Financial and Economic Consequences of Political Interference within State-Owned Enterprises

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A thesis submitted in partial fulfilment of the requirements for the degree of
Doctor of Philosophy

The University of Sheffield
Faculty of Social Sciences
Management School

July 2018

Abstract

Conflicting objectives and political interference are recognized as the main reasons for SOEs' inability to exhibit performance levels that are comparable to those of their private counterparts. Political interference within SOEs is a side effect of politicians' objectives to maintain the power and enjoy the associated perquisites. This thesis explores the relationship between three distinct political interference mechanisms and SOE performance/behaviour in six countries of the former Socialist Federal Republic of Yugoslavia (SFRY). We use hand-collected dataset with board membership and financial information about 200 SOEs over the period 2010-2014. Fixed effects and instrumental variable estimators are used in our analysis.

Our findings imply that board member changes for SOEs, unlike for private enterprises, are politically motivated rather than performance induced. The politically motivated board member changes negatively influence SOEs' profitability and productivity levels. Performance of SOEs governed by independent government body is not influenced by politically induced board member changes. Aside from initiating board member changes in election years, we find that politicians engage in election-related manipulation of SOEs' corporate decisions. The increase of SOEs' employment and indebtedness is observed in pre-election and election years, while upsurge in investments happens in election and postelection years. In election periods, SOEs with politically dominated boards and those governed by central governments suffer from greater increase in the number

of employees. Furthermore, we reveal that influence over board structure is another political interference mechanism. The presence of academics on SOE boards is positively associated with performance of SOEs, while government representatives have negative association with operating performance. In addition, these associations become more profound when the intertwined effect of board members' professional backgrounds and political connections is considered. We also find positive relationship between private sector representatives and operational performance of SOEs with minority private ownership.

Acknowledgements

After three years of a truly life-changing experience, hard work and dedication, this thesis marks the end of the journey towards obtaining my Doctor of Philosophy degree in Finance. Recognising the help and support I have received throughout this journey I would like to acknowledge several individuals in that regard.

First, I owe my deepest gratitude to my supervisory team. I would like to acknowledge my indebtedness to Professor Oleksandr Talavera for his structural guidance, for introducing me to the STATA world and for enabling my professional growth. His research-oriented thinking, constant availability and support made achievements of my research priorities possible. Through the supervisory process, Professor Talavera contributed to development of my econometric skills and expertise in the field of finance providing me with the access to international research networks. Further, I want to express my deep gratitude to Dr Sotirios K. Bellos for his thorough mentoring and all the constructive criticism, for challenging my arguments, for endless discussions, for his constant availability and all the prompt replies. Collaboration with Dr Bellos led to further development of my critical thinking, while his valuable comments improved the quality of my research. I also wish to convey my sincere gratitude to Dr Chaudhry M. Ghafran for all the research suggestions and guidance as well as for all the encouragement, advice and motivation. I would further like to thank Professor Jill F. Atkins for accepting to join the team in the final year of my PhD studies and for providing me with insights regarding my research topic.

Further, I wish to express endless gratitude to my family and friends for their unconditional and wholehearted support throughout this journey. Thank you for your passionate encouragement, for always being there for me, for being such amazing listeners and motivators and for believing in me whenever I had my doubts. My deepest gratitude goes to my parents and sister for their infinite love over the years, for their dedication, efforts and all the compromises they had to make as for me to be able to accomplish my life and career goals. I also wish to thank all my old friends, as well as the ones I met on this journey, for understanding the lack of my free time, for making me laugh when it was hard and keeping up with all my moods.

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Chapter 1

Introduction

1.1 Background and literature overview

The 2007 global economic crisis and its constraining consequences restarted the debate about state ownership. This happened for two contrasting reasons. Firstly, governments of certain countries (e.g., United States of America, United Kingdom) reversed the process of privatisation, thus increasing the level of state ownership worldwide (Florio, 2014; Nanto, 2009; Stan, Peng, & Bruton, 2013). Secondly, high levels of public debt and staggered economic activity reconfirmed that governments can no longer subsidize poor performing state-owned enterprises (SOEs). Hence, the question of whether SOEs should be profitable returned to the centre of the public attention.

The economic slowdown, caused by the crisis, showed that a shift towards profitable orientation of SOEs is required. For decades SOEs were considered to be a main government tool for pursuing social policy goals (Aharoni, 1986; Bai & Xu, 2005; Shapiro & Willing, 1990). However, attainment of these goals incurs costs

thus, negatively impacting the overall SOE performance (Bozec, Breton, & Cote, 2002). Furthermore, governments realised that social objectives, being non-profitable at the same time, create financial burden for state budgets, while SOE profit orientation strengthens economies (Musacchio, 2013). In addition, readjustment of SOEs' objectives in accordance with private enterprises' profit orientation was triggered by pro-market forces and a need for economic recovery (Bozec et al., 2002; Brown, 1995; Cuervo-Cazzura, Inkpen, Musacchio, & Ramaswamy, 2014). OECD (2015) even suggests that SOEs' economic activities should be expected to obtain rates of return that are in the long run comparable to those of competing private counterparts.

The comparison of SOE performance with those of private enterprises is performed by many researchers providing evidence for superior performance of private enterprises (e.g., Boardman & Vining, 1989; Dewenter & Malatesta, 2001; Reeves & Ryan, 1998; Caves, Christensen, & Diewert, 1982; De Alessi, 1977). The empirical studies suggest that specific underlying factors create weaknesses in SOE operational activities, thus causing their inferior performance. The literature denotes that inefficiencies creating a performance gap between private and state-owned enterprises originate mainly from the existence of political interference within SOEs and a third agency problem (OECD, 2018).

Political theory of state ownership asserts that politicians interfere within SOEs as to fulfil their personal and/or political interests which are not in line with enterprise value maximization objectives (La Porta, Lopez-de-Silanes, Shleifer, & Vishny,

2002; Shleifer & Vishny, 1994, 1997). Thus, political interference is more common and more profound in SOEs than in private enterprises (Jones, 1985; Lioukas, Bourantas, & Papadakis, 1993; Shleifer, 1998). Jones (1985) argues that politicians will be exposed to lower costs if they transfer certain benefits to politically-like minded groups through SOEs. Transfer of subsidies or approving favours is far more transparent and obvious process than interventions within SOEs. Therefore, SOEs are exposed to political interference as they are closely connected to governments which often don't act as value maximizing shareholders (Aharoni, 1986; Okhmatovskiy, 2010). Such government behaviour creates costs negatively impacting SOE performance. But why is political interference far more present among SOEs?

The agency theory implies that separation of ownership and control will result in several governance issues for both, state-owned and private enterprises (Fama & Jensen, 1983; Jensen & Meckling, 1976). However, challenges within SOEs are a little different because of the third agency problem (Christiansen, 2013). The third agency problem implies that within SOEs we have three instead of two layers of governance: (1) citizens who are the ultimate owners, (2) the government who has a fiduciary duty vis-a-vis its citizens, and finally (3) the board of directors which governs the enterprise (Capobiano & Christiansen, 2011; Musacchio, Pineda Ayerbe, & Garcia, 2015b). The government can be viewed as "the fiduciary agent", while the board, that is appointed by the government, is "the direct agent". The citizens as principals and ultimate owners lack the knowledge and resources to competently supervise their direct agents and, thus, they have to rely on the

government in this respect. The problem arises when decisions of agents are misaligned with the best interest of principals usually because of a certain political agenda.

In line with the above stated, corporate finance literature in recent years started pointing out that in conglomerate enterprises increase of investment inefficiencies arises from agency problem. Scharfstein and Stein (2000) explain that cross-subsidies within conglomerates take a "socialist" form since strong divisions end up subsidizing weak ones. The reasoning behind it, cannot be related to a CEO/board decision to derive their private benefits only from the weak divisions. It is showed that division managers engage in rent-seeking activities and that for managers of weaker divisions opportunity cost of this engagement is much lower.

The model of Scharfstein and Stein (2000) incorporates three layers of agents: division managers, a CEO and outside investors. The allocation of investments depends on the power of rent-seeking managers and discretionary decision of a CEO. However, the aim of both agents is to derive private benefits from the assets under their control, thus creating inefficiencies for the outside investors. The research of Scharfstein (1998) also discovers that 'socialism' stems from misaligned interests of top managers and outside investors since top managers have weak incentives to focus on value maximization. If we were going to apply this model to SOEs, that are in a certain way conglomerates, the division managers being SOE boards and CEOs being governments would use SOEs for pursuance of

certain private benefits. Hence, SOE boards seem to be the key governance mechanism that enables political interference.

The literature suggests that SOE boards play a central role in the governance of SOEs through balancing government objectives with market success (Schedler & Finger, 2008). The role includes development of the strategy that is in line with the objectives set by the government, while at the same time bearing the ultimate responsibility for the SOE performance (OECD, 2018). Additionally, SOE boards should monitor management behaviour and implementation of the agreed strategy, have the power to appoint and remove the CEO, approve major expenditures, review annual budgets/business plans and perform their duty in the best interest of the ultimate owners (OECD, 2015). Therefore, in theory, the only difference between responsibilities of SOE and private enterprise boards is the presence of government that influences the course of SOEs (Frederick, 2011).

In practice, however, SOE boards usually have just the nominal power without clearly assigned responsibilities and government taking over the roles that should be in the competency of the board (World Bank, 2014a). This occurs since SOE boards tend to be dominated by middle-level civil servants and politically connected individuals that lack required experience, competencies and technical or finance expertise (Vagliasindi, 2008a). Moreover, the empirical research of Schedler and Finger (2008) implies that government representatives on boards are still a major factor of political control. Hence, SOE board composition determines whether board accountability is undermined, whether SOE performance is in the focus of

the board's decision-making process and whether political interference is present (Cornforth, 2003).

Governments are usually tempted to appoint bureaucrats or political cronies to SOE boards since these individuals do not question adoption of inefficient decisions (Boycko, Shleifer, & Vishny, 1996). Lack of autonomous, independent and powerful boards results in undue hands-on government interference when it comes to SOE strategic and operational decisions (World Bank, 2014a). Such behaviour of politicians blurs the lines of board responsibilities and leaves boards with conflicting and inconsistent objectives (OECD, 2015). This leads to poorly run SOEs with negative performance.

Motivated by the implications of the literature and the need for improvements in SOEs' performance, this thesis examines how different forms of political interference affect SOEs' behaviour. Firstly, we analyse the nature and drivers of SOEs' board turnover and how board member changes might serve as political interference mechanism with negative performance consequences. Secondly, we look at whether politicians manipulate SOEs' corporate decisions as to increase the likelihood of their re-election, thus representing another channel of political interference. Thirdly, we investigate whether board members' professional backgrounds affect SOE performance and whether intertwined effect of the SOE board members' professional background and political connections changes these relationships.

1.2 Research context and data

The relationships between political interference and SOE performance mentioned above are examined in six countries of the former Socialist Federal Republic of Yugoslavia (SFRY) - Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro, Serbia, and Slovenia. We chose these countries because of similarities/dissimilarities that exist among them and that provide us with a unique research set-up.

1.2.1 Historical and institutional background

The path followed by the former SFRY's countries, before declaration of their independence, was alike (Horvat, 1971). The highest legal entity in the country was the Federal Parliament, constituted from parliament representatives of each republic. Republic parliaments could propose laws and policies to the Federal Parliament and only when adopted at the federal level the laws/policies would be implemented by each republic. Hence, the legal framework that shaped the economy of individual republics was rather similar with small discretionary rights in certain areas (Woodward, 1995).

Tensions between republics of the SFRY started in 1970s and intensified towards the end of 1990s (Jovic, 2009). Differences in ideology and the raise of nationalism led to creation of movements in Slovenia and Croatia that supported decentralized federation. Furthermore, a widening gap between developed and underdeveloped regions led to deterioration of unity among republics (Jovic, 2009). Beginning of nineties brought about the fall of economic activity and industrial production, high

levels of unemployment, severe decrease of GDP and hyperinflation. For those reasons, the dissolution was started with the Slovenian and Croatian declaration of independence since citizens of both countries thought that they will better off in their own countries. This triggered a war that ended with a peace truth after which each of the countries gained its own independence (Leslie, 2004).

The dissolution and independence led to major political changes in each of the countries with adoption of new constitutional laws and establishment of new political order. Because of the war and newly established political regimes certain countries were unable to pick up the transition pace (e.g., Milosevic's regime in Serbia). The economic transformation and adoption of the new legal frameworks in certain countries went through several iterations. For those reasons, within our sample we have two EU member countries (Slovenia and Croatia), two that are in advanced transition (Serbia and Montenegro) and two slow-adjusting transition economies (Bosnia and Herzegovina and FYR Macedonia). Despite dissimilarities with regards to transitional pace, the similarities regarding political dynamics are present. During the observed five years, four out of six countries went twice through the election cycles. Furthermore, in four out of six countries the ruling political party changed. Even the political stability indicator shows similar levels of government instability among the observed countries (World Bank, 2014b).

1.2.2 State enterprise sector

The state enterprise sectors in the former SFRY's countries were almost analogous and they were keystones for economic development (Horvat, 1971). The countries

had similar legal and governance frameworks for state ownership, their enterprises were faced with same market conditions and most of their SOEs were monopolies. Coherent patterns could be depicted by looking at the level of state ownership, their number and sectors in which they operate (Bicanic, 2010). Notwithstanding, SOEs poor performance led to adoption of the Federal Ownership Transformation Act in 1989 which triggered large privatization waves (Jocic, 1997). The first privatization wave was initiated in the beginning of 1990s and was followed by the second one, ten years later, but even today the privatization process in still ongoing.

Despite these privatization efforts, the degree of state ownership in these countries is still pretty high. The total number of SOEs ranges from 15 in Montenegro to at least 80 in Slovenia. Even though absolute numbers of SOEs in each of these countries might indicate that the degree of state ownership is quite distinctive, when we take into account the total number of enterprises and employment percentage for which SOEs are accountable, similarities become apparent. For example, level of state ownership in Slovenia is one of the highest among OECD countries. In 2012 SOE sector in Slovenia accounted for 11% of the total employment which is three times higher than the OECD average (OECD, 2014). Moreover, in the same year SOEs in Serbia and Croatia employed 7% and 6.3% of the total employment respectively (Arsic, 2012; Croatia Bureau of Statistics, 2012; DUUDI, 2013). Governments have a majority state ownership in strategically important SOEs (e.g., energy, transport, telecommunication, utilities) which contribute to the overall functioning of their economies.

1.2.3 Governance of state ownership

Up until the SFRY's dissolution governance and legal framework around the state ownership in each of the countries was the same. Reform and privatization efforts, after the independence, created different frameworks for governance of state ownership. The aim of governments was to increase efficiency of SOEs as to decrease their dependency on the state financial help and increase their attractiveness for the investors. Similarly, as with all the other reforms, governments tried to adopt the best practices that exist in EU and OECD member states. However, depending on the transition pace of each country the laws and governing models adopted differentiate to a certain extent.

First area of governance where dissimilarities can be depicted is board of directors. The best practice implies that SOEs should have two-tier boards with supervisory board being responsible for setting up the strategy, management oversight and the overall performance, while management board is responsible for strategy implementation and every day business operations (OECD, 2015). However, SOEs can also have one-tier boards with or without the presence of managing directors. The vast majority of SOEs within our sample has two-tier boards. In Montenegro, all SOEs have one-tier boards due to legal stipulation, while in FYR Macedonia SOEs can have one-tier or two-tier board systems depending on category of SOEs to which they belong.

The second area where dissimilarities arise is related to governing models of state ownership. In Slovenia governance of SOEs is in the hands of Slovenian Sovereign

Holding (SSH), while its parallel in Croatia is DUUDI. Personal commission within SSH carries out recruitment process for board membership and sends proposals to shareholders assembly for confirmation (SSH, 2011). All conditions for supervisory board membership are explained in detail in SSH's Rules on supervisory board member selection and other regulatory documents (e.g., level of education, work experience, postulates about non-political involvement etc). In Croatia, the procedure for appointment of supervisory board members is initiated by line ministry, but DUUDI conducts public call. Criteria for board membership is determined by government through adoption of the official decision in which position requirements are defined such as educational level, expertise etc (Narodne novine, 2012). After public call DUUDI creates proposal with justification for each candidate and this proposal is then forwarded to government for adoption.

Contrary to those nomination practices, in Bosnia and Herzegovina and FYR Macedonia line ministries are responsible for monitoring and exercising ownership rights. SOEs are governed in accordance with provisions of the relevant SOEs legislation.[1] Line ministries are creating proposals of decisions on appointment of board members. In Bosnia and Herzegovina this decision is sent to shareholders assembly for confirmation, while in FYR Macedonia it is sent to the government. Aside from the general provisions within the laws detailed criteria for board

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[1] In Bosnia and Herzegovina details regarding nomination and appointment of board members within state-owned enterprises are stipulated in the Law on state-owned enterprises in Bosnia and Herzegovina (Official Gazette of the Federation of Bosnia and Herzegovina, 2012). Law on public enterprises in Macedonia stipulates procedures and criteria for nomination of board members (Official Gazette of the FYR Macedonia, 2013).

membership is not stated and they are usually created by line ministries for each public call.

For Serbia and Montenegro government plays the key role in SOEs governance. SOEs in Serbia are governed by provisions of Law on SOEs, while in Montenegro individual laws provide provisions for governance of SOEs. Criteria for appointment of board members such as education, work experience, level of expertise that board members need to possess are stated in legal provisions in Serbia, while in Montenegro it is only stated that the board members cannot work for SOEs' auditor, perform duty of executive director or be convicted for any crime. The specificity of this model is that line ministry only prepares call for appointment of board members which is then taken over by committee or office for appointments within government. This office announces the process, governs the procedure and decides on candidates which will be proposed. The final decision on appointment of board members is made by government and sent to shareholders assembly for confirmation.

1.2.4 Why six countries of the former SFRY?

Several reasons stem behind our decision to investigate former SFRY's countries. First, the vast majority of prior empirical studies on political interference are related to OECD and BRICS countries while none of them, to the best of our knowledge, was related to these six countries. Second, each of these countries had similar market conditions and legal rules prior to the breakup of the SFRY (Horvat, 1971). Even after declaration of independence and privatization processes, SOEs in these

countries remain quite significant in terms of their size and sectors to which they belong (Bicanic, 2010).

Third, SOEs in these countries are exposed to analogous levels of political pressures with political control being widespread in the state enterprise sector (Transparency International, 2016). Fourth, enhancement of SOEs' performance is one of the main priorities for governments of these countries due to serious budget deficits and high levels of public debt. Moreover, discussion about importance of SOEs' board member professionalisation is present on the governmental level of these countries for several years now. Appointments of knowledgeable and experienced individuals at board level is a precondition for SOE successful performance (Petrovic & Sonje, 2016).

The last reason is related to the fact that countries within our sample might provide useful insights about political interference–SOEs relationship that are present at different stages of transition. Slovenia and Croatia finished their transition with both being EU member states. Serbia and Montenegro are considered to be advanced transition economies that are expected to finish negotiations for EU accession in next couple of years. FYR Macedonia and Bosnia and Herzegovina are rather slow-adjusting transition economies with numerous reforms being on hold.

Despite all the differences in governing models of state ownership and board nomination/appointment procedures, our data shows quite a few similarities among the observed countries. Comparable number of board member changes enables us to investigate nature and drivers of SOEs' board turnover and its relationship with

performance. Rather alike fluctuations of SOE's employment, investment and indebtedness levels around election years in addition to politician's influence in all economic spheres provides us with the opportunity to examine political influence over SOE corporate decisions. Similarities of board members' professional backgrounds and board structure allow us to question whether professional background can influence SOE performance. Therefore, we believe that six countries of the former SFRY provide a unique set-up for analysis of the impact that political mechanisms might have on SOEs' behaviour and performance.

1.2.5 Data

The analysis in this thesis is performed on the hand-collected dataset of 200 SOEs from six countries of the former SFRY for the period 2010-2014. We build a sample through extraction of financial data from Amadeus database. Moreover, we hand-collect board member information (e.g., names, dates of appointment and resignation), their demographic characteristics (e.g., age, gender, nationality) and information about their educational/professional backgrounds (e.g., graduation year, highest degree obtained, area of study, expertise, previous/current employer). In the vast majority of the cases two sources of information are used as to increase data reliability. The final sample used in this thesis contains data on 2,120 board members with 1,000 enterprise-year observations.

1.3 Motivations, research questions and chapter summary

For vast majority of government representatives, attainment and exploitation of power is the ultimate goal (Buchanan & Tullock, 1962). Hence, politicians are frequently enticed to use SOEs as mechanisms through which they can effectuate some political or personal objectives. Lawson (1994) even suggests that SOE behaviour is a consequence of various political processes. However, as noted by Sun, Mellahi, Wright, and Xu (2015) the prior research fails to recognize a possible existence of the informal linkages between business people and politicians. Furthermore, research on relationship between different types of political interference and SOE performance is rather limited. The three empirical chapters within this thesis try to address several literature gaps in an attempt to recognize political interference mechanisms that influence SOE performance/behaviour.

Chapter 2 – Politically Induced Board Turnover, Ownership Arrangements and Performance of SOEs

The first empirical chapter investigates the impact of elections on board member changes and its relationship with profit-oriented performance of SOEs, thus providing new insights on political tie heterogeneity. Board positions within SOEs are reserved for bureaucrats and politically like-minded individuals (Boycko et al., 1996; World Bank, 2006) who are appointed on the basis of their political allegiance. Such appointment practices are considered to be one of the most profound forms of political interference (Barberis, Shleifer, & Vishny, 1998;

Greene, 2014). For that reason, prior empirical studies examined personal level political ties as political interference proxies.

Percentage of politicians/government officials on boards (e.g., Menozzi, Gutierrez Urtiaga, & Vannoni, 2011; Okhmatovskiy, 2010), political connections of CEOs (e.g., Wu, Wu, Zhou, & Wu, 2012), or unlawful discharge of a board chairman or CEO (e.g., Ding, Jia, Wu, & Zhang, 2014) are most frequently used measures for determining the level and consequences of political interference. However, these measures neglect the fact that government officials and political appointees are replaced whenever new government representative or ruling political party is elected (Kernaghan, 1986). In that way governments beholden boards to ensure that they fulfil their interests even when these interests might cause negative performance results (World Bank, 2014a).

Following literature implications, we analyse whether board turnover for SOEs, unlike for private enterprises, complies with political pressures rather than performance results (Vickers & Yarrow, 1988). In that way we try to trace signs of possible informal channels for political interference. The political embeddedness perspective suggests that political interference via boards can bring benefits as well as costs. Hence, we question whether politically induced board member changes create negative effects on SOE performance. Change of board members in the absence of perfect substitution, disrupts the efficient decision-making processes causing organizational inefficiencies and adversely affecting SOE performance

(Sharma, 1985). Furthermore, we recognize that magnitude of these effects could be influenced by SOE's political importance or government ownership models.

For examination of election–board member changes relationship we use panel data fixed effects. Since board member changes cannot influence the occurrence of elections, no reverse causality is assumed. However, poor performance results might lead to change of board members, thus implying the possibility of reverse causality. Hence, panel data instrumental variable (IV) estimator is used for analysis of board member changes–performance relationship. We look at operating and financial performance of SOEs and we employ three different variables of board member changes as to grasp distinct levels of board dynamics.

Our findings suggest that board member changes within SOEs are politically motivated rather than performance induced. Hence, we uncover that board member changes represent an informal channel of political interference. We also reveal that SOEs with higher levels of board member changes encounter lower productivity and profitability levels. These findings suggest that political interference via board member changes causes organizational inefficiencies and poor SOE performance. Moreover, the results show that board member changes are insignificant for performance of large SOEs and SOEs governed by independent government body.

This empirical chapter has several important contributions. First, it provides analysis and empirical evidence which fills in the gap about the nature and drivers of SOEs' board turnover (Grosman, Okhmatovskiy, & Wright, 2016). Previous empirical efforts were mainly streamlined towards examination of political ties and

board composition, while the answers regarding SOE board turnover remained neglected and overlooked. Moreover, we show empirical evidence which confirms theoretical standing that board turnover within SOEs complies with political rather than market forces (Vickers & Yarrow, 1988). Second, we contribute to a more nuanced picture of political tie heterogeneity. We reveal that politically induced board member changes represent an indirect channel of political interference which goes beyond personal political ties. Third, this empirical chapter is the first to link political interference and SOE performance through introduction of election cycles into the board member changes–performance relationship. Hence, we complement the research studies on political embeddedness perspective (e.g., Michelson, 2007) and political view of state ownership (e.g., Krueger, 1990; Shleifer & Vishny, 1997). Additionally, our findings provide important implications for policymakers who are interested in enhancement of SOEs' performance. Criteria for appointment of board members should be defined so that knowledge, skills, and competences represent the main conditions for board membership. Furthermore, adoption of centralized ownership model shields SOEs from political interference.

Chapter 3 – Election driven corporate decisions of SOEs

The second empirical chapter examines the election related manipulation of SOEs' corporate decisions on employment, indebtedness and investment. With the formulation of the opportunistic political business cycles, Nordhaus (1975) is the first to recognize that politicians might engage in pre-election manipulation of macroeconomic outcomes (e.g., economic growth, employment, inflation). The

criticism of this theory led to development of rational political cycles which shifts the focus towards pre-election manipulation of monetary and fiscal policies (Cukierman & Meltzer, 1986; Rogoff, 1990; Rogoff & Sibert, 1988). Even though these theories received limited support from empirical studies, the fact that voters keep politicians accountable for economic conditions does not change (Carlsen, 2000; Fidrmuc, 2000; Gelineau, 2013; Lewis-Beck & Whitten, 2013). Therefore, we suggest that previous research failed to recognize some informal mechanisms that enable politicians to influence economic conditions in election periods. Bertrand, Kramarz, Schoar and Thesmar (2007) suggest that aside from altering public policies, politicians might use their power to influence corporate decisions of certain enterprises.

The incumbents are tempted by the national elections to use SOEs' corporate decisions as a transfer mechanism which provides their voters with certain perquisites (Shleifer, 1998). Hence, SOEs' decisions represent a perfect lever to garner voters support. With voters' preferences being highly dependent on the level of employment and economic growth (Schultz, 1995) politicians have a limited leeway to ensure their re-election chances. News about job creation and introduction of investment projects increases probability of their reappointment (Bertrand et al., 2007; Chattopadhyay & Duflo, 2004; Wolfers, 2002). Thus, politicians are enticed to engage in pre-election manipulation of decisions which would generate such news. Since adoption of political decisions depends on SOE boards it is expected to observe greater level of manipulation amongst SOEs with politically dominated boards (Hu & Leung, 2012). Furthermore, SOEs governed by

local self-governments might encounter higher pressures to alter decisions (Li & Zhou, 2005).

Panel data fixed effects estimator is used since we do not have to be concerned about endogeneity and reverse causality problems. Elections are exogenous as well as exempted from any individual enterprise influence since their occurrence is in line with constitution or with some extraordinary circumstances in case of the early elections. Employment, indebtedness and investment represent our dependent variables. Furthermore, we use a three-dummy approach (i.e., pre-election, election, postelection) in an attempt to alleviate any doubt regarding the timing and the reasons stemming behind SOE corporate decision alterations.

The results of this empirical chapter reveal that incumbents' interventions in pre-election and election years lead to increase in SOEs' employment and indebtedness. Conversely, the change of investment levels happens in election and postelection years. Moreover, the results imply that the increase of leverage and number of employees in election periods is more pronounced for SOEs with politically dominated boards. Our findings also suggest that SOEs governed by central governments suffer from election related manipulation of employment levels in pre-election and election years. In contrast, for SOEs governed by local self-governments we observe a significant change of indebtedness in pre-election and election years, as well as significant change of investment levels in postelection years.

With the analysis from this empirical chapter we contribute to the literature in several important aspects. First, we complement the literature on political business cycles through offering a detailed analysis which shows that politicians manipulate SOE corporate decisions. The researchers so far observed manipulation of macroeconomic variables as the main option for increase of incumbents' reappointment chances (e.g., Alesina, Cohen, & Roubini, 1993; Hibbs, 1977; Nordhaus, 1975). However, we shift that focus towards the existence of enterprise level political business cycles. Second, our findings show that alteration of SOE corporate decisions is closely related to provision of election favours to politicians, thus improving our understanding of political embededdness theory (e.g., Okhmatovskiy, 2010).

This chapter also provides some important practical implications on how governance of SOEs could be amended and improved. As to avoid pre-election manipulation of SOEs' corporate decisions a four-year plan regarding employment, indebtedness and investment should be adopted. Amendments or deviations from these four-year plans should be allowed only under special and unpredictable circumstances (e.g., major economic crisis). Moreover, governance of SOEs by independent government body would impede political interference (e.g., Musacchio et al., 2015b; OECD, 2015) and ensure implementation of these four-year plans with clearly defined milestones.

Chapter 4 – Importance of board members' professional background for performance of SOEs

The third empirical chapter explores implications of upper echelons theory (Hambrick & Mason, 1984) by observing how board member idiosyncratic professional experiences might influence SOE performance. Smith et al. (1994) explain that professional thinking and views of individual board members stem from work-related experiences. Moreover, diverse and heterogeneous boards escape group-thinking (Doz & Kosonen, 2007), while their decision making is efficient (Gul, Srinidhi, & Ng, 2011).

Prior empirical studies on board characteristics and heterogeneity are primarily related to gender (e.g., Adams & Ferreira, 2009), tenure (e.g., Hambrick, Geletkanycz, & Frederickson, 1993), age (e.g., Golden & Zajac, 2001; Post, Rahman, & Rubow, 2011), independence (e.g., Devos, Prevost, & Puthenpurackal, 2009; Hermalin & Weisbach, 1988) and foreign directors (e.g., Masulis, Wang, & Xie, 2012). Additionally, the vast majority of studies on occupational diversity is related to private enterprises and specific professions impact. For example, Sisli-Ciamarra (2012) show that bankers are associated with greater leverage, while Kor and Sundaramurthy (2009) find that board members specific industry knowledge leads to sales growth. With this empirical chapter we try to fill in the literature gap on whether occupational diversity of SOE board members is important.

The capability of board members to effectively perform their duties is dependent upon their professional backgrounds (Bazerman & Schoorman, 1983). Therefore, we try to depict how SOE board members who work as professors, in the private

sector or in the government affect SOE performance. Recognizing that political connectedness of these individuals might play a significant role we perform several additional analyses. We look whether the intertwined effect of board members' professional background and political connections on SOE performance differs from the sole effect of professional backgrounds. Furthermore, we examine the effects of board and political capital in an attempt to determine whether knowledge and expertise provide greater performance benefits.

We use panel data fixed effects estimator for examination of the effects that board members' professional backgrounds have on ROE, sales per employee and operating costs. Our results show that presence of professors on SOE boards is positively associated with both, financial and operating performance of SOEs. Contrary to that, board members coming from private enterprises increase operating costs probably because they require higher levels of compensation. Furthermore, negative relationship between government representatives and SOE operational efficiency is observed. This result supports literature implication that government officials usually lack competencies and knowledge for successful performance of board duties. The magnitude and significance of these associations increases with board members being politically connected. Private sector representatives and professors are positively related to operational performance of SOEs with minority private ownership. Lastly, we find that board capital and political capital positively influence SOE financial performance.

This chapter provides few important contributions for the literature. First, our findings enriching understanding of the upper echelons theory by providing evidence that board members' professional background influences performance (Hambrick & Mason, 1984). Second, we complement the prior empirical research on the relationship between individual board member characteristics and performance. The results within this chapter show that board–performance relationship is influenced by individual board member experience, level of education and political connections.

Aside from literature contributions stated above, the analysis performed within this chapter provides important implications for government policies. Our findings reveal what kind of board criteria should be adopted by governments as to ensure that combination of individuals on SOE boards is the optimal one. More specifically, our findings suggest that professors and private enterprise representatives possess the skills-set and expertise which could enhance SOE performance.

1.4 Structure of the thesis

This thesis consists of four further chapters. Chapter 2 examines the relationship between election cycles and board member changes and conducts detailed analysis on how that relationship impacts the performance of SOEs. Chapter 3 explores pre-election manipulation of SOE corporate decisions on employment, indebtedness and investments. Chapter 4 investigates the effects of board members' professional

backgrounds on SOE performance. Chapter 5 summarizes the main findings of the

thesis and discusses implications for future research.

Chapter 2

Politically Induced Board Turnover, Ownership Arrangements and Performance of SOEs[2]

2.1 Introduction

The political view of state ownership asserts that political ties are established through appointments of politically like-minded individuals or bureaucrats that follow certain political interests (Boycko et al., 1996). The primary goal of these appointees is fulfilment of their personal and/or political interests that are not in line with the enterprise value maximization objective (La Porta et al., 2002; Shleifer & Vishny, 1994, 1997). Moreover, these appointees might lack the appropriate knowledge, competences and experience for carrying out board responsibilities (Vagliasindi, 2008a; World Bank, 2014a). In that way, governments constitute SOE boards to ensure that they fulfil their interests even when this may cause negative

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performance (World Bank, 2014a). The main focus of the past empirical research on this topic is related to personal level political ties and government ownership ties within SOEs. Researchers use political connections of CEOs (e.g., Wu et al., 2012), percentage of politicians/government officials on boards (e.g., Menozzi et al., 2011; Okhmatovskiy, 2010), or unlawful discharge of a board chairman or CEO (e.g., Ding et al., 2014) as political interference proxies. These proxies neglect the existence of political ties heterogeneity. Sun et al. (2015) explain that the past research has failed to recognize the informal linkages that might exist between business people and politicians. Therefore, the main question in this chapter is whether political interference goes beyond the establishment of formal political ties and, if so, what kind of informal channels might exist.

Vickers and Yarrow (1988) suggest that for SOEs, board member changes comply with political rather than market forces. Government officials and political appointees are replaced whenever a new government representative or ruling political party is elected (Kernaghan, 1986). In that way, political establishments distance themselves from individuals connected to the previous political administration (Sun et al., 2015), who are unlikely to show loyalty and impartiality for the new political party in power (Kernaghan, 1986). Consequently, board member changes are triggered by election cycles, which thus represent an informal channel for political interference. In addition, board members without direct political ties could suffer from "guilt by association". This refers to punishment of individuals or organizations because of their prior relationship with illegitimate,

disadvantaged, or undesirable individuals or networks (Labianca & Brass, 2006). Hence, even non-politically connected board members might be replaced.

Politically induced board member changes might indicate that the likelihood of board member discharge due to poor performance is much lower for SOEs. Nevertheless, political interference via board member changes may lead to operational inefficiencies and poor SOE performance. The nonexistence of perfect substitution for individual board members creates a time lag before an efficient decision-making process is re-established (Sharma, 1985). Moreover, new board members need time to adapt in order to be able to positively contribute to the decision-making processes (Smith et al., 1994). Recognizing that performance depends on board decisions, politically motivated board member changes might have negative effects on SOE performance. The magnitude of these effects could be influenced by the interplay of the SOE's political importance and the government ownership ties.

In this chapter we examine the relationship between election cycles and board member changes and we analyse how that relationship impacts the performance of SOEs in six countries of the former SFRY. Our hand-collected dataset has financial and board member information for 200 SOEs from 2010 to 2014. We examine election–board member changes and board member changes–performance relationship using panel data fixed effects and a panel data instrumental variable (IV) estimator, respectively.

The decision to investigate SOEs in countries of the former SFRY is based on several reasons. First, these countries had similar legal frameworks, market rules and ways in which they govern state ownership (Horvat, 1971). Coherent patterns could be depicted by looking at the level of state ownership, their number, and the sectors in which they operate (Bicanic, 2010). Even though each of these countries chose its own path after achieving independence, all of them still face similar problems (e.g., level of indebtedness, staggered economic activity, and political instability). Second, despite privatization efforts during the past 20 to 30 years, the degree of state ownership in these countries is still high. The absolute number of SOEs in each of these countries might indicate that the degree of state ownership is quite distinctive, but when we take into account the employment percentage for which SOEs are accountable, similarities become apparent. Third, our data reveal that countries within our sample have analogous levels of board member changes. Therefore, the six countries of the former SFRY provide a unique set-up for examining the influence of board member changes on performance of SOEs.

In addition to the above stated, the motivation to focus on the board member changes is related to the increase of the public pressures when it comes to the way in which individuals obtain/lose SOE board membership. Journalists of daily newspapers started investigating the ways in which SOEs are governed. The headlines and the stories behind them mainly investigated why responsibility of the boards for the poor performance of SOEs is non-existent and who provides the support for questionable board decisions and board memberships. For example, the article from March 2010 published in Blic states that Serbia kept the practice of

appointing political party members to SOE boards because of the certain political interests (Spasic, 2010). Moreover, in the aftermath of the Serbia's 2012 elections political party negotiations about government constitution encompassed negotiations about SOE board memberships (Valtner, 2012). Exactly in that year the ruling political party changed as well as the majority of SOE board members. In Bosnia and Herzegovina politicians appoint their family and political party members to SOE boards as found by Karabeg (2014). Croatian Vijesti also show that political parties control SOEs through their board members (Cigoj, 2013). Furthermore, the article also revealed that a year and a half after the elections most of the board members that belonged to the previous political regime were replaced. Similar headlines and behaviour of political leaders in other countries from our sample can also be found. However, when questioned, political leaders from these countries explain that there is no evidence of political board member changes or negative consequences of such practices even if they exist. Hence, our research tries to provide empirical evidence for such practices that could lead to policy changes.

