

# EFFECTS OF CORPORATE GOVERNANCE ON MANAGEMENT EFFICIENCY OF LITHUANIAN STATE-OWNED ENTERPRISES

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**Abstract.** Management efficiency of state-owned enterprises (SOE) is being widely discussed not only in Lithuania, Central Eastern Europe, but also globally (mainly focusing on such countries as China, having state monopoly in most of the industries). Moreover, this topic is interesting to scholars both in the context of public governance reforms and a specific area of public administration. On the other hand, the topic of SOEs management is quite specific due to its duality: firstly, it is an area of public governance with an intensive intervention of the government, and secondly, SOEs are autonomous enterprises having dual – social (e.g., creation of work places, implementation of state-level projects, etc.) and economic (e.g., profitability, return on investment, etc.) – goals. Following the paradigms of (post) new public governance, principal agent theory, corporate governance guidelines established by such international organizations as the OECD, World Bank, International Monetary Fund and others, this paper is focusing on the management and performance of SOEs, trying to find an evidence of positive effects related to the implementation of corporate governance principles in Lithuanian SOEs. The paper seeks to identify those aspects of corporate governance which are the most relevant in terms of their potential effect on the management efficiency of Lithuanian SOEs.

**Key words:** state-owned enterprises, corporate governance, principal agent theory, management efficiency

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## Introduction

The management efficiency of the state-owned enterprises (hereinafter SOEs) is being widely discussed not only in Lithuania, Central Eastern Europe (hereinafter CEE), but also globally (mainly focusing on such countries as China, having state monopoly in most of the industries). Moreover, this topic is interesting to scholars as both a context of public governance reforms and a specific area of public administration. On the other hand, the topic of SOEs management is quite specific due to its duality: on the one hand, it is an area of public governance with an intensive intervention of the government, on the other – SOEs are the autonomous enterprises, having dual – social (e.g., creation of work places, implementation of state-level projects, etc.) and economic (e.g., profitability, return on investment, etc.) goals.

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The above stated aspects are the main reason why SOEs were always in the radar of scholar analysis and debates focusing on the below mentioned areas of SOEs management efficiency:

- The effect of privatization of SOEs on the selected economies and enterprises.

This question was on the top of academic discussions during the last decades of the 20<sup>th</sup> century. Firstly, this was caused by the collapse of the Soviet Union, which radically changed the form of global economy and raised a lot of questions about the role of the state in managing its assets (including SOEs).

Scholars have been paying specific attention to the role of the state as a shareholder and a manager of its assets, primarily focusing on the question of management efficiency, attempts to justify and / or explain the role of SOEs in the development of national economies, and the potential (practical and theoretical) obstacles and strengths of SOEs (such international organizations as the World Bank (hereinafter WB), International Monetary Fund (IMF), Organization for Economic Cooperation And Development (OECD), United Nations (UN) were the main international actors trying to justify the benefits of the pro-liberal approach and privatization. However, this position was actively debated by different scholars in their research papers).

To answer the above questions, the discussed researches were mainly comparing the performance of SOEs with that of the private companies working in similar industries, seeking to identify the impact of privatization and management culture. Nevertheless, the main question which to be answered from this analysis was always concerned the level and areas of intervention of the state which would be justified from the point of management efficiency.

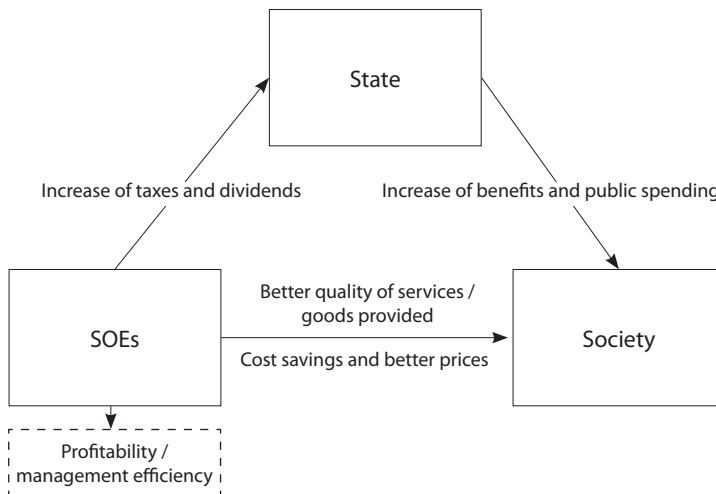
- The management efficiency and corporate governance of SOEs

