan. Therefore, assuming that the intercept has a country-level fixed effect is more appropriate than estimating such an effect as if it were random (see Searle et al., 1992). The first three equations predict, respectively, the "proportion" of the second pillar within the pension system ( $\mu$ ), when the second pillar is bigger than 0 and smaller than 1, the probability that the pension system is fully public ( $p$ ), and the probability that it is fully private ( $q$ ). All three equations include the intercept, the lagged dependent variable, and a set of  $N$  predictors. The fourth equation predicts the dispersion of the beta portion of the model ( $\phi$ ), and it includes only the intercept.

We estimate our model in a bayesian framework using the **Z0IB** package for R (Liu and Kong, 2015; Liu and Li, 2014).<sup>10</sup> Bayesian models differ from models estimated via maximum likelihood in that they require the specification of a set of *priors* for our parameters, i.e. a set of values reflecting our belief regarding the parameter effects before the data are taken into

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<sup>9</sup>Note that the distribution of  $u_j$  is assumed to be the same across both equations, hence the model estimates only one value for  $\sigma^2$ . This is a restriction of the current version of the software package used to estimate the model. However, we do not think that this represents a big problem, for the link functions are the same across the two models and therefore the distribution of the linear predictors is on the same scale.

<sup>10</sup>The results shown in this paper have been obtained using the **Z0IB** package version 1.2 and the **rjags** package version 3-14 ran on R version 3.1.2. Moreover we used the software **JAGS** version 3.3.0.

account.<sup>11</sup> Since we do not have any prior knowledge about the parameter effects in our population we adopt uninformative priors, that is, prior distributions with great uncertainties which assign equal probability to a wide range of possible parameter values.<sup>12</sup> This implies that, when information in the data is scarce (because of a limited number of observations), a bayesian model will weigh more on the priors to estimate the coefficients, i.e. it will assign greater importance to our existing belief regarding the effect of the predictors because the new information at our disposal does not provide enough leverage to "change our mind". However, since the priors are themselves highly uncertain, the model will produce very wide confidence intervals. This property makes bayesian estimation particularly advisable when, like in this present case, the multilevel structure of the data is taken into account in the modeling but the number of higher-level units is limited (Stegmueller, 2013).

## Findings and Discussion

The results of the model are shown in Table 1. The coefficients represent posterior means of the model parameters. Bayesian models do not produce single point estimates of the parameter values, but rather *distributions* of possible values, called posterior distributions. These consist of the prior distributions that we have set before looking at the data (with mean zero and very large dispersion) *updated* taking into account the information contained in the data. To extract the results, we drew a large number of MCMC samples from the posterior distributions and stored the values. Next to the means, Table 1 also reports the 95% and 90% credible intervals, namely the ranges containing, respectively, 95% and 90% of the values sampled from the posterior distributions.<sup>13</sup>

The model results confirm some of our expectations, but also reveal some counterintuitive findings. Three things are worth noting. First, our Hypothesis 3 regarding the positive effect of the external debt is confirmed with a probability greater than 0.95. This finding corroborates earlier evidence on the impact of external debt on countries' choice for introducing

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<sup>11</sup>See Jackman (2009) for a general discussion of bayesian estimation and its applications to social science data.

<sup>12</sup>We use the default prior specifications of the Z0IB package, that is, diffuse normal priors with mean 0 and precision  $10^{-3}$  for all the intercept and slope coefficients, and a half-Cauchy prior with scale parameter 20 for  $\sigma^2$ .

<sup>13</sup>For every parameter we drew two chains of 52,000 MCMC samples each, discarded the first 2,000 to allow the Markov chains to reach an equilibrium, and stored one value out of 50. The results reported in this section summarize the 2,000 parameter values stored with this process.

Table 1: ZOIB model results. 95% and 90% credible intervals are reported in parentheses below the mean coefficients. Bold coefficients differ from zero in at least 90% of the cases.

	Proportion	P(Y=0)	P(Y=1)
Intercept	-0.869 (-2.146; 0.787) (-1.968; 0.488)	<b>6.167</b> (3.671; 8.893) (4.106; 8.42)	59.02 (-67.58; 188.441) (-43.533; 167.829)
Lagged DV	<b>2.374</b> (1.537; 3.203) (1.687; 3.072)	<b>-19.984</b> (-25.571; -15.348) (-24.491; -16.009)	-11.045 (-140.083; 118.645) (-116.742; 99.439)
GDP growth (t-1)	0.012 (-0.009; 0.035) (-0.006; 0.03)	<b>-0.088</b> (-0.18; -0.001) (-0.165; -0.014)	0.201 (-3.893; 5.482) (-3.27; 4.491)
Debt (t-1)	-0.002 (-0.006; 0.002) (-0.006; 0.001)	<b>-0.017</b> (-0.032; -0.002) (-0.03; -0.005)	-0.068 (-0.935; 0.655) (-0.805; 0.555)
Pension expenditure	-0.011 (-0.097; 0.069) (-0.081; 0.055)	0.013 (-0.157; 0.2) (-0.135; 0.172)	-6.604 (-19.987; 5.995) (-17.377; 3.748)
Democratization	-0.08 (-0.208; 0.028) (-0.186; 0.007)	<b>-0.407</b> (-0.675; -0.171) (-0.637; -0.205)	<b>-8.394</b> (-16.016; -2.155) (-14.739; -2.906)
Ideologically Coherent	<b>0.364</b> (0.078; 0.654) (0.122; 0.613)	<b>1.378</b> (-0.037; 2.803) (0.199; 2.551)	13.804 (-95.956; 104.019) (-76.417; 90.124)
Ideologically Coherent	0.14 (-0.092; 0.388) (-0.058; 0.35)	0.468 (-0.668; 1.609) (-0.485; 1.437)	-31.253 (-113.92; 28.831) (-98.991; 20.896)
Intercept log( $\phi$ )		<b>3.574</b> (3.294; 3.844) (3.337; 3.8)	
$\sigma^2$		<b>0.137</b> (0.005; 0.562) (0.012; 0.398)	
N observations		330	
N countries		18	

private pillars (Müller, 1999). In addition, we find that economic crises as measured by the rate of growth of GDP, increase the likelihood of pension privatization. Generally, when the external debt is high, governments

promote market-oriented reforms as a way to access international financial resources as well as in order to signal their commitment for reforms that were agreed with their creditors. In this respect, the adoption of second pillars can help in boosting the credibility of governments (Müller, 2002).<sup>14</sup>

Second, the impact of government ideology on pension privatization in Eastern Europe is more complex than previously hypothesized. To understand this effect, Figure 2 shows the predicted probability to have a fully-public pension system (left panel) and the predicted proportion of the second pillar (right panel) in three different scenarios of executive ideology. The dots are the single predictions based on the values sampled from the posterior distributions, and the box plots show the mean and the inter-quartile range. The predictions refer to a situation where all the other variables are set to the average, apart from the left-wing executive variable, which is set to zero. Hence, a value of 0 for the right-wing executive variable means that the executive is ideologically on the center. A value of 0.5 means that the executive is ideologically right-wing, and supported in the legislature by a government with 50% of the seats belonging to right-wing parties. A value of 1 means that the executive is right-wing and supported by a 100% right-wing government. The figure shows a substantial increase in the probability to have a fully-public pension system, which raises from an average of less than 50% when the executive is ideologically center, to an average of 75% when there is a right-wing executive supported by an ideologically homogeneous government. Much smaller is the effect on the size of the second pillar, which increases of about 9 percentage points on average in between the two scenarios.

These results suggest that, on the one hand, ideologically consistent right-wing governments are more likely to increase the size of the second pillar once privatization has been adopted. This finding confirms our second Hypothesis and is in line with expectations derived from traditional theories of partisan effects on welfare spending, which suggest that Eastern European countries are not different from their Western counterparts (Careja and Emmenegger, 2009). On the other hand, the same types of government are more likely to maintain a fully-public pension system. The finding refutes our first hypothesis and suggests that, despite the fact that pension privatization is ideologically consistent with right-wing ideology, when in power, right-wing parties will avoid investing resources in pushing for the reform. Politically, the strategy of avoiding to support the introduction of private-pillars might be preferred by right-wing governments because the reform is politically costly, involving a large amount of political capital for advocat-

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<sup>14</sup>Note, however, than when the model is executed excluding Kazakhstan from the sample, the effect of debt is reduced to the point that is not distinguishable from zero with a 90% of probability, as Table 2 in Appendix A shows.