The results show that board member changes within SOEs are politically motivated rather than performance induced. We also uncover the informal channel of political interference via board member changes. Furthermore, we find a negative and significant relationship between politically induced board member changes and performance of SOEs. The relationship is stronger for operating than for financial performance. Our estimates also indicate a greater presence of political interference in small and medium size SOEs. Additionally, we find that board member changes

are insignificant for the performance of SOEs governed by independent government body.

This research contributes to the existing literature in several important aspects. First, we respond to a recent call by Grosman et al. (2016) to fill in the gap regarding the nature and drivers of board turnover within SOEs. We offer a detailed analysis and empirical evidence for Vickers and Yarrow's (1988) theoretical standing that board member changes within SOEs comply with election cycles (political force) rather than poor performance results (market force). Second, we introduce politically induced board member changes as a new proxy for political interference within SOEs. With this proxy we recognize that political interference goes beyond personal political ties of CEOs, board chairmen, or a portion of board members and takes into account the dynamics of the entire board. Third, we complement research studies on the political view of state ownership (e.g., Krueger, 1990; Shleifer & Vishny, 1997) and the political embeddedness perspective (e.g., Michelson, 2007) with our novel empirical approach to political interference. More specifically, we investigate the link between political interference and performance of SOEs by introducing the election cycles into the board–performance relationship. Fourth, we contribute to the literature which investigates the factors that influence SOE performance. We show that political interference via unstable board membership engenders poor performance. Frequent board member changes disrupt board dynamics, thus creating numerous operational inefficiencies (Sharma, 1985).

Aside from the contributions stated above, our research might have important government policy implications. First, we acknowledge that adoption of a certain ownership model can lead to improvement or deterioration of SOE performance. Our findings suggest that adoption of the centralized ownership model lowers the level of political interference within SOEs. Secondly, through policy changes governments could create new board appointment procedures for SOEs. The procedures would be formulated so that knowledge, skills and business acumen represent key qualities that induvial needs to possess in order to be considered for SOE board membership.

The chapter is organized as follows. Section 2.2 presents the literature review and hypotheses on politically induced board member changes and its relationship with profit-oriented performance of SOEs. Section 2.3 describes data and explains methodology used in this chapter. Empirical results are presented and discussed in Section 2.4. Section 2.5 summarizes the main conclusions and provides implications for future research.

2.2 Literature review and hypothesis development

2.2.1 Politically induced board member changes

The primary goal of politicians is attainment, exploitation and maintenance of power (Buchanan & Tullock, 1962). In order to accomplish that, politicians use SOEs for personal or political gains that are not in line with the profit maximization objective as implied by the political view of state ownership (Chong & Lopez-de-Silanes, 2005; Krueger, 1990; Shleifer & Vishny, 1997). Consequently, board

positions are reserved for politically loyal and obedient individuals (World Bank, 2006) or bureaucrats who are ready to pursue certain political interests (Boycko et al., 1996). The practice of appointing board members on the basis of their political allegiance and not qualifications and business acumen is one of the most profound forms of political interference (Barberis et al., 1998; Greene, 2014; Wong, 2004).

Politically construed board appointments enable politicians to influence and control the decision-making processes within SOEs. For that reason, government officials do not have an incentive to appoint the best candidates for board membership as these decisions need to have a political justification (Hu & Leung, 2012). Opper, Nee, and Brehm (2015) argue that political connections and political evaluations are the only parameters for selection of government officials and managers. They explain that political leaders tend to allocate key positions to like-minded individuals with whom they can associate their interests. Furthermore, politicians and individuals with alike interests dominate SOE boards (Yoshikawa, Zhu, & Wang, 2014). Hence, the shift of political power or even substitution of political leaders triggers replacements of government officials and political appointees (Kernaghan, 1986).

Along those lines, Vickers and Yarrow (1988) argue that within SOEs, board turnover complies with political rather than market forces. They suggest that board member changes within SOEs are caused by political disagreement/lack of political obedience/election cycles rather than poor performance results. Shleifer and Vishny (1994) find that Greek elections won by an opposing party result in the overturn of

top managers within SOEs. With board member changes, politicians want to avert any likelihood that their power might be destabilized and ensure a network of loyal individuals in key positions (Dittmer & Wu, 1995; Li & Bachman, 1989). Consequently, change of politically connected board members due to election cycles can be observed as an informal channel for political interference. To gain additional insights, we propose the following hypothesis:

Hypothesis 1. Board member changes within SOEs are politically motivated rather than performance induced.

2.2.2 Performance and political interference via board member changes

Political interference via boards and political connections can create both, benefits and costs, as suggested by the political embeddedness perspective. On the one hand, political ties are considered to be a relational asset that provides enterprises with access to valuable governmental resources, thus leading to a better enterprise performance (Boubakri, Cosset, & Saffar, 2012; Faccio, 2006; Pfeffer & Salancik, 1978). Several studies demonstrate that enterprises benefit from political connections through preferential access to financing (e.g., Chen, Shen, & Lin, 2014; Dinc, 2005; Inoue, Lazzarini, & Musacchio, 2013; Khwaja & Mian, 2005), increased probability for getting government contracts (e.g., Goldman, Rocholl, & So, 2009; Goldman, So, & Rocholl, 2013) or subsidies (e.g., Wu & Cheng, 2011), payment of lower taxes (e.g., Adhikari, Derashid, & Zhang, 2006), lower regulatory enforcement (e.g., Agrawal & Knoeber, 2001), possibilities for influencing regulatory policies (e.g., Hillman, 2005), and provision of bail-out for financially

troubled enterprises (e.g., Faccio, 2006). On the other hand, political ties enable government representatives to manipulate SOEs' resources to promote political or personal interests with negative consequences on SOE performance (Krueger, 1990; Shleifer & Vishny, 1994). Political ties in those cases cause excessive employment levels (e.g., Menozzi et al., 2011), distorted investment efficiency, and lower capital allocation efficiency (e.g., Chen, Sun, Tang, & Wu, 2011). The costs of political ties might outweigh the benefits with presence of government officials on boards (Okhmatovskiy, 2010).

Unlike for private enterprises, governance of SOEs is in the hands of three different interest groups: citizens as principals and ultimate owners, governments as fiduciary agents, and boards as direct agents (Capobianco & Christiansen, 2011; Musacchio et al., 2015b). The agency theory asserts that fiduciary and direct agents may choose to pursue some private benefits at the expense of wealth maximization for principals (Fama & Jensen, 1983; Jensen & Meckling, 1976). Fear of dismissal is one of the main tools for alignment of interests of agents and principals, which ensures that managers work in the best interest of the owners (Holstrom, 1979; Ross, 1973).

The presence of politically motivated board member changes implies that the fear of dismissal might not be effectuated in the case of SOEs. Several authors explain that SOE boards lack the managerial incentives for pursuance of efficiency and profitability objectives (Boardman & Vining, 1989; Boubakri, Cosset, & Saffar, 2008; Vickers & Yarrow, 1988). This is due to political interference, which lowers

the likelihood of discharge because of poor performance results. Therefore, the question in the case of SOEs is whether politically induced board member changes might cause a negative effect on their performance. Sharma (1985) argues that frequent board member changes cause inconsistent decision-making processes that result in organizational inefficiencies and poor performance. An enterprise's performance depends on board decisions, while board decisions rely on collective judgment and deliberation, which alters with board member changes. Hence, decisions are kept in a state of flux and away from real implementation, which in the end impinges on the enterprise's performance (Sharma, 1985). Crutchley, Garner, and Marshall (2002) find that greater board stability is associated with enhanced enterprise performance. We therefore propose the following hypothesis:

Hypothesis 2. Politically induced board member changes are negatively associated with SOE performance.

In addition to what is noted above, the literature indicates that politicians might use the economic power of large enterprises to improve the likelihood of their re-election (Bertrand et al., 2007). Moreover, they might influence the corporate decisions of large SOEs in order to preserve their political power (Bertrand et al., 2007). For those reasons, large SOEs are considered to be one of the essential trophies in the aftermath of elections. The previous research studies suggest that politically connected directors are prevalent in large enterprises (Faccio, 2006; Su & Fung, 2013). The greater number of politically connected directors is found within large SOEs, due to their political importance (Menozzi et al., 2011).

Contrary to that, small and medium SOEs are less important because of their limited market power and curtailed influence on the re-election outcome. Considering that politicians appoint like-minded individuals to key positions (Opper et al., 2015) and that political appointees are replaced after elections (Kernaghan, 1986), greater numbers of board member changes are expected among large SOEs. Consequently, unstable boards of large SOEs might endanger their performance as a result of a considerable number of short-term decisions beneficial for politicians. However, as media are more likely to investigate large SOEs (O'Connell, 1995), politicians might opt to interfere with boards of small and medium size SOEs. In order to investigate these implications of the literature, we propose:

Hypothesis 3a. Politically induced board member changes are negatively associated with the performance of large SOEs.

Hypothesis 3b. Politically induced board member changes are less negatively associated with the performance of small and medium SOEs than of large SOEs.

2.2.3 Government ownership ties and political interference via ownership models

The research studies on government ownership ties analyse how state ownership affects performance (e.g., Ding et al., 2014), how government-business networks operate in cases of minority state ownership (e.g., Inoue et al., 2013; Wang, Hong, Kafouros, & Wright, 2012), and whether interaction of personal and ownership ties produces some differentiating effects (e.g., Sun et al., 2015). Furthermore, researchers recognize that political connections to local and central governments

can have distinct effects on enterprise performance (e.g., Fan, Wong, & Zhang, 2007; Zheng, Singh, & Mitchell, 2015). Zheng et al. (2015) found that political ties to local governments improve enterprise performance because of the closer alignment between SOEs' and politicians' interests.

Governments can exercise their political or personal interests via interference of ownership entities in day-to-day operations of SOEs and/or board nomination procedures (World Bank, 2006). The property-rights theory explains that non-transferability of SOEs' ownership leads to the lack of incentives for government entities to perform their monitoring function comprehensively (De Alessi, 1969, 1973). Furthermore, Wong (2004) argues that politicians and bureaucrats who sit on these governmental bodies are poor overseers of state ownership. Therefore, the level of political interference depends on the ownership model adopted by governments as well as its structure.

Governments can choose between three different ownership models. They can opt for a decentralized model where line ministries are accountable for SOEs (Musacchio et al., 2015b; OECD, 2012). As the second option they have a dual model in which line ministry and "central" ministry (usually Ministry of Finance) jointly exercise ownership rights (Vagliasindi, 2008b). Governments can also decide to adopt a centralized model where an independent government body is responsible for ownership function over all or a vast majority of SOEs (PwC, 2015; World Bank, 2014a). Table 2.1 reveals that countries within our sample have distinctive governing models for state ownership. In Slovenia and Croatia, an

independent government body governs SOEs, while in Bosnia and Herzegovina and FYR Macedonia line ministries bear the responsibility of managing state ownership. The government de facto plays the key role in governing SOEs in Serbia and Montenegro (government ownership model), despite the fact that this responsibility is de jure in hands of line ministries.

The theory and literature clearly indicate that a centralized model should be adopted by governments as it curtails opportunities for political interference (World Bank, 2014a). Contrary to that, several government bodies in decentralized and dual models can compete for influence over SOEs, creating contradictory and conflicting goals that can undermine their performance (Musacchio et al., 2015b; World Bank, 2006). Furthermore, board member nomination and appointment procedures within centralized ownership models are insulated from political pressures since they are based on professional criteria - expertise and knowledge of individuals (World Bank, 2014a). For all other ownership models, ministry cabinets interfere in these processes, thus enabling appointments of politically connected individuals. The nomination procedures as well as criteria for board membership outlined in Table 2.1 imply that politicians in Slovenia and Croatia have a rather limited space for interference. The independent government body conducts public calls for board members on the basis of predetermined criteria. Serbia and Montenegro follow completely opposite procedures within their quasi decentralized model. The nomination procedure in these countries is led by the governmental committee or office for appointments, which enables direct political interference. Therefore, SOEs in countries with centralized ownership models should experience a lower

level of political interference, and thus a limited effect on their performance. In accordance with the previous literature and implications regarding different models adopted by countries within our sample, we introduce our last hypothesis:

Hypothesis 4. The performance of SOEs in countries with government ownership models suffers more from politically induced board member changes than does the performance of SOEs in countries with centralized ownership models.

[Insert Table 2.1 about here]

2.3 Data and Methodology

2.3.1 Sample and Data Collection

Our sample contains financial and board membership data about 200 SOEs from six countries of the former SFRY for the period 2010-2014. We construct our sample through extraction of data from the Amadeus database on the basis of two criteria. The first criterion is that the enterprise operates in one of the six former SFRY's countries. The second criterion is that the ultimate owner of the enterprise is public authority, state, or government with a minimum 50.01% of direct or indirect ownership. We use this cut-off point for three main reasons. First, OECD (2015) in its guidelines on corporate governance of SOEs, defines a SOE as an enterprise with 100% or majority state ownership. Second, this cut-off point conveys effective government control. Third, prior empirical research demonstrates

that enterprises with minority state ownership have a lower number of political connections, thus implying a lower level of political interference (e.g., Wu et al., 2012).

Based on the country and ownership criteria, 556 enterprises are identified as state-owned. From that sample we exclude all enterprises that declared bankruptcy, as their real performance could not be observed. Moreover, we delimit our sample by removing enterprises from the financial sector (e.g., banks, insurance enterprises), since they have distinct financial reporting and higher levels of corporate governance due to legal requirements (e.g., Goldeng, Grunfeld, & Benito, 2004; Haniffa & Hudaib, 2006). In addition, we remove all providers of health, social, and cultural services since they are established in order to achieve some non-commercial objectives (e.g., Bozec et al., 2002). Lastly, we exclude enterprises for which data are not available (e.g., Faccio, 2010). After applying all of these restrictions, our final sample encompasses 200 SOEs.

We download standardized balance sheet and profit and loss items, ownership data, industry code, date of incorporation, number of employees, and board membership information from the database. We fill in any missing financial data from SOE annual reports. For enterprises that do not report their financial data in EUR we make a conversion using exchange rates applied by Amadeus to ensure data standardization. Furthermore, all financial data used in our research is in constant 2009 EUR.

Due to limited availability of board member data in the database, we hand-collect data on numerous board member characteristics (e.g., names, dates of appointment and resignation, political connectedness, level of education, previous/current position, subsequent position) to complement the missing data. The collection of board level data is based on the predetermined definition of boards. As already noted, SOEs can have two-tier boards (supervisory and management board) or one-tier boards with or without the presence of managing directors. In our research we follow the definition of OECD (2015) and World Bank (2014a), and we define "board" as an enterprise body that monitors management and governs enterprise. Table 2.2 shows that the vast majority of SOEs within our sample have two-tier boards. In Montenegro, all SOEs follow a one-tier board system due to legal stipulations, while in FYR Macedonia SOEs can have one-tier or two-tier board systems depending on the category of SOEs to which they belong.

[Insert Table 2.2 about here]

For the extraction of the board-level missing data we use official financial and annual reports of enterprises, databases of official enterprise registry agencies, data published on stock exchanges, and individual decisions of shareholder assemblies on the appointment and resignation of board members. Overall, we have data on 2,120 board members, which makes our dataset the first of its kind for this part of Europe.

Even though it may be argued that our sample is small, several facts need to be considered. First, we exclude SOEs whose inclusion might lead to misleading results following the implications of previous research studies mentioned above. Second, availability of data for SOEs worldwide is rather scarce, and we include all SOEs for which data are available. Third, our sample is larger or comparable to the sample sizes of similar studies (e.g., Menozzi et al. (2011) employ a sample of 114 Italian SOEs).

Notwithstanding, we acknowledge that usage of annual data and a short sample period might suggest that our estimates are more influenced by short-term effects. Unavailability of the data for the period that is longer than five years enables us only to observe the effects of ten parliamentary and ten local elections. In cases where elections happened in the first observed year (i.e., 2010) or the last one (i.e., 2014) we cannot determine the trend of any board member changes or SOE behaviour changes (this is only in terms of comparison with pre-election or postelection periods).

The short sample period also limits our ability to investigate whether board member changes happen only due to a ruling political party change. In four out of six observed countries the change of political party happened during parliamentary elections, but this is far from enough observations for a solid empirical analysis. We also take into account that certain board member changes happen due to retirement or the death of individual board members. However, we lack the data on whether certain board members resigned for some personal reasons (voluntarily) in

election years or it was a forced resignation imposed by the government. Additionally, due to the short sample size and frequency of election cycles we are not able to determine whether instability of board membership would be observed in the longer periods with no elections.

2.3.2 Variables and Measures

In our study we employ two performance measures, following the approach taken in previous research studies (e.g., Boardman & Vining, 1989; Boubakri et al., 2008; Bozec et al., 2002; Dewenter & Malatesta, 2001; Ding et al., 2014; Hu & Leung, 2012; Menozzi et al., 2011; O'Connell & Cramer, 2010). We use return on equity (*ROE*) as a profitability measure and *Sales per employee* as an operating and productivity measure. *ROE*, which is a proxy of return on shareholders' investments, is computed as the ratio of net income to average total equity. *Sales per employee* is the natural logarithm of the sales over the total number of employees. It is a well-established fact that accounting-based measures may suffer from financial manipulations. However, employment of standardized audited financial data provides sufficient reliability of these performance measures (Goldeng et al., 2004; O'Connell & Cramer, 2010). Despite some limitations of accounting measures, evidence from previous research studies implies that they are adequate proxies of economic rates of return (Vining & Boardman, 1992). In addition, we do not use any stock market measures since the vast majority of SOEs from our sample are not listed on stock exchanges, while the level of liquidity of traded stocks is not sufficient for valid estimations (e.g., Okhmatovskiy (2010) recognizes the same problem for investigation of SOE performance and political

ties in Russia). Moreover, Ding et al. (2014) explain that usage of market performance measures is not well suited for investigation of political interference. Due to efficient markets, political interference would be immediately reflected in stock prices. Thus, market measures might not grasp its effect.

We also employ three different measures of board member changes. *Board turnover* is the percentage of the total number of board members in the observed year who left at the end of the year after spending at least one year on the board (e.g., Franks & Mayer, 2001). *Board political turnover* is the percentage of the total number of board members in the observed year who are politically connected and who left at the end of the year after spending at least one year on the board. *Board intermediary* shows the number of board members who left in the observed year with tenures shorter than one year. This measure is employed to grasp the within-year board dynamics. In order to grasp board dynamics not captured by *Board intermediary*, we employ variables that show the number of board members who left the board within one year (*Board leavers*) and the number of board members appointed in the same period (*Board appointments*). With employment of these measures, we take into account political connectedness of all board members, thus creating a new proxy for political interference.

Our definition of politically connected board members takes into consideration definitions of political connectedness from previous literature (e.g., Faccio, 2006, 2010; Menozzi et al., 2011; Zheng et al., 2015). Hence, within the scope of our study we define politically connected board members as: (1) those who hold or held

position in central or local government, parliament, or some other governmental body; (2) those who are members of the political party; (3) those who participated in election cycles as citizen representatives; (4) those who have close relationships (e.g., relatives, friends) with current/past, government/parliament officials or political party representatives.

Bearing in mind the political view of state ownership and standing of Vickers and Yarrow (1988), who suggest that board member changes within SOEs are a result of political rather than market forces, we employ two variables that represent political force. *Parliamentary* and *Local* elections are dummy variables that take value one in the year of elections and zero for other years.[3] In addition, we use these variables as instruments for the board member changes–performance relationship due to potential endogeneity issues.

In our models we introduce several other board characteristics as suggested in the previous research. Board members with short tenures cannot adapt and contribute positively to the board decision-making processes (Smith et al., 1994). This can create a time lag (Sharma, 1985) with negative performance consequences. However, board members with long tenures are more likely to be replaced, thus increasing board member changes. Hence, we employ *Board tenure*, which is

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[3] The dummy variable for parliamentary elections takes value one for the following years and countries: 2010-Bosnia and Herzegovina; 2011-Croatia, FYR Macedonia, Slovenia; 2012-Serbia, Montenegro; 2014-Bosnia and Herzegovina, FYR Macedonia, Serbia, Slovenia. Following the same approach, the dummy variable for local elections takes value one in: 2010-Bosnia and Herzegovina, Montenegro, Slovenia; 2012-Bosnia and Herzegovina, Serbia; 2013-Croatia, FYR Macedonia; 2014-Montenegro, Serbia, Slovenia. Both of these dummy variables are time variant.

calculated as the average time that board members spent on the board (e.g., Ding et al., 2014; McIntyre, Murphy, & Mitchell, 2007). *Board size* is computed as the total number of board members, and as such appears in previous research models related to political connections (e.g., Ding et al., 2014; Okhmatovskiy, 2010). Furthermore, Yermack (1996) suggests that board size has a negative effect on performance since a greater number of board members leaves room for greater political interference. Male-dominated boards tend to make consensus decisions without appropriate evaluation of alternatives since such board homogeneity leads to group thinking (Janis, 1972). We therefore employ *Board male* as the percentage of men on board.

Since SOEs differentiate among themselves, we employ several enterprise-level controls. SOEs are sometimes used for employment purposes, so it is often argued that an increase in the number of employees leads to lower performance results (Fan et al., 2007). Therefore, we employ *Size*, which is calculated as the natural logarithm of the total number of employees, to control for absolute availability of resources (e.g., Hu & Leung, 2012; Menozzi et al., 2011; Vining & Boardman, 1992; Zheng et al., 2015). Hannan and Freeman (1989) explain that dissolution risk is associated with years of existence. Hence, we control for the period of SOEs' *Existence*, which is computed as the natural logarithm of the difference between years under investigation and year of SOE incorporation (e.g., Goldeng et al., 2004; Sun et al., 2015; Tian & Lau, 2001). Additionally, Gilson (1990) indicates that board member changes are common among financially distressed enterprises. We therefore control for *Leverage* as the measure of long-term debt over shareholders' equity (e.g., Faccio, 2010). Furthermore, recognizing that differences across countries might

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impact our results and following prior literature (e.g., Boubakri et al., 2012), we employ *GDP*, which represents the logarithm value of the gross domestic product at purchasing power parity (GDP PPP). We obtain data on GDP PPP from the World Bank online database. Definitions for all variables employed within this chapter are provided in Table 2.3.

[Insert Table 2.3 about here]

2.3.3 Methodology

Empirical studies that examine the relationship between political interference and performance of enterprises use mainly five different methods. The methods are: (i) event study; (ii) logistic regression; (iii) regression analysis using OLS; (iv) panel data fixed-effects; (v) instrumental variable approach. The first type of methods is applied in the seminal paper of Sun et al. (2015) for investigation of interconnectedness of political ties and enterprise cumulative abnormal returns in the presence of an adverse high-profile event in China. Within our research context we don't have an event happening in all countries at the same point in time. Furthermore, stock market data in unavailable for our sample and elections do not represent a sudden, unpredictable, exogenous event. Therefore, this research method is not suggested for our research. The second method is applied in the examination of sensitivity of top management turnover to accounting measures of

enterprise performance (e.g., Hu and Leung, 2012). This method envisages that the dependent variable is binary and since that is not the case for our dependent variable we cannot apply this method.

The third method is used by Menozzi et al. (2011) in their investigation of relationship between political connections and SOE performance in Italy. The OLS estimator is not efficient as it ignores the panel structure of the data and is thus, not applicable in the context of our research. Even Menozzi et al. (2011) note that there is a problem in applying OLS when one of the independent variables is endogeneous to the fixed effect error term, thus violating assumption of OLS consistency and creating a "dynamic panel bias". Thus, they also use the fourth method in their research study.

The fourth and fifth methods are the most commonly used in research studies of political interference effect on performance (e.g., Menozzi et al., 2011; Su & Fung, 2013; Xu, Zhu, & Lin, 2002; Zeng et al., 2015). With the panel data fixed-effects we mitigate the risk of some unobserved enterprise characteristics and we control for any differences that might exist among countries.[4] Moreover, Su and Fung (2013) explain that usage of fixed-effects model lowers the probability of the omitted variable problem.

Endogeneity appears whenever the expected value of the error term is not equal zero and when there is a correlation between independent variable and the error

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[4] Prior to our decision to employ fixed-effects, we run Durbin-Wu-Hausman test that shows better performance of fixed-effects model than random-effects model.

term. This can be caused by one of the following: (1) omitted variable - a variable that is relevant cannot be measured and proper proxy cannot be found; (2) measurement error in regressor; and (3) reverse causality. Research papers that investigate the political interference-performance relationship independently from the econometric methodology and measure of political interference that they employ all acknowledge possible presence of endogeneity within their estimations (e.g., Menozzi et al., 2011; Xu et al., 2002). Therefore, we use instrumental variable approach as to resolve the potential issue of reverse causality in our estimations.

It is also important to mention that we have to be aware of predictive and causal power of the estimated results. The predictive power of estimated results enables us to assess the potential associations between variables without the direction of those associations. The causal power enables us to recognize causes to effects relationship that shows us what happens to the effect when cause changes.

To identify whether board member changes are politically induced (Hypothesis 1), we run a following fixed effects model:

$$
\begin{aligned}
Board\ member\ changes_{i,t} = \alpha\ &+ \beta_1 Parliamentary_{i,t} + \beta_2 Board\ size_{i,t} +\\
&\beta_3\ Board\ tenure_{i,t} + \beta_4 Board\ male_{i,t} + \beta_5\ Size_{i,t-1} +\\
&\beta_6 Performance_{i,t-1} + u_i + \delta_t + \varepsilon_{i,t} \qquad (2.1)
\end{aligned}
$$

where i is the SOE id, t is the year effect, α is the intercept, and $\varepsilon_{i,t}$ denotes the error term. SOE specific fixed effects are captured by u_i, while time-fixed effects are depicted by δ_t.

Board member changes is a dependent variable represented by three measures, namely *Board turnover*, *Board intermediary*, and *Board political turnover*. We run the regressions only with parliamentary elections as it is not possible to distinguish between the effects of local and parliamentary elections in years in which they occur simultaneously. Due to the greater importance of parliamentary elections, we believe that they create more profound effects on board member changes.

Significant coefficient for variable *Parliamentary* might indicate that board member changes are politically motivated. We assume no reverse causality, since board member changes cannot influence the occurrence of elections. The occurrence of elections is prescribed by the constitution, while early elections are decided based on certain political or economic reasons and they are not announced because of the board member changes within SOEs. As it can be noted, variables *Size* and *Performance* are lagged, since these variables can have non-instantaneous association with board member changes. *Performance* is represented by *ROE* and *Sales per employee*.

To investigate the relationship between politically motivated board member changes and SOE performance (Hypothesis 2), we estimate the following equation:

$$
\begin{aligned}
Performance_{i,t} = \alpha + \ & \beta_1 Board\ member\ changes_{i,t} + \beta_2 Existence_{i,t} + \beta_3 Size_{i,t} \\
& + \beta_4 Leverage_{i,t} + \beta_5 GDP_{i,t} + \beta_6 Board\ size_{i,t} + \\
& \beta_7 Board\ tenure_{i,t} + \beta_8 Board\ male_{i,t} + \varepsilon_{i,t} \qquad (2.2)
\end{aligned}
$$

where *i* is the state-owned enterprise id, *t* is the year effect, α is the intercept, and $\varepsilon_{i,t}$ is the error term. *Performance* is a dependent variable that is represented by

ROE and *Sales per employee*. *Board member changes* is an independent variable of our main interest and is represented by *Board turnover*, *Board intermediary*, and *Board political turnover*.

As mentioned above when determining the estimation technique, we take into account that every research study on performance and board characteristics can suffer from endogeneity. For our model, the literature implies a possibility of reverse causality: the poor performance of enterprises could lead to board member changes. In order to address endogeneity issues, we estimate our models using a panel data IV estimator, which can be implemented by *ivreg2h*.[5] This approach provides instruments identification when external instruments are not available or when there is a need to supplement external instruments with generated ones as to improve IV estimator efficiency (Baum, Lewbel, Schaffer, & Talavera, 2012; Lewbel, 2012).

The *ivreg2h* implements Lewbel's (2012) generated instruments approach, which consists of two stages. In the first stage, each of the *n* endogenous variables ($\varphi_i...\varphi_n$) is regressed on exogenous variables ($x_1...x_k$) using OLS. The generated predicted residuals ($\hat{u}_i...\hat{u}_n$) from this step are then multiplied by demeaned endogenous variables $z_i = (\varphi_i - \bar{\varphi}_i)\hat{u}_i$ as to construct instrument vector $z_1...z_n$ for each $i \in 1...n$. Within the second stage, we run the two-step IV-GMM, where board member changes are treated as endogenous and are instrumented by the internally

---

[5] *ivreg2h* is an instrumental variables estimation using heteroscedasticity based instruments and Stata command that was written by Baum and Schaffer (2012). *ivreg2h* uses a two-step GMM estimation. This technique was used by several researchers (e.g., Bremus & Buch, 2015; Mishra & Smyth, 2015).

generated instruments. In addition to those instruments, we create a vector of externally selected instruments that are likely to have a direct effect on board member changes but not performance of SOEs.

The instruments include *Parliamentary* and *Local* elections as they might create a non-instantaneous impact on SOE performance via board member changes. Furthermore, the use of these two instrumental variables enables us to grasp and acknowledge their mutual effect. In addition, for estimations of *Board turnover* and *Board political turnover*, we use within-year board dynamics as an instrument.

We first estimate model (2.2) for the whole sample and then we re-estimate it within two sets of sub-samples. To test Hypotheses 3a and 3b, we divide our sample on the basis of median value for the number of employees. In that way we can investigate whether differences in political importance of large, and small and medium SOEs are present. Additionally, we want to recognise whether there are any differences among SOEs that are governed by different ownership models (Hypothesis 4). For that reason, we depict SOEs that are governed by two distinct and completely opposite ownership models - independent centralized body (Slovenia and Croatia) and government governance (Serbia and Montenegro). In all estimations with *Board intermediary*, we employ two additional variables, *Board leavers* and *Board appointments*, to grasp additional layers of board dynamics.

2.3.4 Sample and summary statistics

Table 2.4 presents summary statistics for all variables in our estimations. In Panel A we report performance characteristics of SOEs. We can conclude that during the

observed period the average financial SOE performance is negative since the average value of *ROE* is -5%. The average *Sales per employee* is equal to €190.72 ($225.29). Based on Panel D we can see that SOEs within our sample exist for 28 years on average and that they have on average 676 employees. The average *Leverage* is 33%, which is similar to findings of previous research studies (e.g., 28.14% for politically connected enterprises (Faccio, 2010)).

Panel B of Table 2.4 reports summary statistics for board characteristics. On average, boards of SOEs have five members, which is in line with good corporate governance practice suggested by OECD. Boards are male dominated since on average 81% of board members are men. The average *Board tenure* is approximately two years, while 0.33 board members spent less than one year on boards. The average turnover of all board members is 19%, which is almost 50% higher than what Franks and Mayer (2001) find for quoted German industrial and commercial enterprises. In addition, the average turnover of politically connected board members is 10%. On average, approximately 1.5 board members are appointed to boards each year, while 1.3 board members leave the board.

[Insert Table 2.4 about here]

Table 2.5 presents further analysis of board member changes by country in the period 2010-2014. Five out of six countries have average board turnover between

17% and 21%, while for other measures of board member changes analogous values are noted. Moreover, the proportion of the total board members who left the board in each of the countries is approximately 60%. Therefore, we can conclude that in countries within our sample, board member changes follow quite similar patterns, thus providing us with a unique set-up for investigation of political interference–performance relationship within SOEs.

[Insert Table 2.5 about here]

The summary statistics regarding elections by countries and years are presented in Table 2.6. Countries from our sample went through ten parliamentary and ten local elections in the period 2010-2014. With the exception of Croatia and Montenegro all other countries went twice through the parliamentary election cycles, while exception from the two local election cycles is observed in Croatia and FYR Macedonia. The shift of the ruling party is observed in four countries during parliamentary elections, while in one country a change of the political party with the second biggest political influence is observed (Table 2.7).

[Insert Table 2.6 about here]

[Insert Table 2.7 about here]

The Figure 2.1 depicts periods before and after parliamentary elections. The average before and after parliamentary elections is equal to 3 years, with shortest periods recorded for Slovenia (i.e., 1 year) and Serbia and FYR Macedonia (i.e., 2 years).

[Insert Figure 2.1 about here]

Table 2.8 reports correlations among variables. The correlation coefficients do not raise any potential issues with multicollinearity.

[Insert Table 2.8 about here]

2.4 Empirical results and discussion

2.4.1 Main results

Figures 2.2 to 2.4 provide an overview of the proportion of board member changes by year and country, thus disclosing the link between board member changes and elections. They show that the proportion of board member changes increases in

most cases during election and postelection years.[6] Figure 2.2 points out that the proportion of *Board turnovers* is higher in seven out of nine election years and in five out of six postelection years. Similarly, the proportion of *Board intermediary* rises in four out of nine election years and in three out of six postelection years (Figure 2.3). In election years, the proportion of *Board political turnover* increases in five out of nine cases and in postelection years in five out of six cases, as outlined in Figure 2.4. Therefore, similarities among all three measures in election and postelection years are observed, implying the existence of the link between the election cycles and board member changes within SOEs.

[Insert Figure 2.2 about here]

[Insert Figure 2.3 about here]

[Insert Figure 2.4 about here]

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[6] For countries where elections happened at the beginning or end of the observed period, we are not able to observe prior or post levels of board member changes. In Bosnia and Herzegovina, the elections took place in 2010, so we cannot observe whether the level of board member changes increased due to the lack of data for 2009. Therefore, we count out this election year when we calculate the number of years in which there was an increase of board member changes in an election year. We apply same reasoning for postelection years for which the data is not available, and we therefore discuss nine election years and six postelection years in Figures 1, 2, and 3. Since these cases represent the minority, we do not have a reason to believe that they would significantly change our conclusions.

Table 2.9 shows the relationship between elections and board member changes. We find that board member changes are higher during election years. In parliamentary election years *Board turnover*, *Board intermediary*, and *Board political turnover* increase by approximately 9%, 23%, and 4% respectively. Moreover, previous year profitability (*ROE*) and productivity levels (*Sales per employee*) are insignificant. Hence, performance as a proxy of market force is not likely to induce board member changes within SOEs. These findings support our Hypothesis 1 and the contention of Vickers and Yarrow (1988) that board member changes within SOEs happen due to political rather than market forces. Moreover, these results validate the usage of election variables as instruments for board member changes.

[Insert Table 2.9 about here]

Table 2.9 reveals one more important finding. The impact of *Parliamentary* elections is much greater for changes of all board members (9%) than for changes of only politically connected board members (4%). Thus, our results suggest that non-politically connected board members suffer from social distancing and guilt by association syndrome (Labianca & Brass, 2006; Yoshikawa et al., 2014). Yoshikawa et al. (2014) explain that outside board members without political connections are likely to be faced with social distancing since a powerful owner can replace them. The newly elected politicians assume that non-politically connected board members are loyal to previous political regimes, and with their change

politicians want to avert any likelihood that their power might be destabilized (Dittmer & Wu, 1995). Therefore, our results imply that informal political ties might exist within SOEs and that they go beyond the establishment of personal political ties. A larger magnitude of the *Board intermediary* change in election years (23% vs. 9% and 4%) might indicate that politicians have the tendency to appoint temporary boards with up to three-month tenures. The temporary boards enable politicians to take over the control of certain SOEs right after the elections while deciding which individuals deserve these positions in the long run based on their political loyalty and obedience.

Other results from Table 2.9 show that *Board tenure* has a significant positive effect on *Board turnover* and *Board political turnover*. The increase in the time spent on boards implies that board members will be replaced as the end of their mandate is approaching. Contrary to that, *Board tenure* has a negative effect on *Board intermediary*. With increase in time spent on boards, fewer board members with tenures shorter than one year are replaced. The percentage of men on boards seems to have an insignificant effect, while increase in *Board size* increases the number of board member changes. Moreover, an upsurge in number of employees results in a lower number of board member changes. Fan et al. (2007) argue that evaluation of SOE boards depends also on certain social responsibilities, such as an increase in employment levels. Hence, when employment levels are low there is a greater likelihood of a board member change. Within our estimations we employ variance inflation factors (VIF) and we find no evidence of multicollinearity.