Questions related to the management efficiency, distribution of functions within an organization and its governance bodies, monitoring of performance results are also widely discussed in the context of SOEs (e.g., Hafsi et al. (1987), Hatry (1999), Sheram, Soubotina (2000), Verhoest et al. (2004), Pollitt et al. (2004), Johnsen (2005), Khoza, Adam (2007), Verhoest et al. (2010), etc.). Even though the question of SOEs management efficiency was hidden under the topic of privatization (which was in the center of attention around the 1980s–1990s), it was successfully developed as a separate topic of academic research after the global wave of privatization. Specifically, the OECD could be mentioned as an organization which has been paying a lot of attention to such topics as a better corporate governance, herewith bringing back the topic of new public management (hereinafter NPM) to the academic discussions (e.g., in the monograph of V. Nakrošis and Ž. Martinaitis “Lithuanian agencies and other public sector organizations:

organization, autonomy, control, and performance” (2011) it is being argued that, based on the analysis of Lithuanian public organizations (including SOEs), the paradigm of post-NPM is a better alternative to explain the questions of public organizations’ management efficiency. Similar thoughts are being raised by Christopher Pollitt arguing that NPM is more suitable for the Anglo-Saxon countries or areas of public administration having a more “commercialized” and “managerial” type of operations (Pollitt, van Thiel, Homburg (eds.), 2007).

Lithuanian (and of the rest of the Baltic region) SOEs did attract a new wave of attention when the reform of SOEs was initiated in 2010 (see Fig. 1). However, currently the analysis of SOEs management efficiency is limited to the financial analysis only (see Annual reviews of Lithuanian SOEs, Governance Coordination Center,) while the issues of a better corporate governance and its effects on SOEs performance are highly limited and fragmented.

For the above reasons, this paper is focused on the analysis of the main elements of corporate governance<sup>1</sup>, relations of the SOEs and their shareholders (Government and society), seeking to identify the aspects that are the most relevant (in terms of their potential effect on management efficiency) for Lithuanian SOEs and potential improvements of public administration principles related to the management of SOEs. The principal agent theory is used as the main theoretical background in the paper when testing the theoretical insights against the realities of Lithuanian SOEs’ performance (see sections below).



**FIG. 1. Main goals and areas of the impact of Lithuanian SOEs’ reform (Ministry of Economy of the Republic of Lithuania)**

<sup>1</sup> In this paper, corporate governance is being referred to as the system of structures, rights, duties, and obligations by which corporations are directed and controlled (Lin, Tom C.W., “CEOs and Presidents”, 47 UC Davis Law Review (2014))

The paper itself is developed by, first, presenting the theoretical background of the analysis (Chapter 1), followed by the development of the analytical model, hypotheses and presentation of principles of the analysis (Chapter 2), results of analysis (Chapter 3), and concluding remarks (Chapter 4).

## **1. Institutionalism as a theoretical background for the analysis of the SOE development and management efficiency**

The change of public institutions and their role in the state has always been actively analyzed by scholars, as it was one of the main determinants explaining differences of CEE countries' development. Different researches reveal that the increasing level of market economy establishment in different countries had an influence not only on the policies of public administration (macro level), but also on the institutions and public officials themselves (mezzo and micro levels) (Warner, 2002). The principal-agent theory is a commonly accepted doctrine used for the analysis of the relationship between the selected organization (in the context of this research – SOEs) and the state (in the context of SOEs – their main shareholder) (Greenwood et al., 2008; Lawrence, et al., 2009; Mahoney, Thelen, 2010).

Institutionalism was chosen as the main theoretical background for the analysis of SOEs as it focuses on the effect of rules and conditions established in a certain environment and “rational players” (Meyer, Rowan, 1977) stressing the aspects of institutional convergence via the application of “best practices” in different areas of public administration. Moreover, implementation of leading management practices is highly advocated by the international institutions as it (theoretically) should have a positive effect on the minimization of conflicting – market and political – risks in underdeveloped regions (DiMaggio, Powell, 1983; Sitalaksmi, 2010).

