



## OWNERSHIP AND CONTROL IN LARGE EASTERN EUROPEAN COMPANIES

Nicușor Dumitru CĂRĂUȘU\*

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### Abstract

*The aim of this paper is to determine if the ownership structure of large Central Eastern-European companies, can influence the performance of the companies via better monitoring and control of managers done by individual blockholders. We use a sample of 497 large private and public CEE companies and analyze influence of large individual type of blockholders on performance over the period 2004-2013. We use ROA as a proxy for performance, firm, country characteristics and ownership indicators in a fixed-effect panel model. Our estimates indicate that only state and foreign ownership can influence performance while individual and widely held ownership do not influence performance in large CEE companies. On average, state controlled companies tend to underperform while foreign ownership seems to be beneficial for performance. This suggests that ownership can be used as a substitute for missing good governance institutions, in such a specific environment as CEE countries.*

**Keywords:** corporate governance, ownership and control, firm performance, public and private companies

**JEL classification:** G32, G34

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### 1. INTRODUCTION

The consequences of the separation of investors and managers has been a key focus of corporate governance since its inception, but in the end we still don't have a solution for this dilemma. The discrepancy of interests between the managers seeking personal benefits instead of company's and shareholder's wellbeing ultimately ends in an everlasting state of control and monitoring of the agent on behalf of the principal.

Ownership concentration can help mitigate the principal agent dilemma, because large blockholders usually tend to monitor and control managers closely, but this can lead to a potential risk. If the majority shareholders engage in a dominant behavior, minority shareholders suffer. The influence of large shareholders on a company performance is a potential trade-off between the monitoring effect and expropriation effect of a concentrated ownership.

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\* Faculty of Economics and Business Administration, Alexandru Ioan Cuza University of Iași, Romania;  
e-mail: [nicusor@live.com](mailto:nicusor@live.com).

The aim of this paper is to provide additional cross-country empirical testing regarding the relationship between shareholder ownership and company performance as recommended by Wang and Shailer (2015). We use a sample of 497 large Central and Eastern European (CEE) companies to provide additional insight into the inner-workings of the specific economic and institutional environment in CEE countries and try to emphasize the role and importance of ownership in this particular environment.

Our results indicate that only state and foreign ownership can influence performance, while individual and widely held ownership do not influence performance in large CEE companies. We find that state controlled companies tend to underperform, while foreign ownership seems to be beneficial. This suggests that ownership can be used as a substitute for missing good governance institutions, in such a specific environment as CEE countries.

The rest of this paper is organized as follows: the second part gives insight into the theoretical considerations, third section presents the data and preliminary analysis, fourth section marks the methodology, fifth section marks empirical results and sixth part concludes.

## 2. LITERATURE REVIEW

Ownership concentration is one of the key corporate governance mechanisms that can help mitigate agency problems that arise from the separation of ownership and control. Concentrated ownership allows large blockholders to control a company according to their own interests, but the influence they have on firm value or performance is up to debate.

Shleifer and Vishny (1986) consider that ownership concentration can positively influence firm value and performance because blockholders tend to closely monitor the company's managers, but Stulz (1988) and Johnson *et al.* (2000) argue that it can also be detrimental because blockholders can use their control to sidetrack assets and profits out of the firm. The potential detrimental effect of blockholders can lead to a lower corporate value as Claessens *et al.* (2002) found for East Asian firms or La Porta *et al.* (2002) for developed economies and Lins (2003) in all emerging markets. Ultimately, Filatotchev *et al.* (2013) argues that the influence of large shareholders on a company performance is a potential trade-off between the monitoring effect and expropriation effect of concentrated ownership.

La Porta *et al.* (2002) in a cross-country study found that high levels of concentration are found typically in countries with weak legal protection of investors as a mean to counter the weak institutional environment. This high level of concentration according to Boubakri *et al.* (2005) can help mitigate the flaws in the legal and institutional environment but raise other issues regarding blockholders abuse and minority shareholders rights.