Table 2.10 presents the IV results for the board member changes–performance relationship. We find that political interference via board member changes deteriorates SOE performance. The estimates show a significant negative relationship between *Board turnover* and SOEs' financial and operating performance, thus supporting our Hypothesis 2. Moreover, *Board intermediary* is negatively associated with financial performance and is insignificant for operating performance of SOEs. The descriptive statistics in Table 2.4 show that SOEs in our sample have on average five board members with average *Board turnover* of approximately 20% (during one year one board member leaves the board). In terms of economic significance, the results from Table 2.10 imply that the change of one board member (*Board turnover* increase of 20 percentage points) results in a 3.2 percentage points decrease in *ROE* and 16.6% decrease in *Sales per employee*. The change of one board member with less than a year tenure decreases ROE by 0.01 percentage points. Contrary to that, we find that *Board political turnover* has negative but insignificant association with both financial and operating performance of SOEs. This might imply that non-politically connected board members represent a more valuable "asset" for SOEs. Previous studies point out that politically connected board members are appointed on the basis of their political loyalty and not their professional qualifications (Barberis et al., 1998). For that reason, their change might not influence performance of SOEs. However, we recognize that further analysis in this regard is needed as to be able to create a well-based conclusion. In spite of insignificance, the negative sign supports our findings of negative association between board member changes and performance of SOEs.

[Insert Table 2.10 about here]

The negative association suggested by our results confirms findings of Crutchley et al. (2002) that greater stability of board membership enhances enterprise performance. Moreover, our results support Anderson and Chun (2014), who investigate the impact of board turnover on performance of the S&P 500 enterprises. Their results show that the lowest levels of performance are observed for enterprises in which five or more board members were changed over three years. Essentially, frequent board member changes disrupt decision making, leaving procedures and implementation processes unattended (Sharma, 1985). The non-existence of perfect substitution for individuals, as noted by Sharma (1985), postpones re-establishment of efficient working dynamics within boards. In addition, frequent board member changes contribute to the lack of long-term perspective and dedication of individuals who sit on boards, thus disrupting creation of sound strategic orientation. Consequently, performance that is dependent from board member deliberation and board decisions is negatively affected by unstable board memberships that are politically induced.

Table 2.10 also shows significant positive relationship between *Board size* and SOE operating performance. This result is different from findings of Hermalin and Weisbach (2003) and Menozzi et al. (2011), but it seems to support resource dependence theory in this regard. The theory asserts that larger boards are able to

establish a greater number of external links, thus securing access to crucial resources (Pfeffer & Salancik, 1978). Moreover, *Board tenure* is positively associated with performance of SOEs, since longer tenures imply greater familiarity of board members with business operations. We also find that board members leaving the board or being appointed to the board have negative effect on operating performance. This is related to the appearance of the time lag that represents the period of adjustment to the new board dynamics (Sharma, 1985). In addition, the presence of women on boards does not improve performance of SOEs.

Results for control variables in Table 2.10 imply that larger SOEs have lower operating performance. Enterprise *Existence* indicates that older enterprises have higher levels of efficiency, probably due to better established procedures and prolonged market experience. Macroeconomic conditions (*GDP*) seem not to have an effect on performance, which is consistent with findings of previous research studies (e.g., Boubakri et al., 2012). Increase in *Leverage* has a negative effect on financial performance, as it creates higher levels of financial distress while at the same time creating positive effects on productivity levels, likely due to investments in fixed assets, which improve efficiency.

The second step of our main analysis investigates whether the political importance of large SOEs alters the board member changes–performance relationship. Our results in Table 2.11 suggest a significant negative relation between board member changes and performance of small and medium SOEs and insignificant relation for large SOEs. These results are inconsistent with our Hypotheses 3a and 3b, and the

findings of Bertrand et al. (2007), which assert that politicians use large SOEs to improve the likelihood of their re-election. However, our results are in line with findings of Wu et al. (2012), who analyse the impact of political connections on SOE performance in China. They explain that due to the importance of central SOEs (which are at the same time large) for the normal functioning of private enterprises, governments tend not to use those enterprises for fulfilment of their political goals. Garrone, Grilli, and Rouseseau (2013) find that the effect of political interference on large utility SOEs in Italy is uncertain. In addition, large enterprises are usually under the eye of the media (O'Connell, 1995), and politicians may opt not to reveal themselves and jeopardize their position.

Contrary to the above, small and medium SOEs are used by local officials for personal and political goals to secure their political power (Wu et al., 2012). Jin, Yingyi, and Weingast (2005) reveal that local officials are politically pressured to increase local employment and they do so through SOEs. In addition, several other reasons might provide explanation for our results. First, large SOEs have established procedures and systems that function despite board member changes, unlike small and medium size SOEs. Moreover, small and medium SOEs usually suffer from a lack of supervision and procedures, thus relying to a greater extent on board decision-making processes. Consequently, political interference via board member changes affects board deliberation, decision making, and performance of small and medium SOEs. The results for all other variables are consistent with the results for the whole sample.

[Insert Table 2.11 about here]

Within the last step of our main analysis we determine whether different governing models for state ownership create any dissimilarities in the board member changes–performance relationship. Table 2.12 presents results for the centralized model in Panel A and results for the government model in Panel B. The results imply that for SOEs under the centralized model, politically induced board member changes are insignificant in terms of their performance. The insignificant result is in line with literature which suggests that independent body governing state ownership curtails opportunities for political interference within SOEs (Musacchio et al., 2015b). However, these results do not mean a complete absence of politically induced board member changes but rather that they are not prevailing and that even when present they do not create negative consequences for performance. Moreover, board nomination and appointment procedures within the centralized model are based on professional qualifications of individuals and not their political loyalty (World Bank, 2014a).

The results in Panel B imply positive board member changes–performance relationship in countries with government model. This result could be in line with the efforts of the governments of Serbia and Montenegro to professionalise board membership. Due to this result and its implication we do not find the support for our Hypothesis 4. Other results in Table 2.12 are consistent with results for the

whole sample such as enterprise size, enterprise existence, etc. As it can be noted, *GDP* and *Leverage* are excluded from re-estimations in both subsamples. The reason for this is related to the significant drop in the number of observations, while the results of estimations with and without these variables are analogous.

[Insert Table 2.12 about here]

2.4.2 Robustness tests

The robustness of previous results can be checked in several ways. In order to prove consistency of the results for election–board member changes relationship, we perform two re-estimations. First, we re-estimate the model (2.1) by controlling for leverage and the percentage of board members with PhD degrees. In Table 2.13, we observe consistent results regarding the effects of elections on board member changes, while SOE performance remains insignificant. These results strengthen the argument that board member changes are politically induced. Interestingly, the percentage of board members with PhD degrees has negative significance for *Board intermediary*. Board members with higher qualifications are expected to possess a greater level of expertise and knowledge, and as such they are less likely to be replaced in short periods of time.

[Insert Table 2.13 about here]

Second, we check the possibility that the effect of *Parliamentary* elections is non-instantaneous through employment of lagged *Parliamentary* in model (2.1). As seen in Table 2.14, we find negative significant coefficient for *Board turnover*, thus confirming the literature implication that politicians want to ensure position and power as soon as they are elected. The negative significance for *Board intermediary* supports the notion that politicians use temporary boards in election years. Moreover, we find insignificant coefficient for *Board political turnover*. As it can be seen the performance stays insignificant for board member changes. Hence, results of these robustness checks support our main finding that board member changes are politically motivated rather than performance induced.

[Insert Table 2.14 about here]

The robustness of results for board member changes–performance relationship is tested through re-estimation of the model (2.2). First, we rerun the model with different macroeconomic control variables (e.g., real GDP, inflation) and enterprise level controls (e.g., total debt/equity as leverage measure, growth opportunities). The results of these regressions suggest the negative association between *Board turnover/Board intermediary* and SOE performance, thus supporting the findings presented in Table 2.14.

Second, it is possible that our enterprise level and board level controls have the delayed effect on SOE performance. Therefore, we re-estimate the model (2.2) with lagged enterprise level controls and the results of this re-estimation are presented in Table 2.15. We find a significant negative relationship of *Board turnover* with both measures of performance. *Board intermediary* stays significant and negative for operating performance.

[Insert Table 2.15 about here]

Third, we re-run the model (2.2) with lagged enterprise and board level controls (Table 2.16). The significance of *Board turnover* in this estimation remains for financial performance, while *Board intermediary* loses its significance. Interestingly, the coefficient on *Board political turnover* becomes significant for financial performance. This result might imply that after controlling for certain delayed effects, the loss of certain political connections negatively affects SOE performance. The signs and significance for other variables in all robustness checks are quantitatively similar to the ones reported.

[Insert Table 2.16 about here]

Thirdly, the level of state ownership might influence the number of appointed individuals with political connections. Therefore, we introduce state ownership as one of the control variables in our model specification. However, since state ownership didn't change in the observed period for the individual SOEs and it is time invariant, the variable is dropped from our model re-estimation results.

In addition to all the above explained robustness tests, we also try to complement our analysis on endogeneity using the difference-in-differences (DID) approach with fixed-effects regression as shown in Table 2.17. One of the main concerns in corporate governance empirical research is related to the fact that certain regressions might fail to obtain causal inference due to omitted variable bias. The bias is partly addressed by the fixed-effects estimations which deal with unobserved individual characteristics, but not with unobserved confounders. The DID approach enables us to control for unobserved events/characteristics that might confound interpretation. This approach integrates fixed effects estimators with the causal inference analysis (Angrist & Pirschke, 2008). In simple words, the DID is used to estimate the effect of a specific exogenous event (treatment) by comparing the change in outcomes between a group that was exposed to a treatment (treatment group) and a group that is not (control group). Hence, this approach removes biases that might be a consequence of some permanent differences between two groups, when comparisons of the observed groups are performed (Abadie, 2005). But how we can apply this to our research context?

One of the main goals of our research is to determine whether SOE board member changes happen due to certain political reasons and not due to poor SOE performance. In our context elections represent a specific event that does not happen at the same point in time in all countries within our sample. Therefore, we can construct a treatment group that encompasses SOEs in the country with elections in year *t*, which we match with a control group that encompasses SOEs in the country that do not have elections in the year *t*. With DID we can then determine whether a difference between board member changes within treatment and control group is higher or lower in election and postelection year.

We start implementation of the DID approach through creation of the treatment and control group by using binary variable *Treatment*. This variable takes value 1 for enterprises in Serbia and Montenegro (treatment group) and 0 for Bosnia and Herzegovina (control group). We also create the *Election* dummy variable, which takes value 1 for 2012 and 0 otherwise. This is due to the fact that in Serbia and Montenegro, parliamentary elections were held in 2012 and in the same year there were no parliamentary elections in Bosnia and Herzegovina. In addition, we create a *Postelection* dummy variable which takes value 1 for 2013 and 0 otherwise. Both variables are employed within our estimation in order to control for time trends. We also create two interaction variables, *Treatment*election* and *Treatment*postelection*, to be able to detect differentiating effect of elections on the board member changes in the treatment group versus the control group. The following models are then estimated:

$$Board\ member\ changes_{i,t} = \alpha + \beta_1 Election_{i,t} + \beta_3 Treatment * election_{i,t} +$$
$$\beta_3 Board\ size_{i,t} + \beta_4\ Board\ tenure_{i,t} + \beta_5 Board\ male_{i,t}$$
$$+ \beta_6\ Size_{i,t-1} + \beta_7 Performance_{i,t-1} + u_i + \delta_t + \varepsilon_{i,t}$$

$$Board\ member\ changes_{i,t} = \alpha + \beta_1 Postelection_{i,t} + \beta_3 Treatment * postelection_{i,t}$$
$$+ \ \beta_3 Board\ size_{i,t} + \beta_4\ Board\ tenure_{i,t} +$$
$$\beta_5 Board\ male_{i,t} + \beta_6\ Size_{i,t-1} + \beta_7 Performance_{i,t-1} +$$
$$u_i + \delta_t + \varepsilon_{i,t}$$

where i is the SOE id, t is the year effect, α is the intercept, and $\varepsilon_{i,t}$ denotes the error term. SOE specific fixed effects are captured by u_i, while time-fixed effects are depicted by δ_t. Before estimating our models, we match enterprises in terms of size and industry.

The intertwined effects of parliamentary and local elections limit our ability to clearly specify the treatment effect. Consequently, the significance of our results is absent. Considering that parliamentary and local elections happen in different years in different countries, it is quite difficult to depict the treatment and control groups in which board member changes are not influenced by effects of some post or pre-election cycles. Therefore, differentiating effect of the treatment becomes insignificant due to the decrease in difference between board member changes within the treatment and control group. Notwithstanding, the positive sign for both interaction variables suggests that in countries with elections, board member changes are higher in election and postelection years than in countries with no elections. We tried re-estimating the model with different specification of the treatment and control groups. In all cases, the interaction variables have positive

sign but remain insignificant, which additionally confirms the interplay of post and/or pre-election effects.

[Insert Table 2.17 about here]

2.5 Conclusions

Prior literature recognizes the general contingency of personal-level political ties and their values/costs for performance of enterprises, but it neglects the examination and analysis of their heterogeneity. Previous research studies fell short in recognizing the informal channels through which politicians and businesspeople might influence each other (Sun et al., 2015). Considering that, our study examines whether election cycles rather than poor SOE performance results lead to board member changes as well as how these board member changes relate to the performance of 200 SOEs in six countries of the former SFRY.

Overall, our results reveal that board member changes are politically motivated rather than performance induced. We also find that political interference via instable board membership is negatively associated with performance of SOEs. In addition, our findings imply that the significance and magnitude of this association depends on the SOE's political importance and ownership models. The results show that politically induced board member changes are insignificant for performance of large SOEs and SOEs governed by an independent government body.

The empirical findings of this study have several important implications. They reveal a more nuanced picture of political tie heterogeneity and show another channel for political interference within SOEs. In that way, we extend the political embeddedness perspective by enabling multilevel investigation of political influence and its impact on the behaviour of SOEs. Unlike previous research studies, our study also acknowledges the importance of differentiation among government ownership ties on the basis of adopted ownership models. Our findings in this regard might have important implications for policymakers. In particular, the results show that policymakers should adopt a centralized ownership model to create a shield from political interference. Recognizing that a centralized ownership model might not be appropriate for all countries due to their specificities, policymakers can at least ensure that appointment of board members is based on knowledge, skills, and competences rather than political allegiance.

Even though we have undertaken a careful analysis we acknowledge that our study has several limitations that suggest implications for future research. First, further examination of the characteristics of replaced board members (e.g., expertise, work experience) will enrich the understanding of why board member changes increase in years of elections. Second, in our study we do not take into account that board member changes might depend on distinct personal political ties. For example, board members working in private enterprises with political connections are less likely to be replaced than government officials with direct political ties. Such analysis would provide us with insights regarding the underlying mechanisms of politically induced board member changes. Third, as noted within the political

embeddedness perspective, political ties create certain benefits as well as costs. Therefore, empirical research that would disentangle benefits and costs of individual board replacements in years of elections would provide us with better understanding of the impact of politically induced board member changes on SOE performance.

Table 2.1

Governing models for state ownership, appointment procedures and criteria for board membership

	Governance model adopted	Procedure for appointment of board members	Criteria for board membership
Bosnia and Herzegovina	**Decentralized ownership model** Line ministries are responsible for monitoring and exercising ownership rights.	Line ministries create decision proposals on appointment of board members. The proposal is sent to shareholders' assembly for confirmation. The details about procedures are stipulated in the Law on SOEs in Federation of Bosnia and Herzegovina (Official Gazzete of the Federation of Bosnia and Herzegovina, 2012).	Aside from the general provisions within the laws detailed criteria for board membership is not stated and the criteria is usually determined by line ministries for each individual public call.
Croatia	**Centralized ownership model** Independent government body DUUDI is responsible for monitoring and exercising ownership rights.	The procedure for appointment of supervisory board members is initiated by line ministry, but DUUDI conducts the public call. After public call DUUDI creates a proposal with justification for each candidate and this proposal is then forwarded to government for adoption.	Criteria for board membership is determined by government through adoption of the official decision in which position requirements are defined e.g., educational level, expertise (Narodne novine, 2012).
FYR Macedonia	**Decentralized ownership model** Line ministries are responsible for monitoring and exercising the ownership rights.	Line ministries create proposals of decisions on appointment of board members. The proposal is sent to the government for adoption. The details about procedures are stipulated in the Law on public enterprises in Macedonia (Official Gazzete of the FYR Macedonia, 2013).	Aside from the general provisions within the laws detailed criteria for board membership is not stated and the criteria is usually determined by line ministries for each public call.
Montenegro	**Government ownership model** The quasi decentralized model in which de facto the government governs SOEs, while de jure line ministries are responsible.	The line ministry prepares a call for appointment of board members. Governmental committee or office for appointments takes over the call, announces the process, governs the procedure and decides on candidates to be proposed. The final decision on appointment is made by government and sent to shareholders' assembly for confirmation.	The only criteria stated in legal provisions is that board members cannot work for SOEs' auditor, perform duty of executive director or be convicted for any crime.
Serbia	**Government ownership model** The quasi decentralized model in which de facto the government governs SOEs, while de jure line ministries are responsible.	The line ministry prepares a call for appointment of board members. Governmental committee or office for appointments takes over the call, announces the process, governs the procedure and decides on candidates to be proposed. The final decision on appointment is made by government and sent to shareholders' assembly for confirmation.	Criteria for appointment of board members such as education, work experience and level of expertise is stated in legal provisions of Serbian laws (e.g., Law on SOEs).
Slovenia	**Centralized ownership** Independent government body called Slovenian Sovereign Holding is responsible for monitoring and exercising ownership rights.	Personal commission within Slovenian Sovereign Holding carries out recruitment process for supervisory board membership and sends proposals to shareholders' assembly for confirmation (Slovenian Sovereign Holding, 2011).	The Slovenian Sovereign Holding's Rules on supervisory board member selection and other regulatory documents provide detailed criteria for supervisory board membership (e.g., level of education, work experience, postulates about non-political involvement etc).

Notes: Description of governing models for state ownership, appointment procedures, and criteria for board membership in six countries of the former SFRY for the period 2010–2014.

Table 2.2
Board and ownership characteristics

ONE TIER VS. TWO TIER	
Number of SOEs with one-tier board system	Number of SOEs with two-tier board system
14	186

OWNERSHIP STRUCTURE		
Number of SOEs with 100% state ownership	Number of SOEs with minority shareholders	Number of SOEs with significant minority shareholder
102	86	12

ORIGIN OF SIGNIFICANT MINORITY SHAREHOLDER	
Domestic	Foreign
3	9

OWNERSHIP ENTITY	
Direct government control	Indirect government control via local self-government
102 SOEs	98 SOEs

Notes: Board and ownership characteristics of 200 SOEs from six countries of the former SFRY.

Table 2.3

Definition of variables

Variable name	Variable definition
Return on equity (ROE)	The ratio of net income to average total equity
Sales per employee	The natural logarithm of the sales over the total number of employees
Board turnover	The percentage of the total number of board members in the observed year who left at the end of the year after spending at least one year on the board
Board political turnover	The percentage of the total number of board members in the observed year who are politically connected and who left at the end of the year after spending at least one year on the board
Board intermediary	The number of board members who left in the observed year with tenures shorter than one year
Board leavers	The number of board members who left the board within one year
Board appointments	The number of board members appointed to the board within one year
Parliamentary	The dummy variables that take value one in the year of parliamentary elections and zero for other years
Local	The dummy variables that take value one in the year of parliamentary elections and zero for other years
Board tenure	The average time that board members spent on the board
Board size	The total number of board members
Board male	The percentage of men on board
Size	The natural logarithm of the total number of employees
Existence	The natural logarithm of the difference between years under investigation and year of SOE incorporation
Leverage	The measure of long-term debt over shareholders' equity
GDP	The logarithm value of the gross domestic product at purchasing power parity (GDP PPP)

Notes: This table provides definition of variables employed in this chapter.

Table 2.4

Descriptive statistics

	Mean	Median	Std	Obs
Panel A: Performance measures				
ROE	-0.05	-0.02	0.22	957
Sales per employee	190.72	96.26	919.24	971
Panel B: Board level measures				
Board turnover	0.19	0.13	0.27	1,000
Board intermediary	0.33	0.00	1.12	1,000
Board political turnover	0.10	0.11	0.18	1,000
Board size	5.38	6.00	3.10	1,000
Board male	0.81	0.83	0.19	919
Board tenure	2.12	1.92	1.21	919
Board appointments	1.53	1.00	2.19	1,000
Board leavers	1.33	0.00	2.05	1,000
Panel C: Political interference measures				
Parliamentary	0.34	0.00	0.47	1,000
Local	0.28	0.00	0.45	1,000
Panel D: Control variables				
Existence	28.12	21.00	23.99	977
Size	675.53	488.00	1517.72	989
Leverage	0.33	0.31	0.64	817
GDP	55847.84	57540.00	24252.24	1,000

Notes: This table reports descriptive statistics for key variables. The sample covers 200 state-owned enterprises from Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro, Serbia and Slovenia for the period 2010-2014. Please note that for the variables that are used in logarithm form within our estimations in this table we report non-logarithm values. Panel A reports the summary statistics for state-owned enterprise performance variables. *ROE* is the ratio of net income to average total equity. *Sales per employee* is the natural logarithm of sales over the total number of employees. In panel B the summary statistics for board level variables are reported. *Board turnover* is the percentage of the total number of board members in the observed year who left at the end of the year after spending at least one year on the board. *Board intermediary* shows the number of board members who left in the observed year with tenures shorter than one year. *Board political turnover* is the percentage of the total number of board members in the observed year who are politically connected and who left at the end of the year after spending at least one year on the board. *Board size* is the total number of board members. *Board male* is the percentage of men on board. *Board tenure* is the average time that board members spent on the board. *Board appointments* is the number of board members appointed to the board within one year. *Board leavers* is the number of board members that left the board within one year. Panel C reports the summary statistics for political interference variables. *Parliamentary* is a dummy variable which takes value 1 in years of parliamentary elections. *Local* is a dummy variable which takes value 1 in years of local elections. In Panel D the summary statistics for control variables are reported. *Existence* is the natural logarithm of the difference between years under investigation and year of SOE incorporation. *Size* is the natural logarithm of the total number of employees. *Leverage* is equal to long-term debt over shareholders' equity. *GDP* is the logarithm of GDP PPP.

Table 2.5
Board member changes per country

MEAN VALUES OF BOARD MEMBER CHANGES PER COUNTRY						
	Bosnia and Herzegovina	Croatia	FYR Macedonia	Montenegro	Serbia	Slovenia
Board turnover	0.17	0.21	0.33	0.21	0.20	0.18
Board intermediary	0.25	0.35	0.30	0.32	0.58	0.32
Board political turnover	0.09	0.14	0.08	0.16	0.10	0.07

PROPORTION OF CHANGED BOARD MEMBERS						
	Bosnia and Herzegovina	Croatia	FYR Macedonia	Montenegro	Serbia	Slovenia
Total number of board members	474	620	40	144	148	694
Number of board members who left the board	306	383	40	81	90	427
Proportion of board members who left the board	64.56%	61.77%	100%	56.25%	62.50%	61.53%

Notes: This table reports the mean values of board member changes per country as well as proportion of changes board members.

Table 2.6

Years of parliamentary and local elections

	Bosnia and Herzegovina		Croatia		FYR Macedonia		Montenegro		Serbia		Slovenia	
	Par.	Loc.	Par.	Loc.	Par.	Loc.	Par.	Loc.	Par.	Loc.	Par.	Loc.
2010	X	*						*				*
2011			X		X						X	
2012		*					X		X	*		
2013				*		*						
2014	X				X			*	X	*	X	*

Notes: This table presents the years of parliamentary and local elections in each of the countries within our sample. Parliamentary elections are marked with X and local elections with *.

Table 2.7

Ruling party change

Parliamentary elections					
	Bosnia and Herzegovina	Croatia	FYR Macedonia	Montenegro	Serbia	Slovenia
2010	Change					
2011		Change	No change			Change
2012				No change	Change	
2013						
2014	No change				No change	Change

Notes: This table presents the presence/absence of the ruling party change in years of parliamentary elections.

Figure 2.1

Periods between elections

92
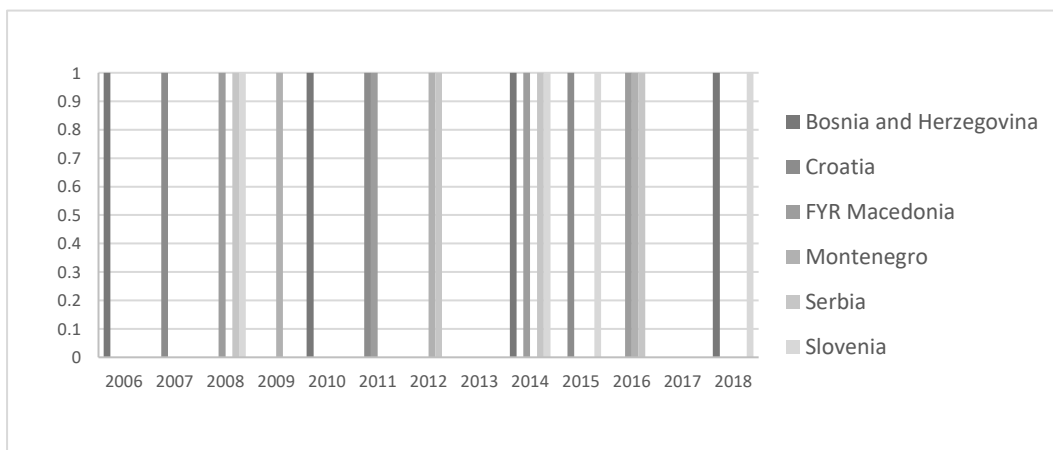
Table 2.8

Pearson's correlation matrix

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
1. ROE	1.0000															
2. Sales per employee	0.1210***	1.0000														
3. Board turnover	0.0220	0.0306	1.0000													
4. Board intermediary	-0.0653	0.0301	0.4361***	1.0000												
5. Board political turnover	0.0295	-0.0067	0.8040***	0.3062***	1.0000											
6. Board size	0.0319	0.3255***	0.3619***	0.3299***	0.3032***	1.0000										
7. Board male	0.0922***	0.0496	-0.0453	-0.0033	-0.0164	0.0380	1.0000									
8. Board tenure	0.0648**	-0.0157	-0.0593	-0.2337***	-0.0065	-0.1897***	0.0652	1.0000								
9. Board appointments	-0.0322	0.0951***	0.3329***	0.4947***	0.2596***	0.6047***	-0.0221***	-0.4615***	1.0000							
10. Board leavers	0.0027	0.1219***	0.8366***	0.4778***	0.6792***	0.6535***	-0.0331***	-0.1429***	0.5496***	1.0000						
11. Parliamentary	0.0031	0.0047	0.0604**	0.0229	0.0294	-0.0719**	-0.0155	0.0363	-0.0781***	0.0002	1.0000					
12. Local	0.0096	0.1129***	-0.0130	-0.0134	-0.0194	0.0125	0.0093	-0.0210	0.0080	-0.0236	-0.0660**	1.0000				
13. Existence	0.0197	0.2079***	-0.0585**	-0.0805***	-0.0422	0.1168***	0.0782**	0.1066***	-0.0348	-0.0230	0.0053	0.0158	1.0000			
14. Size	0.0200	0.0820***	0.0219	0.0826***	0.0231	0.3353***	0.2403***	-0.733***	0.1745***	0.1417***	-0.0419	0.0055	0.1910***	1.0000		
15. Leverage	-0.2327***	0.1342***	0.0275	0.0913***	-0.0012	0.1360***	0.0327	-0.0504	0.1038***	0.0892***	-0.0251	-0.0252	-0.1277***	0.1731***	1.0000	
16. GDP	0.0248	0.2613***	0.0102	0.0248	-0.0171	0.2238	0.0216***	-0.0888***	0.1081***	0.0816***	-0.0046	-0.0189	0.2413***	0.1681***	0.1834***	1.0000

Notes: ***, ** and * indicate significant at 1%, 5% and 10%, respectively.

Figure 2.2
Proportion of board turnovers per year and country
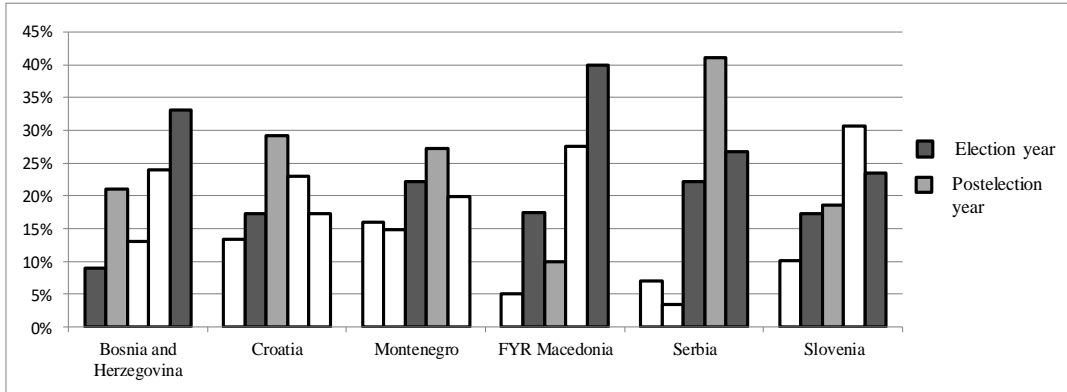
Notes: Proportion of the total number of board members in the observed year who left at the end of the year after spending at least one year on the board.

Figure 2.3
Proportion of board intermediary per year and country
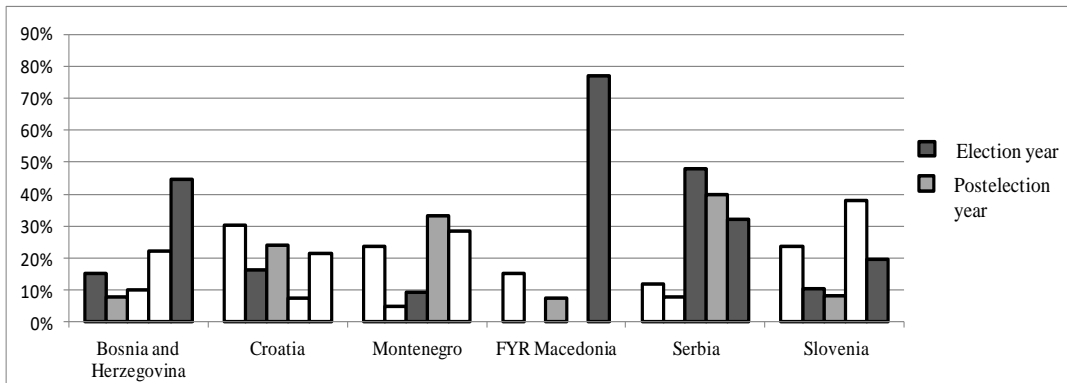
Notes: Proportion of the total number of board members who left in the observed year with tenures shorter than one year.

Figure 2.4
Proportion of board political turnovers per year and country

Notes: Proportion of the total number of board members in the observed year who are politically connected and who left at the end of the year after spending at least one year on the board.

Table 2.9

Effect of elections on board member changes

	BOARD TURNOVER		BOARD INTERMEDIARY		BOARD POLITICAL TURNOVER	
	(1)	(2)	(3)	(4)	(5)	(6)
Parliamentary	0.088***	0.093***	0.233**	0.235**	0.040***	0.043***
	(0.022)	(0.023)	(0.091)	(0.091)	(0.014)	(0.015)
Board size	0.081***	0.081***	0.226***	0.223***	0.046***	0.046***
	(0.007)	(0.007)	(0.060)	(0.059)	(0.005)	(0.005)
Board tenure	0.048***	0.049***	-0.177***	-0.182***	0.035***	0.037***
	(0.014)	(0.015)	(0.061)	(0.059)	(0.011)	(0.011)
Board male	-0.045	-0.066	-0.227	-0.232	-0.063	-0.078
	(0.121)	(0.123)	(0.311)	(0.318)	(0.077)	(0.079)
Size (t-1)	-0.072***	-0.073**	-0.160	-0.108	-0.004	0.001
	(0.025)	(0.032)	(0.142)	(0.141)	(0.014)	(0.018)
ROE (t-1)	0.000		0.023		-0.010	
	(0.073)		(0.218)		(0.048)	
Sales per employee (t-1)		0.016		0.123		0.024
		(0.033)		(0.105)		(0.028)
No. of Obs.	722	732	722	732	722	732
R^2 Within	0.30	0.29	0.21	0.21	0.23	0.22
Prob>F	0.000	0.000	0.000	0.000	0.000	0.000
Mean VIF	1.10	1.18	1.10	1.18	1.10	1.18

Notes: The table presents the results for the relationship between board member changes and election cycles. Fixed effects panel data was used. First panel (columns (1) and (2)) show results for the board turnover-election relationship. Second panel (columns (3) and (4)) present results for the board intermediary-election relationship. Third panel (columns (5) and (6)) present results for the board political turnover-election relationship. In columns (1), (3) and (5) lagged *ROE* is performance measure. In columns (2), (4) and (6) lagged *Sales per employee* is performance measure. Robust standard errors are reported in parentheses. In all regressions a constant term is estimated but not reported. ***significant at 1%, ** significant at 5%, * significant at 10%. *Board turnover* is the percentage of the total number of board members in the observed year who left at the end of the year after spending at least one year on the board. *Board intermediary* shows the number of board members who left in the observed year with tenures shorter than one year. *Board political turnover* is the percentage of the total number of board members in the observed year who are politically connected and who left at the end of the year after spending at least one year on the board. *Parliamentary* is a dummy variable which takes value 1 in years of parliamentary elections. *Board size* is the total number of board members. *Board tenure* is the average time that board members spent on the board. *Board male* is the percentage of men on board. *Size* is the natural logarithm of the total number of employees. *ROE* is the ratio of net income to average total equity. *Sales per employee* is the natural logarithm of sales over the total number of employees.

Table 2.10

Effect of board member changes on SOE performance: Whole sample

	ROE	Sales per employee	ROE	Sales per employee	ROE	Sales per employee
	(1)	(2)	(3)	(4)	(5)	(6)
Board turnover	-0.158*	-0.826*				
	(0.094)	(0.426)				
Board political turnover			-0.205	-0.983		
			(0.147)	(0.685)		
Board intermediary					-0.010*	0.011
					(0.018)	0.077
Existence	-0.036**	0.216***	-0.037**	0.213***	-0.027	0.213***
	(0.016)	(0.069)	(0.017)	(0.073)	(0.016)	(0.066)
Size	-0.010	-0.113**	-0.008	-0.101**	-0.003	-0.119***
	(0.009)	(0.046)	(0.009)	(0.045)	(0.010)	(0.043)
Leverage	-0.096***	0.175***	-0.100***	0.157**	-0.096***	0.194***
	(0.031)	(0.066)	(0.031)	(0.067)	(0.030)	(0.064)
GDP	0.028	0.184	0.030	0.200	0.036	0.148
	(0.027)	(0.123)	(0.027)	(0.125)	(0.027)	(0.123)
Board size	0.009*	0.171***	0.009	0.164***	-0.001	0.249***
	(0.005)	(0.026)	(0.006)	(0.028)	(0.008)	(0.032)
Board tenure	0.020**	0.011	0.023***	0.024	0.021**	-0.049
	(0.009)	(0.047)	(0.009)	(0.046)	(0.009)	(0.052)
Board male	0.123*	-0.067	0.135**	-0.004	0.136**	-0.020
	(0.068)	(0.340)	(0.067)	(0.338)	(0.063)	(0.341)
Board leavers					0.009	-0.100**
					(0.010)	(0.040)
Board appointments					-0.000	-0.101**
					(0.008)	(0.040)
No. of Obs.	427	424	427	424	427	424
Mean VIF	1.36	1.37	1.35	1.35	1.81	1.82
Underidentification LM statistic P val	0.00	0.00	0.00	0.00	0.00	0.00
Hansen J statistic P val	0.98	0.12	0.56	0.02	0.51	0.09

Notes: The table presents the results for estimation of board member changes and SOE performance. IV estimation using heteroskedasticity-based instruments (*ivreg2h*) was used. In columns (1) and (2) *Board turnover* is the measure of board member changes. In columns (3) and (4) *Board political turnover* is the measure of board member changes. In columns (5) and (6) *Board intermediary* is the measure of board member changes. Robust standard errors are reported in parentheses. In all regressions a constant term is estimated but not reported. ***significant at 1%, ** significant at 5%, * significant at 10%. *ROE* is the ratio of net income to average total equity and is dependent variables in columns (1), (3) and (5). *Sales per employee* is the natural logarithm of sales over the total number of employees and is dependent variable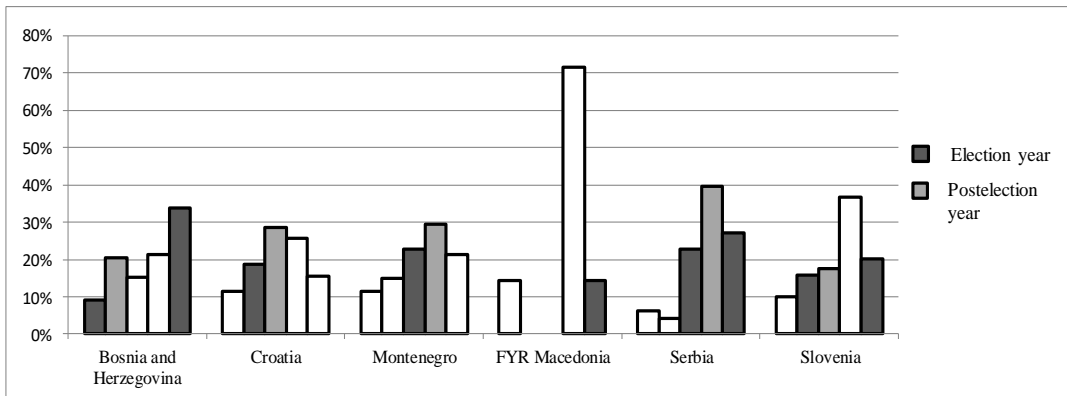 in columns (2), (4) and (6). *Board turnover* is the percentage of the total number of board members in the observed year who left at the end of the year after spending at least one year on the board. *Board political turnover* is the percentage of the total number of board members in the observed year who are politically connected and who left at the end of the year after spending at least one year on the board. *Board intermediary* shows the number of board members who left in the observed year with tenures shorter than one year. *Existence* is the natural logarithm of the difference between years under investigation and year of SOE incorporation. *Size* is the natural logarithm of the total number of employees. *Leverage* is equal to long-term debt over shareholders' equity. *GDP* is the logarithm of GDP PPP. *Board size* is the total number of board members. *Board tenure* is the average time that board members spent on the board. *Board male* is the percentage of men on board. *Board leavers* is the number of board members that left the board within one year. *Board appointments* is the number of board members appointed to the board within one year.