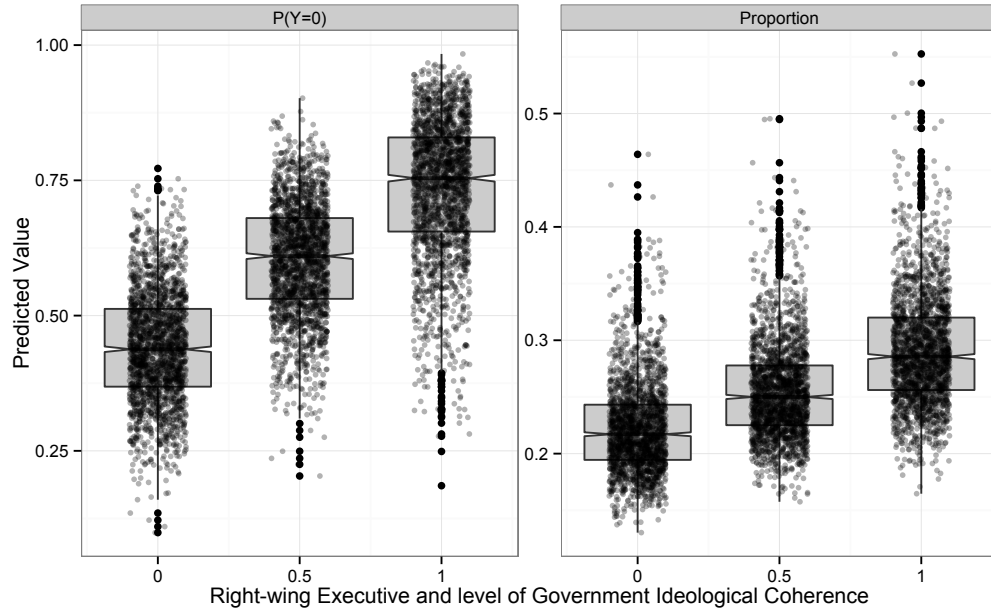


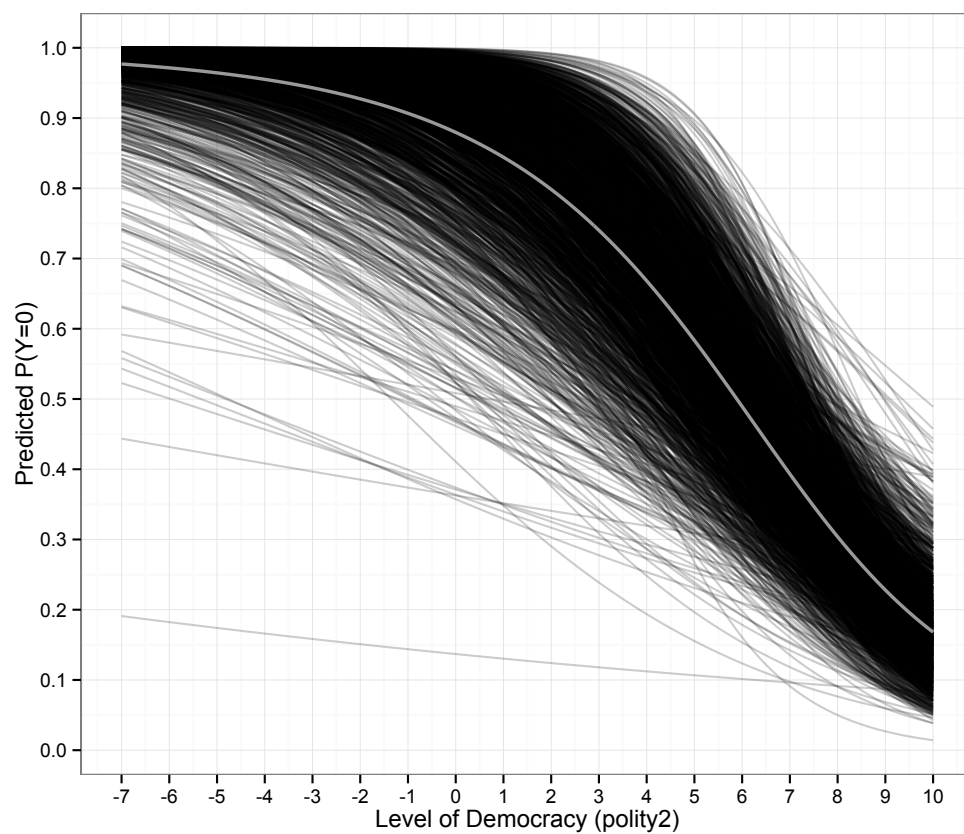
Figure 2: Predicted probability of fully-public pension system and size of the second pillar by ideological coherence of right-wing executive in Eastern Europe

ing, negotiating, and then implementing it. At the same time, right-wing governments might not need to prove their commitment for market oriented reforms, and, therefore will concentrate on passing policies that involve the mobilization of fewer political resources (Tavits and Letki, 2009).

Taken together our findings on the effects of ideology on second pillar reforms show that there is no single mechanism that explains the introduction and maintenance of second pillars in Eastern Europe. In fact, our findings suggest that although support for the policy is rather scarce in its incipient phases, once in place, it does create its own constituents. In addition, we do not find any effects of left-wing ideology neither on the likelihood to privatize nor on the size of the second pillars. The lack of effect of left-wing ideology on second pillar reform outcomes, is echoed in the literature which shows that left-wing governments did not have consistent preference towards pension privatization (Armeanu, 2010). For example, while in the case of the Polish second pillar reform, the proposal came from a left-wing coalition government, in the Slovak case of the left has consistently opposed the reform and sought to reverse it once it came to power (Naczyk and Domonkos, 2015).

A third important finding is that higher levels of democracy increase the likelihood to privatize a country's pension system, as argued in Hypothesis 4. Figure 3 plots the predictions for each posterior sample across the range





*Figure 3: Predicted probability of fully-public pension system by level of democracy in Eastern Europe*

of the "polity2" variable, with the bright line representing the mean across all samples. As the shows, when the score of our democracy indicator goes from the minimum to the maximum value in our data, the probability to have a fully-public pension system drops from an average higher than 95% to an average below 20%. This is a large effect, which confirms that more democratic countries are substantially more likely than less democratic ones to have a private pillar in their pension system.

Moreover, the case of Kazakhstan in our data suggests that more democratic countries are also less likely to adopt a fully *private* pension system. To be sure, we shall refrain from discussing the results in the third column of Table 1 in general terms, as those findings refer exclusively to Kazakhstan. However, other historical cases suggest that this pattern might be meaningful in general terms. Chile, the poster child of pension privatization, displays similar features of political regime influence on reforms. Under the authoritarian rule of Augusto Pinochet, the country adopted a private pension scheme in 1981 that fully substituted the state managed schemes. The reform was carried out with little consultation, while reform opponents were ignored (Mesa-Lago and Müller, 2002).

## Conclusion

In this paper we have analysed the political and economic determinants of pension privatization reforms in Eastern Europe. We find that the likelihood of privatization is higher in more democratic countries and that right-wing governments are likely to defend the private pillars, once these are in place. In addition, we show that the level of external debt of a country does impact the likelihood of pension privatisation, but that the effect depends on whether Kazakhstan is included in the sample. By comparison, we find that economic crises have a positive and consistent impact on the likelihood to introduce private pillars.

Our paper contributes to the literature on the determinants of pension privatization reform in several ways. First, this is the first study that systematically analyses the determinants of pension privatization across the wider sample of Eastern European countries. While many cross-national comparative case studies have focused on various sub-sets of countries in our sample, and mostly on the Western rim of Central Europe, no study has attempted to advance general statements about the entire region. Therefore, our study is a first step in understanding the determinants of pension privatization reforms that takes into account the diversity of political and economic regimes that emerged after the collapse of socialist regimes. Sec-

ond, in order to capture the entire range of reforms, we use a dataset that includes both reforming and non-reforming countries between 1995 and 2014. This is an important addition to the literature, since it captures both the expansionary phase of privatization, as well as the period after the economic crisis, when many reversals took place.

Finally, we use a relatively novel statistical method that allows us to distinguish between different types of pension reforms. While other studies before investigated the impact of different predictors on the probability to privatize and on the size of the second pillar (see Brooks, 2002) we provide a more careful description of the data generating process by combining a beta regression to model the proportion of the private pillar with dichotomous models to predict the probability to have a fully-private and a fully-public pension system. Our modeling strategy allows us to detect two important patterns with respect to pension privatization in Eastern Europe. One is the differential impact of right-wing governments on the likelihood to privatize and on the degree of private pension reform. This finding provides an interesting case for the heterogeneous nature of right-wing governance in East European countries, which urges for more research to be done to better understand the core of right-wing ideology in the region. The second interesting pattern that we find, albeit only suggestive at this point, is the tendency of less democratic systems to make extreme choices in terms of pension reforms, choosing either fully-public or fully-private systems. To be sure, our data do not allow us to make generalizations regarding the latter finding. However, they provide a robust piece of evidence that shall inform future research focusing on the effect of democratization on social policies.