CEE countries are a particular category of emerging markets due to the specific economic, institutional and legal environment they operate in, which can be attributed to the radical changes imposed by the transition from planned economy to market economy. Due to the characteristics of the corporate environment, testing the relationship between ownership concentration, blockholder type and company performance or value has led to inconsistent results in CEE countries.

When assessing the influence of **ownership concentration** on company performance in CEE, we find a *positive influence* of large shareholders in studies like Earle *et al.* (2005) for listed companies on Budapest Stock Exchange, or in Gugler *et al.* (2014) who indicates the beneficial effect of individual ownership on performance in a cross-country study for publicly listed CEE companies. We also find a *negative influence* of ownership concentration in studies such as Atanasov (2005), Vintilă *et al.* (2014) or Wang and Shailer

(2015). According to [Atanasov \(2005\)](#) in Bulgaria the majority shareholders prefer expropriation tendency rather than adding value through monitoring, which reduces the trade price of majority owned companies by up to 60%. In Romania the results of [Vintilă et al. \(2014\)](#) indicate a nonlinear relationship between ownership concentration for listed companies on the Bucharest Stock Exchange. This points out that ownership concentration can either be beneficial or detrimental in Romania. [Wang and Shailer \(2015\)](#) in a cross-country emerging markets meta-analysis finds a negative effect of ownership concentration on company performance in all emerging markets. They consider that the main causes for the miss-matching results in all the emerging markets are due to model choices and the improper treatment of endogeneity.

More issues arise when considering the **nature of the controlling shareholders**, because empirical results are once again inconsistent in each of the major controlling shareholders types: individual, state, foreign or widely held companies. As far as *individual ownership* [Gugler et al. \(2014\)](#) finds a positive relationship between performance and individual ownership in CEE countries. They consider individual ownership as a powerful mechanism against the flaws in the institutional environment of CEE countries improving performance. Meanwhile [Kowalewski et al. \(2010\)](#) found a potential indirect U shaped relationship between performance and family ownership in listed companies from Poland. Also the cross-country meta-analysis results of [Wagner et al. \(2015\)](#) indicate a positive influence of individual-family ownership on company performance in all emerging markets. They argue that despite major differences between legal and institutional environment individual-family ownership is beneficial to company performance in all the emerging markets. *State ownership* is generally accepted as being detrimental according to the study of [Estrin et al. \(2009\)](#) and the recent study of [Gugler et al. \(2014\)](#) who indicates that state companies tend to underperform similar companies in CEE countries mainly due to the poor institutional environment. *Foreign ownership* is considered to be beneficial by [Villalonga and Amit \(2009\)](#) in CEE countries because foreign ownership increases performance after a successful privatization, but the results from [Vintilă et al. \(2014\)](#) indicate a nonlinear connection between performance and foreign ownership while [Gugler et al. \(2014\)](#) found inconclusive results with respect to the influence of foreign ownership on company performance. *Widely held firms* are a rare occurrence in the CEE market and their influence on performance are largely unknown according to [Gugler et al. \(2014\)](#).

Considering the influence of ownership concentration and the nature of the controlling shareholder, the main hypothesis of this article are:

$H_1$ : Not all types of blockholders ownership influences company performance in large Eastern-European companies.

$H_2$ : Individual ownership has a positive effect on company performance in large Eastern-European companies.

$H_3$ : State ownership has a negative effect on company performance in large Eastern-European companies.

$H_4$ : Foreign ownership has a positive effect on company performance in large Eastern-European companies.

### 3. DATA

#### 3.1. Sample composition

The data used in this analysis is made up from a sample of 497 large listed and private companies from Central and Eastern Europe namely from: Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Moldova, Poland, Romania, Serbia, Slovakia and Slovenia. The source of the data is Bureau van Dijk Orbis database. The main filtering criteria used in selecting the sample were region, large company in 2007 (we use European Commission criteria's) and availability of data for at least 10 years. While our initial search revealed a higher number of firms, after excluding financial corporations and taking into account the limited availability of information regarding ownership structure for many of our companies we ended up with a sample of 497 distinct companies.