Table 2.11

Effect of board member changes on SOE performance: Differences between small and medium SOEs and large SOEs

	Small and medium SOEs Panel 1		Large SOEs Panel 2		Small and medium SOEs Panel 3		Large SOEs Panel 4		Small and medium SOEs Panel 5		Large SOEs Panel 6	
	ROE	Sales per employee	ROE	Sales per employee	ROE	Sales per employee	ROE	Sales per employee	ROE	Sales per employee	ROE	Sales per employee
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Board turnover	-0.126 (0.110)	-1.189** (0.505)	-0.044 (0.121)	-0.457 (0.515)								
Board political turnover					-0.307 (0.217)	-1.199 (0.866)	-0.067 (0.175)	-1.171 (0.735)				
Board intermediary									-0.031* (0.018)	-0.029 (0.128)	-0.019 (0.025)	-0.005 (0.061)
Existence	0.023 (0.027)	0.425*** (0.114)	-0.005 (0.019)	0.150** (0.070)	0.017 (0.028)	0.442*** (0.118)	-0.006 (0.020)	0.116 (0.076)	0.026 (0.025)	0.443*** (0.111)	0.001 (0.019)	0.121* (0.063)
Size	0.032 (0.023)	-0.227** (0.096)	-0.012 (0.017)	-0.121** (0.060)	0.031 (0.022)	-0.204** (0.092)	-0.012 (0.018)	-0.143** (0.062)	0.038* (0.022)	-0.193** (0.090)	-0.006 (0.018)	-0.142** (0.058)
Board size	0.006 (0.007)	0.245*** (0.035)	0.002 (0.007)	0.129*** (0.031)	0.009 (0.008)	0.233*** (0.038)	0.002 (0.007)	0.141*** (0.027)	0.004 (0.009)	0.285*** (0.044)	-0.007 (0.009)	0.211*** (0.031)
Board tenure	0.021* (0.011)	-0.063 (0.049)	0.016 (0.013)	0.096* (0.058)	0.021** (0.011)	-0.041 (0.048)	0.017 (0.013)	0.107* (0.059)	0.019* (0.011)	-0.103** (0.051)	0.013 (0.014)	0.046 (0.063)
Board male	0.009 (0.073)	-0.285 (0.396)	0.179 (0.111)	0.299 (0.410)	-0.002 (0.075)	-0.234 (0.396)	0.186* (0.110)	0.418 (0.412)	0.015 (0.067)	-0.194 (0.397)	0.189* (0.103)	0.377 (0.406)
Board leavers									0.008 (0.013)	-0.049 (0.060)	0.018 (0.013)	-0.103*** (0.040)
Board appointments									-0.003 (0.013)	-0.104* (0.059)	-0.001 (0.011)	-0.065* (0.037)
No. of Obs.	254	262	275	273	254	262	275	273	254	262	275	273
Mean VIF	1.28	1.28	1.23	1.23	1.28	1.28	1.21	1.21	1.73	1.73	1.74	1.75
Underidentification LM statistic P val	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.03	0.04	0.00	0.00
Hansen J statistic P val	0.72	0.49	0.79	0.16	0.78	0.47	0.83	0.31	0.70	0.12	0.65	0.06

Notes: The table presents the results for estimation of board member changes and SOE performance for two sub-samples: small and medium SOEs and large SOEs. IV estimation using heteroskedasticity-based instruments (*ivreg2h*) was used. Panel 1 and 2 present results for the board turnover-performance relationship for both sub-samples. Panel 3 and 4 present results for board political turnover-performance relationship for both sub-samples. Panel 5 and 6 present results for board intermediary-performance relationship for both sub-samples. Robust standard errors are reported in parentheses. In all regressions a constant term is estimated but not reported. ***significant at 1%, ** significant at 5%, * significant at 10%. *ROE* is the ratio of net income to

average total equity and is dependent variable in odd columns. *Sales per employee* is the natural logarithm of sales over the total number of employees and is dependent variable in even columns. *Board turnover* is the percentage of the total number of board members in the observed year who left at the end of the year after spending at least one year on the board. *Board political turnover* is the percentage of the total number of board members in the observed year who are politically connected and who left at the end of the year after spending at least one year on the board. *Board intermediary* shows the number of board members who left in the observed year with tenures shorter than one year. *Existence* is the natural logarithm of the difference between years under investigation and year of SOE incorporation. *Size* is the natural logarithm of the total number of employees. *Board size* is the total number of board members. *Board tenure* is the average time that board members spent on the board. *Board male* is the percentage of men on board. *Board leavers* is the number of board members that left the board within one year. *Board appointments* is the number of board members appointed to the board within one year.

Table 2.12

Effect of board member changes on SOE performance: Differences between centralized and government model

	Centralized model Panel A						Government model Panel B					
	ROE	Sales per employee	ROE	Sales per employee	ROE	Sales per employee	ROE	Sales per employee	ROE	Sales per employee	ROE	Sales per employee
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Board turnover	-0.220 (0.168)	-0.130 (0.516)					0.509** (0.240)	0.588 (0.854)				
Board political turnover			-0.282 (0.219)	-1.354 (0.900)					0.308 (0.205)	1.087 (1.097)		
Board intermediary					-0.028 (0.018)	-0.046 (0.061)					0.047 (0.029)	0.179* (0.103)
Existence	0.028 (0.023)	0.231** (0.094)	0.031 (0.021)	0.190** (0.095)	0.045** (0.021)	0.232*** (0.086)	0.001 (0.024)	0.266*** (0.094)	-0.005 (0.027)	0.310*** (0.111)	-0.014 (0.020)	0.228*** (0.085)
Size	-0.004 (0.013)	-0.170*** (0.054)	-0.004 (0.012)	-0.186*** (0.054)	0.001 (0.012)	-0.170*** (0.051)	0.026 (0.034)	-0.209* (0.119)	0.014 (0.036)	-0.216* (0.117)	0.018 (0.036)	-0.253*** (0.098)
Board size	0.003 (0.008)	0.036 (0.031)	0.002 (0.008)	0.068*** (0.033)	-0.015* (0.008)	0.035 (0.035)	-0.041* (0.022)	0.155** (0.068)	-0.024 (0.019)	0.149** (0.064)	-0.033 (0.026)	0.264*** (0.055)
Board tenure	-0.002 (0.013)	0.006 (0.068)	0.002 (0.013)	0.014 (0.072)	0.002 (0.014)	-0.006 (0.083)	0.012 (0.034)	0.128 (0.090)	-0.003 (0.032)	0.106 (0.089)	0.004 (0.034)	0.070 (0.091)
Board male	0.156 (0.103)	0.353 (0.440)	0.180* (0.095)	0.329 (0.426)	0.198** (0.090)	0.372 (0.421)	0.006 (0.187)	-0.573 (0.828)	0.001 (0.194)	-0.681 (0.789)	0.033 (0.184)	-0.504 (0.767)
Board leavers					0.014 (0.012)	0.008 (0.041)					0.021 (0.030)	-0.086 (0.072)
Board appointments					0.008 (0.011)	-0.005 (0.046)					-0.009 (0.020)	-0.091 (0.060)
No. of Obs.	305	306	305	306	305	306	73	73	73	73	73	73
Mean VIF	1.40	1.40	1.41	1.41	1.94	1.94	1.41	1.41	1.39	1.39	1.96	1.96
Underidentification LM statistic P val	0.01	0.01	0.00	0.00	0.01	0.01	0.13	0.13	0.15	0.15	0.07	0.07
Hansen J statistic P val	0.49	0.00	0.13	0.03	0.44	0.00	0.22	0.38	0.17	0.12	0.14	0.26

Notes: The table presents the results for estimation of board member changes and SOE performance for two sub-samples: centralized governance model and government governance model. IV estimation using heteroskedasticity-based instruments (*ivreg2h*) was used. Panel A, columns (1)–(6), present results for centralized governance model. Panel B, columns (7)–(12), show results for government governance model. Robust standard errors are reported in parentheses. In all regressions a constant term is estimated but not reported. ***significant at 1%, ** significant at 5%, * significant at 10%. *ROE* is the ratio of net income to average total equity and is dependent variable in odd columns. *Sales per employee* is the natural logarithm of sales over the total number of employees and is dependent variable in even columns. *Board turnover* is the percentage of the total number of board members in the observed year who left at the end of the year after spending

at least one year on the board. *Board political turnover* is the percentage of the total number of board members in the observed year who are politically connected and who left at the end of the year after spending at least one year on the board. *Board intermediary* shows the number of board members who left in the observed year with tenures shorter than one year. *Existence* is the natural logarithm of the difference between years under investigation and year of SOE incorporation. *Size* is the natural logarithm of the total number of employees. *Board size* is the total number of board members. *Board tenure* is the average time that board members spent on the board. *Board male* is the percentage of men on board. *Board leavers* is the number of board members that left the board within one year. *Board appointments* is the number of board members appointed to the board within one year.

Table 2.13

Robustness check of change of board members-election relationship

	BOARD TURNOVER		BOARD INTERMEDIARY		BOARD POLITICAL TURNOVER	
	(1)	(2)	(3)	(4)	(5)	(6)
Parliamentary	0.086***	0.086***	0.157**	0.149*	0.041**	0.041**
	(0.028)	(0.028)	(0.077)	(0.077)	0.017)	(0.017)
Board size	-0.073	-0.061	-0.007	0.169	-0.025	-0.020
	(0.075)	(0.081)	(0.252)	(0.272)	(0.047)	(0.047)
Board tenure	0.062***	0.061***	-0.168***	-0.162***	0.040***	0.040***
	(0.018)	(0.019)	(0.057)	(0.055)	(0.013)	(0.013)
Board male	-0.021	-0.030	0.194	0.240	-0.037	-0.044
	(0.167)	(0.167)	(0.460)	(0.460)	(0.111)	(0.111)
Size (t-1)	0.082***	0.083***	0.217***	0.211***	0.047***	0.048***
	(0.007)	(0.007)	(0.062)	(0.061)	(0.005)	(0.005)
Leverage	0.000	0.002	0.018	0.056	-0.001	0.000
	(0.002)	(0.004)	(0.017)	(0.043)	(0.001)	(0.003)
Knowledge	0.123	0.141	-1.491*	-1.644*	-0.105	-0.092
	(0.188)	(0.189)	(0.882)	(0.883)	(0.128)	(0.128)
ROE (t-1)	0.014		0.349		-0.015	
	(0.104)		(0.294)		(0.063)	
Sales per employee (t-1)		0.023		0.136		0.028
		(0.037)		(0.107)		(0.030)
No. of Obs.	587	585	587	585	587	585
R² Within	0.31	0.32	0.23	0.24	0.26	0.27
Prob>F	0.000	0.000	0.000	0.000	0.000	0.000
Mean VIF	1.12	1.17	1.12	1.17	1.12	1.17

Notes: The table presents the results for the robustness checks of the turnover-parliamentary elections. Fixed effects panel data was used. First panel (columns (1) and (2)) show results for the board turnover-election relationship. Second panel (columns (3) and (4)) present results for the board intermediary-election relationship. Third panel (columns (5) and (6)) present results for the board political turnover-election relationship. In columns (1), (3) and (5) lagged *ROE* is performance measure. In columns (2), (4) and (6) lagged *Sales per employee* is performance measure. Robust standard errors are reported in parentheses. In all regressions a constant term is estimated but not reported. ***significant at 1%, ** significant at 5%, * significant at 10%. *Board turnover* is the percentage of the total number of board members in the observed year who left at the end of the year after spending at least one year on the board. *Board intermediary* shows the number of board members who left in the observed year with tenures shorter than one year. *Board political turnover* is the percentage of the total number of board members in the observed year who are politically connected and who left at the end of the year after spending at least one year on the board. *Parliamentary* is a dummy variable which takes value 1 in years of parliamentary elections. *Board size* is the total number of board members. *Board tenure* is the average time that board members spent on the board. *Board male* is the percentage of men on board. *Size* is the natural logarithm of the total number of employees. *Leverage* is equal to long-term debt over shareholders' equity. *Knowledge* is measured by percentage of board members with PhD degrees. *ROE* is the ratio of net income to average total equity. *Sales per employee* is the natural logarithm of sales over the total number of employees.

Table 2.14

The effect of lagged elections on board member changes

	BOARD TURNOVER		BOARD INTERMEDIARY		BOARD POLITICAL TURNOVER	
	(1)	(2)	(3)	(4)	(5)	(6)
Parliamentary (t-1)	-0.028	-0.034*	-0.294***	-0.299***	-0.012	-0.014
	(0.019)	(0.019)	(0.109)	(0.106)	(0.013)	(0.012)
Board size	0.080***	0.079***	0.228***	0.224***	0.045***	0.045***
	(0.007)	(0.007)	(0.059)	(0.058)	(0.005)	(0.005)
Board tenure	0.052***	0.051***	-0.195***	-0.203***	0.036***	0.038***
	(0.016)	(0.017)	(0.061)	(0.061)	(0.011)	(0.012)
Board male	-0.040	-0.063	-0.228	-0.241	-0.061	-0.077
	(0.126)	(0.129)	(0.315)	(0.323)	(0.080)	(0.082)
Size (t-1)	-0.064**	-0.063*	-0.146	-0.099	-0.000	0.005
	(0.028)	(0.035)	(0.143)	(0.139)	(0.015)	(0.019)
ROE (t-1)	-0.005		0.004		-0.012	
	(0.072)		(0.219)		(0.048)	
Sales per employee (t-1)		0.023		0.136		0.028
		(0.037)		(0.107)		(0.030)
No. of Obs.	722	732	722	732	722	732
R^2 Within	0.27	0.26	0.22	0.22	0.21	0.21
Prob>F	0.000	0.000	0.000	0.000	0.000	0.000
Mean VIF	1.11	1.17	1.11	1.17	1.11	1.17

Notes: The table presents the results for the relationship between board member changes and election cycles. Fixed effects panel data was used. First panel (columns (1) and (2)) show results for the board turnover-election relationship. Second panel (columns (3) and (4)) present results for the board intermediary-election relationship. Third panel (columns (5) and (6)) present results for the board political turnover-election relationship. In columns (1), (3) and (5) lagged *ROE* is performance measure. In columns (2), (4) and (6) lagged *Sales per employee* is performance measure. Robust standard errors are reported in parentheses. In all regressions a constant term is estimated but not reported. ***significant at 1%, ** significant at 5%, * significant at 10%. *Board turnover* is the percentage of the total number of board members in the observed year who left at the end of the year after spending at least one year on the board. *Board intermediary* shows the number of board members who left in the observed year with tenures shorter than one year. *Board political turnover* is the percentage of the total number of board members in the observed year who are politically connected and who left at the end of the year after spending at least one year on the board. *Parliamentary* is a dummy variable which takes value 1 in years of parliamentary elections. *Board size* is the total number of board members. *Board tenure* is the average time that board members spent on the board. *Board male* is the percentage of men on board. *Size* is the natural logarithm of the total number of employees. *ROE* is the ratio of net income to average total equity. *Sales per employee* is the natural logarithm of sales over the total number of employees.

Table 2.15
The effects of board member changes on SOE performance: Whole sample
(lagged enterprise-level control variables)

	ROE	Sales per employee	ROE	Sales per employee	ROE	Sales per employee
	(1)	(2)	(3)	(4)	(5)	(6)
Board turnover	-0.185*	-0.951**				
	(0.106)	(0.469)				
Board political turnover			-0.223	-0.696		
			(0.166)	(0.774)		
Board intermediary					-0.010*	0.011
					(0.018)	(0.077)
Existence (t-1)	-0.024	0.210***	-0.023	0.228***	-0.014	0.208***
	(0.017)	(0.070)	(0.018)	(0.074)	(0.017)	(0.067)
Size (t-1)	-0.009	-0.092**	-0.008	-0.079*	-0.004	-0.097**
	(0.009)	(0.045)	(0.009)	(0.047)	(0.009)	(0.044)
Leverage (t-1)	-0.076**	0.254***	-0.075**	0.261***	-0.071**	0.273***
	(0.035)	(0.072)	(0.035)	(0.074)	(0.033)	(0.070)
GDP	0.023	0.164	0.027	0.189	0.032	0.135
	(0.028)	(0.129)	(0.028)	(0.130)	(0.028)	(0.128)
Board size	0.009	0.169***	0.007	0.150***	-0.002	0.239***
	(0.006)	(0.026)	(0.006)	(0.029)	(0.008)	(0.033)
Board tenure	0.017**	0.010	0.020**	0.025	0.019**	-0.048
	(0.009)	(0.050)	(0.008)	(0.047)	(0.008)	(0.054)
Board male	0.069	-0.149	0.085	-0.046	0.096	-0.051
	(0.069)	(0.356)	(0.067)	(0.353)	(0.062)	(0.352)
Board leavers					0.008	-0.088**
					(0.010)	(0.041)
Board appointments					-0.001	-0.106***
					(0.008)	(0.040)
No. of Obs.	416	412	416	412	416	412
Mean VIF	1.26	1.26	1.25	1.25	1.69	1.70
Underidentification LM statistic P val	0.00	0.00	0.01	0.02	0.00	0.00
Hansen J statistic P val	0.88	0.01	0.39	0.04	0.40	0.11

Notes: The table presents the results for estimation of board member changes and SOE performance with lagged enterprise-level control variables. IV estimation using heteroskedasticity-based instruments (*ivreg2h*) was used. In columns (1) and (2) *Board turnover* is the measure of board member changes. In columns (3) and (4) *Board political turnover* is the measure of board member changes. In columns (5) and (6) *Board intermediary* is the measure of board member changes. Robust standard errors are reported in parentheses. In all regressions a constant term is estimated but not reported. ***significant at 1%, ** significant at 5%, * significant at 10%. *ROE* is the ratio of net income to average total equity and is dependent variable in columns (1), (3) and (5). *Sales per employee* is the natural logarithm of sales over the total number of employees and is dependent variable in columns (2), (4) and (6). *Board turnover* is the percentage of the total number of board members in the observed year who left at the end of the year after spending at least one year on the board. *Board political turnover* is the percentage of the total number of board members in the observed year who are politically connected and who left at the end of the year after spending at least one year on the board. *Board intermediary* shows the number of board members who left in the observed year with tenures shorter than one year. *Existence* is the natural logarithm of the difference between years under investigation and year of SOE incorporation. *Size* is the natural logarithm of the total number of employees. *Leverage* is equal to long-term debt over shareholders' equity. *GDP* is the logarithm of GDP PPP. *Board size* is the total number of board members. *Board tenure* is the average time that board members spent on the board. *Board male* is the percentage of men on board. *Board leavers* is the number of board members that left the board within one year. *Board appointments* is the number of board members appointed to the board within one year.

Table 2.16

The effects of board member changes on SOE performance: Whole sample

(lagged board, enterprise and macroeconomic control variables)

	ROE	Sales per employee	ROE	Sales per employee	ROE	Sales per employee
	(1)	(2)	(3)	(4)	(5)	(6)
Board turnover	-0.208**	-0.193				
	(0.103)	(0.369)				
Board political turnover			-0.285*	-0.282		
			(0.155)	(0.572)		
Board intermediary					-0.016	0.035
					(0.016)	(0.064)
Existence (t-1)	-0.016	0.261***	-0.016	0.261***	-0.006	0.247***
	(0.018)	(0.072)	(0.018)	(0.074)	(0.017)	(0.069)
Size (t-1)	-0.011	-0.067	-0.011	-0.068	-0.010	-0.078*
	(0.009)	(0.045)	(0.009)	(0.045)	(0.009)	(0.045)
Leverage (t-1)	-0.068*	0.290***	-0.069*	0.290***	-0.066*	0.302***
	(0.035)	(0.070)	(0.036)	(0.070)	(0.034)	(0.069)
GDP (t-1)	0.026	0.163	0.025	0.162	0.022	0.126
	(0.028)	(0.130)	(0.029)	(0.132)	(0.027)	(0.131)
Board size (t-1)	0.003	0.152***	0.004	0.153***	-0.001	0.227***
	(0.004)	(0.023)	(0.004)	(0.023)	(0.006)	(0.031)
Board tenure (t-1)	0.012	-0.019	0.014	-0.017	0.010	-0.055
	(0.010)	(0.051)	(0.010)	(0.051)	(0.010)	(0.056)
Board male (t-1)	0.089	-0.053	0.107*	-0.036	0.109*	-0.072
	(0.066)	(0.350)	(0.064)	(0.345)	(0.062)	(0.347)
Board leavers (t-1)					0.007	-0.103**
					(0.009)	(0.042)
Board appointments (t-1)					0.002	-0.046
					(0.007)	(0.032)
No. of Obs.	393	390	393	390	393	390
Mean VIF	1.17	1.18	1.17	1.18	1.57	1.58
Underidentification LM statistic P val	0.00	0.00	0.00	0.00	0.16	0.17
Hansen J statistic P val	0.49	0.08	0.20	0.07	0.32	0.24

Notes: The table presents the results for estimation of board member changes and SOE performance with lagged board, enterprise and macroeconomic control variables. IV estimation using heteroskedasticity-based instruments (*ivreg2h*) was used. In columns (1) and (2) *Board turnover* is the measure of board member changes. In columns (3) and (4) *Board political turnover* is the measure of board member changes. In columns (5) and (6) *Board intermediary* is the measure of board member changes. Robust standard errors are reported in parentheses. In all regressions a constant term is estimated but not reported. ***significant at 1%, ** significant at 5%, * significant at 10%. *ROE* is the ratio of net income to average total equity and is dependent variable in columns (1), (3) and (5). *Sales per employee* is the natural logarithm of sales over the total number of employees and is dependent variable in columns (2), (4) and (6). *Board turnover* is the percentage of the total number of board members in the observed year who left at the end of the year after spending at least one year on the board. *Board political turnover* is the percentage of the total number of board members in the observed year who are politically connected and who left at the end of the year after spending at least one year on the board. *Board intermediary* shows the number of board members who left in the observed year with tenures shorter than one year. *Existence* is the natural logarithm of the difference between years under investigation and year of SOE incorporation. *Size* is the natural logarithm of the total number of employees. *Leverage* is equal to long-term debt over shareholders' equity. *GDP* is the logarithm of GDP PPP. *Board size* is the total number of board members. *Board tenure* is the average time that board members spent on the board. *Board male* is the percentage of men on board. *Board leavers* is the number of board members that left the board within one year. *Board appointments* is the number of board members appointed to the board within one year.

Table 2.17
Difference-in-difference

	BOARD TURNOVER		BOARD INTERMEDIARY		BOARD POLITICAL TURNOVER	
	(1)	(2)	(3)	(4)	(5)	(6)
Board size	0.094***	0.095***	0.245**	0.230**	0.051***	0.053***
	(0.012)	(0.013)	(0.105)	(0.105)	(0.008)	(0.009)
Tenure	0.045*	0.054**	-0.137	-0.139	0.022*	0.035**
	(0.024)	(0.027)	(0.092)	(0.090)	(0.012)	(0.016)
Male board	0.055	0.027	-0.202	-0.223	-0.025	-0.047
	(0.202)	(0.217)	(0.478)	(0.517)	(0.121)	(0.132)
Size (t-1)	-0.081	-0.045	-0.094	-0.041	-0.024	-0.001
	(0.057)	(0.090)	(0.469)	(0.626)	(0.027)	(0.057)
ROE (t-1)	0.102		-0.106		0.039	
	(0.129)		(0.462)		(0.053)	
Sales per employee (t-1)		0.040		0.134		0.032
		(0.076)		(0.196)		(0.059)
Election year	-0.048		-0.176		-0.019	
	(0.044)		(0.136)		(0.027)	
Treatment*election year	0.078		0.144		0.040	
	(0.058)		(0.243)		(0.039)	
Postelection year		-0.043		-0.062		-0.041
		(0.044)		(0.081)		(0.033)
Treatment* postelection year		0.048		0.143		0.041
		(0.068)		(0.338)		(0.054)
No. of Obs.	295	306	295	306	295	306
R^2 Within	0.24	0.22	0.18	0.17	0.18	0.17

Notes: The table reports fixed effects difference-in-difference using binary treatment. First panel (columns (1) and (2)) show results for board turnover-election relationship. Second panel (columns (3) and (4)) present results for board intermediary-election relationship. Third panel (columns (5) and (6)) present results for board political turnover-election relationship. In columns (1), (3) and (5) lagged *ROE* is performance measure. In columns (2), (4) and (6) lagged *Sales per employee* is performance measure. Robust standard errors are reported in parentheses. In all regressions a constant term is estimated but not reported. ***significant at 1%, ** significant at 5%, * significant at 10%. *ROE* is net income over average total equity. *Sales per employee* is natural logarithm of sales over number of employees. *Board turnover* is percentage of board members that changed at the end of the year and that spent at least one year on board. *Board intermediary* is number of board members that spent less than a year on the board. *Board political turnover* is the percentage of politically connected board members that changed at the end of the year and that spent at least one year on board. *Board size* is number of board members. *Board male* is percentage of men on board. *Board tenure* is average time that board members spent on board. Size is the natural logarithm of number of employees. *Election year* is dummy variable that takes value 1 for 2012 and 0 otherwise. *Postelection year* is dummy variable that takes value 1 for 2013 and 0 otherwise. *Treatment* is binary variable that takes value 1 for enterprises in Serbia and Montenegro and value 0 for Bosnia and Herzegovina. *Treatment*election year* and *Treatment*postelection year* are interaction variables.

Chapter 3

Election Driven Corporate Decisions of SOEs

3.1 Introduction

Researchers agree that the state of economy influences election outcomes, but they hold differing opinions of whether pre-election manipulation can be observed in the macroeconomic data (e.g., Drazen, 2001). The paucity of empirical evidence for pre-election manipulation of macroeconomic variables is related to numerous levers available to incumbent politicians for influencing economic conditions. Although incumbents have the power to directly influence economic policies, they can also improve the likelihood of their re-election through intervening in corporate decisions (Bertrand et al., 2007). Therefore, within this chapter we try to refine the political business cycle theories, which encompass mechanisms of pre-election manipulation and political intervention, by bringing these theories down to the enterprise level.

The theoretical and empirical studies about interconnectedness of politics and

economy started with the Nordhaus' (1975) formulation of the opportunistic political business cycles. According to his theory, politicians engage in pre-election manipulation of policies as to induce economic growth and lower unemployment, thus increasing the likelihood of their re-election. The underlying assumption that voters are myopic and hence react to events preceding elections is the main model criticism. Moreover, a lack of conclusive empirical confirmation results in the waned interest for the Nordhaus model (e.g., Drazen, 2001; Golden & Poterba, 1980; McCallum, 1978; Paldam, 1979).

Following the criticism, rational political business cycles model is proposed (Cukierman & Meltzer, 1986; Rogoff, 1990; Rogoff & Sibert, 1988). The voters' decision in this model is based upon the rational expectation of the future utility which can be provided by individual politicians. Alesina et al. (1993) substantiate this model by showing that elections do not engender changes in GDP and employment while they cause alterations in monetary and fiscal policies. But are there any other ways in which politicians can engage in pre-election manipulation as to increase their re-election chances?

The political view of state ownership contends that politicians utilize SOEs as a grabbing hand for achievement of their personal and/or political objectives which are not coherent with enterprise value maximization (e.g., La Porta et al., 2002; Shleifer, 1998; Shleifer & Vishny, 1994). In this regard, incumbents as SOE shareholders can alter SOE strategic choices ensuring in that way that they are consistent with a certain political agenda and re-election efforts (Okhmatovskiy,

2010). Since SOEs objectives emerge from political processes and pressures (Lawson, 1994) they are transient in the context of changing governments (Megginson & Netter, 2001). Moreover, corporate decisions of SOEs might be used as an effective redistributive tool which provides politician's supporters with certain perks (Musacchio et al., 2015b). Politicians influence SOEs as to create an upsurge in their voting support at the upcoming elections (Boycko et al., 1996; Stiglitz & Atkinson, 1980). Therefore, the question we try to answer in this chapter is whether it is possible that politicians seek political support through manipulation of SOEs' corporate decisions during the run up to the elections?

The national elections tempt the incumbent politicians to use corporate decisions of SOEs as benefit transfer mechanisms for their voters (Shleifer, 1998). One such decision that can influence the re-election outcome of the politician is employment. The seminal paper of Shleifer and Vishny (1994) suggests that politicians require SOEs to increase the level of employment since their political supporters benefit from such corporate decisions. Feld and Kirchgassner (2000) confirm that the level of unemployment curtails popularity of the politician in power. Politically connected enterprises create disproportionately more jobs compared to non-politically connected counterparts (Bertrand et al., 2007; Menozzi et al., 2011). This result is in line with notion of Pint (1990) and Boycko et al. (1996) that SOEs are over employed.

Aside from employment, decision of voters is contingent upon the level of investment (Chattopadhyay & Duflo, 2004; Fair, 1988a; Wolfers, 2002).

Governments provide SOEs with better credit support to make their investments look more successful (Aivazian, Ge, & Qiu, 2005). For that reason, higher leverage levels are observed within politically connected enterprises (Boubakri et al., 2012; Faccio, 2010; Khwaja & Mian, 2005). On the other hand, Chen et al. (2011) explain that within politically connected enterprises investment efficiency is distorted. Enterprises might be instructed to carry out projects with negative NPV values when the primary goal of these projects is social stability, regional development etc. Through implementation of such projects politicians increase the probability of their re-election. Considering that investment and indebtedness decisions of SOEs can increase the chances of winning the elections, politicians have the incentive for political interventions.

In this chapter, we attempt to provide a more direct evidence for election related manipulation of SOEs' corporate decisions on employment, indebtedness and investment which would increase the likelihood of incumbent's re-election. The main focus of the past empirical research was on politicians' pre-election manipulation of macroeconomic policies and changes in SOEs' behaviour due to establishment of political connections. With our study, we try to shift that focus towards micro level political business cycles which would ascertain the presence of political interventions and alteration of SOEs' corporate decisions around election times.

To be more concrete, we examine the relationship between election cycles and corporate decisions of SOEs using a dataset of 200 SOEs, from 2010 till 2014, in

six countries of the former SFRY. The idea to investigate the political manipulation of SOEs' corporate decisions in six countries of the former SFRY is related to similar levels of SOEs' importance as well as similar levels of political instability and political pressures. Four out of six countries within our sample went twice through the election cycles in only five years. According to the World Bank's political stability indicator for 2014, all six countries are ranked between -0.05 and 0.95 (2.5 being indicator of politically stable countries), thus indicating similar levels of government instability (World Bank, 2014b). Moreover, the report of Transparency International published in 2016 reveals that politicians in Western Balkan countries wield enormous influence in all economic spheres. The report highlights that examples of direct/indirect political manipulations and interventions across the country systems are abundant. As stated in the report, public resources are often used for election purposes, while political control of the state enterprise sector is widespread. Therefore, we believe that these countries provide us with a one of a kind set-up for analysis of election induced SOE corporate decisions.

Our approach has three important underlying assumptions. Firstly, we focus on the impact of election periods since politicians have a limited leeway to engage in pre-election manipulation of SOEs' corporate decisions. Election periods bring the largest political gain, so we assume that political intervention and manipulation of SOEs' corporate decisions are present in pre-election and/or election years. Secondly, elections are out of control of any individual enterprise being set in accordance with constitution or in accordance with some extraordinary economic/political conditions in the case of early elections. Hence, elections

provide us with a natural experimental framework in which we use a panel data fixed effects estimator without being concerned with the endogeneity and reverse causality issues. Thirdly, the voters are myopic and retrospective as they reward/punish incumbent politicians based on economic conditions in the six months or year before the election day (e.g., Achen & Bartels, 2004; Alesina et al., 1993; Healy & Lenz, 2014). Healy and Lenz (2014) explain that such behaviour is related to the existence of "end-heuristic". Even though voters might try to evaluate the politician in power on the basis of its long-term performance the fact that media focuses mainly on recent economic conditions makes it impossible (Healy & Lenz, 2014).

Our findings reveal that SOEs' employment decisions are manipulated in pre-election and election years since atypical increases in the number of employees are observed. We also find that incumbents intervene as to change SOEs' indebtedness levels in pre-election years. Furthermore, weak but significant and positive upsurge in investment levels is noted in election and postelection years. For SOEs with politically dominated boards increase of leverage and number of employees is more pronounced than for SOEs with non-politically dominated boards. Our findings also suggest that SOEs governed by central governments are used for employment interventions, while SOEs governed by local self-governments suffer from greater manipulation of indebtedness and investment decisions.

This study entails that election manipulation of SOEs' corporate decisions exists, thus contributing to the literature in several important instances. First, we provide

empirical evidence for the existence of political interventions and enterprise level opportunistic business cycles. We show that previous research has misconstrued the ways in which incumbents increase the likelihood of their reappointment by implicitly suggesting that they manipulate the macroeconomic variables (e.g., Alesina et al., 1993; Hibbs, 1977; Nordhaus, 1975). We offer a detailed analysis which shows that politicians manipulate SOE decisions on employment, investment and indebtedness in pre-election and/or election years as to acquire greater voters support. Second, we uncover that politically connected boards grant election favours to politicians through alteration of SOE corporate decisions. Hence, our study enriches understanding of political embeddedness theory by pointing out to one of the reverse channels through which benefits are streamlined from enterprises to politicians (e.g., Okhmatovskiy, 2010). Third, we extend the literature on political interference as we demonstrate that the government control of SOEs engenders political influence over their decisions. More specifically, we show that state ownership provides the incumbents with additional tool for obtaining the electoral support.

In addition to the above stated literature contributions, our findings provide important implications for governance policies of SOEs. They suggest that SOEs need to be governed by independent governance institutions as to impede political influence over their corporate decisions (e.g., Musacchio et al., 2015b; OECD, 2015). Furthermore, our study implies that policymakers need to adopt four-year plans regarding employment, indebtedness and investment. Through adoption of

such plans short-term decisions with election benefits for politicians would be limited.

The remainder of this chapter is organized as follows. Section 3.2 reviews the literature regarding pre-election manipulation and develops hypothesis. Section 3.3 presents data description and empirical strategy overview. Section 3.4 discusses the main findings. Section 3.5 provides the main conclusions and directions for future research.

3.2 Literature review and hypothesis development

The first theory on political usage of economic policies for re-election purposes is formalized by Nordhaus in 1975. His model of opportunistic political business cycles assumes that politicians exploit the Phillips curve, thus manipulating the trade-off between unemployment and inflation. Nordhaus (1975) claims that office-holding politicians spur employment just ahead of elections as to create positively distorted image of economic conditions. Consequently, myopic voters preferring high growth and low unemployment support these politicians as they are not able to recognize the pre-election manipulation.

The theoretical and empirical criticism of the Nordhaus model appeared shortly after publication of his paper. The theorists assert that any voter who was part of the election cycle within Nordhaus model would next time recognize the opportunistic and manipulative behaviour of politicians (Alesina et al., 1993). After once observing low inflation and high employment before elections, and the vice

versa effect after the elections, the voter would punish rather than reward the incumbent politician in the next election round (Drazen, 2001). In addition, the empirical research does not provide rigorous, systematic and consistent support for the Nordhaus' theory (Alt, 1994). There is a paucity of evidence for the increase of economic growth and employment prior to elections when observing the US (e.g., Hibbs, 1987; McCallum, 1978) and OECD data (Alesina, 1988; Alesina, Cohen, & Roubini, 1991; Paldam, 1979).

Through criticism of Nordhaus, Hibbs (1977) develops the partisan political cycles model. He argues that pre-election manipulation is dependent upon general economic goals of political party. Moreover, his model implies that manipulation of certain macroeconomic policies is associated with relatively permanent economic effects and not the election related effects as proposed by Nordhaus. The revolution of rational expectations theory and recognition of empirical shortcomings led to creation of the second-generation models.