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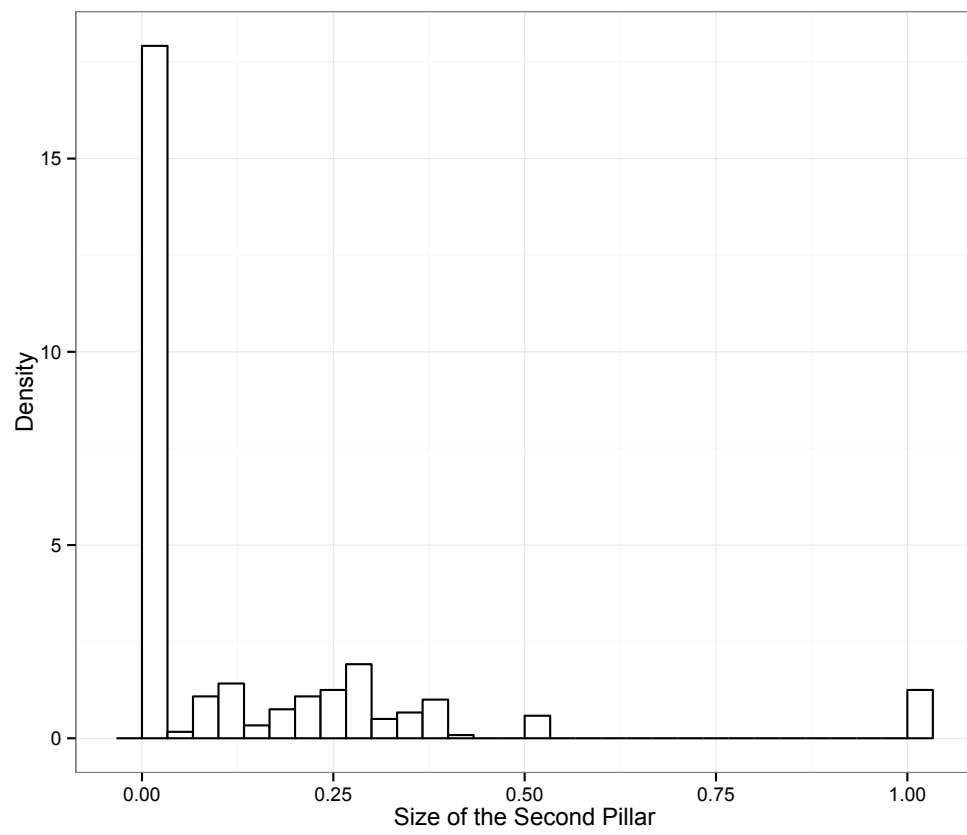
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## Appendix A Additional Tables

Table 2: ZOIB model results excluding Kazakhstan.

	Proportion	P(Y=0)
Intercept	<b>-1.531</b> (-2.362; -0.595) (-2.239; -0.75)	<b>6.685</b> (3.626; 10.277) (4.051; 9.652)
Lagged DV	<b>2.746</b> (1.908; 3.539) (2.033; 3.413)	<b>-34.072</b> (-46.228; -24.514) (-44.276; -25.81)
GDP growth (t-1)	0.012 (-0.008; 0.036) (-0.005; 0.031)	<b>-0.109</b> (-0.219; -0.006) (-0.2; -0.023)
Debt (t-1)	-0.003 (-0.007; 0.002) (-0.006; 0.001)	-0.012 (-0.03; 0.005) (-0.026; 0.002)
Pension expenditure	-0.009 (-0.073; 0.051) (-0.062; 0.041)	-0.002 (-0.194; 0.205) (-0.16; 0.173)
Democratization	-0.023 (-0.107; 0.053) (-0.091; 0.04)	<b>-0.433</b> (-0.796; -0.134) (-0.737; -0.169)
Ideologically Coherent	<b>0.435</b> (0.156; 0.727) (0.2; 0.683)	<b>1.651</b> (-0.053; 3.596) (0.214; 3.265)
Right-wing Executive	0.15 (-0.081; 0.382) (-0.046; 0.348)	0.387 (-0.934; 1.729) (-0.693; 1.517)
Left-wing Executive		
Intercept $\log(\phi)$	<b>3.490</b> (3.206; 3.741) (3.25; 3.709)	
$\sigma^2$	<b>0.033</b> (0.000; 0.140) (0.000; 0.100)	
N observations	312	
N countries	17	

## Appendix B Descriptive Statistics



*Figure 4: Distribution of the size of the second pillar in the sample.*



## Appendix C The Beta Distribution

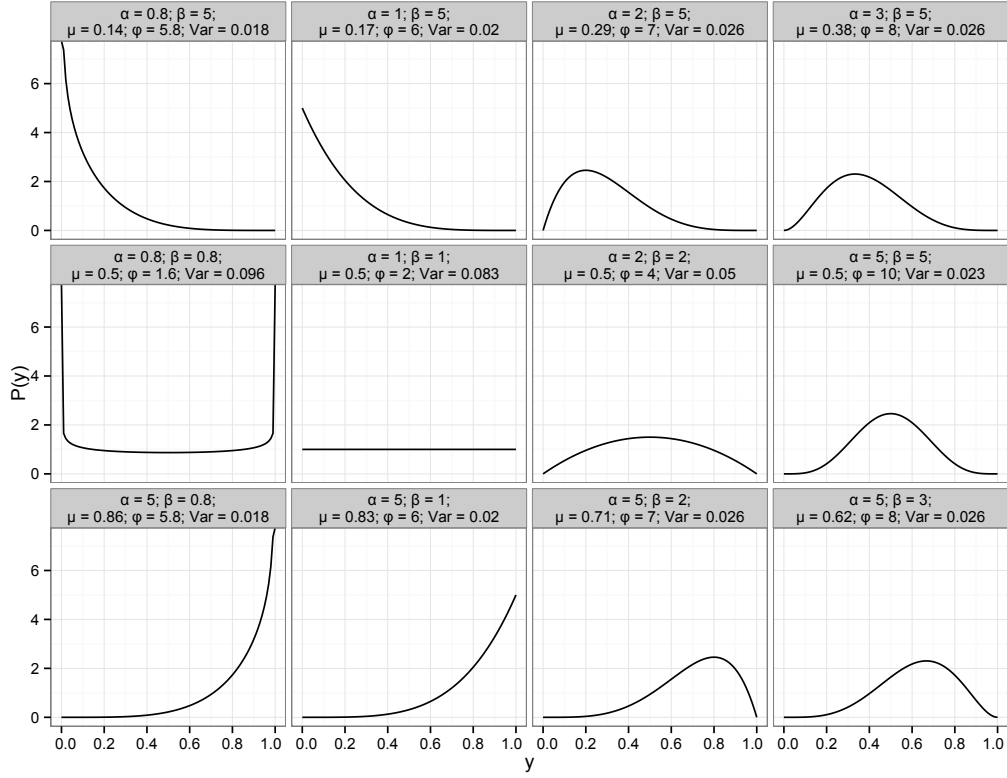


Figure 5: Beta distribution for several values of  $\alpha$  and  $\beta$  and other parameters

The probability function of the beta distribution is:

$$P(y|\alpha, \beta) = \frac{\Gamma(\alpha + \beta)}{\Gamma(\alpha)\Gamma(\beta)} y^{(\alpha-1)}(1 - y)^{(\beta-1)}$$

where  $\alpha > 0$ ,  $\beta > 0$ , and  $\Gamma()$  is the Gamma function. Moreover, the mean of the beta distribution is given by:

$$E(y) = \mu = \frac{\alpha}{\alpha + \beta}$$

and the variance is given by:

$$\text{Var}(y) = \frac{\mu(1 - \mu)}{\alpha + \beta + 1}$$

Finally, the precision parameter  $\phi$  that is estimated in beta regression mod-

els is given by  $\phi = \alpha + \beta$ , so then  $\alpha = \mu\phi$  and  $\beta = (1 - q)\phi$ .

Figure 5 shows how different values of  $\alpha$  and  $\beta$  affect the shape of the beta distribution and, by extension, the values of the mean and the variance. In general, when  $\alpha > \beta$  the distribution is left (or negative) skewed, while when  $\beta > \alpha$  the distribution is right (or positive) skewed. When  $\alpha = \beta$  the distribution is symmetric, with a single mode when  $\alpha = \beta > 1$ , two modes when  $0 < \alpha = \beta < 1$ , and uniform when  $\alpha = \beta = 1$ <sup>15</sup>.

The figure also helps understand the relationship between the two shape parameters, the mean  $\mu$ , the precision  $\phi$ , and the variance of the beta distribution. Moving from left to right in the top row,  $\beta$  is constant and equal to 5 while the value of  $\alpha$  goes from 0.8 to 3, hence the mean moves from the lower bound towards the center and the precision increases. However, since the variance is function of both  $\mu$  and  $\phi$ , its value increases as well. Differently, in the middle row, the mean is always constant and equal to 0.5, while the value of the precision parameter goes from 1.6 to 10, hence the variance decreases from about 0.096 to about 0.023.

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<sup>15</sup>Note that the distribution can also be bimodal, albeit not symmetric, in all the cases where  $0 < \alpha, \beta < 1$  and  $\alpha \neq \beta$

## **Paper 2: Reforming against all odds: Multi-pillar pension systems in the Czech Republic and Romania**

Adascalitei, D. and Domonkos, S. 2015. Reforming Against All Odds: The Introduction of Multi-Pillar Pension Systems in the Czech Republic and Romania. *International Social Security Review* 68 (2): 85–104.