The above-mentioned aspects of institutional convergence are especially relevant for SOEs as they (like no other public institution) are bound to act rationally and based on the economical logic. Meyer and Rowan (1977) argue that rationalized myths (so-called best practices) are a socially accepted norm which ensures the political and economic support for the continuance and growth of (public) institutions. Moreover, due to the strong advocacy made by international players, the application of a specific normative guidance (e.g., corporate governance principles promoted by OECD) is also seen as a precondition to become member of appropriate “clubs”, which is especially important for the developing economies as well.

The above arguments are especially relevant to both Lithuania and the rest of CEE and are commonly used to explain the reforms initiated in the public sector (including SOEs). However, based on the critics of institutionalism (Beckert, 1999; Kraatz, Zajac, 1996; Peng, 2002; Reay, Hinings, 2005), it could be argued that it does not cover (or not to the full extent) the internal changes of an organization (Greenwood, Hinings, 1996) and the role of organizations themselves (Beckert, 1999; Dorado, 2005; Ingram, Clay,

2000; Muller-Jentsch, 2004). Alternative theories of institutional development do single out the aspects of reorganization and / or transformation coming from inside of an organization (McKinley, Scherer, 2000; Newman, 2000; Greenwood, Hinings, 1996). The main determinants for such changes are usually seen to be related to (i) external pressures (Czaban, Whitley, 2000), (ii) market dynamics and change (Gordon et al., 2000), (iii) technological development (Kraatz, Zajac, 1996), and (iv) the change of the principal (shareholder / executive manager) (Czaban, Whitley, 2000; Gordon et al., 2000). Additionally, in the context of a SOE, specific aspects of liberalization and / or (contrary) a higher politization are also seen to be highly important factors for an development of internal and external reforms within the organization and or sector as such.

Based on the given theoretical model describing the elements influencing changes of the public sector (and to the possible extent SOEs), the model describing the change of Lithuanian SOEs' is presented below, focusing on (i) the adaptation of corporate governance principles and take-over of the "leading practices" (based on the approach of historical institutionalism) and (ii) a potential improvement of management efficiency, related to implementation of the principles of corporate governance (based on the NPM and post-NPM approach).

## **2. Analytical model, main hypotheses and principles of the analysis**

Based on the main principles of institutionalism, NPM and principal-agent theories described above, the following hypotheses were raised for the further research:

- full and proper implementation of corporate governance principles should have a positive influence on SOEs' management efficiency via:
  - (i) *increased transparency*  
increased transparency of SOEs performance, goals and targets set should have a positive effect on the management (including financial results) of SOEs; (management transparency is seen to potentially increase the involvement of society into the process of SOEs management and thus have a positive pressure on the executives of SOEs to improve the management principles of appropriate organizations);
  - (ii) *quality of the boards*  
better qualified, more independent and professional boards should lead to a better strategic management and thus to a better performance of SOEs;
  - (iii) *quality of internal control system*  
quality of internal control system should also be one of the main determinants of the management efficiency.

Even though the main independent variables used for this research are related to the indicators of corporate governance (see (i)-(iii) points above), the below listed determinants were included into the analysis to be able to specify the effects of a variable used by certain categories:

- a) industry of SOE (financial results of the SOE – such as profitability margins – would be strongly related to the profitability of the industry)
- b) monopolization of the industry and / or its openness to the market (increasing competition should have a positive influence on the managerial efficiency)
- c) SOE being listed in the stock-exchange (public listing of the SOEs should also increase the pressure for the organization to show better results)
- d) type of the company and functions (goals) attributed to it (SOEs performing in the commercial sector should show better financial results and / or overall performance)
- e) legal form of the SOE (joint stock companies should show a better performance as compared to companies acting as “state companies”<sup>2</sup>).

As discussed above, this analysis is meant to explain the potential effects of corporate governance (the composition of the main independent variables (i)–(iii) is specified in the table below) to the SOE management efficiency (a dependent variable), which in this paper is analyzed via Return on Equity (hereinafter ROE<sup>3</sup>) and Earnings Before Interest, Taxes, Depreciation and Amortization (hereinafter EBIDTA<sup>4</sup>).