The rational political business cycle models shift the focus from political influence over macroeconomic outcomes (e.g., economic growth, unemployment, inflation) towards pre-election manipulation of monetary and fiscal policies (e.g., Alesina, Cohen, & Roubini, 1992; Schultz, 1995). Cukierman and Meltzer (1986), Rogoff and Sibert (1988), Rogoff (1990) and Persson and Tabellini (1991) entail that rational cycles represent a short-run manipulation of policy instruments as a 'signal' of the politicians' ability to provide more public goods. They argue that it is much easier for politicians to introduce tax cuts, transfer subsidies to certain entities or

print money than influence the overall level of employment or economic growth (Alesina et al., 1993). Therefore, the rational cycle models imply that it is highly unlikely to observe the periodic election-year macroeconomic cycles (Alesina & Roubini, 1992). Moreover, voters choose the politician for whom they are going to vote on the basis of rationally expected utility he/she is going to deliver (Cukierman & Meltzer, 1986; Rogoff, 1990).

The empirical evidence of the rational cycles is somewhat more supportive. Bizer and Darlauf (1990) show that a cyclical component of tax changes corresponds to the election shift of the political parties. Furthermore, fiscal transfers pattern around election times is present (Alesina, 1988; Tufte, 1978). Grier (1987) shows that there is a connection between monetary policy and elections in the US but only for the period encompassing early sixties to early eighties. Within the extended time frame the connection wanes and disappears when the control for fiscal policy is introduced (Beck, 1987). Hence, the real-life results on manipulation of monetary and fiscal policy instruments are mixed.

The absence of conclusive evidence for political business cycle theories does not change the fact that voters keep politicians accountable for economic conditions (Carlsen, 2000; Fidrmuc, 2000; Gelineau, 2013; Lewis-Beck & Whitten, 2013). Therefore, the re-election prospects of politicians are highly dependent upon state of the economy (Schultz, 1995). With that in mind, we suggest that the previous research probably failed to recognize some informal mechanisms used by politicians for shaping economic conditions. Politicians can directly alter economic

policies, but they can also use a more sophisticated approach through influencing the corporate decisions of important enterprises (Bertrand et al., 2007). This influence can be exerted via established political connections within private enterprises or via state ownership.

The political view of state ownership posits that governments and politicians utilize SOEs as a playground for the transfer of benefits to their cronies and politically like-minded individuals (e.g., Bennedsen, 1998; Megginson, 2005; Musacchio & Lazzarini, 2014). The primary and single most important aim of politicians is maintenance of the voting support as to be able to remain in power and enjoy the associated perquisites (Sapienza, 2004; Shleifer & Vishny, 1998). Politicians being eager to win the electoral support use SOEs for attainment of their personal and political goals which are not in line with the value maximization objective (e.g., Chong & Lopez-de-Silanes, 2005; Cui & Jiang, 2012; Shleifer, 1998). Therefore, politicians might provide incentives for SOEs' managers to undertake decisions incurring high costs while generating an upsurge of the voting support (Shleifer & Vishny, 1994; Stiglitz & Atkinson, 1980). By providing the voters with certain perquisites in exchange for the political support, the incumbents suppress the potential electoral win of the opposition (Shleifer, 1998).

Under the political pressures operations of SOEs are distorted as they cater the prevailing political interests (Majumdar, 1998; Nellis, 1994). These might encompass creation of job placements within SOEs, introduction of projects for facilitation of resource transfers or similar (Shleifer, 1998). Hence, politicians

influence SOEs' strategic choices and their corporate decisions to ensure that they are in line with a specific political agenda (Dewenter & Malatesta, 2001; Okhmatovskiy, 2010). The unrestrained political power enables incumbents to intervene and manipulate SOEs' corporate decisions in a rather straightforward manner. Since politicians' primary objective is keeping the office, they are tempted by the election periods to influence SOE corporate decisions (Dinc, 2005). Hence, SOEs might be used around election times as an informal mechanism in order to garner the voters support. But how these mechanisms would work and why politicians would use them only around election periods?

Ensuring elevated voter satisfaction in the pre-election period is the key driving motivation behind the decisions and actions undertaken by politicians (Alesina & Tabellini, 2007). The incumbent is incentivized to use his/hers political power to enhance the conditions observed by the voter (Drazen & Enslava, 2010). The review of the literature on vote and popularity function (VP function) shows that around 30% of the vote change stems from a deterioration in economic conditions (Lewis-Beck & Paldam, 2000). Furthermore, due to voters' short-sightedness the decision of whether to reward or punish the incumbent is dependent upon the economic movements in the six to twelve months prior to elections (e.g., Fair, 1988b; Kiewiet, 1983; Kramer, 1971; Lewis-Beck & Stegmaier, 2000). As explained by Healy and Lenz (2014), myopic and retrospective behaviour of voters is the consequence of the "end heuristic". This phenomenon suggests that voters evaluate the incumbents according to the state of election-year economy. Individuals have a general tendency to replace the end circumstances as being true

for the whole term due to the absence of long-term media coverage (Alesina & Rosenthal, 1995; Healy & Lenz, 2014).

For the reasons stated above, politicians are enticed by the voters' behaviour to concentrate on the election year and changes they can initiate in that period (Healy & Lenz, 2014). They have an inclination toward quick win actions which have immediate apparent benefits and delayed costs (Tufte, 1978). Musacchio et al. (2015b) explain that political benefits attached to SOEs make it almost impossible for governments not to intervene. Thus, SOEs are perfect instruments for achieving goals that are entwined with the re-election political agenda. The manipulation of SOE corporate decisions are expected to happen only around the time of elections as this brings the biggest benefits to the incumbent (Bertrand et al., 2007). The persistence of these transient decisions would distort SOE operations which in turn might be considered by voters as over-costly and unnecessary.

The variation of SOE corporate decisions around election times is closely related to voters' preferences for high employment and growth (Schultz, 1995). A high level of unemployment reduces the probability of an incumbents' reappointment (Carlsen, 2000; Fair, 1978; Feld & Kirchgasser, 2000). Consequently, politicians seeking electoral support would prosper from positive news about job creation (Bertrand et al., 2007). Since labour union support is an influential factor for election outcomes, the increase of employment becomes the pre-electoral must. Hence, the politician may request from SOEs to increase the number of employees and maintain excess employment for a certain period of time in order to hold the

office for another term (Shleifer & Vishny, 1994). The increase of employment levels is observed by voters as a positive sign of economic conditions and incumbent capabilities. In that way politicians secure the voters support while making the alteration of SOEs' corporate decisions around election times completely justifiable in terms of their political goals. Having in mind all the above stated, we propose the following:

Hypothesis 1. SOEs' employment decisions are manipulated as to increase the number of employees in pre-election and/or election years.

Increase of economic growth is the second determinant of the voters' decision whether to punish or reward the incumbent. For that reason, politicians have the incentive to expand investment activities of SOEs as to boost growth around the election periods. Considering the fact that investment of SOEs cannot be financed by internally generated capital due to their average poor performance, politicians wanting to increase their prospects of re-election are faced with a need to amend SOEs' indebtedness decisions. Aivazian et al. (2005) confirm that SOEs' investments are supported by loans. Therefore, it is expected from incumbents to streamline greater levels of subsidies towards SOEs in years prior to elections or provide loan guarantees. The leverage is therefore used as a vehicle for increase of investments that provide incumbents with a positive public image which wins over the election votes. To gain additional insights about the SOEs' leverage dynamics in election periods, we propose:

Hypothesis 2. SOEs' indebtedness decisions are altered as to increase leverage in pre-election years.

Investments are one of the key determinants of the voters' decision for whom to vote (Chattopadhyay & Duflo, 2004; Wolfers, 2002). The importance of investments for the incumbents can also be seen though the findings of the research study by Carvalho (2014). This study showed that loans are approved by government banks merely to enterprises which are going to expand their investment activity in politically important regions. Thus, it can be concluded that incumbents introduce investment projects when expecting high political benefits in the form of electoral support. Contrary to that, election related contraction of investment expenditures among private enterprises is observed (Gulen & Ion, 2016; Jens, 2016; Julio & Yook, 2012). The contraction is the consequence of the uncertainty which goes hand in hand with elections. This trend happens because of the fact that the only consideration for private enterprises is profit maximization, unlike for SOEs with predominantly political considerations. Musacchio, Lazzarini, & Aguilera (2015a) imply that SOEs are more likely to undertake the investment projects with negative NPV values as long as they provide benefits to politicians or increase their probability of being re-elected. In line with that, SOEs announce a greater number of investment projects in election years when compared to non-election years (Alok & Ayyagari, 2015). As to further investigate the changes of SOEs' investments within the timeframe of elections, we propose:

Hypothesis 3. SOEs' investment decisions are altered as to increase the investment levels in election years.

3.2.1 Politically dominated boards and corporate decisions of SOEs

To be able to control processes within SOEs, politicians have the incentive to appoint loyal and obedient individuals as board members in order to put forward the politically motivated decisions (Hu & Leung, 2012; World Bank, 2014a). For that reason, it is expected that SOEs with politically dominated boards behave to a greater extent in line with political goals of incumbents relative to SOEs with non-politically dominated boards. The incentive for politically dominated boards to support the re-election of their politician, stems from the desire to secure their board positions in the aftermath of elections. Thus, politically connected managers alter SOE employment decisions as to increase the likelihood of the politicians' reappointment (Wolfers, 2002). The confirmation of this standing comes from Bertrand et al. (2007) who find that politically connected CEOs generate disproportionately larger number of job placements in election years. The previous research also reveals that politically connected enterprises have higher levels of indebtedness which reflects preferential treatment from banks and easier access to credit (e.g., Boubakri et al., 2012; Brandt & Zhu, 2000; Cull & Xu, 2005; Faccio, 2010; Johnson & Mitton, 2003; Saeed, Belghitar, & Clark, 2015; Yingyi & Roland, 1996). Contrary to that, Chen et al. (2011) and Zhao, Wan and Xu (2013) explain that within politically connected enterprises investments are distorted. The reasons for such inefficiencies are twofold. On the one hand, because of the political pressures politically connected SOEs carry out investment projects which are in line

with certain government/political plans, thus missing out on profitable investment opportunities (Chen et al., 2011). On the other hand, SOEs faced with bad projects cannot terminate them as this would lead to a conflicting situation with the incumbent (Chen et al., 2011). Bearing in mind that politically dominated boards might manipulate SOEs' corporate decisions to a greater extent than non-politically dominated boards, we propose:

Hypothesis 4. Employment increase in pre-election and/or election years is higher for SOEs with politically dominated boards relative to SOEs with non-politically dominated boards.

Hypothesis 5. Indebtedness increase in pre-election and/or election years is higher for SOEs with politically dominated boards relative to SOEs with non-politically dominated boards.

Hypothesis 6. Investment increase in pre-election and/or election years is higher for SOEs with politically dominated boards relative to SOEs with non-politically dominated boards.

3.2.2 Governance level and corporate decisions of SOEs

To further improve identification of factors which might lead to alteration of SOE corporate decisions we follow the literature suggesting that decisions of SOEs governed by central governments and those governed by local self-governments might differ in election years. Li and Zhou (2005) explain that political pressures for local officials are much higher as their advancement on the political ladder is dependent upon local growth and employment levels. Hence, local governments

have greater incentive to use political connections within SOEs as to cater political interests (Wu et al., 2012). Local SOEs increase investments to boost growth and facilitate employment even when these projects might have higher delayed costs (e.g., Wu et al, 2012). Consequently, the number of investment projects in election years is 10% higher for locally governed SOEs relative to those that are governed by central governments (e.g., Allok & Ayyagari, 2015). Dahlberg and Mork (2008) also note that local employment level is highly visible to voters, thus being detrimental for politicians who are eager to keep the office. Contrary to that, the empirical research by Garrone et al. (2013) implies that political interests and political intervention has a minor role on local level. In this vein, we question the following hypothesis:

Hypothesis 7. Employment, indebtedness and investment decisions are altered in election periods to a greater extent for SOEs governed by local self-governments than SOEs governed by central governments due to higher political pressures at the local level.

3.3 Data and Methodology

3.3.1 Sample and Data Collection

The data for SOEs from six countries of the former SFRY are extracted from Amadeus database. We define SOEs as enterprises whose ultimate owner is public authority, state or government with minimum 50.01% of direct or indirect ownership. Our definition is built upon two main literature findings. The first one is OECD definition for SOEs which implies that enterprises with 100% or majority

state ownership can be considered as state owned (OECD, 2015). The second one is related to level of political intervention being dependent upon level of state ownership. Wu et al. (2012) showed that enterprises with minority state ownership have lower number of political connections, thus probably facing the lower political pressures. The data from Table 3.1 confirm this trend for our sample. The decrease of state ownership and existence of significant private minority shareholder results in approximately 21% drop in the number of politically connected board members. Therefore, we have no reason to believe that inclusion of private enterprises with 20%, 30% or 40% state ownership would be significant for our analysis.

[Insert Table 3.1 about here]

On the basis of country and ownership criteria 556 enterprises in the database are identified as state-owned. Following the previous literature, we delimit the sample by excluding bankrupt enterprises, enterprises from financial sector (e.g., banks, insurance enterprises), enterprises providing health, social and cultural services due to their non-commercial goals and enterprises with unavailable data.[7] After applying all of these exclusions our final sample encompasses 200 SOEs.

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[7] We follow Goldeng et al. (2004) and Haniffa and Hudaib (2006) when it comes to exclusion of financial institutions. Following Bozec et al. (2002) we exclude enterprises with non-commercial goals. As suggested by Faccio (2010) for the enterprises to be included in our sample the data needs to be available.

We download the items from balance sheets and profit and loss statements as well as data on ownership, industry code, date of incorporation and number of employees for the period 2010-2014. Since the data in Amadeus is standardized we are not concerned about differences that may arise from differences in accounting systems of countries within our sample. The missing data was hand collected from annual reports of SOEs whenever the annual reports were publicly available.

3.3.2 Variables and Measures

In our study, we investigate whether the incumbent politicians manipulate SOE employment, indebtedness and investment decisions around election years to gain voters' support. Following Menozzi et al. (2011), we use the natural logarithm of the number of employees to observe any upsurge or drop in the number of job placements within SOEs in election periods (*Employees*). The proxy for *Indebtedness* is the natural logarithm of account 'creditors' from balance sheet that includes all outstanding loan obligations of SOEs as well as any other types of debt such as subsidies, deferred payments for services or goods etc (e.g., Dewenter & Malatesta, 2001). The logarithm value is used and not the percentage change as we want to grasp the magnitude of government support and preferred treatment when incumbent's future is on the line. The level of *Investment* is calculated as the difference of fixed assets at the end of the year and fixed assets at the beginning of the year scaled by the fixed assets at the beginning of the year (e.g., Li, Lin, & Xu, 2016). We calculate *Investment* as a percentage change on the premise that only investment growth, and not the number per se, is going to be noticed by voters as a positive signal for the incumbent (e.g., Alok & Ayyagari, 2015).

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As noted in the literature the politicians engage in pre-election manipulation when the benefits of such actions result in large political gains. Considering that their ultimate goal is winning the elections, the political manipulations and interventions should be more pronounced closer to the election year (Bertrand et al., 2007). For that reason and the fact that voters are myopic, we expect to observe adjustments of SOE corporate decisions in pre-election and/or election years. We employ *Election* as a dummy variable which takes value 1 in the year of parliamentary elections and 0 for other years.[8] Furthermore, we employ *Pre-election* and *Postelection* variables. The *Pre-election* variable is a dummy variable which takes value 1 in a year prior to elections and 0 otherwise, while *Postelection* variable is a dummy variable which takes value 1 in a year after the elections and 0 in all other years.

Additionally, we control for several enterprise and country level characteristics as they can influence our research results. We employ *Enterprise size* which is calculated as the natural logarithm of total assets (e.g., Chen et al., 2011; Julio & Yook, 2012). We also control for the period of *Enterprise existence* equal to the natural logarithm of the difference between years under investigation and year of SOE incorporation (e.g., Goldeng et al., 2004; Sun et al., 2015; Tian & Lau, 2001). We do not include variables that represent constant or fixed enterprise characteristics (e.g., industry, level of state ownership) since these variables are omitted from fixed effects estimations as they are captured by the fixed effect term

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[8] Dummy variable for parliamentary elections takes value 1 for the following years and countries: 2010-Bosnia and Herzegovina; 2011-Croatia, FYR Macedonia, Slovenia; 2012-Serbia, Montenegro; 2014-Bosnia and Herzegovina, FYR Macedonia, Serbia, Slovenia. The dummy variable is time variant.

(e.g., Aivazian et al., 2005; Boubakri et al., 2012). Recognizing that certain development differences between the countries might exist, we control for the level of real country development through employment of *GDP growth* rate (e.g., Dewenter & Malatesta, 2001).

Existence of political connections might increase the political pressure for SOEs, thus channelling its resources towards certain political objectives. Therefore, we control for *Politically connected board* which is calculated as the number of politically connected board members over the total number of board members. Following previous literature we define politically connected board members as: (1) individuals who hold or held position in central or local government, parliament or any other governmental body; (2) members of political party; (3) citizen representatives which participated in election cycles; (4) individuals who have close relationships (e.g., relatives, friends) with current/past government/parliament officials or political party representatives (e.g., Faccio, 2006, 2010; Menozzi et al., 2011; Zheng et al., 2015).

In the estimation of changes in number of employees we control for leverage and capital intensity. The previous research implies that SOEs are supported by governments through subsidized loans (e.g., Brandt & Zhu, 2000; Cull & Xu, 2005; Qian & Roland, 1996). Hence, we employ *Leverage* as the measure of long-term debt over equity (e.g., Faccio, 2010) since loans might be used to cover the increase in labour expenses. *Capital intensity* is industry proxy and labour intensity indicator which depicts whether the increase in number of employees is related to SOEs

dependence on human capital as production resource. It is calculated as fixed assets over total assets (e.g., Wu et al., 2012).

For the indebtedness, the literature emphasises that existence of collateral impacts the enterprise ability to borrow funds. We therefore control for *Tangible collateral* which equals the sum of inventory and tangible fixed assets over total assets following the approach of Guedes and Opler (1996) and Boubakri et al. (2012). Moreover, since the past research studies imply that there is a positive relationship between cash flow and investment we employ *Cash flow* in our investment estimation (e.g., Bertero & Rondi, 2000). It is calculated as earnings before interest and tax (EBIT) over total assets (e.g., Julio & Yook, 2012). Additionally, we control for *Leverage* since borrowed funds can be used to finance certain investment projects.

The ability of enterprises to raise a loan or create a new job placement is influenced by its *Performance*. Hence, we employ return on assets (*ROA*) and return on equity (*ROE*) as they reflect the realized performance and the benefits for owners (Barclay, Gode, & Kothari, 2005; Goldeng et al., 2004). *ROA* shows effectiveness of use of assets and it is calculated as earnings before interest and tax (EBIT) over average total assets. As the proxy of shareholders' return, *ROE* is equal to net income over average total equity. We compute *ROA* using EBIT as a proxy of current operating performance which is independent from tax, interest payments and depreciation. This is especially important when looking at performance of SOEs since some SOEs may be exempted from tax payments or have zero-interest loans/subsidies

(Bozec et al., 2002; Hermalin & Weisbach, 1991). Therefore, usage of net income for calculation of *ROA* in these cases would create distorted image about effective use of assets. Contrary to that, for calculation of *ROE* we use net income since shareholders are only interested in profits which are generated on the basis of their investments and can potentially be distributed to them. This approach is congruent with the approach undertaken in past research studies (e.g., Boardman & Vining, 1989; Boubakri et al., 2008; Bozec et al., 2002; Ding et al., 2014; Hu & Leung, 2012; Menozzi et al., 2011; O'Connel & Cramer, 2010). We also employ *Sales* as growth opportunity measure which is equal to natural logarithm of sales (Wu et al., 2012).

3.3.3 Methodology

The method used in this chapter is fixed-effects panel data since we want to control for any unobserved enterprise specific characteristics as well as any differences that might arise among countries within our sample.[9] Our method is similar to that of Megginson, Nash and Van Randenborgh (1994) and Dewenter and Malatesta (2001) since these two research studies investigate the impact of certain event on enterprise performance. We also considered using event study, but the fact that elections happened at different points in time and that they are not unpredictable/exogenous events, creates limits in this regard. Hence, we follow closely the three-dummy method used by Dewenter and Malatesta (2001) in their investigation of the privatization-year impact on profitability, leverage and labour

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[9] Prior to our decision to employ fixed-effects, we run Durbin-Wu-Hausman test that shows better performance of fixed-effects model than random-effects model.

intensity. In order to investigate the alteration of employment, indebtedness and investment decisions around election years (Hypotheses 1, 2 and 3) we run the following fixed effects models:

$$Employees_{i,t} = \alpha + \beta_1 Pre\text{–}election_{i,t} + \beta_2 Election_{i,t} + \beta_3 Postelection_{i,t} +$$
$$\beta_4 GDP\ growth_{i,t} + \beta_5 Enterprise\ existence_{i,t} + \beta_6 Enterprise\ size_{i,t} +$$
$$\beta_7 Politically\ connected\ board_{i,t} + \beta_8 Capital\ intensity_{i,t} +$$
$$\beta_9 Leverage_{i,t-1} + \beta_{10} Performance_{i,t-1} + u_i + \delta_t + \varepsilon_{i,t} \qquad (3.1)$$

$$Indebtedness_{i,t} = \alpha + \beta_1 Pre\text{–}election_{i,t} + \beta_2 Election_{i,t} + \beta_3 Postelection_{i,t} +$$
$$\beta_4 GDP\ growth_{i,t} + \beta_5 Enterprise\ existence_{i,t} +$$
$$\beta_6 Enterprise\ size_{i,t} + \beta_7 Politically\ connected\ board_{i,t} +$$
$$\beta_8 Collateral_{i,t} + \beta_9 Performance_{i,t-1} + u_i + \delta_t + \varepsilon_{i,t} \qquad (3.2)$$

$$Investment_{i,t} = \alpha + \beta_1 Pre\text{–}election_{i,t} + \beta_2 Election_{i,t} + \beta_3 Postelection_{i,t} +$$
$$\beta_4 GDP\ growth_{i,t} + \beta_5 Enterprise\ existence_{i,t} + \beta_6 Enterprise\ size_{i,t} +$$
$$\beta_7 Politically\ connected\ board_{i,t} + \beta_8 Cash\ flow_{i,t-1} +$$
$$\beta_9 Leverage_{i,t-1} + \beta_{10} Performance_{i,t-1} + u_i + \delta_t + \varepsilon_{i,t} \qquad (3.3)$$

where i is the SOE id, t is the year effect, α is the intercept and $\varepsilon_{i,t}$ denotes the error term. SOE specific fixed effects are captured by u_i, while time fixed effects are depicted by δ_t. We use the three-dummy approach (i.e., *Pre-election, Election, Postelection)* as to alleviate any doubt that the SOE corporate decisions were manipulated because of election benefits for politicians and not some business fluctuations and/or economic circumstances. Moreover, the three-dummy approach provides us with a possibility to depict the exact timing of incumbent intervention as well as dynamics of election induced political cycles. The significant coefficients for *Pre-election* and *Election* variables will indicate that incumbent politicians manipulate SOEs as to increase their re-election chances.

The fact that elections are recurring events which happen in different years enables us to suspend any global/regional movements in employment, indebtedness and investment levels. Furthermore, this allows us to separate the election effect from the time effect (e.g., Dahlberg & Mork, 2008). The time effect in countries with no elections can be used as a counterfactual for the time effect that would be present in countries with elections if elections were not held. Additionally, since the timing of elections is exogenous to any individual enterprise and is determined by the constitutional law, or some extraordinary political/economic conditions in case of the early elections, we do not have to be concerned about reverse causality issues.

We re-estimate the above stated models in two sets of sub-samples without the variable *Politically connected board*. To test Hypotheses 4, 5 and 6 we divide our sample on the basis of the number of politically connected board members. The politically dominated boards have the incentive to alter corporate decisions of SOEs as to provide the support for re-election of the incumbent politician, thus securing their board membership. Therefore, SOEs with politically dominated boards suffer from greater political interventions which may cause significant manipulations of SOEs' corporate decisions.

The threshold for politically dominated boards is based on critical mass theory since the percentage should represent a considerable minority of board members. The theory implies that a certain number of board members with same or similar characteristics is needed to impact/change board decision-making processes (Dahlerup, 1988; Kanter, 1977). The theory at first was used for women

representation in corporations but it was later applied in political, academia, judiciary and many other contexts. Kanter (1977) explains that minority members with similar characteristics are potential allies that can jointly change group decisions. We consider boards with more than 25% of politically connected board members as politically dominated. In our research context with average board size of five individuals, 25% implies more than one politically connected board member, constituting in that way considerable minority.

SOEs governed by local self-governments may suffer from greater political pressures. The political career of local politicians is highly dependent on their commitment to increase the local employment and growth as noted by Li and Zhou (2005). For that reason, we depict SOEs governed by government and SOEs governed by local self-governments as to be able to test Hypothesis 7.

3.3.4 Sample and summary statistics

Table 3.2 reports summary statistics for our sample. SOEs in six countries of the former SFRY employ on average 667 employees and exist for 28 years. Their average level of *Indebtedness* is approximately EUR 9.8 million with long-term debt accounting for 28% of equity. The negative cash flows imply the mismatch between expenses and income. This can be a consequence of the inefficient credit management, while in the case of SOEs it might be the sign of over indebtedness. The high coefficients for *Capital intensity* and *Tangible collateral* imply that the tangible fixed assets dominate the SOE assets structure with 65% and 64% respectively. Confirmation of the standing that SOEs are politically dominated in

the case of our sample comes from the fact that half of the board members are politically connected.

[Insert Table 3.2 about here]

Figures 3.1 to 3.3 provide an overview of the average number of employees, level of indebtedness and investments by country and year. Figure 3.1 suggests that fluctuations in the average number of employees in each of the countries are present. We notice that in six out of ten election years there is an increase in the average number of employees. Changes in average indebtedness levels are more obvious as shown on Figure 3.2. The increase is observed in six election years and three postelection years. In Serbia and Slovenia, we observe significant increases of indebtedness levels in one of the election years. The average investments presented on Figure 3.3 fluctuate to a smaller extent, but we can still observe their increase in five election years.

[Insert Figure 3.1 about here]

[Insert Figure 3.2 about here]

[Insert Figure 3.3 about here]

The correlation coefficients from Table 3.3 do not raise concerns regarding multicollinearity.

[Insert Table 3.3 about here]

3.4 Empirical results and discussion

The results for the relationship between SOE corporate decisions and elections are presented in Table 3.4. They reveal that incumbent politicians use corporate decisions of SOEs in order to boost their re-election prospects. The results indicate that politicians engage in pre-election manipulation of SOEs' employment decisions since the number of *Employees* increases between 9.7% and 12.4% in *Pre-election* years. The increase is even more profound in *Election* years when the upsurge in job placements is between 10.8% and 13.2%. The low level of significance and lower coefficients (between 4.2% and 7.4%) in *Postelection* years clearly indicate that increase of employment within SOEs is election driven. Therefore, our results support Hypothesis 1 implying the existence of political intervention and election induced political employment cycles within SOEs.

Moreover, the findings suggest that the only purpose of employment decision manipulation is the interim satisfaction of the voters (Alesina & Tabellini, 2007). The incumbents being aware of the fact that voters react positively to the news about job creation (Bertrand et al., 2007) use SOEs for the quick boost of employment in pre-election and election years with the prospect of their reappointment. After winning the elections, the increase of employment is significantly lower since over-employment in the long-run might lead to numerous inefficiencies (Bertrand et al., 2007). The results are also in line with the findings of Labonne (2016) suggesting that employment in municipalities increases in two pre-electoral quarters.

[Insert Table 3.4 about here]

Table 3.4 also reveals that there is a highly significant and positive impact of pre-election years on *Indebtedness* of SOEs. In *Pre-election* years the level of debt, subsidies and differed payments increases by approximately 29%, while in *Election* and *Postelection* years the significant change is absent. Therefore, our results indicate that incumbents eager to win elections increase SOEs' *Indebtedness* in *Pre-election* years, thus providing support for Hypothesis 2. These findings also show that SOEs' indebtedness decisions are manipulated prior to elections since their change does not have an instant and visible result which is recognizable by the voters. The change of SOEs' indebtedness might be in anticipation of the higher fixed-costs related to creation of new job placements and/or a need to create

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opportunities for new investments. The increase in number of *Employees* in *Pre-election* and *Election* years generates new fixed costs which can hardly be covered from the regular operations of SOEs. The payments of such fixed costs would seriously jeopardize SOEs' functioning. For that reason, the incumbents might be incentivized to amend SOEs' indebtedness decisions in years prior to elections as to be able to increase employment and create conditions based on which they will be re-elected. On the other hand, the incumbents might decide to increase SOEs' investments which cannot be financed from the internally generated capital (Dewenter & Malatesta, 2001) or they might have to use the debt as to rescue failing projects (Musacchio et al., 2015a). As found by Aivazian et al. (2005) SOEs raise loans as to finance investments.

The *Election* and *Postelection* years have a low significant impact on *Investment* levels of SOEs. This is consistent with Hypothesis 3 as well as theory which predicts that politicians manipulate SOEs' investment decisions as to garner voters support. Moreover, our results are in line with the findings of study by Alok and Ayyagari (2015) which entail that the likelihood of the project announcements by SOEs is larger in election years than in non-election years. Chattopadhyay and Duflo (2004) and Wolfers (2002) noted that incumbents have the incentive to pressurize SOEs to boost investments when it is politically relevant. As mentioned above, the voters' decision for whom to vote depends on investment levels as a precondition for economic growth. Considering the fact that private enterprises reduce their investments around election years due to high levels of uncertainty

(Gulen & Ion, 2016; Jens, 2016; Julio & Yook, 2012), the incumbents' only option for increase of investments is political manipulation of SOEs' investment decisions.

Some of the enterprise specific features appear to be important as well. The longer the *Enterprise existence* is, the greater is its *Indebtedness* as well as the *Investment* levels. Furthermore, bigger SOEs are able to employ the greater number of employees and their ability to raise loans, gain subsidies or differ payments because of their market power raises. SOE performance seems to be insignificant for corporate decisions, thus indirectly confirming that political intervention within SOEs induces election driven corporate decisions. *Capital intensity* seems to be insignificant for employment levels within SOEs, thus showing that changes in the number of employees are not related to SOE dependence on human capital. The insignificant coefficient for *Tangible collateral* confirms that SOEs with their preferential access to loans and government guarantees do not need collateral for securing the loans (Charumilind, Kali, & Wiwattanakantang, 2006).

The significant negative relationship between the *GDP growth* and SOE's number of *Employees* and *Indebtedness* confirms some of the findings of Boubakri et al. (2012). On the one hand, the positive change of the GDP growth rate indicates better market conditions and better state of the economy as a whole. Due to increased economic growth, SOEs are able to accumulate internally generated capital for their investment activities, thus lowering their need for loans, subsidies and deferred payments. On the other hand, in countries with low GDP growth rates job placements within SOEs are observed as a secure option which provides a secure

income relative to the private sector. The increase of GDP growth rates usually indicates the strengthening of the private sector which becomes more plausible option for employment, thus leading to decrease in number of employees within SOEs. This is confirmed by Wilson (2012) who showed that governments lean towards employment increase when serious drop in economic growth is observed.

The percentage of *Politically connected board* members seems to be significant for all three dependent variables (Table 3.4). Ten percent increase in *Politically connected board* members results in approximately 2% increase in number of *Employees*, 5% increase in *Indebtedness* and 10% decrease in *Investment*. The positive association with employment and indebtedness confirms the findings of previous studies. Bertrand et al. (2007) and Wolfers (2002) show that politically connected managers have the incentive to create more jobs. Moreover, Faccio (2010) suggests that greater number of political connections results in higher leverage levels. The negative association with investments stems from the fact that politically connected managers distort efficiency of capital allocation within enterprises (Chen et al., 2011; Zhao et al., 2013). In the case of SOEs this is usually the consequence of undertaking the politically expedient projects with negative values (Cavaliere & Scabrosetti, 2008; Musacchio et al, 2015a).

To further investigate the impact of political connections we analyse whether SOEs with politically dominated boards behave differently in election periods relative to SOEs with non-politically dominated boards. The results in Table 3.5 reveal that only SOEs with politically dominated boards increase the number of *Employees* in

Election and *Postelection* years with effect being more profound in *Election* years, thus supporting Hypothesis 4. The politically connected board members increase employment as this helps the re-election prospects of the incumbent (Wolfers, 2002). Contrary to that, the number of *Employees* within SOEs with non-politically dominated boards is determined by *Enterprise size* and *Capital intensity* and it is not altered in election periods. Politicians via their political connections exert significant positive impact on employment levels (Menozzi et al., 2011).

[Insert Table 3.5 about here]

The *Indebtedness* seems to increase in *Pre-election* and *Election* years for SOEs with politically dominated and non-politically dominated boards as presented in Table 3.5. The insignificance of *Postelection* for *Indebtedness* confirms election-related manipulation of SOEs' decisions. Furthermore, the positive significant upsurge in the level of loans, subsidies and deferred payments (*Indebtedness*) in *Pre-election* years is more profound for SOEs with politically dominated boards, thus providing support for Hypothesis 5. This finding is in line with previous research which entails that enterprises with political connections rely heavily on debt (e.g., Boubakri et al., 2012; Cull & Xu, 2005; Johnson & Mitton, 2003; Khwaja & Mian, 2005). Politicians are incentivized to increase SOEs' indebtedness as to be able to finance investment projects which are one of the underlying factors of the voters' support. The low significant postelection increase of investments might

indicate that increase of SOEs' indebtedness was used for some other political re-election mechanisms. Thus, we acknowledge that our results do not support Hypothesis 6. The results for control variables are consistent with results for the whole sample.

The last step of our analysis reveals discrepancies in manipulation of SOEs' corporate decisions in election periods which might be dependent upon the level of governmental governance. Results in Table 3.6 clearly indicate that SOEs governed by central governments increase the number of *Employees* in *Pre-election* and *Election* years, thus disclosing the presence of election induced employment cycles. Contrary to that, it can be noted that for SOEs governed by local self-governments such adjustments of employment levels cannot be observed. Moreover, alteration of *Indebtedness* decisions in *Pre-election* and *Election* years is only present within SOEs governed by local self-governments. The results related to *Investment* levels indicate that only in *Postelection* years at the local level the positive change is observed. Therefore, we acknowledge that our results partially support Hypothesis 7 and that further analysis in this regard is needed.

[Insert Table 3.6 about here]

The explanation for the above stated results can be related to visibility of SOEs. SOEs governed by the central governments are mostly large enterprises being

continuously in the focus of the public (O'Connel, 1995). On the one hand, increase in employment within these SOEs would be accompanied with news headlines, gaining a lot of publicity and providing incumbents with the propaganda which wins over the votes. On the other hand, increase of indebtedness in election periods for SOEs governed by central governments would raise questions about the purpose of those funds especially bearing in mind that change of investments is not observed in the same period. Additionally, the absence of increase in employment levels amongst SOEs governed by local self-governments can be related to election dynamics. Walder (1995) explains that local incumbents straightforwardly encounter all the benefits and/or costs of enterprise operations at the local level. Local politicians are exposed to the highest political pressures in years of local elections. Therefore, they may opt to increase employment around local elections instead of parliamentary elections as this provides them with the greatest political gains. The result for investments is contrary to findings of Allok and Ayyagari (2015) who show that the number of investment projects increases in election years and is 10% higher for locally governed SOEs relative to those that are centrally governed. For that reason, our results may indicate that funds raised by SOEs in pre-election and election years are used for other re-election mechanisms.

In order to test the robustness of our results we re-estimate our models with several variables being replaced. First, we use GDP per capita growth rate instead of GDP growth rate as suggested by Boubakri et al. (2012). We also use total debt over equity as an alternative measure of leverage and fixed assets over total assets as

enterprise size measure. The fixed effects re-estimations provide us with consistent results supporting our analysis and arguments presented in this section.

3.5 Conclusions

The past research on pre-election manipulation focuses mainly on alteration of macroeconomic variables and economic policies despite the fact that incumbent politicians have numerous levers for influencing economic conditions. Our study shifts that focus towards micro level political business cycles which encompass political intervention, manipulation and alteration of SOEs' corporate decisions around election times. We examine whether incumbents in pre-election and election years use corporate decisions of SOEs as to increase their re-election prospects.

Our results uncover that politicians engage in pre-election manipulation of SOE employment decisions since the increase in number of employees is greatest in pre-election year. We also find that SOEs' indebtedness decisions are manipulated prior to elections as to create opportunities for new investments and/or cover the costs of new job placements. The level of SOEs' investments increases in election and postelection years. Furthermore, for SOEs with politically dominated boards we observe more profound changes of employment and leverage levels. The manipulations of employment levels are present within SOEs governed by central governments, while political intervention regarding indebtedness and investment levels is more profound within SOEs governed by local self-governments.