DOI: 10.1111/issr.12066

### Abstract

Attempts to replace pay-as-you-go pension schemes with private funded systems came to a halt in Central and Eastern Europe after 2005. However, more recently, the region has witnessed two belated reformers: the Czech Republic and Romania. Both countries decided to partially privatize pensions despite the rising tide of evidence concerning the challenges associated with the policy. We argue that while part of the domestic political elite remained supportive of private funded pensions, the difficulties experienced by earlier reformers and reduced support from International Financial Institutions led to the adoption of small funded pension pillars. Such cautious attempts at privatization might become more common in the future as large reforms have proven politically unsustainable.

*Due to copyright reasons, the full text of this article is not part of the electronic version of the dissertation. Please use the following link to get access to the full text:*

<http://onlinelibrary.wiley.com/doi/10.1111/issr.12066/abstract>

### **Paper 3: From Austerity to Austerity: The Political Economy of Public Pension Reforms in Romania and Bulgaria**

Adascalitei, D. 2015. From Austerity to Austerity: The Political Economy of Public Pension Reforms in Romania and Bulgaria, *Social Policy & Administration Article First Published Online*.

DOI: 10.1111/spol.12173

#### Abstract

This article discusses the trajectories of pension system reforms in two of the latecomers to the EU: Bulgaria and Romania. It finds that over the past two decades, the two countries pursued increasingly dissimilar public pension reforms for managing their respective public pay-as-you-go pension systems. Using a political institutionalist theoretical framework, I argue that the divergence between the two cases is attributable to multiple factors. First, different temporary political compromises between national and international actors generated reforms that retrenched public pensions and introduced mandatory private accounts. Second, pension reforms often had unintended consequences that limited their intended impact. Third, incremental adjustments introduced by governments in response to political pressures caused alternating phases of austerity and generosity that catered to different constituencies in each country. In Romania, reform outcomes amounted to a moderately generous pension system, financed through relatively high contribution rates with a small funded component, while in the case of Bulgaria, the pension system evolved into a meagre programme, financed through low contribution rates and a larger private pillar.

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**Paper 4. What about the non-reformers? The political economy of pension reforms in Belarus and Ukraine.**

**What about the non-reformers? The political economy of pension reforms in Belarus and Ukraine.**

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This paper analyzes the outcomes of pension reforms in two Eastern European countries, Belarus and Ukraine. It seeks to explain why, unlike other countries in the region, the two comparators have not opted for the introduction of mandatory private accounts. In addition, it seeks to provide an analysis of the alternative reforms that each of the two countries used for managing their public *pay-as-you-go* (PAYG) pension systems. It shows that whereas in the case of Belarus, the rejection of the pension privatization agenda was an explicit choice by the political elite, in the case of Ukraine, the second pillar received political support in government but failed to generate a legislative coalition around it and ultimately was not implemented. Furthermore, reforms to adjust public PAYG pension benefits diverged between the two countries: whereas in Belarus they targeted the preservation of benefit generosity, in Ukraine they alternated between phases of austerity and generosity.

## Introduction

In the last two decades a great deal of intellectual effort has been placed in explaining the institutional changes that Eastern European (EE) pension systems have undergone. With few exceptions (Cashu 2000; Müller 2002), most of the studies focused on the reforms that introduced individual pension savings accounts - a phenomenon commonly referred to as ‘pension privatization’. Nevertheless, the repertoire of reforms that marked the pension policy making during the past two decades was not limited to privatizing measures. More frequently, public *pay-as-you-go* (PAYG) pension systems were changed in a gradual manner through alterations of their parameters. These changes included benefit levels adjustments, shifts in the contribution rates, as well as more complex changes in indexation formulas, eligibility criteria, and retirement ages. To differing degrees, these measures have been implemented across most of the EE countries (Cerami and Vanhuysse 2009; Guardiancich 2012). They represented an effort of governments in transition economies to bring the public PAYG pension systems in line with the new social and economic conditions.

Compared with their Western counterparts, which introduced parametric pension reforms in a sequential manner that built upon long phasing-in periods (Bonoli and Palier 2007), EE governments could not afford similar time horizons for passing pension reforms due to the rising fiscal pressures caused by the economic and social crises experienced by the majority of countries in the region. Crisis driven adjustments resulted in a type of emergency policy-making (Inglot 2008) that was biased towards temporary solutions to social insurance problems. Above all, emergency policy-making allowed post-communist governments to gain significant control over social policy reforms in comparison with other national political actors. At the same time, it made pension reforms more sensitive to domestic political shifts that oftentimes led to contradictory interventions by successive governments. Consequently, outcomes of adjustments in PAYG public pension systems have varied substantially across countries.

This paper seeks to explain why some EE countries did not opt for introducing mandatory private accounts, and instead adjusted their public PAYG pension systems through marginal parametric adjustments. Second, it seeks to analyze the variation in pension system adjustment strategies between countries that did not introduce second pillars. To do so, the paper discusses the determinants of public pension reforms in two less studied East European countries: Belarus and Ukraine. The two countries began the transition to capitalism with similar state administered public PAYG pension systems. During the socialist period, universal retirement schemes with low retirement ages and financing based almost exclusively on employers' contributions were introduced in each country. Pension systems were integrated into state budgets thus being subject to similar expenditure policies.

Following the demise of the socialist regimes in the region, the two countries preserved many of the features of their pension systems such as low retirement ages and relatively high contribution rates. At the same time, unlike many of the Central and Eastern European countries (CEECs) they did not introduce mandatory private accounts. Still, important differences between the pension system reform outcomes emerged during and after the economic transition. Ukraine alternated between a radical pension benefit retrenchment phase from 1991 to 2003, a radical expansionary phase between 2003 and 2009, and another retrenchment phase after 2009. Furthermore, attempts to introduce mandatory private accounts failed. In comparison, Belarus avoided retrenchment altogether, while preserving the institutional structure of its public pension system almost intact. Benefit generosity suffered a steep decline during the recent economic crisis, but it soon recovered as a result of government efforts to restore pensioners' welfare.

The paper explains the above outcomes by tracing the determinants of parametric adjustments in public PAYG pension systems in the two countries. Parametric changes in the public pension systems have often been overlooked because they are frequently viewed as 'too small' to be taken into consideration. Yet, although they do not change the institutional structure of public pension



systems, their fiscal and distributional impact is significant. As public pension systems remain the most important social policy items in these countries both in terms of coverage and expenditure levels, changes in their parameters have immediate welfare consequences.

I claim that two elements are critical for explaining the pension reform outcomes between the two countries. First, I show that the political regime type impacted how national political elites responded to international pressures for reform: while in the Ukraine the opening of the regime in 2003 led to an attempt to sync the national pension reform strategy to the international agenda advocated by the World Bank (WB), in the case of the authoritarian regime of Belarus, pension reform was insulated from any outside influence. Furthermore, I show that in the case of Ukraine, the fractionalization of the party system led to the failure to implement the second pillar reform as well as to tying parametric adjustments in benefit levels to the electoral cycle – a practice that resulted in high fiscal deficits of the social security budget. In comparison, in Belarus, the political regime drew its political support from pensioners, and therefore sought to protect the generosity of the public pension system at any cost. While this strategy has functioned well during times of economic growth, the recent economic and currency crises that affected the country after 2009 have revealed its limits: the generosity of pension benefits was preserved, a practice that generated significant fiscal pressures on the budget of the country.

### **Drivers of pension reform**

In this section I outline the economic and political factors that shaped these adjustments. Building on previous literature (Kitschelt 2001; Armeanu 2010) I distinguish between factors that create the demand for reform and factors that impact the supply side of reform. On the demand side, I discuss the economic and demographic crises that impacted public pensions over the last two

decades. On the supply side, I analyze the regime type, the levels of party fractionalization, and the influence of International Financial Institutions (IFIs).

Economic crises have impacted pension systems through several channels. First, the rise in unemployment levels during economic downturns significantly weakened revenues gathered from social security contributions. Furthermore, given that in the early 1990s EE unemployment systems were underdeveloped, many countries liberalized access to pensions by allowing workers to take early retirement. This policy led to considerable increases in the pensioner demographic during very short periods of time especially in CEECs (Vanhuyse 2006). By comparison, in the Community for Independent States (CIS) countries early exit into pensions was less widespread since these countries adjusted to the new economic conditions by keeping workers employed but underpaid and with large wage arrears (Gimpelson 2001).

Second, crises have been associated with an increase in employment in the informal sector and large scale tax evasion (Stephan Haggard and Kaufman 2008). State owned enterprises typically defaulted on social security contributions which added to the worsening of the financial situation of the pension systems (Kyle et al. 2001). Third, when accompanied by inflationary periods, crises had a direct impact on benefit levels. Concerns over monetary policies during periods of high inflation, led governments in the region to drop the automatic indexation of old age benefits and replace it with ad-hoc increases that decreased substantially the generosity of public pensions.