One of the most challenging aspects of our research was to reconstruct the ownership structure of each individual company during 2004-2013. Because of limited availability of information for each company in Orbis, we had to use collected data from different sources. These sources include: 1) Orbis database for direct ownership; 2) Annual reports where available; 3) Information published/included in local or global press; 4) Corporate web pages and web searches about company histories, family and personal relations.

Following the definition of [Gugler et al. \(2014\)](#) regarding shareholders and ownership structure we define the following categories of controlling shareholders: individual *ind* (if a single person controls at least 10% of the company and he is the largest shareholder), *sate* (state, regional or federal government or municipalities control at least 10 % of the company and he is the major shareholder), widely held *wide* (if none of the shareholders control more than 10%), *foreign* (if the company is controlled by a foreign individual or company), *financial institutions* (if the owner is a financial institution), and industrial company *indus* (if the company is owned by a local company and we cannot determine its ownership).

**Table no. 1 – Variables used in the analysis**

Variable	Description	Data source
<b>Dependent variable</b>		
<i>prof</i>	ROA calculated by dividing EBIT to total assets (%)	Orbis
<b>Ownership indicators</b>		
<i>ind</i>	Dummy variable equal to 1 if a single person controls at least 10% of the company and he is the largest shareholder	Orbis, Hand-collected data
<i>state</i>	Dummy variable equal to 1 if the state controls at least 10 % of the company and he is the major shareholder	Orbis, Hand-collected data
<i>wide</i>	Dummy variable equal to 1 if no single person or entity owns more than 10% of a company	Orbis, Hand-collected data
<i>foreign</i>	Dummy variable equal to 1 if the company is controlled by a foreign person or entity	Orbis, Hand-collected data
<i>financial institutions</i>	Dummy variable equal to 1 if the company is controlled by financial institution	Orbis, Hand-collected data
<i>industrial company</i>	Dummy variable equal to 1 if the owner is an industrial company and we cannot determine the exact owner via cross-reference	Orbis, Hand-collected data
<b>Firm Characteristics</b>		
<i>listed</i>	Dummy variable equal to 1 if the firm is listed in the mentioned year	Orbis, Hand-collected data
<i>size</i>	Log normal of total assets	Orbis

Variable	Description	Data source
<i>delisted</i>	Dummy variable equal to 1 if the firm was previously listed and now it's delisted in a year	Orbis, Hand-collected data
<i>lev</i>	Leverage calculate by dividing debt to assets	Orbis
<i>growth</i>	Sales growth, as the relative increase in sales from the previous year (%)	Orbis
<i>nwc</i>	Ratio of net working capital to total assets	Orbis
<b>Macroeconomic factors (external)</b>		
<i>gdp</i>	Annual GDP per capita growth (%)	World Bank
<i>inf</i>	GDP deflator annual (%)	World Bank
<i>crisis</i>	Dummy variable equal to 1 if the period is between 2008-2011	-

Source: Author definition

In determining influence of ownership on performance and profitability we use return on assets (ROA) as a proxy because 428 companies from our sample are private while only 69 are listed. We use *prof* as return on assets (ROA) calculated by dividing earnings before interest and taxes (EBIT) to total assets in order to remove the bias of country specific fiscal policies. We employ additional firm control variables used in existing studies such as *size* the log value of total assets, *lev* leverage ratio between debt and total assets, *growth* as the firm annual growth rate of sales, net working capital *nwc* as the ratio between net working capital and total assets. All the firm specific data is from Orbis database. Because in the period analyzed some of the firms were listed or private, some had an initial public offering (IPO) while others were delisted, we encode addition dummy variables *listed* and *delisted* if the conditions are met for each year.