Our research findings have several important implications for literature and policymakers. First, they reveal that SOEs' corporate decisions are used by the incumbents as an informal lever for increase in the likelihood of their reappointment, thus implying the existence of enterprise level opportunistic business cycles. Second, our study shows one of the reverse channels through which benefits are streamlined from enterprises to politicians. These findings provide an important implication for political embeddedness theory as they suggest that politically connected boards grant election favours to politicians through manipulation of SOE corporate decisions. Third, policymakers should entrust governance of SOEs to independent institutions as to impede political influence over their corporate decisions. Moreover, through adoption of four-year government plans on employment, indebtedness and investment, policymakers would limit the possibilities for adoption of short-term election-driven political decisions.

The research presented in this study can be extended in several ways. First, our research focused on the relationship between elections and SOE corporate decisions since the incumbent politicians have a direct channel for political intervention. Further research might focus on presence/absence of changes within corporate decisions of private enterprises around election times as to determine whether political influence is ownership related. Second, in our study we do not track the link between indebtedness and investment levels due to data limitations. Such analysis would provide us with a more nuanced picture of whether increase of SOE indebtedness is used for real investment purposes or hidden election campaign

goals. Third, the research could be replicated in the context of other developed, developing, emerging and/or transition countries as to establish whether the findings are more generally applicable. In that way, certain institutional or developmental factors might be depicted as crucial for the existence of same or similar patterns. Furthermore, the analysis could be extended to other corporate decisions.

Table 3.1

Ownership structure and political connections

	SOEs with 100% state ownership	SOEs with no significant minority shareholder	SOEs with significant minority shareholders
Number of SOEs	102	86	12
Minority shareholder stake	No minority shareholders	Large number of small shareholders with ownership lower than 3%	One significant shareholder with ownership between 19.6% and 49% and others with ownership lower than 5%
Percentage of board members that are politically connected	55.8%	51%	34.5%
Percentage of board members that held a government position and that are politically connected	31.2%	24%	15.92%

Notes: Interdependence of SOE ownership structure and percentage of politically connected board members.

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Table 3.2

Descriptive statistics

	Mean	Median	Std	Obs
Panel A: SOE corporate decisions				
Employees	666.67	4830.00	1506.40	985
Indebtedness	9815.30	2667.50	23638.84	840
Investment	48.21	21.04	1214.28	635
Panel B: Political interference measures				
Pre-election	0.27	0.00	0.45	996
Election	0.34	0.00	0.47	996
Postelection	0.20	0.00	0.40	996
Panel C: Control variables				
GDP growth	0.27	0.65	1.71	996
Enterprise existence	28.01	21.00	23.40	973
Enterprise size	10.14	10.11	2.22	970
Politically connected board	0.52	0.57	0.29	915
Capital intensity	0.65	0.73	0.27	840
Leverage	0.28	0.31	0.46	813
Tangible collateral	0.64	0.69	0.26	808
Cash flow	-0.01	0.00	0.08	975
ROA	-0.01	0.00	0.09	970
ROE	-0.05	-0.02	0.22	953
Sales	9.06	8.72	2.15	969

Notes: This table reports descriptive statistics for key variables. The sample covers 200 state-owned enterprises from Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro, Serbia and Slovenia for the period 2010-2014. Panel A reports the summary statistics for state-owned enterprises' corporate decision variables. *Employees* is calculated as natural logarithm of the total number of employees (non-logarithm value reported). *Indebtedness* is calculated as natural logarithm of creditors including all loans as well as any other type of debt such as subsidies, deferred payments of services or goods etc (non-logarithm value reported). *Investment* is calculated as the difference between fixed assets at the end of year and fixed assets at the beginning of the year divided by fixed assets at the beginning of year. In panel B the summary statistics for election variables are reported. *Pre-election* is a dummy variable which takes value 1 in a year prior to parliamentary elections. *Election* is a dummy variable which takes value 1 in years of parliamentary elections. *Postelection* is a dummy variable which takes value 1 in a year after parliamentary elections. Panel C reports the summary statistics for control variables. *GDP growth* is the real GDP growth rate. *Enterprise* existence is natural logarithm of the difference between years under investigation and year of SOE incorporation (non-logarithm value reported). *Enterprise* size is the natural logarithm of total assets. *Politically connected board* is the percentage of the politically connected board members and is equal to the number of politically connected board members over total number of board members. *Capital intensity* is the industry proxy calculated as fixed assets over total assets. *Leverage* is equal to long-term debt over shareholders' equity. *Tangible collateral* is equal to net inventory (tangible fixed assets + stock) over total assets. *Cash flow* is EBIT over total assets. *ROA* is EBIT over average total assets. *ROE* is net income over average total equity. *Sales* is natural logarithm of sales.

Figure 3.1

Average number of employees by country and year
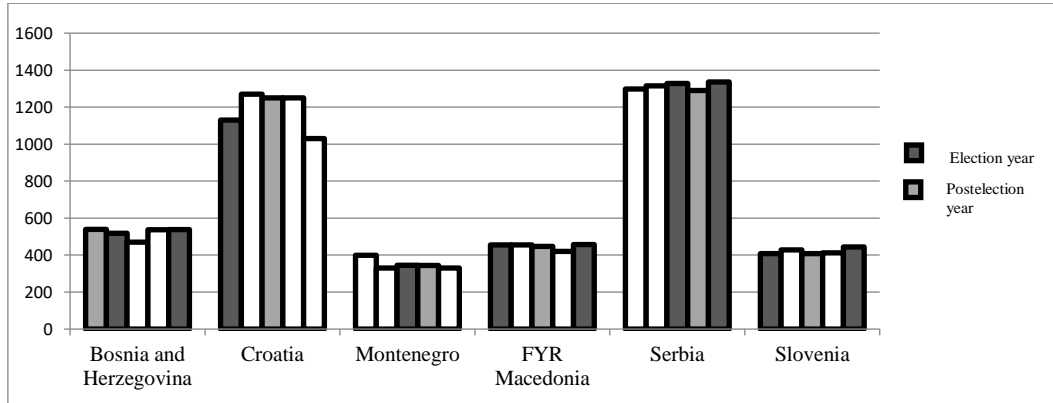
Notes: This figure shows the average number of employees employed by SOEs in each of the countries and each of the years.

Figure 3.2

Average level of indebtedness by country and year
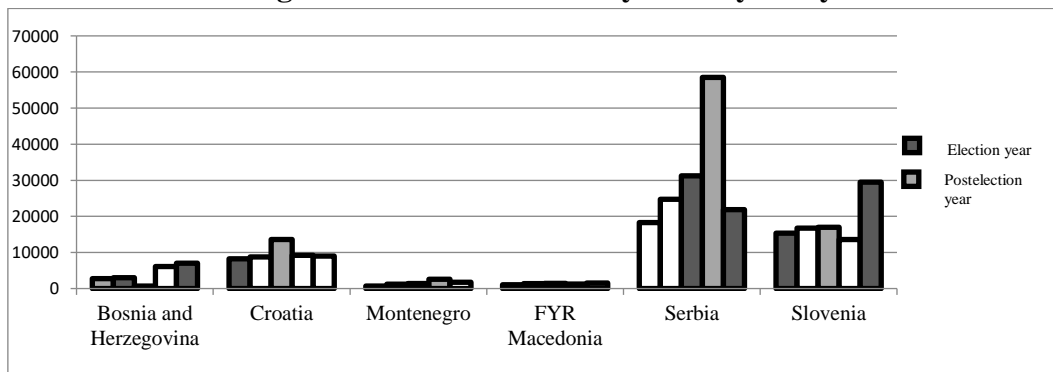
Notes: This figure shows the average level of SOE indebtedness in each of the countries observed and each of the years. The level of indebtedness is account 'creditors' from balance sheet that includes all outstanding loan obligations of SOEs as well as any other types of debt such as subsidies, deferred payments for services or goods etc.

Figure 3.3

Average level of investments by country and year
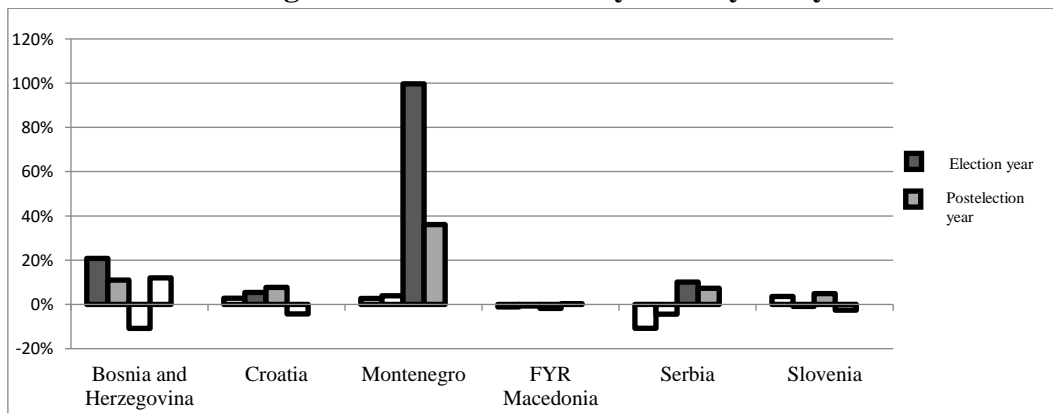
Notes: This figure shows the average level of SOE investments in each of the countries observed and each of the years. The investment level is calculated as the difference of fixed assets at the end of the year and fixed assets at the beginning of the year scaled by the fixed assets at the beginning of the year.

Table 3.3

Pearson's correlation matrix

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
1. Employees	1.0000																
2. Indebtedness	0.4024*	1.0000															
3. Investment	-0.1114*	-0.0046	1.0000														
4. Pre-election	0.0150	0.00757	-0.0240	1.0000													
5. Election	-0.0395	-0.0395	-0.0240	-0.4434*	1.0000												
6. Postelection	-0.0010	0.0451	-0.0231	-0.2384*	-0.3594	1.0000											
7. GDP growth	-0.0999*	-0.0296	0.0660	0.1671*	0.2337*	-0.2508*	1.0000										
8. Enterprise existence	0.1944*	0.0727	-0.0447	0.0092	0.0077	-0.0122	-0.0660	1.0000									
9. Enterprise size	0.6841*	0.5067*	-0.0201	0.0417	-0.0514	-0.0059	-0.1458*	0.1941*	1.0000								
10.Politically con. board	0.0153	-0.0828	-0.0052	-0.0410	-0.0586	0.0096	-0.0636	0.0731	0.0346	1.0000							
11. Capital intensity	0.3028*	0.1016*	-0.0986	0.0080	-0.0274	-0.0065	-0.0721	0.1537*	0.4930*	0.0064	1.0000						
12. Leverage	0.1799*	0.1391*	-0.0255	-0.0339	-0.0135	0.0364	-0.1330*	-0.1306*	0.1466*	-0.0605	0.0655	1.0000					
13. Tangible collateral	0.2776*	-0.0712	-0.1022	-0.0162	-0.0012	-0.0160	-0.0088	0.1163*	0.1894*	-0.0356	0.6446*	-0.0401	1.0000				
14. Cash flow	-0.0053	-0.0952*	-0.0350	-0.0117	0.0541	-0.0598	0.0463	0.0278	0.0788	0.0141	0.0461	-0.0900	-0.0899	1.0000			
15. ROA	-0.0183	-0.0793	-0.0330	-0.0165	0.0539	-0.0481	0.0397	0.0315	0.0583	0.0336	0.0144	-0.0846	-0.1046*	0.9738*	1.0000		
16. ROE	0.0202	-0.1152*	0.0513	-0.0146	0.0028	-0.0096	0.0087	0.2658*	0.8262*	-0.0327	0.2917*	0.2041*	0.0404	0.0969*	0.4193*	1.0000	
17. Sales	0.7687*	0.5554*	-0.0502	0.0690	-0.0268	-0.0021	-0.1481*	0.2658*	0.8262*	-0.0327	0.2917*	0.2041*	0.0404	0.0969*	0.0902*	0.1023*	1.0000

Notes: ***, ** and * indicate significant at 1%, 5% and 10%, respectively.

Table 3.4
The relationship between corporate decisions and elections

	Panel 1			Panel 2			Panel 3
	Employees			Indebtedness			Investment
Pre-election	0.097**	0.124**	0.121**	0.284***	0.292***	0.291***	0.090
	(0.046)	(0.062)	(0.060)	(0.081)	(0.080)	(0.081)	(0.117)
Election	0.108**	0.132**	0.127**	0.138	0.230***	0.137	0.213*
	(0.043)	(0.059)	(0.058)	(0.092)	(0.078)	(0.093)	(0.148)
Postelection	0.042*	0.074*	0.073*	0.030	0.111	0.041	0.187*
	(0.023)	(0.038)	(0.037)	(0.080)	(0.070)	(0.081)	(0.118)
GDP growth	-0.018**	-0.024**	-0.024**	-0.059***	-0.062***	-0.058***	0.034
	(0.008)	(0.011)	(0.011)	(0.018)	(0.019)	(0.019)	(0.049)
Enterprise existence	0.030	0.013	-0.084	0.393	1.170***	0.287	0.755*
	(0.201)	(0.196)	(0.181)	(0.665)	(0.399)	(0.676)	(0.797)
Enterprise size	0.211	0.217*	0.225*	0.497***	0.439***	0.475***	-0.874**
	(0.137)	(0.121)	(0.116)	(0.165)	(0.154)	(0.167)	(0.396)
Politically connected board (t-1)	0.199**	0.247**	0.218**	0.632**	0.537**	0.621**	-0.654*
	(0.099)	(0.121)	(0.106)	(0.266)	(0.247)	(0.267)	(0.398)
Capital intensity	-0.689	-0.850	-0.837				
	(0.639)	(0.793)	(0.868)				
Leverage (t-1)	0.067	0.096	0.078				0.083
	(0.075)	(0.086)	(0.076)				(0.064)
Tangible collateral				-0.239	-0.193	-0.209	
				(0.468)	(0.441)	(0.485)	
Cash flow (t-1)							0.047
							(0.095)
ROA (t-1)	1.244			0.388			
	(1.017)			(0.514)			
ROE(t-1)		0.234			-0.296		
		(0.270)			(0.205)		
Sales(t-1)			0.078*			0.152	
			(0.043)			(0.118)	
No. of Obs.	533	534	533	528	513	527	346
F	1.92	1.86	2.08	3.71	4.63	3.81	1.70
Prob>F	0.046	0.054	0.028	0.000	0.000	0.000	0.000
r2	0.16	0.09	0.09	0.09	0.12	0.09	0.09

Notes: The table presents the results for the relationship between SOEs' corporate decisions on employment, indebtedness and investment and election cycles. Fixed effects panel data was used. Robust standard errors are reported in parentheses. In all regressions constant term is estimated but not reported. ***significant at 1%, ** significant at 5%, * significant at 10%. In Panel 1 the dependent variable is *Employees* which is calculated as natural logarithm of the total number of employees. In Panel 2, the dependent variable is *Indebtedness* which is calculated as natural logarithm of creditors including all loans as well as any other type of debt such as subsidies, deferred payments of services or goods etc. In Panel 3, the dependent variable is *Investment* which is calculated as the difference between fixed assets at the end of the year and fixed assets at the beginning of the year divided by fixed assets at the beginning of year. *Pre-election* is a dummy variable which takes value 1 in a year prior to parliamentary elections. *Election* is a dummy variable which takes value 1 in years of parliamentary elections. *Postelection* is a dummy variable which takes value 1 in a year after parliamentary elections. *GDP growth* is the real GDP growth rate. *Enterprise existence* is natural logarithm of the difference between years under investigation and year of SOE incorporation. *Enterprise size* is the natural logarithm of total assets. *Politically connected board* is the percentage of the politically connected board members and is equal to the number of politically connected board members over the total number of board members. *Capital intensity* is the industry proxy calculated as fixed assets over total assets. *Leverage* is equal to long-term debt over shareholders' equity. *Tangible collateral* is equal to net inventory (tangible fixed assets + stock) over total assets. *Cash flow* is EBIT over total assets. *ROA* is EBIT over average total assets. *ROE* is net income over average total equity. *Sales* is natural logarithm of sales.

Table 3.5
The relationship between corporate decisions and elections in the context of politically dominated boards

	Panel 1 — Boards with more than 25% of politically connected board members - politically dominated boards							Panel 2 — Boards with less than 25% of politically connected board members - non-politically dominated boards						
	Employees (1)			Indebtedness (2)			Investment (3)	Employees (4)			Indebtedness (5)			Investment (6)
Pre-election	0.092 (0.057)	0.138* (0.083)	0.121 (0.074)	0.417*** (0.103)	0.399*** (0.103)	0.398*** (0.104)	0.102 (0.116)	-0.001 (0.025)	-0.003 (0.025)	-0.010 (0.019)	0.312** (0.125)	0.355*** (0.127)	0.318** (0.123)	0.005 (0.064)
Election	0.121** (0.047)	0.154** (0.070)	0.136** (0.065)	0.174* (0.096)	0.233** (0.092)	0.168* (0.099)	0.188 (0.146)	0.003 (0.034)	0.005 (0.034)	-0.015 (0.024)	0.284** (0.132)	0.312** (0.133)	0.288*** (0.131)	0.011 (0.045)
Postelection	0.052** (0.024)	0.090* (0.049)	0.076* (0.042)	-0.081 (0.096)	-0.030 (0.089)	-0.072 (0.096)	0.190* (0.118)	0.007 (0.021)	0.005 (0.021)	0.002 (0.016)	0.152 (0.141)	0.185 (0.151)	0.156 (0.140)	-0.067 (0.104)
GDP growth	-0.024** (0.011)	-0.031** (0.015)	-0.027* (0.014)	-0.109*** (0.024)	-0.106*** (0.024)	-0.109*** (0.024)	0.034 (0.053)	-0.006 (0.005)	-0.005 (0.005)	-0.003 (0.004)	-0.026 (0.026)	-0.025 (0.028)	-0.027 (0.026)	-0.001 (0.028)
Enterprise existence	-0.117 (0.255)	-0.204 (0.230)	-0.381* (0.228)	-0.183 (0.772)	0.336 (0.511)	-0.266 (0.797)	0.721 (0.731)	0.393 (0.246)	0.379 (0.264)	0.416* (0.207)	-0.798 (0.856)	-1.163 (1.049)	-0.787 (0.854)	0.108 (0.267)
Enterprise size	0.032 (0.136)	0.058 (0.111)	0.060 (0.107)	0.366** (0.166)	0.260 (0.157)	0.368** (0.181)	-0.558 (0.469)	0.347*** (0.058)	0.333*** (0.067)	0.348*** (0.048)	0.580* (0.343)	0.420 (0.413)	0.580* (0.343)	-0.079 (0.157)
Capital intensity	-0.103 (0.621)	-0.404 (0.828)	-0.518 (0.943)	—	—	—	—	0.209** (0.081)	0.188** (0.079)	0.116 (0.073)	—	—	—	—
Leverage (t-1)	0.133 (0.094)	0.119 (0.102)	0.152 (0.097)	—	—	—	0.129 (0.113)	-0.001 (0.014)	-0.005 (0.015)	-0.005 (0.010)	—	—	—	0.105 (0.137)
Tangible collateral	—	—	—	0.698 (1.127)	0.791 (1.102)	0.647 (1.173)	—	—	—	—	1.052 (0.897)	1.080 (0.965)	1.058 (0.907)	—
Cash flow	—	—	—	—	—	—	0.020 (0.076)	—	—	—	—	—	—	0.024 (0.115)
ROA (t-1)	1.422 (1.137)	—	—	0.481 (0.575)	—	—	—	0.211 (0.415)	—	—	-0.148 (0.131)	—	—	—
ROE (t-1)	—	0.233 (0.286)	—	—	0.080 (0.292)	—	—	—	0.008 (0.050)	—	—	0.096 (0.162)	—	—
Sales (t-1)	—	—	0.168** (0.074)	—	—	0.047 (0.144)	—	—	—	0.116** (0.049)	—	—	-0.027 (0.127)	—
No. of Obs.	493	494	490	485	474	481	324	80	80	80	84	81	84	49
F	1.71	1.78	1.80	3.48	3.38	3.35	1.72	185.69	130.91	127.55	1.49	2.15	1.54	1.97
Prob>F	0.091	0.075	0.072	0.001	0.001	0.001	0.057	0.000	0.000	0.000	0.193	0.056	0.178	0.019
r2	0.15	0.07	0.09	0.09	0.10	0.08	0.05	0.62	0.61	0.73	0.23	0.25	0.22	0.28

Notes: The table presents the results for the relationship between corporate decisions on employment, indebtedness, investment and election cycles in the context of politically dominated

boards. Fixed effects panel data was used. Robust standard errors are reported in parentheses. In all regressions, constant term is estimated but not reported. ***significant at 1%, ** significant at 5%, * significant at 10%. First panel presents the results for SOEs with politically dominated board members (more than 25% of board members are politically connected). Second panel presents the results for SOEs with non-politically dominated board members (less than 25% of board members is politically connected). In columns (1) and (4) the dependent variable is *Employees* which is calculated as natural logarithm of the total number of employees. In columns (2) and (5) the dependent variable is *Indebtedness* which is calculated as natural logarithm of creditors including all loans as well as any other type of debt such as subsidies, deferred payments of services or goods etc. In columns (3) and (6) the dependent variables is *Investment* which is calculated as the difference between fixed assets at the end of the year and fixed assets at the beginning of the year divided by fixed assets at the beginning of year. *Pre-election* is a dummy variable which takes value 1 in a year prior to parliamentary elections. *Election* is a dummy variable which takes value 1 in years of parliamentary elections. *Postelection* is a dummy variable which takes value 1 in a year after parliamentary elections. *Enterprise existence* is natural logarithm of the difference between years under investigation and year of SOE incorporation. *Enterprise size* is the natural logarithm of total assets. *Capital intensity* is the industry proxy calculated as fixed assets over total assets. *Leverage* is equal to long-term debt over shareholders' equity. *Tangible collateral* is equal to net inventory (tangible fixed assets + stock) over total assets. *Cash flow* is EBIT over total assets. *ROA* is EBIT over average total assets. *ROE* is net income over average total equity. *Sales* is natural logarithm of sales.

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Table 3.6
SOE corporate decisions in the context of owner's entity

	Panel 1 — Governed by central government								Panel 2 — Governed by local self-government					
	(1) Employees			(2) Indebtedness			(3) Investment		(4) Employees		(5) Indebtedness			(6) Investment
Pre-election	0.140** (0.066)	0.201* (0.106)	0.182* (0.099)	0.005 (0.098)	0.016 (0.105)	-0.007 (0.102)	-0.006 (0.114)	-0.022 (0.050)	-0.021 (0.051)	-0.019 (0.040)	0.591** (0.168)	0.532*** (0.150)	0.558*** (0.172)	0.102 (0.107)
Election	0.176** (0.083)	0.214* (0.121)	0.193* (0.110)	0.013 (0.105)	0.012 (0.113)	0.004 (0.111)	0.124 (0.140)	0.033 (0.042)	0.036 (0.043)	0.027 (0.030)	0.330** (0.139)	0.383*** (0.131)	0.317** (0.139)	0.063 (0.116)
Postelection	0.110** (0.050)	0.161* (0.090)	0.148* (0.079)	0.001 (0.095)	0.007 (0.098)	0.019 (0.098)	-0.092 (0.081)	0.017 (0.018)	0.020 (0.018)	0.005 (0.015)	-0.190 (0.122)	-0.116 (0.116)	-0.189 (0.118)	0.234** (0.107)
GDP growth	-0.020* (0.010)	-0.028* (0.015)	-0.028* (0.015)	-0.042** (0.020)	-0.045** (0.020)	-0.042** (0.020)	-0.039 (0.044)	-0.006 (0.014)	-0.007 (0.014)	-0.004 (0.012)	-0.156** (0.040)	-0.154** (0.039)	-0.156*** (0.041)	0.075 (0.058)
Enterprise existence	0.077 (0.258)	0.055 (0.274)	-0.098 (0.222)	0.350 (0.531)	0.291 (0.531)	0.249 (0.532)	-0.142 (0.508)	0.277* (0.151)	0.272* (0.152)	0.034 (0.193)	-0.715 (0.998)	0.239 (0.678)	-0.752 (1.021)	0.680 (0.932)
Enterprise size	0.276 (0.222)	0.239 (0.204)	0.235 (0.195)	0.145 (0.210)	0.120 (0.204)	0.092 (0.203)	-1.197** (0.459)	0.062 (0.084)	0.075 (0.089)	0.086 (0.087)	0.630** (0.274)	0.563* (0.320)	0.677** (0.319)	-0.349 (0.741)
Capital intensity	-0.668 (0.941)	-0.985 (1.226)	-0.947 (1.298)						0.209 (0.473)	0.157 (0.383)				
Leverage (t-1)	0.066 (0.084)	0.081 (0.090)	0.073 (0.089)				0.007 (0.100)	-0.018 (0.022)	-0.012 (0.030)	-0.014 (0.025)				0.369 (0.314)
Tangible collateral				0.234 (0.539)	0.167 (0.515)	0.065 (0.580)					1.245 (1.266)	1.390 (1.311)	1.167 (1.326)	
Cash flow							0.024 (0.149)							-0.303 (0.263)
ROA (t-1)	1.398 (1.167)			0.629 (0.602)				0.252 (0.204)			0.643 (1.578)			
ROE (t-1)		0.278 (0.354)			-0.140 (0.263)				0.017 (0.043)			-0.277 (0.376)		
Sales (t-1)			0.055 (0.046)			0.019 (0.111)				0.360** (0.147)			0.124 (0.289)	
No. of Obs.	300	301	299	289	290	287	197	300	300	297	306	290	303	195
F	1.09	1.06	1.14	1.10	0.99	1.08	1.36	2.00	1.84	2.35	4.13	4.75	4.20	1.04
Prob>F	0.376	0.402	0.341	0.372	0.450	0.385	0.223	0.049	0.071	0.019	0.000	0.000	0.000	0.239
r2	0.17	0.09	0.08	0.04	0.03	0.03	0.29	0.08	0.07	0.32	0.17	0.20	0.16	0.08

Notes: The table presents the results for the relationship between corporate decisions on employment, indebtedness and investment and election cycles in the context of owner entity. Fixed

effects panel data was used. Robust standard errors are reported in parentheses. In all regressions, constant term is estimated but not reported. ***significant at 1%, ** significant at 5%, * significant at 10%. First panel presents results for SOEs governed directly by central government. Second panel presents results for SOEs governed through local self-governments. In columns (1) and (4) the dependent variable is *Employees* which is calculated as natural logarithm of the total number of employees. In columns (2) and (5) the dependent variable is *Indebtedness* which is calculated as natural logarithm of creditors including all loans as well as any other type of debt such as subsidies, deferred payments of services or goods etc. In columns (3) and (6) the dependent variables is *Investment* which is calculated as the difference between fixed assets at the end of year and fixed assets at the beginning of the year divided by fixed assets at the beginning of year. *Pre-election* is a dummy variable which takes value 1 in a year prior to parliamentary elections. *Election* is a dummy variable which takes value 1 in years of parliamentary elections. *Postelection* is a dummy variable which takes value 1 in a year after parliamentary elections. *GDP growth* is the real GDP growth rate. *Enterprise existence* is natural logarithm of the difference between years under investigation and year of SOE incorporation. *Enterprise size* is the natural logarithm of total assets. *Capital intensity* is the industry proxy calculated as fixed assets over total assets. *Leverage* is equal to long-term debt over shareholders' equity. *Tangible collateral* is equal to net inventory (tangible fixed assets + stock) over total assets. *Cash flow* is EBIT over total assets. *ROA* is EBIT over average total assets. *ROE* is net income over average total equity. *Sales* is natural logarithm of sales.

Chapter 4

Importance of Board Members' Professional Background for Performance of SOEs

4.1 Introduction

Empirical research recognizes that board of directors (board) is one of the crucial corporate governance mechanisms that influences enterprise performance. Bertrand and Schoar (2003) explain that enterprise behaviour can vary due to idiosyncratic differences between board members. With development of upper echelons theory, the first to recognize this notion are Hambrick and Mason (1984). The theory states that strategic decisions and enterprise performance are influenced by decision makers' background characteristics. Moreover, idiosyncratic experiences lead to different information interpretation, thus affecting decision-making processes and performance. The professional experience and knowledge of individual board members determine the role of the board as well as their ability to pinpoint financial and performance issues (Xiao, Dahya, & Lin, 2004).

Anderson, Reeb, Upadhyay and Zhao (2011) suggest that heterogeneous boards in terms of their occupation, education, knowledge and skills provide larger number of viewpoints, more oversight and better monitoring. It is argued that heterogeneity in terms of professional, technical and social backgrounds enable managers to tap into a broader advice and knowledge pool (Klein, 1998; Watson, Johnson, & Merritt, 1998). Moreover, diverse expertise of board members enables extensive discussions, greater problem scrutiny and in-depth assessments of decision consequences (Berger, Kick, & Schaeck, 2014). Contrary to that, board homogeneity might result in group thinking and uniform decision deliberation (Janis, 1982; Ujinwa, Okoyeuzu, & Nwokoby, 2012). Furthermore, Francis, Hasan and Qiang (2015) explain that boards dominated by individuals with same qualifications inherently focus on same details, thus potentially omitting valuable facts. Therefore, we contend that board ability to monitor managers and provide resources is highly dependent upon board capacity in terms of experience, level of education and established connections.

The interest for the so-called boards' "black box" (Lawrence, 1997; Leblanc, 2004) triggered research about board features as to identify the optimal board structure with greatest positive impact on performance. Thus far, the vast majority of research studies has investigated board independence and certain board demographics. The main focus was on the performance impact of independent board members (e.g., Devos et al., 2009, Hermalin & Weisbach, 1988), board size (e.g., Boone, Field, Karpoff, & Raheja, 2007), differences between insiders and outsiders (e.g., Anderson & Reeb, 2004; Daily, 1995; Jensen & Zajac, 2004), board

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gender impact (e.g., Adams & Ferreira, 2009) and tenure (e.g., Hambrick, Geletkanycz, & Frederickson, 1993). The empirical evidence provided by these studies is ambiguous and inconclusive. Despite the fact that policymakers and academics considered these board characteristics as proxies of board quality, some recent evidence shows that specific types of board members might be more important.

The capability of board members to monitor and provide credible advice is affected by their individual occupations as found by Bazerman and Schoorman (1983). CEOs or board members of other private enterprises usually possess the well-established professional track record (Jermias & Gani, 2014). With their board participation practical and up-to-date information is brought to the table, thus reducing market scanning costs. On the other hand, government officials provide a direct flow of information regarding government regulation while at the same time increasing enterprise chances of influencing government policies (Boyd, 1990; Hillman, 2005; Pfeffer, 1972). Moreover, the research implies that government officials usually possess above average negotiating skills (Jermias & Gani, 2014). Contribution of university professors is related to their specialized expertise, profound research understanding and consulting capabilities (Francis et al., 2015). Furthermore, Audretsch and Lehmann (2006) suggest that participation of professors on boards enables knowledge-spillover absorption, thus boosting efficiency of certain in-house processes.

The presence of these three distinctive groups of professionals is likely to positively affect managers' decision making and improve enterprise performance (Jermias & Gani, 2014). Furthermore, skills and expertise of these individuals enhance board monitoring, they enable establishment of links to essential resources as well as facilitation of board advisory function (Hillman & Dalziel, 2003; Hillman, Zardkoohi, & Bierman, 1999; Pfeffer & Salancik, 1978; Rosenstein & Wyatt, 1994; Zahra & Pearce, 1989). The primary focus of previous research studies is on private enterprises, board member independence and board demographics. Hence, we try to address this gap through examination of the relationship between board members' profession and SOE performance/operating costs[10].

By disentangling work/experience heterogeneity of SOE board members we try to depict how individuals working within private sector, those working as professors and government officials affect SOE performance and operating costs. Furthermore, we provide a more nuanced picture on how performance and operating costs might be influenced by the intertwined effect of the SOE board members' professional background and political connections. In our study we also analyse whether effects of board capital and political capital balance each other out or their overall effect improves/deteriorates SOE performance.

Using panel data fixed effects, the analysis is performed on a hand-collected dataset of 200 SOEs, from 2010 to 2014, in six countries of the former SFRY. The decision to investigate these countries is related to their governments' commitment to cut

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[10] The measure of operating costs includes the cost of goods sold.

public debt and ensure adoption of good corporate governance practices within SOEs. After global economic crisis the enhancement of SOEs' performance became one of the main priorities for governments of these countries. The governments were faced with serious budget deficits and high levels of public debt. For example, the overall direct adverse effect of SOEs on public finances in Serbia, in the period 2010-2014, reached 3% of GDP or €1 billion annually (Fiscal Council of the Republic of Serbia, 2014). In addition, numerous reports emphasize the importance of SOE board professionalisation and depoliticisation in all six countries irrespective of their EU status (Council of the European Union, 2014; European Commission, 2012; Foundation for the Advancement of Economics, 2015). Petrovic and Sonje (2016) in their analysis of Croatian SOEs explain that appointment of experienced and knowledgeable board members is a precondition for their successful performance. Therefore, we believe that these countries provide a well justified setting for examination of the relationship between board members' professional background and SOE performance.

Our results imply that board members coming from private enterprises are positively related to SOE operating costs, thus having negative association with ROE for the overall sample. Contrary to that, we observe negative relationship between government representatives and SOE operational efficiency. Furthermore, presence of professors on SOE boards is positively associated with financial performance. The findings also reveal that magnitude of these associations increases with board members being politically connected. Individuals working for private enterprises or as professors are positively related to operational efficiency

and operating costs of SOEs with minority private ownership. For SOEs with 100% state ownership we depict negative association between government officials and operating performance. We further find that profession of board members is insignificant for manufacturing SOEs. Finally, board and political capital exhibit positive relationship with SOE financial performance.

Our study makes several contributions to the existing literature. First, we complement the empirical research on the relationship between board characteristics and various aspects of enterprise performance. We point out that board member heterogeneity beyond independence (e.g., Hermalin & Weisbach, 1988) and demographic characteristics (e.g., Carter, D'Souza, Simkins, & Simpson, 2010; Golden & Zajac, 2001; Masulis et al., 2012) has important implications for SOE performance. More specifically, our findings imply that board-performance relationship is influenced by individual board member experience, level of education and political connections. Second, this study enriches understanding of the upper echelons theory by providing evidence that board members' background characteristics impact performance (Hambrick & Mason, 1984). Third, we extend the research that examines how presence of specific types of individuals on boards affects decision-making processes, and thus performance (e.g., Litov, Sepe, & Whitehead, 2013; Sisli-Ciamarra, 2012). Our study uncovers that individuals working for private enterprises, professors and governments' officials have differentiating effects on financial and operating performance of SOEs.

Findings of our study might also have important practical implications regarding SOE policies and board member structure. On a general note, governments need to devote greater attention to development of SOE board appointment criteria which would ensure the quality of individuals performing board duty. Specifically, findings indicate that professors and individuals from private enterprises as SOE board members enhance performance.

The remainder of this chapter is organized as follows. Section 4.2 provides a review of relevant literature and develops hypotheses about the impact of board members' professional backgrounds on SOE performance. Section 4.3 describes our dataset and explains econometric approach. Main findings are discussed in Section 4.4, while concluding remarks and implications for future research are presented in Section 4.5.

4.2 Literature review and hypothesis development

Board functions and roles envisaged by theories are not performed in the same way by boards of different enterprises. In order to address this issue and on the premise of bounded rationality, Hambrick and Mason (1984) built the upper echelons theory. They acknowledge that individuals' characteristics could potentially yield an explanation for distinct performance outcomes. The theory asserts that experience, values and character of individual board members creates personalized construal based on which they process information and evaluate strategic situations. Hence, board processes are a resultant of collective experiences, capabilities and their interactions (Hambrick, 2007). Contrary to the narrow neoclassical view of

homogenous managers being perfect substitutes for each other, Bertrand and Schoar (2003) emphasize the heterogeneity of managers styles.

A growing body of theoretical evidence suggests that board heterogeneity/diversity influences efficiency of board decision making, thus indirectly impacting the overall enterprise performance (Anderson et al., 2011; Carter, Simkins, & Simpson, 2003; Gul et al., 2011). Individual board member perspectives are built on personal work-related experiences and knowledge (Smith et al., 1994). Thus, they enable wider and more thorough appraisal of alternatives resulting in the most effective course of action (Ujinwa et al., 2012). Diversity pushes boards away from group-thinking and puts problems under greater scrutiny increasing in that way the quality of decisions made (Bunderson & Sutcliffe, 2002; Doz & Kosonen, 2007; Zenger & Lawrence, 1989;). Additionally, Carter et al. (2003) show that heterogeneous boards increase enterprise financial value through establishment of innovation culture and better understanding of marketplace. Clearly, theoretical standings support the notion that board diversity can have positive implications for numerous processes which could enhance performance. Therefore, we ask: which board characteristics matter in this regard?