Adverse demographics also impacted public pension systems. Over the last two decades, the elderly dependency ratio increased due to declining fertility rates and high mortality rates especially among working age men. The latter was particularly high in the CIS countries where economic policies such as the mass privatization programs contributed to higher mortality rates amongst workers (Stuckler, King, and McKee 2009). For example, the gender differences in life expectancy at birth are 12 years in Belarus and 11 years in Ukraine (Botev 2012). This negative situation is further deteriorated by the population shrinking due to migration. Overall, both trends

contributed to a general decline in the ratio of contribution to beneficiaries and an increasing need to divert public resources for financing pension expenditures.

On the supply side, the political regime type influenced both what policies were considered to be as viable reform alternatives as well as the responsiveness of the local elites to international pressures to reform. In this respect, early scholarship emphasized that authoritarian regimes are more capable in pursuing radical pension reforms because of the capacity of their executives to by-pass societal interests (Orenstein 1999; Cook 2007). Indeed, privatizing reforms have been passed with mixed results in different authoritarian regimes such as Chile or Kazakhstan. However, other countries such as Belarus, did not privatize and resorted only to parametric reforms for adjusting their pension systems. Moreover, pension reform outcomes in authoritarian regimes are as diverse as in democratic ones. This stems from the fact that there is no archetypal authoritarian regime but a variety of regimes that build their political support in different ways. (Forrat 2012).

While authoritarian regimes may not be democratically accountable to political constituencies, they remain dependent on popular expectations about social security. Since repression alone cannot ensure regime stability, authoritarian regimes must rely on policies that build loyalty among workers (Wintrobe 2000). This suggests that pension reforms can be driven by the need of the regime to ensure its own political survival. As the empirical part of the paper will show, this is indeed the case of Belarus – an instance where the pension system preserved its highly redistributive character because of its role in maintaining the legitimacy of the political system.

A defining characteristic that sets apart pension policy making in authoritarian regimes and democratic regimes is that of the impact of societal interests on reforms is practically non-existent. Unlike democratic regimes, where pension reforms are the result of societal pressures coming from opposition parties, trade unions or employers' organizations, in authoritarian systems pension reforms are driven exclusively by elite policy-making. Thus they do not reflect societal

demands for protection but elite ideas about welfare policies and their role in the survival of the regime. The decoupling of pension policies from the influence of societal interests means that they are imposed from above thus giving elites greater space in pursuing their political and economic goals (Stephan Haggard and Kaufman 2008, 7). Therefore, in authoritarian regimes, pension system reforms depend on how elites perceive the role of social policy: either as a benevolent paternalist policy, as a means to promote state building, as a source of economic development or as a means of political control (Forrat 2012).

By comparison, in competitive authoritarian regimes elections do take place and provide incentives to incumbent governments to compete through welfare promises (Levitsky and Way 2010). Governments prioritize short term electoral goals and make use of pension system adjustments in order to gain popularity amongst their constituents while limiting the opposition's capacity to compete. Thus, in competitive authoritarian regimes, pension system adjustments are less likely to address the long term fiscal pressures generated by adverse demographics or economic crises, and, instead, focus on reforms that have immediate distributive consequences for retirees or those about to retire. Increases in the generosity of benefits are amongst the most widely used policy reforms since they are immediately visible to constituencies and do not require significant institutional resources to be adopted. More so, when competitive authoritarian regimes are characterized by high levels of intra-elite conflict and unstable party systems, reforms that require sustained commitment and consensus building are less probable to find political support. In the absence of elite consensus, privatizing reforms are therefore unlikely to be adopted, even when International Financial Institutions (IFIs) exercise pressures in their favor.

Therefore how parties compete and how they envisage their prospects of survival between electoral cycles, conditions the reforms they support when in power. A widely used indicator for describing the relevant number of parties in a polity is the degree of fractionalization of the party system measured by the effective number of parties index (ENPP) Laakso and Taguepera (1979).

The index is a function of the vote share of each party relative to the total number of votes. In comparison with other measures, such as the degree of polarization, which is based on the seat share of the largest opposition party relative to the executive (Frye 2010, 53 –54), the ENPP fits better contexts where smaller parties exercise a significant control over policy making. At the same time, the ENPP offers an insight on the number of partisan veto players (M.A. Orenstein 2000) that have the power to fight reforms. Values under 3 indicate low levels of fractionalization, values between 3 and 6 indicate moderate levels of fractionalization while values above 6 point to high levels of fractionalization. Table 1 shows the development of party fractionalization in Ukraine between 1994 and 2014<sup>1</sup>. As the table shows, in Ukraine party fractionalization has shifted from very high levels during the 1990s<sup>2</sup>, to moderate levels in the 2000s, and then returned to high levels after the 2014 parliamentary election.

{Table 1 about here}

Fractionalization of the party system impacts the capacity of governments to pursue reforms (S. Haggard and Kaufman 1995). Increased levels of fractionalization imply high levels of political uncertainty leading to difficulties in creating support for costly welfare reforms. This has several implications for the reforms of public pension systems. First, changing the indexation mechanism will be the preferred policy option for handling pension outlays because of its immediate impact and minimal amount of political resources involved in passing such a reform. As opposed to bigger changes, such as increases in the retirement ages, shifts in the indexation mechanisms are relatively easy to adopt and do not require lengthy additional regulations (Schludi 2006). Second, reforms that include long term political commitments, such as the introduction of private pillars, are unlikely to be sustained since political parties are unlikely to survive for more than one electoral cycle. Third, special retirement regimes that offer selective benefits to different

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<sup>1</sup> Belarus is not included because the index is meaningless in an authoritarian context.

<sup>2</sup> The high level of fractionalization in Ukraine in 1994 is caused by the large share of legislative seats obtained by independent candidates (51.42% of the total).

categories of workers are likely to be protected and used as a method of building support among these groups.

Pension reform agenda was also influenced by international actors, and in particular by the WB, which promoted a dual agenda of retrenchment and privatization. In its 1994 flagship report, *Averting the Old-Age Crisis* the WB endorsed a shift towards three pillar systems of pension provision, since it believed that public PAYG pension systems generated labor market imbalances, decreased economic growth, and failed to adequately protect benefits against demographic and economic crises (World Bank 1994). The structural shift towards a three pillar systems implied a substantial retrenchment of public pensions to paying modest flat-rate benefits (Beattie and McGillivray 1995). Since the complete shift towards private pension provision had to take place over a long period of time, and with substantial budgetary costs for public pension budgets, the institution promoted a retrenchment agenda based on longer contribution periods, higher retirement ages, shifting the burden of contribution towards employees and a decrease in employers' contributions, and stricter rules for special retirement regimes.

It is noteworthy that the WB type of pension reform involving retrenchment and privatization has been adopted though EE with varying degrees of success depending on domestic factors such as the level of external debt of a country (Müller 2003), the effectiveness of transnational campaigns that advocated for privatization (Mitchell A Orenstein 2008) or the coming to power of coalitions that supported the privatization agenda (Armeanu 2010). While the majority of the EE countries did follow the WB model of pension reform, some have rejected it altogether. Moreover, it is worth noting that the recent economic crisis has put a dent into the spread of the policy across the region. Some of the early privatizers in the CIS region such as Russia or Kazakhstan have partially or entirely reversed the reform out of fiscal concerns regarding the benefits of keeping a privately managed second pillar. Similarly, in CEECs, a wave of partial reversals and nationalizations has affected private pillars (Drahokoupil and Domonkos 2012).

The next sections bring empirical evidence on how each of the factors discussed above contributed to the trajectories of public pension reforms in Ukraine and Belarus. I show that while pension privatization was not implemented in the two countries, parametric reforms have had long lasting fiscal and distributional consequences. I provide a historical overview of the main episodes of reform and bring case-study empirical evidence to support my arguments. The last section concludes with a discussion on the different pathways of reform that characterized pension policy making in the two EE countries.

### **Politics of pension reform in Ukraine**

In the years following the collapse of the Soviet Union, Ukraine suffered from the most severe economic crisis in EE with its cumulative economic output dropping by 60 per cent between 1990 and 1999 (Sologoub 2010). The crisis reflected heavily on pensions which lost almost entirely in their purchasing power. By 1998 they were at 15.3 per cent of their 1990 value (see Table 2). A key problem of the public pension system was the existence of large arrears owed to the budget by public enterprises and the payment delays that often took months to reach pensioners (Malyshev 2000). The country also experienced a massive demographic crisis since independence due to high male mortality rates, reduced birth rates, and extensive emigration. Due to these factors the public pension system began to display deficits as of 1993. Initially the government opted for subsidizing the deficit but soon was unable to maintain the level of budget transfers and thus it shifted its policy to shrinking benefits by letting them fall against inflation. Concomitantly, the contribution rates were increased and the maximum pension was limited.

{ Table 2 about here }

During this period, pension reform programs never entered into serious public debate. Party fractionalization was so high that hardly any reforms could be agreed upon. As the Ukrainian

transition coincided with a period of state and nation building, most political conflicts revolved around the separation of powers between the President and Parliament and the relationship between Ukrainian and Russian identity (Taras Kuzio 2002). These conflicts led to periods of intense confrontations between the President, who sought to increase his formal powers and the Parliament which sought more control over the executive and especially over the appointment of ministers. Meanwhile, governments operating under short time horizons and facing constraints from both the Parliament and the President became incapable of pursuing any policies. Due to these factors legislative bills were most of the time defeated before being passed into law.