In addition to firm specific variables we add economic environment variables to control for external factors namely *gdp* as the annual GDP per capital growth (%), inflation *inf* annual GDP deflator (%). All the macroeconomic data is taken from World Development Indicators provided by The World Bank. Even though the aim of this paper doesn't focus on the recent crisis we cannot neglect it so we include a dummy variable *crisis* depicting the 2008-2011 economic and financial crisis. A full description of the variables used in the analysis it's depicted in Table no. 1.

Table no. 2 – Control and ownership by country and Fama-French Industry SIC-12

Panel A: Distribution of control across countries								
	Ultimate Control							
Country	1	2	3	4	5	6	Firms	Obs.
Bosnia Herzegovina	0.00	0.60	0.00	0.40	0.00	0.00	5	44
Croatia	0.38	0.22	0.05	0.27	0.00	0.05	18	169
Czech Republic	0.14	0.11	0.00	0.73	0.00	0.01	79	713
Hungary	0.10	0.19	0.01	0.66	0.00	0.04	80	782
Estonia	0.22	0.22	0.00	0.56	0.00	0.00	9	80
Latvia	0.38	0.18	0.08	0.36	0.00	0.00	7	68
Lithuania	0.38	0.18	0.08	0.36	0.00	0.00	12	116
Moldova	0.00	1	0.00	0.00	0.00	0.00	1	9
Poland	0.16	0.19	0.03	0.59	0.00	0.04	198	1761
Romania	0.15	0.13	0.00	0.72	0.00	0.00	58	556
Serbia	0.11	0.56	0.00	0.33	0.00	0.00	9	90
Slovakia	0.00	0.14	0.00	0.71	0.00	0.14	14	122
Slovenia	0.00	0.34	0.33	0.32	0.00	0.00	7	67
Total firms	82	102	12	314	0	14	497	

<b>Panel B: Distribution of control across industries</b>								
	<b>Ultimate Control</b>							
Industry	1	2	3	4	5	6	Firms	Obs.
Consumer non-durables	0.18	0.07	0.03	0.66	0	0	41	369
Consumer durables	0.08	0.00	0.02	0.89	0.00	0.00	50	454
Manufacturing	0.16	0.03	0.02	0.89	0.00	0.00	49	444
Gas, coal, extraction products	0.00	0.62	0.00	0.38	0.00	0.00	15	143
Chemical allied products	0.26	0.31	0.00	0.43	0.00	0.00	16	153
Business equipment	0.00	0.00	0.05	0.95	0.00	0.00	22	208
Telecommunications	0.12	0.15	0.05	0.67	0.00	0.00	22	203
Utilities	0.12	0.63	0.00	0.25	0.00	0.00	41	395
Wholesale	0.21	0.07	0.03	0.63	0.00	0.06	181	1642
Health care	0.00	0.33	0.11	0.55	0.00	0.00	8	87
Finance	0.00	1	0.00	0.00	0.00	0.00	5	44
Other	0.15	0.49	0.03	0.34	0.00	0.00	47	435
Number of firms	82	102	12	314	0	14	497	
<b>Panel C: Distribution of control across Public, Private, Delisted</b>								
	<b>Ultimate Control</b>							
Company type	1	2	3	4	5	6	Firms	Obs.
Private	0.14	0.17	0.01	0.66	0.00	0.03	452	4024
Public	0.26	0.33	0.12	0.29	0.00	0.00	68	553
Delisted	0.14	0.14	0.00	0.64	0.00	0.06	19	136
Number of firms	82	102	12	314	0	14	497	
<i>Note: Distribution of control: 1=large individual investor; 2= state; 3= Widely; 4=Foreign; 5=Financial; 6=Industrial company.</i>								

*Source: Authors estimates*

Table no. 2 Panel A presents the shares of individual control according to the six main categories we constructed: individual, state, widely owned, foreign, financial and industrial company. Out of the total 497 firms, 314 firms were controlled in at least one year by foreign investors making them the most relevant in our sample. Our results are somewhat different from Gugler *et al.* (2014) who finds that in CEE countries most of the listed companies are controlled by individuals. Our results suggest that most of the large companies in CEE countries are now owned/controlled by foreign investors. State and individual ownership are also important.