Board diversity stems from variety of individual board member demographic and social attributes. Kang, Cheng and Gray (2007) explain that these attributes can be divided into two major groups: (1) directly observable characteristics (e.g., age, gender, independence); and (2) less observable characteristics (e.g., educational and occupational background). From this basic division we can justify the fact of having

numerous studies which tackle only the impact of observable characteristics on enterprise performance. The average board age has an effect on strategy change (e.g., Golden & Zajac, 2001; Wiersema & Bantel, 1992) and it changes the environmental governance structures (e.g., Post et al., 2011). The empirical evidence regarding gender suggests that female board members are better at supervisory roles (e.g., Carter et al., 2010). Masulis et al. (2012) show that foreign directors are negatively associated with enterprise performance due to the lack of board meeting attendance.

Another board dimension that was vastly debated is independence. The rationale is that enterprises should appoint board members without connections to their organization in order to strengthen the level of monitoring. Adams, Hermalin and Weisbach (2010) provide literature review in this regard which reveals that effects of independent board members on performance are still obscure and unclear since majority of these studies fail to report any significant relationship.[11] The reason stemming behind might be related to the fact that observable characteristics are valid proxies of board member behaviour but insufficient and incomplete (Hambrick, 2007). Thus, researchers need to tap into the boards' "black-box" (Lawrence, 1997) as to examine how board member occupational and educational

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[11] Research studies of Hermalin and Weisbach (2003), Bhagat and Black (2002), Klein (1998), Mehran (1995), Baliga, Moyer and Rao (1996), Kren and Kerr (1997) and Hermalin and Weisbach (1991) fail to report significant results on the impact of independent board members on performance of enterprises.

background influences their strategic choices, decision making and performance of enterprises.

Diverse occupations and educational backgrounds result in quite distinct and sometimes even unique mindsets of individuals. For that reason, individual board members observe discussions and problem-solving from their own perspectives, thus advancing board thinking (Waine & Green, 2009). Wang, Jin and Yang (2016) assert that boards comprised of professionals with appropriate knowledge and expertise should have greater capacity for performance enhancement. This might stem from the fact that occupational characteristics of board members determine their capabilities for monitoring and supervision (Beasley, 1996; Monks & Minow, 1995). Moreover, experienced board members are in a better position to identify issues related to management misbehaviour or financial performance (Xiao et al., 2004). Contrary to that, Simons and Pelled (1999) report that experience diversity of executives has negative impact on performance because of the informal communication between top managers.

When it comes to occupational background, researchers primarily investigated how certain professions impact performance and/or financial position of enterprises. Bankers as directors seem to be associated with greater leverage and lower costs of financing (e.g., Sisli-Ciamarra, 2012). Litov et al. (2013) find that lawyers reduce enterprise risk-taking and increase enterprise value. Moreover, directors' profession appears to exhibit positive effect on economic performance having a wider impact than age and gender (e.g., Anderson et al., 2011). Board members with specific

industry knowledge are positively associated with sales growth (e.g., Kor & Sundaramurthy, 2009) while increasing likelihood of lawsuits (e.g., Kassinis & Vafeas, 2002).

Almost all empirical studies about professional diversity are related to private enterprises even though SOEs face much greater monitoring challenges. Therefore, in our research we question whether differences in occupational and educational backgrounds of individual board members might create some distinctive effects on SOE performance. We distinguish professional backgrounds of SOE board members on the basis of classification developed by Hillman, Cannella and Paetzold (2000). Their classification depicts three main groups of external board members based on the skills and resources that these individuals possess. Executives (i.e., CEOs or current/former top managers of large private enterprises) are labelled as "business experts". These individuals have good network of connections, they provide alternative solutions for problems and their expertise is related to competition and efficient decision making. Law, banking and public relation experts are "support specialists" as they provide easy access to some of the crucial resources (e.g., legal support, loans) and they enable strong channels of communication. The third group are "community influencers" (i.e., political leaders, university professors, leaders of community organizations) that provide enterprises with non-market perspectives and influence among some powerful society groups.

Building on Hillman et al. (2000) classification and findings of the previous theoretical and empirical works we hypothesize about the impact of three distinct groups of individuals which comprise SOE boards. Namely, we recognize the differences in skills, knowledge and expertise that government representatives, professors and individuals from private enterprises bring to boards. With such classification we try to answer the question of whether all three depicted groups have appropriate knowledge and expertise that contributes to creation of meaningful strategy and better performance (Carpenter & Westphal, 2001).

4.2.1 Government representatives and SOE performance

Appointment of government representatives to SOE boards is a logical extension of SOEs' governance process. However, governments may observe SOE board membership as a perfect reward tool for the most important and loyal supporters. Usually, these supporters lack the appropriate knowledge and competences being unable to provide the added value (Vagliasindi, 2008a; World Bank, 2014a). Furthermore, these incompetent board members might be enticed to favour certain political objectives which incur high costs (Shleifer & Vishny, 1994; Stiglitz & Atkinson, 1980). Government officials might not be accustomed to open-minded discussions since they do not have the necessary experience which would enable them to function as successful peers of executives from private sector (Frederick, 2011).

Characteristics of individuals appointed to SOE boards and their board involvement can ultimately affect the functioning and performance of SOEs. Back in 1949,

Selznick noticed that enterprises co-opt government officials to their boards to establish a firm connection with government. Baysinger (1984) builds on this argument and explains that these practices of enterprises are in line with their intention to create favorable policy environment for their business operations. As board members, government officials can be biased in certain processes that could have a large positive or negative impact on enterprises.

Key benefits of government representatives on boards are related to their day-to-day jobs and processes they are involved in. Jermias and Gani (2014) argue that government officials maintain good relationships with numerous stakeholders and they tend to have very well-developed negotiating skills. Moreover, they usually enable enterprises to: (1) attain financing under privileged conditions, (2) get approved licenses in a shorter period of time, and (3) be assigned with a favorable government contracts (Pye, 1997). Their presence equals possession of exclusive information about state policies which would be costly and hardly obtainable in all other situations (Hillman, Zardkoohi, & Bierman, 1999). For those reasons it is expected that enterprises with government officials on boards have better performance as well as lower operating costs (Hillman, 2005). To shed some light on government representatives' contribution, or lack of such contribution, to the performance and operating costs, the hypothesis we propose is:

Hypothesis 1: The number of government officials is positively associated with financial and operating performance of SOEs and operational costs.

4.2.2 University professors and SOE performance

University professors usually have rather peculiar career path. That path is characterized with long tenures in academia without real professional experience in the private sector (Bennis & O'Toole, 2005). Von Glinow (1997) even explains that professors are advised to avoid enterprise employment as to be able to streamline their attention to academic research and rigor. Moreover, academics' specialized expertise might engender their ability to properly evaluate real business conditions (Francis et al., 2015). Thus, professors are often seen as individuals whose knowledge is far-fetched and disconnected from real market experience (Ghoshal, 2005). Monks and Minow (1995) even indicate that individuals with prior enterprise experience are much more efficient as board members than academics.

Contrary to these implications, professors possess several characteristics that may increase the effectiveness of board, and thus the overall performance of enterprises. Jiang and Murphy (2007) explain that professors are critical thinkers with ability to defend their attitudes even in tough situations. Furthermore, they have hardly any prior connections with enterprise insiders, thus enabling them to be rather independent and have impartial opinions (Francis et al., 2015). Anderson et al. (2011) build on this argument suggesting that professors enhance board advisory role through their specialized experience and ability to introduce new ideas at board meetings. In addition, academics have all the necessary competences and intellectual capacity to process complex information (Audretsch & Lehmann, 2006; Audretsch & Stephan, 1996). Moreover, professors are viewed as reputation

enhancers (Singh, Terjesen, & Vinnicombe, 2008; White, Woidtke, Black, & Schweitzer, 2014) which signal enterprise quality.

Professors are accustomed to embracing full responsibility, coping with unpredictable situations and recognizing favourable circumstances in a similar way as the executives do (Jiang & Murphy, 2007). Jermias and Gani (2014) suggest that boards benefit from professors' research knowledge which broadens their consulting capabilities. Previous empirical research also showed that presence of academics lowers cost of debt (e.g., Anderson, Mansi, & Reeb, 2004) and it decreases cash flow sensitivity (e.g., Guner, Malmendier, & Tate, 2008). Furthermore, Francis et al. (2015) find that enterprises benefit from presence of academics in the boardroom. They reveal that professors on boards are associated with greater acquisition efficiency and higher CEO turnover–performance sensitivity. Since professors might be highly ranked members of society or very well-known for their consultancy work, their presence on boards might result in higher operating costs. Having in mind all the above stated, we present two a hypothesis:

Hypothesis 2: The number of professors is positively associated with financial and operating performance of SOEs and operational costs.

4.2.3 Private sector representatives and SOE performance

CEOs or top managers of private enterprises bring to SOE boards experiences from strategic decision-making processes of their mother enterprises (Hillman et al., 2000). This enables them to provide advice on how certain internal operations

should look like and how these operations can become more effective (Mace, 1971). Johnson, Daily and Ellstrand (1996) contend that business experts provide alternative viewpoints and thorough assessments of proposals since they possess relevant market information. Furthermore, it is argued that they are better at monitoring since they can draw from past experiences (Brickley, Coles, & Terry, 1994; Kosnik, 1987).

Qualified business experts usually have greater motivation to effectively monitor managers because of their need to preserve reputation as well as gather points for future employments (Kaplan & Reishus, 1990). Westphal and Milton (2000) even noticed that board members with private enterprise backgrounds are highly valued since their experience spans outside the specific enterprise and sometimes even outside the industry. Additionally, these individuals provide boards with important information about their competitors and strategies of other enterprises (Jermias & Gani, 2014). Business experts usually build good communication channels (Hillman et al., 2000) and they enable managers to identify good market opportunities (Judge & Zeithaml, 1992). On the one hand, they are expected to enhance decision-making processes, provide better understanding of the real market conditions and increase operational efficiency, thus improving the overall performance. On the other hand, individuals working as top managers of private enterprises with well-established professional backgrounds usually require higher compensation for their board participation, hence creating higher costs for enterprises. In accordance with these suggestions, we propose the following hypothesis:

Hypothesis 3: The number of professionals from private enterprises is positively associated with financial and operating performance of SOEs and operational costs.

4.2.4 Professional backgrounds and political connections: the intertwined effect

Based on the resource dependence theory, Hillman (2005) contends that enterprises with politicians on boards outperform those without. Political connections in those cases are invaluable links to some of the crucial resources which ease out solutions for certain operational issues. Moreover, Mahmood, Chung and Mitchell (2017) assert that political ties create strategic access to resources which can provide foundation for certain business activities. These benefits should in turn create positive effect on performance.

Wang et al. (2016) have the opposing view implying that individuals being board members with political-party-connections engender enterprise performance. Their standing is built on the fact that board members with political connections might not be appointed on the basis of professional criteria but rather some non-market parameters. Such appointments usually signal politicians' intention to misuse SOE resources for certain political objectives. The empirical evidence in this regard suggests that political connections result in higher indebtedness (Faccio, 2010), increased employment levels and inefficient investments (Saeed et al., 2015). Moreover, absence of board appointments on the basis of business acumen and professional experience implies that SOEs might be involved in "power-to-money, under the table" activities (Wang et al., 2016). Therefore, we believe that

intertwined effect of board members' professional background and political connections on SOE performance might be more profound or completely different from the stand-alone effect of board members' occupation.

Probability that government representatives are appointed for political purposes as to facilitate certain political agenda through SOE operations increases with presence of political connections. Hence, it is anticipated that these individuals might influence board decisions as to shift SOE performance towards accomplishment of certain political interests (Shleifer, 1998). On the contrary, individuals with proven professional track record in private sector are less likely to get on board with the political agenda even when he/she is politically connected. This is due to the fact that his/hers professional career is highly dependent on reputation which is built on enterprise performance results. Board members with private enterprise backgrounds generally establish political connections as to be able to influence government policies and obtain up-to-date information regarding government policies (Frederick, 2011). In order to investigate theoretical implications about the potential joint effect of board members' professional background and political connections, the following hypothesis is suggested:

Hypothesis 4: The associations between board member's professional backgrounds and financial/operating performance and operating costs are quantitatively larger when political connections are present.

4.2.5 Political capital versus board capital

Political capital which can improve or deteriorate SOE performance can be observed as a number of government representatives with political connections. On one hand, SOEs can benefit from high rank government officials with political ties since their presence implies certain level of preferential treatment. This treatment might encompass favourable financing conditions (e.g., Inoue et al., 2013), access to valuable resources managed by government (e.g., Xin & Pearce, 1996) and receiving information about government policies in advance of their public announcement (e.g., Lester, Hillman, Zardkoohi, & Cannella, 2008). On the other hand, political capital can be used as a channel for accomplishment of certain political interests which might oppose performance enhancement objectives (Shleifer & Vishny, 1994). Some research studies even found that dominant SOE board members with political ties are negatively associated with SOE performance (e.g., Menozzi et al., 2011; Wu et al., 2012). Investigating into this matter we introduce the following hypothesis:

Hypothesis 5: Political capital is negatively associated with financial/operating performance and positively associated with operating costs of SOEs.

Certain theoretical implications contend that other individuals on SOE boards might outweigh potentially negative effects of political capital. Professionals working for private enterprises have certain distinctive characteristics when compared to government officials (Guo & Lu, 2012). Successful career in private sector usually asserts high level of knowledge and real market experience (Johnson, Schnatterly,

& Hill, 2013). Thus, these board members are usually the ones with a strong focus on performance and profits as this boosts their successful track record. However, several researchers point out that expert knowledge is a combination of professional experience and knowledge acquired through education (Chase & Simon, 1973; de Groot, 1978; Goodall & Pogrebna, 2015; Hambrick & Mason, 1984).

Ericsson, Krampe and Tesch-Romer (1993) and Salas, Rosen and DiazGranados (2010) argue that performance is a resultant of expert decision making which arises from both, real life experience and education. Moreover, the empirical evidence supports the notion that educational background has a significant positive effect on performance (Mahadeo, Soobaroyen, & Hanuman, 2012) and enterprise value (Kim & Lim, 2010). Individuals who attained above-average educational degrees should have greater number of skills which enables them to systematically evaluate alternatives, recognize opportunities well in advance and be more receptive to change (e.g., Datta & Rajagopalan, 1998; Herrmann & Datta, 2005; Wiersema & Bantel, 1992;). Furthermore, board members with PhD degrees ensure high level of intellectual capacity and soundness of judgement, thus being considered as relevant strategic resource (Ingley & van der Walt, 2001). Hence, professionals from private sector who obtained MSc or PhD degrees can be observed as board capital. These individuals should have both, experience as well as knowledge gained through education. Moreover, board capital could enhance SOE performance and counterbalance the negative effects of political capital. We therefore propose the hypothesis:

Hypothesis 6: Board capital is positively associated with financial/operating performance and operating costs of SOEs.

4.2.6 Sub-sample analysis: Private ownership and industry

The minority private ownership might indicate SOE corporatization process which should result in board member professionalisation and commercially oriented performance (World Bank, 2014a). For that reason, SOEs with minority private ownership are expected to appoint individuals with greater level of expertise and knowledge (i.e., professionals working in private sector, professors) when compared to SOEs with 100% state-ownership. Therefore, it is anticipated that presence of these individuals on boards should enhance performance of SOEs with minority private ownership. On contrary, for SOEs with 100% state ownership greater presence of government representatives is anticipated, thus implying greater political interference which is negatively related to their performance. Individuals from private sector and/or professors would probably be a minority on such boards with the absence of real effect on SOE performance.

The theory also suggests that manufacturing enterprises are less likely to appoint professors to their boards (Francis et al., 2015). Furthermore, the impact of board members' professional background can be rather distinctive for manufacturing and service enterprises. For example, the fact that professors and/or individuals working in private enterprises require higher compensation is significant for operating costs of service enterprises. Compared to high fixed costs of production greater level of

compensation for one or couple of board members would not represent a major change of operating costs for manufacturing enterprises.

4.3 Data and methodology

4.3.1 Sample and Data Collection

The Amadeus database is used as a starting point for sample construction. In order for an enterprise to be part of our sample it needs to operate in one of the six countries of the former SFRY. Additionally, direct or indirect state ownership needs to be larger than 50.01% since that conveys the effective government control. Moreover, this cut-off point is in line with OECD (2015) definition which states that SOEs are enterprises with 100% or majority state ownership. On the basis of these criteria 556 enterprises are identified as state-owned. In line with previous literature we further delimit our sample through exclusion of enterprises with non-commercial objectives (e.g., providers of health and social services), banks and insurance enterprises, bankrupt enterprises and enterprises for which data are unavailable.[12] Hence, our final sample is comprised from 200 SOEs.

The financial statement items, date of incorporation, ownership structure and number of employees for the period 2010-2014 are downloaded from Amadeus. Any missing data is then collected from annual reports of SOEs whenever these reports are available. The board membership data within database is limited to last observed year (i.e., 2014) with rather obscure level of information on individual

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[12] For reference please see Goldeng et al. (2004), Haniffa and Hudaib (2006), Bozec et al. (2002) and Faccio (2010).

board member characteristics. Hence, most of the board level information is obtained through hand-collection process.

We define board as an enterprise body responsible for management monitoring and enterprise governing (OECD, 2015; World Bank, 2014a). Based on this definition we firstly gather data on board member names and appointment/resignation dates for the whole period observed. The data is obtained from annual reports of enterprises, enterprise profiles on stock exchanges and databases of official enterprise registry agencies. Overall, we were able to recognize 2,120 individuals that performed board member duty. Secondly, we parse through biographies of all board members as to gather further details about their demographic characteristics (e.g., age, gender, nationality) and educational/professional backgrounds (e.g., graduation year, highest degree obtained, area of study, domestic or foreign education, expertise, previous/current employer, subsequent position, political connectedness, number of other board memberships). As the source of information for individual board member characteristics we use their official curriculum vitae which is available on enterprise or personal websites, within minutes from shareholder meetings, in decisions on board member appointments or on LinkedIn profiles. We tried to have two sources of information confirming board member characteristic as to increase data reliability.

4.3.2 Variables and measures

To examine the effects of board members' professional backgrounds we employ two performance measures. The profitability measure is return on equity (*ROE*) and

it is computed as net income over average total capital (e.g., Boubakri et al., 2012). The proxy of operating performance and productivity is *Sales per employee* which is equal to the natural logarithm of sales over the total number of employees (e.g., Jiang & Murphy, 2007). In addition to these two measures, we recognize that heterogeneity of professional backgrounds might infer higher costs (Anderson et al., 2011). These costs can be a consequence of individual board member interests (e.g., government representative being appointed as to accomplish certain political objective) or the need to pay higher compensation for certain board members. Thus, we also investigate the effect of board members' professional backgrounds on operating costs. The *Operating cost* is equal to the natural logarithm of the difference between the sales and EBIT. We are not using any stock market measures since vast majority of SOEs from our sample is not traded on stock exchanges.

To capture how board members with different occupational backgrounds indirectly impact performance though changes of board decision making we create three variables. *Government representatives* is the number of SOE board members that work for government. *Professors* is the number of SOE board members that work as university professors. *Private representatives* is the number of SOE board members that work for private enterprises. Moreover, as to acknowledge the intertwined effect of board member professional backgrounds and political connections we create three additional variables - *Political government*, *Political professors* and *Political private*. These three variables represent the number of politically connected board members working for government, university and private enterprises, respectively.

The significance of board capital and political capital for SOE performance is analysed through employment of two interaction terms. *Board capital* is an interaction term between *Private representatives* and *Education*, where *Education* represents the percentage of board members with MSc and PhD degrees. Our definition of board capital is built on the definition presented in the works of Chen (2008), Hillman (2005) and Jermias and Gani (2014). The difference stems from the fact that we narrow down their definition to professionals from private sector. *Political capital* is an interaction term between *Government representatives* and *Politically connected*. *Politically connected* is the percentage of politically connected board members.

We also introduce several board characteristics that are widely used as controls in previous literature. The resource dependence theory asserts that board members are providers of important resources (Pfeffer & Salancik, 1978). Thus, larger boards lead to greater accumulation of resources (Bordean & Borza, 2017). Contrary to that, Lipton and Lorsch (1992) and Guest (2009) suggest that larger boards are inefficient. We therefore control for *Board size* which is equal to the total number of board members (e.g., Jermias & Gani, 2014; Yermack, 1996). *Board tenure* is the sum of years that board members served on the board divided by the number of board members (e.g., Herrmann & Datta, 2005). This measure captures board member potential to sway board decisions (Anderson et al., 2004). Individuals with longer tenures have a greater potential to influence board deliberation. Male dominated boards usually result in single-mindedness, while women bring some new perspectives and handful of additional information (Cox, Lobel, & McLeod,

1991; Hillman, Cannella, & Harris, 2002). Furthermore, Milliken and Martins (1996) argue that male-dominated boards are associated with lower quality decisions when compared to decisions of gender diverse boards. Thus, we control for the number of men on board, *Board male*. In addition, we control for *Work experience* in estimations with board/political capital since theory implies that length of individual board member experience can be beneficial for performance. *Work experience* is equal to natural logarithm of the difference between observed year and year of completion of bachelor studies or high school when high school is the highest degree obtained.

Enterprise characteristics can influence performance, and we thus control for several enterprise features. We employ *Enterprise size*, which is calculated as the natural logarithm of the number of employees as to ensure that our results are not driven by size effect (e.g., Cavaco, Challe, Crifo, Reberioux, & Roudaut, 2016; Zheng et al., 2015). *Enterprise existence* controls for different phases of enterprise life cycle and it is equal to the natural logarithm of the difference between years under investigation and year of SOE incorporation (e.g., Sun et al., 2015). *Leverage* is long-term debt over equity and it is a proxy of enterprise indebtedness (e.g., Faccio, 2010). Industry, level of state ownership and other fixed enterprise characteristics are captured by the fixed effects error term and for that reason they are not included as separate variables (e.g., Aivazian et al., 2005; Boubakri et al., 2012).

4.3.3 Methodology

For examination of the relationship between board member characteristics and enterprise performance researchers have used the following methods: (i) cross-sectional regression; (ii) difference-in-differences approach; (iii) fixed-effects. The first method is used by Anderson et al. (2004) for their investigation of the connection between cost of debt and board independence. Since this method envisages investigation of associations between dependent and independent variables in one point in time, this method is not suggested for our research. The study on how educational composition of boards impacts the portfolio risk of enterprises implements the second method (e.g., Berger et al., 2014). This method would require the existence of the treatment effect that we cannot specify in terms of the hypotheses that are stated within this chapter.

The third method is applied in the research study that examines how individual managers characteristics influence enterprise performance (Bertrand & Schoar, 2003). Moreover, fixed-effects models are preferred for panel data analysis since these models can control for unobserved heterogeneity (Greene, 2003). Thus, we use third method for estimations within this chapter.[13]

It is important to mention that we are aware that this method does not allow us to estimate causal effect and that usage of IV approach would help us in that regard. Empirical studies that investigate the relationship between certain board

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[13] Prior to our decision to employ fixed-effects, we run Durbin-Wu-Hausman test that shows better performance of fixed-effects model than random-effects model.

characteristics and performance use as instrumental variables distance of enterprise headquarters from the nearest airport (e.g., Nguyen, Hagendorff, & Eshraghi, 2015; Fields, Fraser & Subrahmanyam, 2012) or distance of universities from enterprise headquarters (e.g. Francis et al., 2015). In addition, certain capital market variables are used as instrumental variables. However, data limitations (i.e., we are not able to observe capital market variables) as well as lack of reliability for instruments used in previous research as implied by performed tests limit our ability to use IV approach. Our objective in that regard, is to assess whether there is evidence of any associations between board member's professional backgrounds and SOE performance.

To examine theoretical implications and hypotheses stated in this chapter we run the following fixed effects models:

$$
\begin{aligned}
Performance/Operating\ cost_{i,t} = {} & \alpha + \beta_1 Government\ representatives_{i,t} + \\
& \beta_2 Professors_{i,t} + \beta_3 Private\ representatives_{i,t} \\
& + \beta_4 Enterprise\ size_{i,t-1} + \\
& \beta_5 Enterprise\ existence_{i,t-1} + \beta_6 Leverage_{i,t-1} \\
& + \beta_7 Board\ size_{i,t} + \beta_8 Board\ tenure_{i,t} + \\
& \beta_9 Male\ board_{i,t} + u_i + \delta_t + \varepsilon_{i,t} \qquad (4.1)
\end{aligned}
$$

$$
\begin{aligned}
Performance/Operating\ cost_{i,t} = {} & \alpha + \beta_1 Political\ government_{i,t} + \\
& \beta_2 Political\ professors_{i,t} + \beta_3 Political\ private_{i,t} \\
& + \beta_4 Enterprise\ size_{i,t-1} + \\
& \beta_5 Enterprise\ existence_{i,t-1} + \beta_6 Leverage_{i,t-1} + \\
& \beta_7 Board\ size_{i,t} + \beta_8 Board\ tenure_{i,t} + \\
& \beta_9 Male\ board_{i,t} + u_i + \delta_t + \varepsilon_{i,t} \qquad (4.2)
\end{aligned}
$$

$$Performance/Operating\ cost_{i,t} = \alpha + \beta_1 Board\ capital_{i,t} + \beta_2 Political\ capital_{i,t} +$$
$$\beta_3 Private\ representatives_{i,t} + \beta_4 Education_{i,t}$$
$$+ \beta_5 Government\ representatives_{i,t} +$$
$$\beta_6 Politically\ connected_{i,t} +$$
$$\beta_7 Enterprise\ size_{i,t-1} +$$
$$\beta_8 Enterprise\ existence_{i,t-1} + \beta_9 Leverage_{i,t-1}$$
$$+ \beta_{10} Board\ size_{i,t} + \beta_{11} Board\ tenure_{i,t} +$$
$$\beta_{12} Male\ board_{i,t} + \beta_{13} Work\ experience_{i,t} + u_i$$
$$+ \delta_t + \varepsilon_{i,t} \qquad (4.3)$$

where *i* is the SOE id, *t* is the year effect, α is the intercept, u_i captures SOE specific fixed effects, δ_t depicts time fixed effect and $\varepsilon_{i,t}$ denotes the error term. In all three models the dependent variable is *Performance* (represented by *ROE* and *Sales per employee*) and *Operating cost*. Furthermore, as it can be noted all enterprise level controls are lagged since these variables might have a non-instantaneous association with *Performance* and *Operating cost*.

The 4.1 model identifies whether board members with different professional backgrounds have distinctive associations with SOE performance and operating costs (Hypothesis 1 to Hypothesis 3). The 4.2 fixed effects model depicts whether intertwined effects of political connections and board members' professional backgrounds have different associations with SOE performance (Hypothesis 4). The 4.3 fixed effects model investigates what kind of relationship board capital and political capital have with SOE performance and whether one of these relationships outweighs the other (Hypothesis 5 and Hypothesis 6).

We first estimate all three models for the whole sample and then we re-estimate them in two sub-samples. The sub-samples are created based on literature

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implications and empirical research findings. Firstly, we create a sample of SOEs with 100% state ownership and a sample of SOEs with minority private ownership, and we rerun all three models. In that way we distinguish whether some differences in associations arise because of the distinct SOE ownership structure. Secondly, we divide SOEs into manufacturing and services sectors and we rerun first two models. With this re-estimation we recognize that relationships between board members' professional backgrounds and SOE performance might also depend on industry.

4.3.4 Sample summary statistics

Table 4.1 reports descriptive statistics. SOEs within our sample employ on average 667 employees and they exist for 28 years. The long-term debt accounts for 33% of the equity. Boards on average have five board members with four members being male. Their average *Work experience* is 25.6 years, while their *Board tenure* is two years. This data implies that SOE board members are experienced and that replacement of board members happens prior to the end of four-year mandate. Only one out of five board members has obtained MSc or PhD degree. We can also observe that half of SOE board members are politically connected. Furthermore, on average two board members are *Government representatives*, additional two are *Private representatives* and one board member is *Professor*. *Government representatives* on boards are the ones with the greatest number of political connections, with *Professors* being the least politically connected.

[Insert Table 4.1 about here]

Table 4.2 reports the Pearson's correlation matrix for all variables used within the scope of this study. Consistent with our hypotheses we find that relationship of *Government representatives* with financial performance is negative and significant (-0.06, p<0.1) and it is positive and significant when it comes to *Operating cost* (0.14, p<0.01). Presence of *Professors* on boards has positive and significant relationship with all performance measures. Contrary to that, we find significant and negative correlation between *Private representatives* and financial performance (-0.06, p<0.1) probably due to the positive significant correlation with operating costs (0.34, p<0.01). Political connections and their intertwined effect with different board member professions has positive and significant correlation with *Operating costs*, suggesting the presence of political interference. It is also interesting to note that *Board tenure* is significantly and negatively correlated with all board member professional backgrounds and that the highest significance and negative correlation is recorder for *Government representatives* (-0.17, p<0.01). Finally, correlation coefficients do not raise concerns regarding multicollinearity.

[Insert Table 4.2 about here]

Further statistics regarding SOE board members' professional backgrounds and expertise are provided in Table 4.3 and Table 4.4. Based on these statistics we can

conclude that *Professors* attain the highest level of education, followed by *Private representatives*. On average *Government representatives* obtain lower levels of education with mostly general expertise.

[Insert Table 4.3 about here]

[Insert Table 4.4 about here]

4.4 Empirical results

Table 4.5, Panel 1 provides an overview of the findings for the effects of board members' professional background on SOE performance. Presence of *Government representatives* on SOE boards is negatively related to *Sales per employee*. This result provides support for the notion that government officials usually lack knowledge and competencies to successfully perform board duties (Frederick, 2011). Moreover, this finding might imply that government officials are appointed on political rather than market criteria (Vickers & Yarrow, 1988). Thus, negative consequences for operational performance can be observed. Statistics from Table 4.3 further suggest that government officials possess general expertise and they have lower educational levels. Moreover, this finding confirms that these board

members might not possess the appropriate knowledge and expertise for board membership. We also note that *Government representatives* are insignificant for *ROE* and *Operating cost*. Hence, we find only partial support for our Hypothesis 1 recognizing insignificance of *Government representatives* for financial performance and operating costs.

[Insert Table 4.5 about here]

Professors have positive significant relationship with both, *ROE* and *Sales per employee*, while having positive but insignificant relation with *Operating cost*. Our findings are in line with theoretical implications about professors' contribution to board decision-making processes through their critical thinking, effective processing of complex information and provision of advice (Anderson et al., 2004; Jiang & Murphy, 2007). Additionally, the results uphold the suggestion of Anderson et al. (2011) that professors provide advanced strategic alternatives which enable boards to decide on the most favourable path that needs to be undertaken. Furthermore, with our findings we also reconfirm the results of Francis et al. (2015). They investigated S&P 1,500 enterprises in the period 1998-2011 and they found positive association between academics and private enterprise performance. Our findings support Hypothesis 2 in terms of the effects of professor's presence on SOE performance.

Results from Table 4.5 also reveal that *Private representatives* are positively associated with SOEs' *Operating cost* and negatively associated with *ROE*. Since board members coming from private enterprises are usually highly valued because of their experience (Westphal & Milton, 2000) they often require higher board compensation, thus increasing operating costs. The negative association with financial performance might be a consequence of positive association with operating costs. Enterprise costs negatively affect net income leading to a decrease of ROE. Furthermore, the absence of positive effect on performance can be related to inability of private representatives to influence board dynamics. Critical mass theory implies that certain number of board members with same or similar characteristics is needed in order to change board deliberation and board processes (Dahlerup, 1988; Kanter, 1977). Additionally, the lack of positive relationship might imply that SOE boards in these countries are "rubber stamps" for government decisions and that real contribution of private representatives is not present (Frederick, 2011). Hence, we do not find support for Hypothesis 3 since results show negative association with financial performance probably caused by the positive association with operational costs.

Panel 2 in Table 4.5 presents results for the intertwined effect of board members' professional background and political connections on SOE performance. With introduction of political connections, the association with SOE performance becomes more profound when it comes to *Government representatives* and *Private representatives*. This result is in line with theoretical conclusion that government representatives are mostly appointed as to facilitate certain political agenda with the

negative after-effect on the overall SOE performance. Furthermore, higher positive association of *Political private* with *Operating cost* (0.049 versus 0.016) might suggest that this is another informal channel of political interference. As argued by Wang et al. (2016) absence of professional board appointments can entail some "under the table" activities which enable political benefit transfers. Additionally, lower significance of politically connected academics (*Political professors*) might imply that presence of political connections lowers their board independence and puts them under political influence. Thus, our results provide partial support for Hypothesis 4.

Both panels of Table 4.5 show that several board and enterprise characteristics seem to be important for SOE performance. The results imply that increase in *Enterprise size* increases *Operating cost*. This stems from the fact that larger SOEs incur greater costs of operations related to maintenance of fixed assets as well as variable costs. Moreover, we find that *Leverage* has a negative impact on *ROE*, thus confirming conclusions from previous research studies (e.g., Faccio, 2010; Fidanoski, Simeonovski, & Mateska, 2014; Francis et al., 2015; Jermias & Gani, 2014). The positive even though insignificant relationship between *Leverage* and *Operating cost* is expected. Highly indebted enterprises face financial distress problems which lead to decline in the enterprise value (Opler & Titman, 1994). Longer *Board tenure* has positive effect on operating SOE performance. This positive effect stems from greater understanding of business operations gained through longer period of time spent on board. Moreover, Anderson et al. (2004) argue that board members with greater tenure improve monitoring and they exhibit

positive influence on board discussions and decision making. The increase of operating costs because of longer tenures implies greater compensation for board members that spend longer period of time on boards. The results for *Leverage* and *Board tenure* are consistent in all our estimations. All other control variables do not have significant relationship with SOE performance.

The results for our sub-samples, presented in Table 4.6, suggest that relationship between board members' professional background and SOE performance depends on SOE ownership structure. Operating performance of SOEs with 100% state-ownership is negatively associated with government officials and positively associated with presence of professors on boards. The association becomes larger when these categories of board members possess political connections, while private representatives remain insignificant. Hence, it can be argued that negative consequences of political interference and lack of competences of government representatives is counterbalanced with expertise and knowledge of professors.

[Insert Table 4.6 about here]

Contrary to that, for SOEs with minority private ownership *Private representatives* and *Professors* have strong positive association with SOE operating performance and operating costs. Potential explanation might be related to strong profit orientation of private representatives due to their cognitive mindset formed within

the private sector (Boyne, 2002). With such focus and mindset private representatives might impose profits as one of the SOE board priorities. Additionally, professors probably create positive effects because of their expertise, alternative viewpoints, analytical skills and well-grounded strategic thinking (Audretsch & Stephan, 1996; White et al., 2014). Moreover, appointment of such professionals to boards implies higher compensation levels, and thus higher operating costs. The insignificance of intertwined effects as well as government representatives further supports the notion that operating costs within SOEs with minority private ownership do not increase due to some political reasons. Hence, our results potentially signal that in SOEs with minority private ownership professionalization of board membership and cost management is present.

Within the second set of sub-samples we find that for manufacturing SOEs professional background of board members is irrelevant (Table 4.7). The only significance we find is related to *Professors*' positive association with *ROE*. Absence of any other association might also be related to the fact that management and other operating expenses (e.g., board member compensation, salaries of administrative personnel, offices etc.) are negligible when compared to the higher magnitude of production costs. Thus, hiring of high profile expert with high board compensation is going to result in an insignificant change of the overall operating costs.

[Insert Table 4.7 about here]

For SOEs providing services, we find that *Professors* and *Private representatives* have positive association with both, *ROE* and *Sales per employee*. The association is lost when these board members possess political connections. *Political professors* and *Political private* have positive association with *Operating cost*. On one hand, this result backs up the view that for SOE service providers compensation of individuals with professional backgrounds and expertise is significant for operational costs due to non-existence of large production costs. On the other hand, this might imply that governments through political connections of non-government representatives create some hidden costs (Shleifer & Vishny, 1994). The negative association between *Political government* and *Sales per employee* upholds the proposition regarding negative consequences of political interference.

Estimation results from Table 4.8 show that *Board capital* is positively associated with SOE financial performance (*ROE*), thus providing partial support for Hypothesis 5. This is consistent with results of previous research studies despite different samples and board capital definitions (e.g., Dalton, Daily, Certo, & Roengpitya, 2003; Hillman et al., 1999). Using a sample of US enterprises listed on Compustat S&P 500, Jermias and Gani (2014) show that board capital[14] has positive effect on performance. Moreover, our results are consistent with resource dependence proposition that expert boards enhance enterprise performance by providing advice, alternative strategies and better external connections (Pfeffer &

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[14] In the research study of Jermias and Gani (2014) the board capital is represented by outsiders' ability to use their skills, expertise and knowledge to monitor management.

Salancik, 1978). Our results also suggest that board members working for private enterprises with MSc and PhD degrees have greater value for performance than board members without such expertise and knowledge.