The party system remained very weak and highly fractionalized throughout the entire transition period. As D'Anieri (2007, 59) notes, 'weak parties became a self-reinforcing prophecy in Ukraine'. In fact, the party system resembled an informal network of interests comprising both old and new elites rather than an institutionalized structure (Fritz 2007). As a result, shifting allegiances between parliamentary blocks had small political costs. Given these short time horizons, none of the political factions in Parliament favored extensive pension or welfare reforms.

The first serious reform program was adopted only in 1998 and was facilitated by the decrease in the levels of party fractionalization which contributed to the emergence of a more structured pro-presidential center-right political block under the leadership of Victor Yushchenko. Upon his confirmation as Prime Minister, Yushchenko started a reform program based on price liberalization, administrative reform and anticorruption measures (Åslund 2009). The reforms had a positive impact on the state budget, allowing for a timely payment of pensions and wages in the public sector.

Two years later, in 2000, the Yushchenko government submitted the first draft laws on social insurance reforms to Parliament. The draft proposed the introduction of a WB three pillar pension system and a series of reforms aimed at streamlining public PAYG pension expenditures. The



proposed reforms included the indexation of pension benefits to inflation plus 20 per cent of the increase in real wages; the gradual increase in the retirement age for men and women, a longer contribution rate for obtaining a full pension, and an accrual rate for each year of delayed pension. However, by April 2001 the backing of the government in Parliament began to disintegrate. Some of the parties that previously supported the Yushchenko government feared that the continuation of market reforms will hurt their business interests and retracted their political support. As a result, the government faced a vote of no confidence and was ousted from power. Pension reform was yet again postponed for an indefinite period of time.

The 2002 parliamentary elections, brought to power a pro-presidential coalition that supported Victor Yanukovich as Prime Minister (Fritz 2007, 180). The Yanukovich government was formed primarily from oligarchs from Eastern Ukraine who had right or center-right ideological views (Åslund 2009). Its program, which included the restarting pension reforms, was approved by the Parliament with a large majority of votes. As a result, two years after coming to power, the government succeeded to pass several of the reforms that were included in the Yushchenko program. The changes introduced by the 2003-2004 reforms were however very limited and avoided to introduce too many unpopular retrenchment measures.

Importantly, the new law sought reduce early retirement by increasing benefits to those who chose to retire later, increased the work period of calculating pension benefits and created a social assistance system for those not eligible for pension benefits. Nevertheless, out of fears of popular backlash ahead of the 2004 presidential elections, the planned increase in the retirement age was not adopted. At the same time, social security contributions remained high despite demands from the International Monetary Fund (IMF) to reduce payroll taxation (IMF 2003a; IMF 2005). Further, the legal framework for the introduction of the mandatory private accounts was adopted but and was conditioned on the lack of deficit in the public PAYG system. Instead, the reform allowed the creation of non-state pension funds financed through voluntary contributions.

However, the possible budgetary savings generated by the reforms were cancelled by the sudden doubling of the minimum pensions in the eve of 2004 presidential elections (Betliy and Handrich 2006). This measure alone added a 3 per cent deficit to the public PAYG system thus effectively eliminating the possibility of implementing the second pillar reform. As a result, while the legislation regulating private pension remained in place, the private pillar was not *de facto* introduced – a situation that was similar with that of Romania at the time. Moreover, the political change that was brought by the Orange Revolution put the pension reform to a standstill.

In political terms, the outcome of the Orange Revolution seemed to produce a significant decrease in the level of fractionalization of the party system. However, as D'Anieri notes, despite the fact that fewer parties entered in Parliament in 2002 and 2005, they quickly split, hence preserving the high levels of political fragmentation (D'Anieri 2007, 149). Existing literature emphasizes the deep political conflicts that marked the reorganization of political life in Ukraine after 2004 (Flikke 2008; Kubicek 2009; Aslund 2005). The continued strife over resources and political power undermined any possibility of carrying out reforms. Instead the pension system was used for electoral purposes. Competition through pension promises became essential as elections increased in importance in the aftermath of the Orange Revolution as the political regime opened up. In this context, the programs of all the parties that competed in the parliamentary elections of 2004, 2006 and 2007 contained promises for pension increases. From this point of view, the turn towards democratic politics in Ukraine connected the demands for redistribution with the patronage and rent-seeking behavior of the Ukrainian elites.

Indeed, while intra-elite competition for state assets continued after 2004, the opening-up of the political system increased the pressures from below. This yielded a move in the political system towards 'social populism' (T. Kuzio 2012) reinforced by inflated welfare promises during elections. Therefore, the change of the political regime led to the recovery of the adequacy of pension benefits but it also contributed to growing expenditures in a very short period of time (see

Fig. 1). The growing pension outlays needed to be supported through high payroll taxes and receipts from privatization of state owned companies. Thus by 2010, pension expenditure alone amounted to 17.7 per cent of GDP, making Ukraine the country with the highest level of pension expenditures in the world.

{Figure 1 about here}

Increasing pension expenditures impacted benefit generosity, which in 2009 reached its highest levels since the beginning of transition. However, the economic crisis had a deep impact on the Ukrainian economy leading to a 14.2 percent decline in GDP levels (IMF 2011). In consequence, pensions were the first items targeted by the austerity measures passed in response to the economic crisis. The first measure undertaken by the government was to freeze the indexation of pension benefits which resulted in the drop of net replacement ratios. Between 2009 and 2012 the net replacement ratio dropped by 8 percentage points which brought pension generosity to the 2005 levels.

The crisis also forced the government to seek financial assistance from the IMF. Besides short-term austerity measures, the IMF required the government to pursue a more substantial pension reform (IMF 2011). However, compared to advice given to countries a decade earlier, the institution did not demand the introduction of a private pillar, but focused on pushing for retrenchment measures that targeted the public pension system. In fact, the institution, argued that given the high deficit of the public pension system, which in 2009 reached 5.2% of GDP, introducing a private pillar would only worsen the financial problems of the public system.<sup>3</sup>

Thus, the IMF conditioned the continuation of its financial assistance on the implementation of a parametric pension reform. While the IMF pressure brought the pension reform back on the

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<sup>3</sup> The information was given to the author during an interview with the IMF representative in Ukraine in September 2012.

legislative agenda, political conflicts within the Parliament led to considerable delays in passing it. In particular, the pro-presidential Party of Regions, the largest party in Parliament, tried to avoid supporting the increase in the retirement age for women out of fears of a popular backlash during the upcoming parliamentary elections. While the internal debate over austerity measures seemed to stall the legislation in Parliament, the IMF suddenly announced that it stopped the disbursement of the 4th tranche of its loan agreement with Ukraine. The IMF threat had the intended effect: the legislative unblocked the pension reform legislation and passed the new law in 2011.

The reform raised the retirement age for women to 60<sup>4</sup>, increased the minimum insurance period for obtaining full pension benefits with five years for both men and women, and capped the high pensions. Despite the fact that the reform restored the financial assistance from the IMF, it did not have a significant fiscal impact. The law instituted a 3 year grace period in which women can choose to retire early under the new rules. At the same time, the restrictions on the special pensions apply only to new pensioners, thus leaving the existing inequalities unchanged. Moreover, another wave of government mandated increases in benefit levels was passed ahead of the 2012 parliamentary elections (Åslund 2015).

Summing up, in Ukraine pension reforms have been limited by high levels of party fractionalization. Over the past two decades, governments have passed only partial institutional reforms that preserved the structure of the inherited pension system, and tied increases in generosity to the electoral cycle. Although the introduction of the second pillar was considered after the opening of the regime in the early 2000s, the reform was undermined by the unsustainable increases in benefit generosity that were adopted by various governments after 2004. Even when external pressure from IFIs pushed the government to adopt a serious parametric reform during

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<sup>4</sup> The retirement age for women is scheduled to increase by half a year, each year, over the next decade.

the recent crisis, the adjustments introduced did not address the main problems of the public PAYG pension system.

### **Politics of pension reform in Belarus**

Unlike Ukraine, Belarus made a return to electoral authoritarianism through the presidential elections of 1994. This came after a period of relative liberalization that, as in other countries in EE, resulted in an economic crisis. Besides, as Ioffe (2004) notes spillovers from the Russian transitional crisis impacted the Belarusian economy up to the point that by 1994 most of the industrial enterprises in the country were near to discontinuing operations (Ioffe 2004). Amidst this context of economic instability, presidential elections brought in power Aleksandr Lukashenko – a former *Kolkhoz* director who steered the country into an authoritarian direction.