One of the reasons for the high number of foreign investors it's reveled by grouping all the firms using Fama-French SIC-12 categories in Panel B Table no. 2. The major part of our sample consists of the wholesale industry, mainly because most of our private companies are either wholesale foreign direct investments or subsidiary of large western European retail chains. State owned enterprises is another important ownership type in CEE controlling the extraction, utilities and other industry (especially transportation and construction). These three major types of industry are vital for any economy so the CEE companies, like in many other western economies are still controlled by the state due to their key role in the economy. Another particular industry is the finance industry according to SIC-12, but these companies are in fact state owned real estate management companies. The other industries in CEE countries are now owned and controlled by foreign investors. On a general note foreign investors remain predominant in most categories, which can explain the differences we observed previously.

Because none of our companies are owned by a financial institution (institutional investors) we will exclude the variable from our analysis. Assessing the structure of ownership

for private and public firms from Panel C we find that most private and delisted companies are foreign owned, while public companies have similar ratios regarding the ownership type.

**Table no. 3 – Firm characteristics of large CEE companies**

Type of company		<i>prof</i>	<i>size</i>	<i>lev</i>	<i>growth</i>	<i>nwc</i>	<i>gdp</i>	<i>inf</i>
Private	<i>N</i>	4024	4041	4041	3594	3770	4382	4382
	mean	7.111	12.35	0.588	1.025	0.160	3.185	3.659
	st.dev	12.22	1.219	0.339	6.07	0.235	3.659	3.193
	min	-85.2	4.879	0.000	-1	-1.60	-14.5	-10.1
	max	94.12	16.34	8.898	79.85	1.030	12.64	19.52
Listed	<i>N</i>	553	554	554	499	504	563	563
	mean	6.900	13.61	0.475	0.116	0.131	3.165	3.334
	st.dev	7.801	1.255	0.211	0.284	0.139	3.970	3.003
	min	-58.4	10.44	0.009	-0.717	-0.20	-14.5	-10.1
	max	43.61	17.04	1.953	3.255	0.759	12.64	19.52
Previously listed	<i>N</i>	136	137	137	126	118	149	149
	mean	3.491	12.87	0.500	0.136	0.169	2.950	3.888
	st.dev	11.67	0.975	0.246	0.419	0.239	4.004	3.760
	min	-43.4	11.10	0.097	-0.760	-0.40	-13.8	-3.29
	max	29.00	14.72	0.996	2.268	0.726	12.41	14.81
Sample	<i>N</i>	4577	4595	4595	4093	4274	4945	4945
	mean	7.08	12.51	0.575	0.926	0.157	3.182	3.622
	st.dev	11.77	1.290	0.328	7.891	0.226	3.696	3.174
	min	-85.2	4.879	0.000	-1	-1.60	-14.5	-10.1
	max	94.12	17.04	8.898	79.85	1.030	12.64	19.52

*Source: Authors estimates*

Characteristics of firm specific and macroeconomic variables depicted in [Table no. 3](#) reveal that in our sample private firms are more profitable, smaller, experience higher growth than public firms. With respect to public companies and delisted companies, we find public companies more profitable, larger and less leveraged.

### 3.2. Preliminary analysis

Our initial analysis is based upon the correlation matrix between our performance variable ROA and the ownership structure or firm characteristics.