[Insert Table 4.8 about here]

Significant negative association of *Government representatives* with financial performance for the whole sample further supports the claim that appointment of these board members is related to some political objectives (Chong & Lopez-de-Silanes, 2005). Additionally, positive association of *Politically connected* with *Operating cost* upholds the notion that political interference within SOEs has some hidden levers for "under the table" activities (Wang et al., 2016). Interestingly, we find that *Political capital* is positively associated with *ROE*. Therefore, our results provide partial support for Hypothesis 6. Politically connected government officials can improve SOE financial performance through enabling certain resources such as lower costs of financing (e.g., Chen et al., 2014) or even easier access to subsidies (e.g., Wu & Cheng, 2011). Hence, we can conclude that combination of private representatives with MSc and PhD degrees and government representatives with political connections enhances SOE performance.

When we take ownership structure into consideration further differences arise, as seen in Panel 2 and Panel 3 of Table 4.8. For SOEs with 100% state ownership

Board capital and *Political capital* are insignificant for performance. The only significant positive association is between *Politically connected* and *Operating cost* for both sub-samples, confirming negative consequences of political interference. On contrary, estimation results for SOEs with minority private ownership provide completely different picture of the board–performance relationship when compared to SOEs with 100% state ownership. *Private representatives*, *Working experience* and individuals with MSc and PhD degrees are positively associated with *Sales per employee* and *Operating cost*. On one hand, these results confirm literature implications that private representatives bring market know-how to SOEs, thus improving the overall organizational performance (Johnson et al., 1996). They are also in line with previous research which shows that well-educated boards improve enterprise performance and increase value (Fidanoski et al., 2014; Kim & Lim, 2010). On the other hand, individuals with greater working experience, higher levels of education and proven track record are expected to require higher compensations (Medoff & Abraham, 1980) for board membership thus increasing operating costs. This is further confirmed through positive association of board capital and operating cost. Positive association between board/political capital and financial performance has the same implications as explained above.

4.5 Conclusions

The upper echelons theory (Hambrick & Mason, 1984) suggests that expertise and personal interpretation of information affects the way in which top level decision makers decide on strategic and organizational matters. However, the prior empirical

studies focused mainly on the effects of board demographics and board independence on behaviour of private enterprises in developed countries. Only recently researchers recognized the need to tap into the boards' "black-box" as to examine whether and in what way board member's professional background might influence their decision making and enterprise performance. Thus far, the attention was mainly streamlined towards the effects of certain industry specific background (e.g., bankers, lawyers). With our research we try to investigate whether professional and educational backgrounds of SOE board members and their political connections affect performance and operating costs.

The results of our panel data fixed effects estimation for 200 SOEs from six countries of the former SFRY imply that presence of professors on SOE boards is positively related to financial performance. Moreover, the findings suggest that government representatives have negative association with operating performance, while private sector representatives increase operating costs, thus adversely affecting financial performance. With presence of political interference in the form of individual board members' political connections the stated associations become quantitatively larger. For SOEs with minority private ownership and those operating in the service sector, individuals working in the private sector positively influence their operating performance. Furthermore, we observe that private sector representatives with MSc and PhD degrees as well as government representatives with political connections have positive association with SOEs' financial performance.

This chapter has several important implications for the existing literature and policy makers. The findings reveal that board members' professional backgrounds and experiences influence SOE performance, thus providing us with a better understanding and new perspectives regarding board–performance relationship. We acknowledge that private enterprise representatives, professors and government officials create differentiating effects for performance. Furthermore, we address the potential issue of political interference by looking at the intertwined effects of board members' professional backgrounds and political connections. Thus, our findings suggest that governments should adopt clearly defined criteria for board memberships. The criteria should recognize the importance of knowledge, expertise, prior experience in making strategic and organizational decisions and ability to observe problems from several angles. Such criteria would lead to professionalisation of SOE boards with greater number of professors and individuals from private enterprises performing board membership duty.

Limited availability of data regarding SOE board members' professional careers leaves a number of areas for future research. First, in our study we only have information about the full-time position that an individual performs while being SOE board member. Greater details about career path in terms of the time spent in certain positions would enable greater differentiating amongst board members' professional backgrounds. For example, someone who spent twenty years in private sector and last two years in government probably has qualities of a private sector representative. Furthermore, the data regarding the exact position and successfulness would contribute to better understanding of whether board member

has the required knowledge and expertise. Second, our dataset contains information about the number of other board positions. However, the information is available only for the year of appointment of board member. If data would be available for the whole period, other board memberships could be used as a parameter of successfulness by observing the performance of those enterprises throughout the time in which board membership is obtained. Third, we define board capital in accordance with previous literature, but we recognize that this is an indirect proxy which might not grasp the true quality of how individuals perform their board duties. Information about board meeting discussions, their length, presence of board members etc. would enable creation of a more direct board capital proxy.

Table 4.1

Descriptive statistics

	Mean	Median	Std	Obs
Panel A: Performance measures				
ROE	-0.05	-0.02	0.22	957
Sales per employee	190.72	96.26	919.24	971
Operating cost	56971.27	2484.00	166953.1	973
Panel B: Board level measures				
Government representatives	1.67	1.00	1.66	1,000
Professors	0.35	0.00	0.69	1,000
Private representatives	1.95	2.00	1.86	1,000
Political government	1.49	1.00	1.55	1,000
Political professors	0.16	0.00	0.44	1,000
Political private	0.71	1.00	1.01	1,000
Board size	5.38	6.00	3.10	1,000
Board tenure	2.12	2.75	1.21	919
Male board	4.38	6.00	2.72	1,000
Education	0.21	0.17	0.22	919
Work experience	25.61	23.67	18.93	919
Politically connected	0.52	0.57	0.29	919
Panel C: Enterprise level measures				
Enterprise size	675.53	488.00	1517.72	989
Enterprise existence	28.12	21.00	23.99	977
Leverage	0.33	0.31	0.64	817

Notes: This table reports descriptive statistics for all variables used in our estimations. The sample covers 200 state-owned enterprises from Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro, Serbia and Slovenia for the period 2010-2014. Please note that for the variables that are used in logarithm form within our estimations in this table we report non-logarithm values. Panel A reports the summary statistics for state-owned enterprise performance variables. *ROE* is the ratio of net income to average total equity. *Sales per employee* is the natural logarithm of sales over the total number of employees. *Operating cost* is equal to the natural logarithm of the difference between the sales and EBIT. In panel B the summary statistics for board level variables are reported. *Government representatives* is the number of SOE board members that work for government. *Professors* is the number of SOE board members that work as university professors. *Private representatives* is the number of SOE board members that work for private enterprises. *Political government* is the number of SOE board members that work for government and are politically connected. *Political professors* is the number of SOE board members that work as university professors and are politically connected. *Political private* is the number of SOE board members that work for private enterprises and are politically connected. *Board size* is the total number of board members. *Board tenure* is the average time that board members spent on the board. *Board male* is the percentage of men on board. *Education* is the percentage of board members with MSc and PhD degrees. *Work experience* is equal to natural logarithm of the difference between observed year and year of completion of bachelor studies or high school when high school is the highest degree obtained. *Politically connected* is the percentage of politically connected board members. In Panel C the summary statistics for enterprise control variables are reported. *Enterprise size* is the natural logarithm of the total number of employees. *Existence* is the natural logarithm of the difference between years under investigation and year of SOE incorporation. *Leverage* is equal to long-term debt over shareholders' equity.

Table 4.2

Pearson's correlation matrix

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.
1 ROE	1.0000																	
2. Sales per employee	0.1210***	1.0000																
3. Operating cost	0.0512	0.6694***	1.0000															
4. Government representative	-0.0626*	0.0451	0.1445***	1.0000														
5. Professors	0.0557*	0.1617***	0.2822***	0.0677	1.0000													
6. Private representative	-0.0628*	0.2175***	0.3357***	-0.0210	0.1880***	1.0000												
7. Political government	0.0551*	0.0756**	0.1866***	0.9546***	0.0595*	0.0012	1.0000											
8. Political professors	0.0241	0.0574*	0.1509***	0.1747***	0.6553***	0.0938***	0.1735***	1.0000										
9. Political private	0.0030	0.0481	0.1420***	0.1786***	0.0564*	0.4626***	0.1951***	0.1089***	1.0000									
10. Board size	0.0319	0.3255***	0.4628***	0.5532***	0.3946***	0.6185***	0.5534***	0.2995***	0.3673***	1.0000								
11. Board tenure	0.0648*	-0.0157	-0.0706**	-0.1766***	-0.0727**	-0.0618*	-0.1456***	0.0051	-0.0019	-0.1897***	1.0000							
12. Male board	0.0652*	0.3263***	0.4884***	0.5011***	0.3808***	0.5996***	0.5006***	0.2928***	0.3986***	0.9341***	-0.1526***	1.0000						
13. Education	0.0402	0.3801***	0.4557***	-0.0117	0.4535***	0.1794***	-0.0144	0.2478***	-0.0339	0.2527***	-0.0663**	0.2500***	1.0000					
14. Work experience	0.0390	0.1581***	0.2982***	0.0973***	0.1814***	-0.0422	0.1064***	0.1573***	0.0153	0.0403	-0.0464	0.0372	0.1897***	1.0000				
15. Politically connected	0.0208	-0.0907***	-0.0402	0.4685***	-0.0817	-0.2314***	0.5389***	0.1833***	0.4781***	0.1357***	-0.0046	0.3742***	0.2787***	0.2311***	1.0000			
16. Enterprise size	0.0200	0.0820	0.7761**	0.1553***	0.2224***	0.2560***	0.1857***	0.1447***	0.1357***	0.3353***	-0.0733**	0.3742***	0.2787***	0.2311***	0.0187	1.0000		
17. Enterprise existence	0.0197	0.2079***	0.2606***	0.0046	0.0789**	0.1404***	0.0448	0.0068	0.1730***	0.1168***	0.1066***	0.1326***	0.0340	0.0820**	0.0693**	0.1910***	1.0000	
18. Leverage	-0.2327***	-0.1342***	0.2077***	0.0055	0.0754**	0.2007***	0.0092	0.0778**	0.0862**	0.1360***	-0.0504	0.1336***	0.1874***	0.0715*	-0.0500	0.1731***	-0.1277***	1.0000

Notes: ***, ** and * indicate significant at 1%, 5% and 10%, respectively

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Table 4.3

Board structure by professional background and level of education

Government representatives			
Total number: 741			
PhD = 40	MSc = 107	BSc = 434	High school or higher school = 156
Private representatives			
Total number: 865			
PhD = 43	MSc = 165	BSc = 522	High school or higher school = 135
Professors			
Total number: 151			
PhD = 119	MSc = 14	BSc = 18	High school or higher school = 0

Notes: This table reports board structure by professional background and level of education of SOE board members. The data presented show how many SOE board members are government representatives, private representatives and professors as well as what is the highest level of education obtained by individuals from each of the three groups. Government representatives are SOE board members that work for government. Professors are SOE board members that work as university professors. Private representatives are SOE board members that work for private enterprises. PhD is the number of individuals among SOE board members that obtained Doctor of Philosophy degree. MSc is the number of individuals among SOE board members with master's degree that represents the highest level of education they obtained. BSc is the number of individuals that obtained bachelor's degree that represents the highest level of education they obtained. High school or higher school is the number of individuals that finished high school or higher school as the highest level of education they obtained.

Table 4.4

Board structure by professional background and expertise

Government representatives	
Specialists = 346	Generalists = 307
Private representatives	
Specialists = 470	Generalists = 294
Professors	
Specialists = 94	Generalists = 56

Notes: This table reports board structure by professional background and expertise of SOE board members. The data presented distinguishes between specialists and generalists among government representatives, private representatives and professors. Government representatives are SOE board members that work for government. Professors are SOE board members that work as university professors. Private representatives are SOE board members that work for private enterprises. Specialists are SOE board members that possess a specific expertise related to the SOE business operations and they are not economists or general engineers. Generalists are SOE board members with a general expertise in economics or engineering.

Table 4.5
Board members' professional backgrounds and SOE performance: Whole sample

	Panel 1			Panel 2		
	ROE	Sales per employee	Operating cost	ROE	Sales per employee	Operating cost
	(1)	(2)	(3)	(4)	(5)	(6)
Government representatives	-0.019	-0.030*	-0.017			
	(0.016)	(0.016)	(0.019)			
Professors	0.046**	0.001*	0.000			
	(0.022)	(0.030)	(0.030)			
Private representatives	-0.006*	0.013	0.016**			
	(0.011)	(0.014)	(0.014)			
Political government				-0.018	-0.035**	-0.007
				(0.014)	(0.016)	(0.019)
Political professors				0.056*	-0.039	0.068
				(0.033)	(0.042)	(0.048)
Political private				0.002	0.023	0.049*
				(0.015)	(0.023)	(0.027)
Board size	-0.012	0.022	0.003	-0.013	0.025	-0.002
	(0.011)	(0.019)	(0.018)	(0.010)	(0.017)	(0.017)
Board tenure	0.015	0.039**	0.034***	0.010	0.040**	0.035***
	(0.011)	(0.017)	(0.012)	(0.012)	(0.017)	(0.011)
Board male	0.001	-0.022	0.011	0.002	-0.021	0.007
	(0.011)	(0.017)	(0.016)	(0.011)	(0.016)	(0.015)
Enterprise size (lagged)	-0.023	0.102	0.211*	-0.020	0.102	0.209*
	(0.043)	(0.171)	(0.114)	(0.041)	(0.170)	(0.111)
Enterprise existence (lagged)	0.041	0.068	-0.041	0.051	0.062	-0.036
	(0.108)	(0.114)	(0.121)	(0.109)	(0.111)	(0.117)
Leverage (lagged)	-0.106***	-0.026	0.026	-0.105***	-0.031	0.025
	(0.040)	(0.048)	(0.036)	(0.039)	(0.046)	(0.034)
No. of Obs.	655	651	650	655	651	650
Mean VIF	2.61	2.59	2.59	2.28	2.27	2.27
R^2 Within	0.08	0.04	0.05	0.07	0.04	0.06

Notes: The table presents the results regarding relationship between board members' professional background and SOE performance. Fixed effects panel data was used. Panel 1 presents results for estimation of board members' professional background and SOE performance. Panel 2 presents results for the intertwined effect of board members' professional background and political connections with SOE performance. In columns (1) and (4) performance measure is *ROE*. In columns (2) and (5) performance measure is *Sales per employee*. In columns (3) and (6) performance measure is *Operating cost*. Robust standard errors are reported in parentheses. In all regressions a constant term is estimated but not reported. ***significant at 1%, ** significant at 5%, * significant at 10%. *ROE* is the ratio of net income to average total equity. *Sales per employee* is the natural logarithm of sales over the total number of employees. *Operating cost* is equal to the natural logarithm of the difference between the sales and EBIT. *Government representatives* is the number of SOE board members that work for government. *Professors* is the number of SOE board members that work as university professors. *Private representatives* is the number of SOE board members that work for private enterprises. *Political government* is the number of SOE board members that work for government and are politically connected. *Political professors* is the number of SOE board members that work as university professors and are politically connected. *Political private* is the number of SOE board members that work for private enterprises and are politically connected. *Board size* is the total number of board members. *Board tenure* is the average time that board members spent on the board. *Board male* is the percentage of men on board. *Enterprise size* is the natural logarithm of the total number of employees. *Existence* is the natural logarithm of the difference between years under investigation and year of SOE incorporation. *Leverage* is equal to long-term debt over shareholders' equity.

Table 4.6

Board members' professional backgrounds and SOE performance: Differences between SOEs with 100% state-ownership and SOEs with minority private ownership

	Panel 1: SOEs with 100% state ownership						Panel 2: SOEs with minority private ownership					
	ROE	Sales per employee	Operating cost	ROE	Sales per employee	Operating cost	ROE	Sales per employee	Operating cost	ROE	Sales per employee	Operating cost
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Government representatives	0.005 (0.014)	-0.041** (0.020)	-0.027 (0.025)				0.033 (0.035)	0.026 (0.022)	0.023 (0.023)			
Professors	0.041** (0.020)	0.025 (0.039)	0.032 (0.038)				0.036 (0.050)	0.093*** (0.028)	0.082*** (0.023)			
Private representatives	0.010 (0.013)	-0.003 (0.019)	0.015 (0.022)				-0.019 (0.018)	0.057*** (0.018)	0.044** (0.017)			
Political government				-0.004 (0.012)	-0.040** (0.018)	-0.014 (0.027)				0.036 (0.025)	-0.007 (0.032)	0.012 (0.028)
Political professors				0.065** (0.032)	0.046 (0.053)	0.071 (0.066)				-0.026 (0.045)	0.032 (0.058)	0.078 (0.058)
Political private				0.002 (0.015)	0.009 (0.032)	0.031 (0.035)				-0.006 (0.029)	0.043 (0.029)	0.071** (0.032)
Board size	-0.017* (0.010)	0.042* (0.024)	0.017 (0.022)	-0.011 (0.009)	0.039* (0.023)	0.007 (0.024)	0.007 (0.023)	-0.047** (0.018)	-0.046* (0.024)	-0.005 (0.018)	-0.008 (0.016)	-0.024 (0.020)
Board tenure	0.029* (0.017)	0.045 (0.033)	0.024 (0.018)	0.025 (0.016)	0.050 (0.032)	0.033* (0.017)	-0.000 (0.013)	0.037** (0.015)	0.043*** (0.014)	-0.003 (0.014)	0.034** (0.014)	0.040*** (0.013)
Board male	0.014 (0.011)	-0.036 (0.025)	0.002 (0.021)	0.015 (0.011)	-0.037 (0.024)	0.002 (0.020)	-0.026 (0.020)	0.008 (0.014)	0.026 (0.023)	-0.017 (0.020)	0.004 (0.012)	0.020 (0.021)
Enterprise size (t-1)	-0.030 (0.056)	0.156 (0.248)	0.271 (0.183)	-0.026 (0.055)	0.155 (0.249)	0.262 (0.181)	-0.007 (0.041)	-0.018 (0.067)	0.087 (0.073)	-0.014 (0.041)	-0.012 (0.064)	0.093 (0.069)
Enterprise existence (t-1)	-0.071 (0.132)	0.319 (0.233)	0.131 (0.191)	-0.068 (0.131)	0.287 (0.233)	0.144 (0.191)	0.122 (0.157)	-0.219*** (0.071)	-0.254*** (0.084)	0.143 (0.161)	-0.171*** (0.063)	-0.207** (0.091)
Leverage (t-1)	-0.049 (0.042)	-0.046 (0.066)	0.044 (0.049)	-0.050 (0.042)	-0.049 (0.062)	0.032 (0.046)	-0.199*** (0.056)	0.031 (0.031)	0.014 (0.051)	-0.216*** (0.054)	0.024 (0.036)	0.016 (0.053)
No. of Obs.	347	346	344	347	346	344	308	305	306	308	305	306
Mean VIF	2.08	2.07	2.06	1.95	1.95	1.93	4.31	4.27	4.27	3.03	3.02	3.01
R² Within	0.04	0.06	0.07	0.04	0.06	0.07	0.26	0.06	0.09	0.24	0.04	0.09

Notes: The table presents the results regarding relationship between board members' professional background and SOE performance for two sub-samples: SOEs with 100% state ownership and SOEs with minority private ownership. Fixed effects panel data was used. Panel 1 presents results for sub-sample of SOEs with 100% state ownership. Panel 2 presents results for sub-sample of SOEs with minority private ownership.

with minority private ownership. Columns (1)-(3) and columns (7-9) present results for estimation of board members' professional background and SOE performance. Columns (4)-(6) and columns (10)-(12) present results for the intertwined effect of board members' professional background and political connections with SOE performance. Robust standard errors are reported in parentheses. In all regressions a constant term is estimated but not reported. ***significant at 1%, ** significant at 5%, * significant at 10%. *ROE* is the ratio of net income to average total equity. *Sales per employee* is the natural logarithm of sales over the total number of employees. *Operating cost* is equal to the natural logarithm of the difference between the sales and EBIT. *Government representatives* is the number of SOE board members that work for government. *Private representatives* is the number of SOE board members that work as university professors. *Professors* is the number of SOE board members that work as university professors. *Political professors* is the number of SOE board members that work for private enterprises. *Political government* is the number of SOE board members that work for government and are politically connected. *Political professors* is the number of SOE board members that work as university professors and are politically connected. *Political private* is the number of SOE board members that work for private enterprises and are politically connected. *Board size* is the total number of board members. *Board tenure* is the average time that board members spent on the board. *Board male* is the percentage of men on board. *Enterprise size* is the natural logarithm of the total number of employees. *Existence* is the natural logarithm of the difference between years under investigation and year of SOE incorporation. *Leverage* is equal to long-term debt over shareholders' equity.

Table 4.9

Board members' professional backgrounds and SOE performance: Differences between manufacturing and service sector SOEs

	Panel 1: Manufacturing SOEs						Panel 2: Service sector SOEs					
	ROE	Sales per employee	Operating cost	ROE	Sales per employee	Operating cost	ROE	Sales per employee	Operating cost	ROE	Sales per employee	Operating cost
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Government representatives	0.011	-0.062	-0.041				0.021	-0.018	-0.011			
	(0.045)	(0.074)	(0.061)				(0.016)	(0.015)	(0.020)			
Professors	0.098*	0.020	0.006				0.028*	-0.009	-0.009			
	(0.056)	(0.097)	(0.072)				(0.021)	(0.035)	(0.036)			
Private representatives	-0.012	-0.037	-0.023				-0.007	0.022*	0.023			
	(0.033)	(0.050)	(0.039)				(0.011)	(0.014)	(0.015)			
Political government				-0.012	-0.017	-0.003				0.023	-0.033**	-0.009
				(0.034)	(0.080)	(0.064)				(0.015)	(0.014)	(0.019)
Political professors				0.091	-0.028	-0.032				0.028	-0.043	0.108*
				(0.062)	(0.106)	(0.080)				(0.033)	(0.049)	(0.061)
Political private				-0.088	0.102	0.089				0.010	0.014	0.050*
				(0.079)	(0.089)	(0.062)				(0.015)	(0.022)	(0.030)
Board size	0.011	0.051	0.038	0.020	0.020	0.014	-0.018	0.016	-0.008	-0.022**	0.026	-0.007
	(0.030)	(0.064)	(0.047)	(0.028)	(0.053)	(0.042)	(0.012)	(0.021)	(0.020)	(0.011)	(0.019)	(0.019)
Board tenure	-0.003	0.023	0.045*	-0.007	0.018	0.041	0.016	0.043**	0.028**	0.012	0.045**	0.031**
	(0.023)	(0.027)	(0.026)	(0.025)	(0.030)	(0.026)	(0.013)	(0.021)	(0.013)	(0.014)	(0.020)	(0.012)
Board male	-0.045	-0.030	-0.002	-0.033	-0.023	0.001	0.012	-0.024	0.016	0.012	-0.023	0.008
	(0.038)	(0.030)	(0.033)	(0.036)	(0.033)	(0.033)	(0.011)	(0.022)	(0.018)	(0.012)	(0.020)	(0.017)
Enterprise size (t-1)	-0.014	0.049	0.061	-0.020	0.034	0.055	-0.021	0.116	0.262	-0.017	0.112	0.251
	(0.068)	(0.131)	(0.114)	(0.057)	(0.126)	(0.109)	(0.051)	(0.219)	(0.159)	(0.050)	(0.218)	(0.154)
Enterprise existence (t-1)	0.035	0.003	-0.082	0.023	-0.054	-0.137	0.073	0.084	-0.026	0.084	0.080	-0.035
	(0.214)	(0.206)	(0.235)	(0.223)	(0.203)	(0.245)	(0.114)	(0.129)	(0.139)	(0.117)	(0.128)	(0.132)
Leverage (t-1)	-0.069*	0.096	0.085	-0.079*	0.065	0.065	-0.107**	-0.047	0.018	-0.104**	-0.051	0.014
	(0.040)	(0.088)	(0.134)	(0.046)	(0.085)	(0.129)	(0.048)	(0.053)	(0.037)	(0.047)	(0.051)	(0.034)
No. of Obs.	139	136	136	139	136	136	516	515	514	516	515	514
Mean VIF	2.32	2.27	2.26	2.01	1.98	1.96	2.89	2.89	2.88	2.55	2.55	2.55
R^2 Within	0.12	0.04	0.08	0.12	0.04	0.08	0.08	0.05	0.06	0.08	0.05	0.07

Notes: The table presents the results regarding relationship between board members' professional background and SOE performance for two sub-samples: manufacturing SOEs and service sector SOEs. Fixed effects panel data was used. Panel 1 presents results for sub-sample of manufacturing SOEs. Panel 2 presents results for sub-sample of service sector SOEs. Columns (1)-(3) and columns

(7-9) present results for estimation of board members' professional background and SOE performance. Columns (4)-(6) and columns (10)-(12) present results for the intertwined effect of board members' professional background and political connections with SOE performance. Robust standard errors are reported in parentheses. In all regressions a constant term is estimated but not reported. ***significant at 1%, ** significant at 5%, * significant at 10%. *ROE* is the ratio of net income to average total equity. *Sales per employee* is the natural logarithm of sales over the total number of employees. *Operating cost* is equal to the natural logarithm of the difference between the sales and EBIT. *Government representatives* is the number of SOE board members that work for government. *Professors* is the number of SOE board members that work as university professors. *Private representatives* is the number of SOE board members that work for private enterprises. *Political government* is the number of SOE board members that work for government and are politically connected. *Political professors* is the number of SOE board members that work as university professors and are politically connected. *Political private* is the number of SOE board members that work for private enterprises and are politically connected. *Board size* is the total number of board members. *Board tenure* is the average time that board members spent on the board. *Board male* is the percentage of men on board. *Enterprise size* is the natural logarithm of the total number of employees. *Existence* is the natural logarithm of the difference between years under investigation and year of SOE incorporation. *Leverage* is equal to long-term debt over shareholders' equity.

Table 4.12

Effect of board capital and political capital on performance

	Whole sample			SOEs with 100% state ownership			SOEs with minority private ownership		
	ROE	Sales per employee	Operating cost	ROE	Sales per employee	Operating cost	ROE	Sales per employee	Operating cost
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Board capital	0.014*	-0.038	-0.025	-0.014	-0.157	0.018	0.001*	0.090	0.116**
	(0.033)	(0.041)	(0.038)	(0.038)	(0.116)	(0.077)	(0.044)	(0.054)	(0.050)
Political capital	0.301*	-0.135	-0.125	0.060	-0.309	-0.251	0.554**	0.022	0.020
	(0.175)	(0.343)	(0.332)	(0.251)	(0.383)	(0.435)	(0.281)	(0.517)	(0.424)
Government representatives	-0.243**	-0.111	-0.161	-0.134	-0.103	-0.100	-0.360	-0.069	-0.115
	(0.119)	(0.264)	(0.266)	(0.136)	(0.295)	(0.346)	(0.226)	(0.411)	(0.328)
Private representatives	-0.020	0.033	0.025	-0.003	0.036	0.014	-0.040	0.091**	0.075**
	(0.014)	(0.021)	(0.020)	(0.015)	(0.028)	(0.030)	(0.026)	(0.037)	(0.032)
Politically connected	-0.079	0.208	0.365**	-0.043	0.149	0.346*	-0.183	0.402*	0.414**
	(0.093)	(0.141)	(0.148)	(0.116)	(0.197)	(0.191)	(0.178)	(0.235)	(0.201)
Education	0.084	0.131	-0.032	-0.004	0.125	-0.200	0.214	0.731*	0.525
	(0.104)	(0.225)	(0.178)	(0.095)	(0.275)	(0.216)	(0.177)	(0.402)	(0.322)
Work experience	-0.003	0.059	0.003	-0.063	-0.091	-0.108	0.119	0.270***	0.177**
	(0.100)	(0.132)	(0.116)	(0.129)	(0.190)	(0.193)	(0.112)	(0.095)	(0.087)
Board size	0.002	0.015	-0.002	-0.016	0.015	-0.012	0.047	-0.013	-0.008
	(0.016)	(0.023)	(0.021)	(0.019)	(0.032)	(0.029)	(0.036)	(0.031)	(0.033)
Board tenure	0.012	0.038*	0.027*	0.026	0.055	0.020	-0.010	0.027	0.037**
	(0.014)	(0.023)	(0.014)	(0.019)	(0.038)	(0.021)	(0.018)	(0.018)	(0.016)
Board male	0.003	-0.020	0.010	0.014	-0.036	0.004	-0.031	0.019	0.026
	(0.012)	(0.018)	(0.016)	(0.011)	(0.024)	(0.020)	(0.025)	(0.018)	(0.025)
Enterprise size (t-1)	0.038	0.086	-0.004	-0.071	0.331	0.217	0.050	-0.380***	-0.419***
	(0.098)	(0.157)	(0.147)	(0.138)	(0.242)	(0.207)	(0.112)	(0.126)	(0.143)
Enterprise existence (t-1)	-0.022	0.095	0.194*	-0.025	0.189	0.263	-0.010	-0.092	-0.002
	(0.043)	(0.170)	(0.105)	(0.058)	(0.258)	(0.178)	(0.036)	(0.072)	(0.062)
Leverage (t-1)	-0.110***	-0.030	0.028	-0.049	-0.055	0.037	-0.229***	-0.009	-0.005
	(0.042)	(0.050)	(0.034)	(0.044)	(0.067)	(0.046)	(0.054)	(0.031)	(0.046)
No. of Obs.	582	578	577	341	340	338	241	238	239
Mean VIF	3.53	3.54	3.54	3.32	3.32	3.32	4.99	5.03	5.04
R² Within	0.08	0.04	0.07	0.03	0.07	0.08	0.31	0.16	0.20

Notes: The table presents the results for the relationship between board capital/political capital and SOE performance for the whole sample, SOEs with 100% state

ownership SOEs with minority private ownership. Fixed effects panel data was used. Columns (1)-(3) present results for the whole sample. Columns (4)-(6) present results for SOEs with 100% state ownership. Columns (7)-(9) present results for SOEs with minority private ownership. Robust standard errors are reported in parentheses. In all regressions a constant term is estimated but not reported. ***significant at 1%, ** significant at 5%, * significant at 10%. *ROE* is the ratio of net income to average total equity. *Sales per employee* is the natural logarithm of sales over the total number of employees. *Operating cost* is equal to the natural logarithm of the difference between the sales and EBIT. *Government representatives* is the number of SOE board members that work for government. *Private representatives* is the number of SOE board members that work for private enterprises. *Politically connected* is the percentage of politically connected board members. *Education* is the percentage of board members with MSc and PhD degrees. *Work experience* is equal to natural logarithm of the difference between observed year and year of completion of bachelor studies or high school when high school is the highest degree obtained. *Board size* is the total number of board members. *Board tenure* is the average time that board members spent on the board. *Board male* is the percentage of men on board. *Enterprise size* is the natural logarithm of the total number of employees. *Existence* is the natural logarithm of the difference between years under investigation and year of SOE incorporation. *Leverage* is equal to long-term debt over shareholders' equity.

Chapter 5

Conclusions

This thesis investigates how political interference influences board dynamics and decision-making processes, thus impacting SOEs' behaviour and performance. For the purpose of our analysis we use hand-collected sample of 200 SOEs from six countries of the former SFRY with financial and board membership data for the period 2010-2014. The selected countries provide us with a unique set-up having similar state enterprise sectors where direct/indirect political pressures are abundant. Furthermore, the enhancement of SOEs' performance and curtailment of political interference is one of the main priorities for governments of these countries. Therefore, the three empirical chapters of this thesis analyse distinct political interference mechanisms in an attempt to provide a more nuanced picture of how politicians use SOEs for personal or political objectives.

Chapter 2 reveals that board member changes within SOEs are politically motivated rather than performance induced. More specifically, the results show a significant positive impact of parliamentary elections on board member changes with

performance being insignificant for board replacements. Furthermore, the findings suggest negative relationship between politically induced board member changes and financial/operating performance of SOEs. This confirms that change of the critical number of board members causes inconsistent decision making which results in poor enterprise performance. We also find the adverse association of politically induced board member changes with performance of small and medium SOEs and no association with large SOEs. Such results suggest that government officials avoid using large SOEs for political objectives due to their visibility and negative publicity that this might cause. Furthermore, our findings uncover insignificant political board replacements–performance relationship when SOEs are governed by independent government body, thus providing support for literature implication that centralized ownership model limits political interference.

Chapter 3 implies that politicians engage in pre-election manipulation of SOEs' corporate decisions. We observe that increase of SOEs' employment is the highest in pre-election and election years. The results imply that leverage changes in pre-election and election years probably because of the need to start new investments or cover costs of new employment. Moreover, upsurge of SOE investments is present in election and postelection years. Hence, our findings suggest that politicians take advantage of voters' preferences for high employment/investment and the fact that they are short-sighted in order to increase their re-election prospects. In addition, for SOEs with politically dominated boards we find that employment and indebtedness levels change to a greater extent. We also reveal that politicians use SOEs governed by central governments as to increase employment

since these enterprises are most likely to generate headlines due to their size and economic importance.

Chapter 4 shows that different board member professional backgrounds influence SOE performance. The findings imply that government representatives are negatively related to operating performance probably due to their inadequate competencies and expertise. However, results show positive relationship between professors and ROE, while individuals coming from private enterprises increase SOE operating costs, thus creating negative association with ROE. The significance and magnitude of these associations increases with presence of political connections. Board composition in terms of professional backgrounds seems to be unimportant for manufacturing SOEs. The presence of professors and private sector representatives is positively associated with operating performance of service sector SOEs and SOEs with minority private ownership. Lastly, our results suggest that the relationship between board/political capital and ROE is positive.

The analyses presented within this thesis imply that politicians influence SOEs' behaviour and performance through different political interference mechanisms which encompass boards and their decision making. Hence, this thesis makes several contributions to the existing literature and provides practical implications for government policies related to SOEs. First, we fill in the existing literature gap about the nature and drivers of SOEs' board turnover contributing to a more nuanced picture of political tie heterogeneity. Second, we demonstrate that political interference via unstable board membership hinders SOE performance, thus

complementing the research about the factors that influence SOE performance. Third, we extend the literature on political interference by showing that state ownership provides incumbents with an informal channel for obtaining electoral support. Moreover, our findings enrich understanding of political embeddedness theory by showing a reverse channel through which benefits are streamlined from SOE board members to politicians. Fourth, we contribute to upper echelons theory and we complement the empirical research on board characteristics–performance relationship since we demonstrate that board members' background characteristics influence SOE performance. Fifth, our results imply that centralized ownership model and adoption of board appointment criteria that is based on business acumen could potentially shield SOEs from political interference. Furthermore, governments should adopt four-year plans regarding SOEs' employment, indebtedness and investment levels as to decrease possibilities for short-term decisions with election benefits. However, we acknowledge that our study has several limitations which suggest possible directions for future research.

First, we carried out a kind of natural experiment since six countries of the former SFRY share a lot of similarities in terms of their development path and state enterprise sectors. However, replication of this research in the context of developed, developing, emerging and/or transition countries would determine general applicability of our findings. Furthermore, it would allow for recognition of some institutional and/or developmental factors which co-create certain patterns when it comes to political interference and SOEs.

Second, the dataset used in this thesis covers a five-year period. Although sample with 1,000 enterprise-year observations is comparable to sample sizes of similar studies and is sufficient for examination of the political interference effects, a dataset with longer period of time would add to robustness of the research. Additionally, prolonged time frame implies greater number of local/parliamentary elections, thus enabling differentiation between their effects and allowing for a better structured analysis using DID approach in Chapter 2.

Third, findings of Chapter 3 show some differences between pre-election manipulation of SOE corporate decisions for SOEs with 100% state ownership and SOEs with minority private ownership. The extension of this research to majority privately owned enterprises would allow a clear-cut conclusion of whether pre-election manipulation is related to presence of state ownership. Furthermore, due to the lack of available data we are unable to track the link between pre-election manipulation of indebtedness and investment decisions. Information about purpose of approved subsidies and loans on the one hand, and list of investment projects on the other hand, would answer the question of whether funds are used for real investment activities or some election campaign goals.

Fourth, our hand-collected dataset comprises of rather detailed demographic and professional information about SOE board members, thus being unique for countries analysed in this thesis. Recognizing that due to scarcity of available information we were not able to perform certain analysis in Chapter 2 and Chapter

4, here we outline several directions for future research in case such data becomes available at certain point in time.

The analysis in Chapter 2 does not consider the fact that board member changes in election years might also depend on the type of political tie. Middle level government officers might be less likely to be replaced than individuals connected directly to a high-level government or parliament official when a change of a ruling party happens. Hence, such analysis would provide a more nuanced picture of politically induced board member changes in election years. In Chapter 2, we also note that political ties create certain costs and benefits as implied by political embededdness theory. Therefore, examination of costs and benefits of individual board member replacements in election years would provide further explanation of the negative association between politically induced board member changes and SOE performance.

The categorization of board members' professional backgrounds in Chapter 4 is based on the full-time positions which individuals perform aside of their board membership. However, such categorization might omit the fact that certain board members spent majority of their careers as professors even though their current position is in the government. Therefore, more detailed categorization or even diversity of positions obtained, would provide some additional insight on how board members' professional backgrounds influence SOE performance. Moreover, a more direct proxy of board capital could be created by observing board member contribution in terms of their presence and participation in board discussions.

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