Soon after taking office Lukashenko began establishing a political regime based on extensive state control over the economy and constraints on the capacity of working class to organize. Politically, the institution of the President was strengthened while the powers of the Parliament were severely restrained. At the same time, previous liberalizing reforms were overturned by restoring a high degree of state ownership, introducing controls over profits and margins, adopting a system of state redistribution over “priority sectors” and centrally setting wage targets (Korosteleva 2011). Additionally, the national budget was patched by using loans from Russia obtained at special interest rates and a preferential agreement over the oil price. This made the country immune to the perils of transition that marked the other two economies but also isolated it from external influences (Nutti 2000). Unemployment remained low and pension expenditure fairly steady. The pension level was set at 25 percent of the living wage with a strong redistributive component towards low income workers.

Subsequently the regime assumed a paternalist pension policy in exchange for political support from pensioner groups. Indeed, Haiduk et al. (2009) find that support for the political regime in Belarus is high among pensioners who prioritize political stability and the delivery of a minimum social package over economic and social reforms. In consequence, pension benefits were prioritized by the regime and were protected against inflation while the minimum pension was increased several times starting from 1995 (Chubrik et al. 2009). Besides, the pension system contains a highly redistributive element with very small differences between the minimum and the maximum pensions. Thus, Belarus has the lowest level of inequality among the successor states of the Soviet Union and the highest levels of redistribution through social programs and wage increases (Fritz 2007).

Despite the relatively generous pension system in terms of retirement age and replacement rate (see Figure 2), the Social Security Fund (SSF) never displayed deficits. This is mainly because the SSF received generous subsidies from the state budget which retained as a main source of revenue, income from state owned enterprises. For example, in 2002 when the SSF reserves were exhausted, the government stepped in and insured that the pension payments will not be delayed (IMF 2003b). In addition, as in the case of Ukraine, the generous pension system was financed through increases in social security contributions from 25.2 per cent in 1992 to 35 per cent in 2010 (UN 2009).

{Figure 2 about here}

The lack of deficits in the SSF and a stable growth rate during transition minimized the incentives to reform the pension system. Under these conditions, the government has been resilient in accepting any changes in the public pension system especially changes regarding the increase in the retirement ages or any form of retrenchment. Furthermore, the influence of external actors has been minimal due to the lack high debt levels. As a result, the WB campaign for shifting to a defined contribution system and the gradual introduction of private accounts had little impact.

The Ministry of Labor acknowledged the need for the introduction of the WB model in mid' 2000s but none of the reforms made it into legislation.

The absence of reforms is also due to the institutional arrangements which prevailed in Belarus after 1994. The constitutional reform that took place in 1996 limited the political impact of the Parliament and reduced parties' capacity to organize. At the same time, civil society groups such as trade unions have faced tough sanctions each time they voiced opposition and had limited opportunities to access the policy process. Thus alternative reform proposals were less likely to be formulated given the minimal impact of Parliament and civil society.

However, the economic and currency crises that affected the country after 2008, have aggravated the situation of the pension system. The level of external debt of the country has risen sharply from 25 percent of GDP at the end of 2008 to 61 percent of GDP at the end of 2011 (IMF 2012). At the same time, the real value of pension benefits dropped substantially in 2011, when they amounted to 77 per cent of their 2010 value (see Figure 3). Pensioners lost much faster in their purchasing power in comparison with workers as the government opted for letting benefits fall against inflation. However, the impact of the crisis has been curtailed through mandating an increase in pension benefit levels a year later. Further, while the statutory increase in the retirement age was not considered, the government introduced incentives for those who continue to work beyond retirement age. Thus the regime has been adverse on embarking even in limited reforms out of fears that such a path will endanger its stability.

{Figure 3 around here}

Therefore, compared with Ukraine, Belarus has experienced a shorter and the more stable transition that preserved both the social and political institutions of the state socialist system. Unlike other countries in the region, the political regime in Belarus, rejected privatization both as a way to reform the inherited state economic sector as well as an approach to social security

management. Instead, the political regime kept the public PAYG pension system relatively stable and used it for creating loyalty among workers and pensioners. This was achieved through the introduction of a highly redistributive formula for calculating pension benefits and a policy of indexation that safeguarded the adequacy of pensions against economic fluctuations.

## **Conclusion**

The analysis of the country cases undertaken above demonstrates that the political dynamics associated with which political regime type have contributed to the choice of specific pension reform alternatives. In the case of Ukraine, the opening up of the political regime in the beginning of 2000s has contributed to a shift in the pension reform agenda towards the WB pillar model. By comparison, in the case of Belarus, the privatization agenda was rejected altogether, the regime opted instead to preserve the institutional structure of the pension system inherited from the socialist period.

Furthermore, the paper showed that fractionalization of the legislative impacted the capacity of governments to pass pension reforms and encouraged competition through pension promises – a tendency that contributed to significant increases of pension outlays in Ukraine. High levels of legislative fractionalization were associated with relying excessively on changes in the benefit indexation mechanism for managing expenditures and the absence of other reforms. The paper also showed that the fractionalization of the party system has ultimately contributed to the failure of the Ukrainian second pillar reform. While the legislative framework of the private system has been adopted more than a decade ago, the system was not implemented due to the accumulation of large fiscal deficits in the state PAYG system as a result of numerous increases in benefit levels mandated by governments after 2004.

The Ukrainian episodes of pension reform also show that retrenchment was possible only after the IMF exercised direct pressure on the government through withholding its financial assistance



in a time of crisis. However, the reform passed in response to the IMF pressure has had a doubtful fiscal impact: whereas formally the increase in the retirement ages for women has been legislated and the streamlining of high pension benefits for new entrants has been adopted, in practice these measures do little to address the existing inequalities in the Ukrainian pension system. At the same time, the government continues to mandate increases in benefit generosity ahead of elections, thus keeping the pension system dependent on the political cycle.

In comparison, in Belarus the recent crisis has provided a test for the commitment of the regime towards its model of social economy (Yarashevich 2014). The paper has shown that despite the fact that the economic and monetary crises that affected the country after 2008 have led to a substantial loss in the generosity of pension benefits, these have recovered as the regime sought to restore the welfare of its most loyal constituents. However, the crisis seems to have destabilized the Belarussian pension system as expenditures as well as dependency ratios are steadily projected to grow in the upcoming years (World Bank 2012).

The paper contributes to the ongoing debate about the pathways of welfare reforms in EE by discussing the trajectory of pension adjustments in two less studied countries. It has shown that in spite of similar legacies and initially similar political regime types, the two countries have opted for different solutions for adjusting their pension systems. It has also shown that the unconsolidated democratic regime in Ukraine has had a radical impact on the country's pension system – moving it towards a fiscal disaster in the short and medium term.

## Tables and Figures.

Table 1 Effective Number of Political Parties (ENPP) index in Ukraine, 1994 -2014

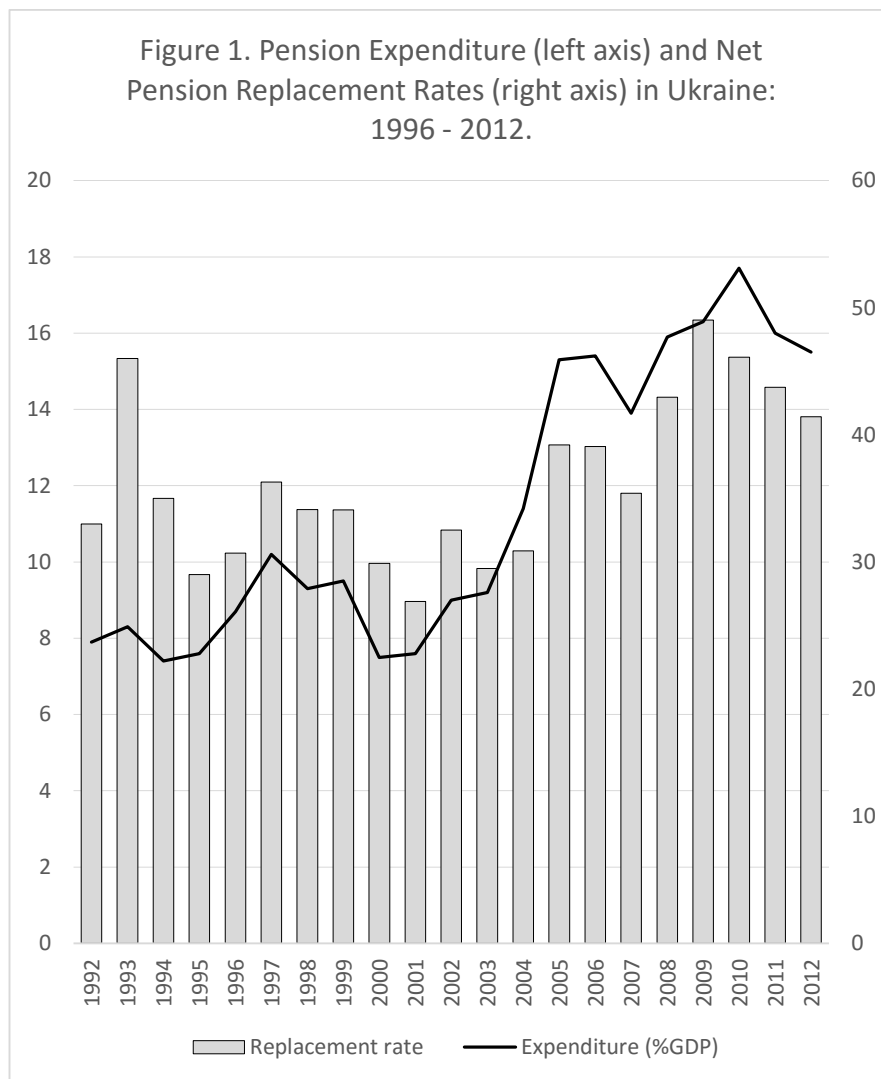
	1994	1998	2002	2006	2007	2012	2014
ENPP	14.84	10.04	4.67	3.38	3.30	5.07	6.64