**Table no. 4 – Firm characteristics of large CEE companies**

	<b>ROA</b>	<b>ind</b>	<b>state</b>	<b>wide</b>	<b>foreign</b>	<b>indus</b>	<b>listed</b>	<b>delisted</b>
<b>ROA</b>	1							
<b>ind</b>	0.005	1						
<b>state</b>	-0.095***	-0.203***	1					
<b>wide</b>	-0.038***	-0.067***	-0.308***	1				
<b>foreign</b>	0.087***	-0.540***	-0.601***	-0.117***	1			
<b>indus</b>	-0.016***	-0.072***	-0.082***	-0.027	-0.217***	1		
<b>listed</b>	-0.006	0.111***	0.120***	0.306***	-0.233***	-0.061***	1	
<b>delisted</b>	-0.053***	-0.002	-0.015	-0.028	0.028**	0.041***	-0.041***	1

*Note:* \*\*\* Correlation is significant at 1% and \*\* at 5%

*Source: Authors estimates*



Our results reveal a weak but statistically significant negative relation between ROA, state, wide ownership, industrial company and delisted company. Meanwhile, we can observe a similar weak but positive relation between ROA and foreign ownership.

#### 4. METHODOLOGY

In order to test if the ownership has any direct influence on the performance of large CEE companies we will use the following basic model (1) as follows:

$$Prof_{i,c,t} = \alpha_i + \beta_1 Ownership_{i,c,t} + \beta_2 Crisis_t + \beta_3 Macro_{c,t} + \beta_4 N_{i,c,t} + \varepsilon_{i,t} \quad (1)$$

where:  $i = 1, \dots, N$  and  $t = 1, \dots, T$

$Prof_{i,c,t}$  is the performance of the company  $i$ , from the country  $c$ , at the time  $t$ . We use *ROA* as a proxy for performance;

$\alpha_i$ - the firm specific intercept;

$Ownership_{i,c,t}$ - the ownership dummy indicator for the controlling shareholder type: *ind. state, wide, foreign indus*;

$Crisis_t$  - a dummy variable depicting the recent economic crisis;

$Macro_{c,t}$  - one macroeconomic variables used in the analysis of the *gdp* and *inf*;

$N_{i,c,t}$  - are firm specific control variables: *size, lev, growth, nwc*;

$\varepsilon_{i,t}$  - the standard error.

A full description of the variables used can be found in [Table no. 1](#). The estimation of the regression coefficients in Stata 12 is done using Ordinary Least Square panel distribution testing if we need to use fixed-effects. Our assumption is that fixed-effects are required. Alternatively, we will use a simple pooled OLS model (no panel data) with all the ownership dummy variables included in the model as suggested by [Wang and Shailer \(2015\)](#). In all the estimations, we will use robust standard errors clustered at firm level in order to prevent endogeneity concerns as recommended by [Petersen \(2009\)](#).

#### 5. EMPIRICAL RESULTS

[Table no. 5](#) provides the estimation results for the least squares panel model and pooled OLS model employed in the analysis using the full sample of listed and unlisted. Our estimations indicate that overall, ownership structure can influence the performance achieved by listed and unlisted companies in CEE companies.

Even though ownership structure can influence performance, the results are not generic. We find that state and foreign ownership influences performance according to the panel data fixed-effects model. Meanwhile, individual ownership doesn't influence performance in the panel data model while in the pooled OLS model individual ownership matters. On a general note widely held ownership doesn't influence performance in either of our estimates.



Table no. 5 – Ownership type and performance in large public and private CEE companies