Source: (2002 -2007): (Gallagher 2013); Own calculations based on the data from the Electoral Commission of Ukraine (<http://www.cvk.gov.ua/>)

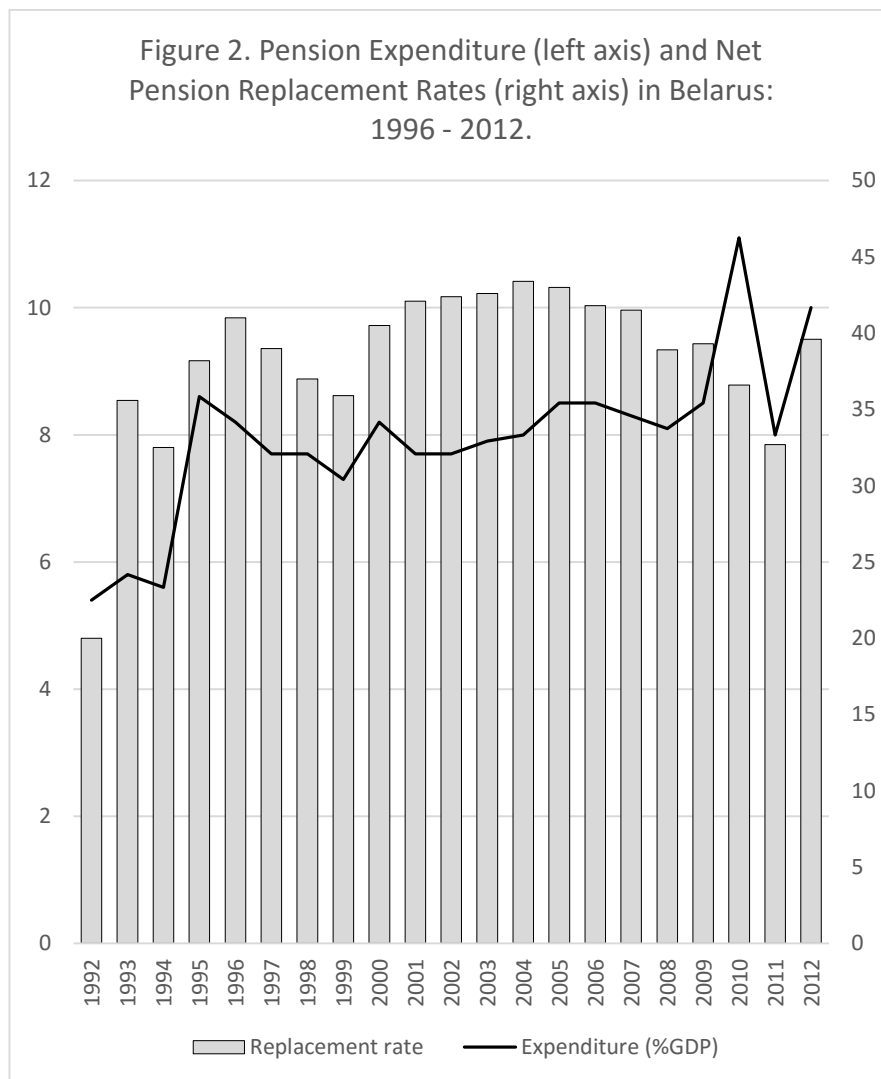
Table 2 Indicators of the pension system in Ukraine 1991 - 1999

	1991	1992	1993	1994	1995	1996	1997	1998	1999
Real GDP, % (1990=100)	91.3	82.3	70.6	54.3	47.7	42.9	41.6	41	40.7
Inflation, %	290	2,000	10,155	401	182	39.7	10.1	20	19.2
Number of retirees, million	13.6	14.2	14.5	14.5	14.5	14.5	14.5	14.4	14.4
Retirees, % of the population	26.2	27.3	27.8	27.8	28	28.4	28.7	28.7	28.9
Pension expenditure, % to GDP	9.5	7.9	8.3	7.4	7.9	9.3	10.3	9.5	10
Real pension, % (1990=100)	79.6	68.5	23.1	15.9	18.4	17.2	15.7	15.3	26.3

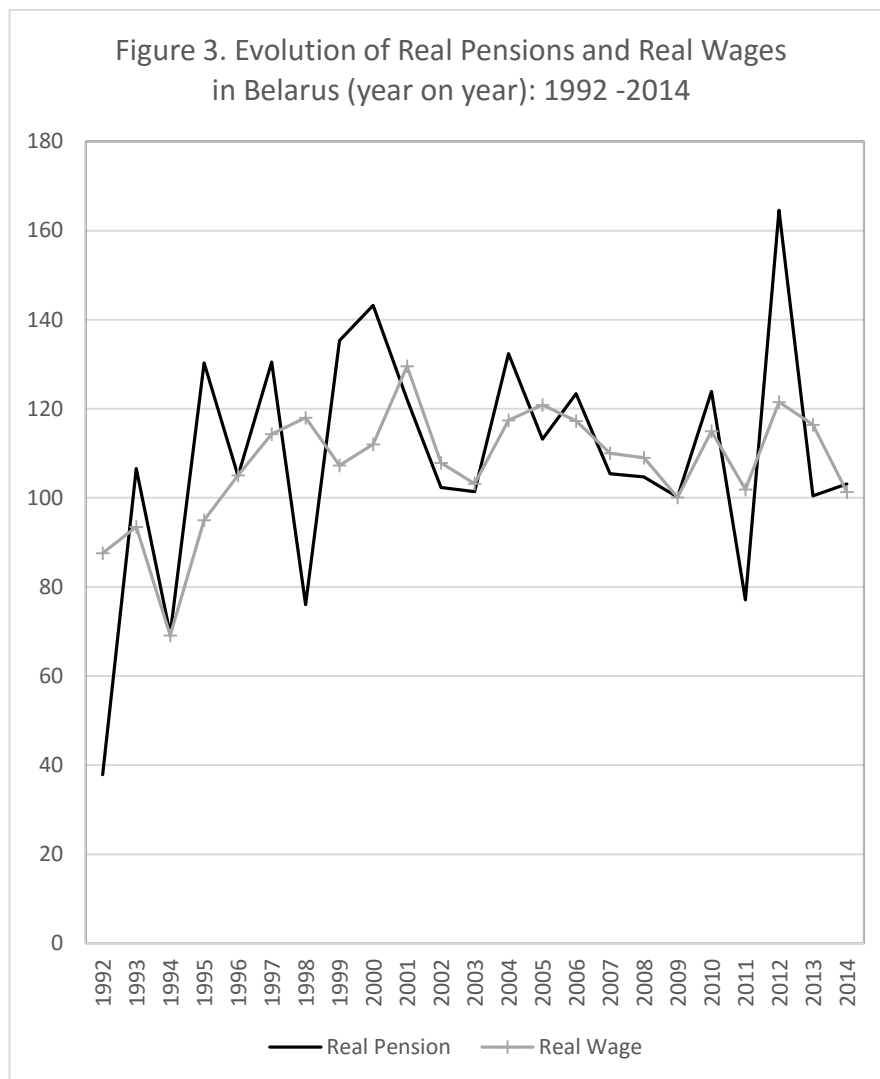
Source OECD (2001)



Source: Own calculations based on data from Ukrainian National Statistical Institute (<http://www.ukrstat.gov.ua/>)



Source: European Commission (2009) and Yarashevich (2014).



Source: Republic of Belarus, Statistical Yearbook 2015.

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## Declaration of authorship

We declare hereby that the manuscript “From State to Market and Back: The Politics and Economics of Pension Privatization in Eastern Europe” (submitted for publication in Comparative Political Studies) has been co-authored. Dragos Adascalitei and Dr. Federico Vegetti (Central European University) contributed to an equal degree (50% each) to this work in research and writing.

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## Declaration of authorship

We declare hereby that the manuscript “Reforming against all odds: Multi-pillar pension systems in the Czech Republic and Romania” (published by International Social Security Review, Volume 68, Issue 2, Pp: 85 – 104) has been co-authored. Dragos Adascalitei and Stefan Domonkos (University of Mannheim) contributed to an equal degree (50% each) to this work in research and writing.

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## Declaration of authorship

I hereby declare that I am the sole author of this thesis and have made use of no other sources than those cited in this work.

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Budapest, January 11, 2016.