Panel A: FULL Sample: Private and Public companies						
	1	2	3	4	5	6
<i>ind</i>	- 0.272 (1.314)					4.026*** (1.944)
<i>state</i>		-2.708*** (1.092)				-1.050* (0.905)
<i>wide</i>			-1.879 (1.261)			0.178 (2.170)
<i>foreign</i>				1.624** (0.696)		3.930** (1.791)
<i>industrial company</i>					-1.385 (1.796)	1.220 (2.456)
<i>crisis</i>	-0.139 (0.239)	-0.147 (0.239)	-0.109 (0.290)	-0.094 (0.290)	-0.139 (0.239)	-0.088 (0.290)
<i>gdp</i>	0.209*** (0.043)	0.211*** (0.043)	0.209*** (0.043)	0.209*** (0.043)	0.209*** (0.043)	0.284*** (0.061)
<i>inf</i>	0.124* (0.066)	0.124* (0.066)	0.123* (0.066)	0.124* (0.066)	0.123* (0.066)	-0.161 (0.108)
<i>size</i>	-0.003 (0.527)	-0.017 (0.528)	-0.002 (0.527)	-0.005 (0.528)	-0.002 (0.527)	-1.289 (0.407)
<i>lev</i>	-11.86*** (3.429)	-11.83*** (3.421)	-11.83*** (3.427)	-11.85*** (3.427)	-11.85*** (3.427)	-16.58*** (3.306)
<i>growth</i>	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
<i>nwc</i>	3.179** (1.606)	3.250** (1.595)	3.176** (1.601)	3.195** (1.601)	3.173** (1.603)	2.858** (1.429)
Intercept	12.27* (6.681)	12.99*** ( 6.750)	12.22*** (6.657)	11.98* (6.692)	12.22*** (6.657)	28.55*** ( 6.750)
Entity FE	YES	YES	YES	YES	YES	NO
Panel data	YES	YES	YES	YES	YES	NO
N	3776	3776	3776	3776	3776	3776
Adj R-sq	0.6074	0.6071	0.6073	0.6071	0.6073	0.1970
F –Stat	23.72***	24.25***	27.06***	23.75***	27.06***	158.35***
Hausman	39.19***	38.69***	37.40***	39.20***	38.40***	-
Estimation	OLS	OLS	OLS	OLS	OLS	OLS

Note: First row is beta coefficient. Second row contains the robust standard errors clustered at firm level. \*\*\* denotes significant at 1%, \*\* at 5% and \* at 10%.

Source: Authors estimates

The mismatching results we find between panel estimates and pooled OLS model might indicate an indirect U shaped relationship between individual owners and performance as hypothesized by [Anderson and Reeb \(2003\)](#) and observed by [Kowalewski et al. \(2010\)](#) in Poland. This leaves room for further analysis.

Table no. 6 – Ownership type and performance in large private CEE companies

Panel B: Private companies						
	1	2	3	4	5	6
<i>ind</i>	-1.758 (1.454)					5.210*** (1.410)
<i>state</i>		-3.332*** (1.295)				-1.367* (1.027)
<i>wide</i>			0.277 (1.406)			1.581 (1.444)
<i>foreign</i>				1.634** (0.780)		4.724*** (1.128)
<i>industrial company</i>					-2.840 (1.956)	1.856 (2.033)
<i>crisis</i>	-0.262 (0.264)	-0.259 (0.264)	-0.263 (0.264)	-0.264 (0.264)	-0.262 (0.264)	(-0.153) (0.319)
<i>gdp</i>	0.192*** (0.050)	0.192*** (0.050)	0.193*** (0.050)	0.193*** (0.050)	0.193*** (0.050)	0.277*** (0.070)
<i>inf</i>	0.118 (0.076)	0.115 (0.076)	0.116 (0.076)	0.117 (0.076)	0.117 (0.076)	-0.145 (0.122)
<i>size</i>	0.049 (0.574)	0.056 (0.574)	0.052 (0.574)	0.050 (0.575)	0.051 (0.574)	-1.555 (0.469)
<i>lev</i>	-11.16*** (3.453)	-11.16*** (3.455)	-11.16*** (3.453)	-11.16*** (3.454)	-11.16*** (3.453)	-16.72*** (3.569)
<i>growth</i>	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
<i>nwc</i>	3.396** (1.678)	3.316** (1.676)	3.351** (1.672)	3.380** (1.689)	3.361** (1.682)	2.271 (1.490)
Intercept	11.71 (7.229)	11.06 (7.252)	11.44 (7.219)	11.01 (7.266)	11.51 (7.269)	31.23 (7.602)
Entity FE	YES	YES	YES	YES	YES	NO
Panel data	YES	YES	YES	YES	YES	NO
N	3320	3320	3320	3320	3320	3320
Adj R-sq	0.6074	0.6072	0.6073	0.6072	0.6071	0.1970
F-Stat	21.81***	21.84***	24.79***	21.68***	23.79***	151.50***
Hausman	40.11***	38.56***	38.21***	35.44***	39.34***	-
Estimation	OLS	OLS	OLS	OLS	OLS	OLS

Note: First row is beta coefficient. Second row contains the robust standard errors clustered at firm level. \*\*\* denotes significant at 1%, \*\* at 5% and \* at 10%.

Source: Authors estimates

The negative effect of state ownership on company performance was expected, because the state doesn't ultimately seek end results, but rather other aspects such as employment, cost of goods, availability etc. Because many of our state owned companies operate as either utilities providers or in the construction or transportation industries the detrimental effect of state ownership on company performance was expected. Nevertheless, our results are in line with existing literature summarized by Estrin *et al.* (2009) or recent empirical results of Gugler *et al.* (2014).

In the case of foreign ownership our estimates indicate a beneficial effect on performance. Even if our estimates might indicate that foreign ownership increases

performance in CEE companies, we need to acknowledge the potential risk of sampling error because foreign ownership is the dominant type of ownership in our sample, while the other types of ownership (individual, state, widely held) are less common. Still, we can assess that in large CEE companies foreign ownership is beneficial.

Table no. 6 is a further analysis of our initial estimates using only private companies. Our initial estimates remain robust and once again we notice that not all types of ownership are beneficial to company performance. We find that state and foreign ownership influence performance of private companies, while widely held ownership doesn't influence performance. In the case of individual ownership, the results from the panel model and the pooled OLS estimation indicate once again a potential indirect U shaped relationship between individual ownership and performance.

In the end, our results suggest that ownership can be used as a substitute for missing good governance institutions, in such a specific environment as CEE countries. Nevertheless, our results indicate that not all types of ownership are effective in improving company performance. We find that only foreign ownership seems to be beneficial while as expected state ownership is detrimental to company performance.

## 6. CONCLUSIONS

The aim of this paper was to determine if the ownership structure of large Central Eastern-European companies can influence the performance of the company via better monitoring and control of managers done by individual blockholders.

We used a sample of 497 large CEE private and public companies, analyzed over the period 2004-2013. Firm performance was measured via return on assets (ROA) determined as the ratio between earnings before interest and taxes (EBIT) divided by the total assets of the company, in order to remove country bias caused by country specific fiscal policies. Employing an OLS panel data with fixed-effects (strongly balanced) we have found that not all types of controlling blockholders influence performance in large CEE companies.

We have found that state and foreign ownership can influence performance, while individual and widely held ownership doesn't influence performance. There is an initial hint of indirect U relationship between individual investors and performance but it requires further investigations. Our estimates indicate that state ownership is detrimental to company performance while foreign ownership can increase performance in large CEE companies. On average the performance of state controlled companies decreases with 2.708 while the performance of foreign controlled firms increases with 1.624 over the average performance in CEE companies. This suggests that ownership can be used as a substitute for missing good governance institutions, in such a specific environment as CEE countries. Nevertheless, our results are in line with previous studies like [Estrin et al. \(2009\)](#) or [Gugler et al. \(2014\)](#).

Our study does have some limits. One limit is determined by the relative small sample size and its bias to foreign ownership and wholesale industry. Another key consideration is limited availability of data regarding ownership structure for private companies which made it impossible to determine shareholders controlling wedge in each company as recommended by [La Porta et al. \(1999\)](#) or [Villalonga and Amit \(2009\)](#). This leaves room for further research. Also, incorporating some additional institutional variables such as the World Government Indicators or Doing Business indicators from World Bank might sheer more inner-workings concerning the relationship between ownership and company performance.

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