I. Transparency	II. Composition of the board	III. Quality of planning and internal control system
I.1 Quality of management reporting (including): <ul style="list-style-type: none"> <li>▪ I.1.1 Clarity of goals</li> <li>▪ I.1.2 Quality of performance description</li> <li>▪ I.1.3 Risk management</li> <li>▪ I.1.4 Disclosure of key performance indicators</li> <li>▪ I.1.5 Management structure (including politization / independency of CEO)</li> <li>▪ I.1.6 Disclosure of dividends' payments</li> </ul> I.2 Corporate social responsibility (hereinafter CSR) policy I.3 Application of international financial reporting standards (hereinafter IFRS) I.4 Positive external audit opinion	II.1 Board independence (including) <ul style="list-style-type: none"> <li>▪ II.1.1 Availability of independent (non-political) board members</li> <li>▪ II.1.2 Board's participation in policy making</li> </ul> II.2 Availability of key competencies in the Board (including) <ul style="list-style-type: none"> <li>▪ II.2.1 Strategic management</li> <li>▪ II.2.2 Finance management</li> <li>▪ II.2.3 Competence related to a specific industry</li> </ul> II.3 Employees' participation in the Board (including) <ul style="list-style-type: none"> <li>▪ II.3.1 Is CEO the chairman of the Board?</li> <li>▪ II.3.2 Composition of the Board</li> </ul> II.4. Cases of board members being present in more than three boards II.5 Structure of the committees (including) <ul style="list-style-type: none"> <li>▪ II.5.1 Remuneration committee</li> <li>▪ II.5.2 Audit / internal control committee</li> </ul> II.6 Composition of the Board	III.1 Quality of strategic planning III.2 Quality of internal control system III.3 Quality of strategy management and monitoring III.4 Availability of operational audits III.5 Quality of the supervision of SOEs management function

<sup>2</sup> Three legal forms of Lithuanian SOEs could be singled out – (i) public liability companies (AB), (ii) limited liability companies (UAB), (iii) state companies (VI)

<sup>3</sup> Return on equity (ROE) measures the rate of return on the ownership interest (shareholders' equity) of the common stock owners. It measures a firm's efficiency at generating profits from every unit of shareholders' equity (also known as net assets or assets minus liabilities). ROE shows how well a company uses investment funds to generate earnings growth.

<sup>4</sup> Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA) gives an indication of the current operational profitability of the business (i.e. how much profit it makes with its present assets and its operations on the products it produces and sells).

It is expected that the application of corporate governance principles could vary in different types of SOEs (e.g., different industries, SOEs responsible for the implementation of different functions, other aspects). However, any differences identified could also provide important insights related not only to Lithuanian SOEs, but also to the public sector in general. On the other hand, reciprocal relationship (e.g., a negative correlation between better corporate governance and SOEs efficiency) should show that Lithuanian SOEs are acting not as subjects of the market economy (e.g., market-driven enterprises), but as organizations having bigger features of public sector organizations influenced by the post-NPM paradigm where the results of the analyzed subjects (in this case SOEs) are determined by a higher interdependence, integration of the network, and appropriate political arrangements.

Based on the above, an index of the corporate governance of Lithuanian SOEs (in total – all (135) of the existing Lithuanian SOEs) was compiled based on the results of self-assessment, performed by the C-level executives of the appropriate SOEs. Self-assessment was performed during April–June 2013. Moreover, the index itself includes the results of the evaluation of the quality of strategic management performed by the Governance Coordination Center under the Ministry of the Economy of the Republic of Lithuania during the summer of 2013.

Every single element of the index (see above) was evaluated in the scale of 1 to 3 (1 representing a poor implementation of the appropriate guidance, and 3 representing a full compliance with the appropriate corporate governance practices settled in the official management policies for Lithuanian SOEs).

As to the table below (Table 1), the results of the index of corporate governance are being presented per respective size, legal form, industry, type of the SOE (as per points (a)–(e) presented above) and tested against the ROE and EBITDA of an appropriate Lithuanian SOEs.

### **3. Patterns of the potential effect of corporate governance on the management efficiency of Lithuanian SOEs**

The results of the analysis are presented in two separate blocks, the first presenting the overall differences of the corporate governance index and the second presenting the links between the elements of corporate governance and SOE efficiency.

#### ***Analysis of the SOE corporate governance index from different angles***

Firstly, the analysis of Lithuanian SOEs' corporate governance index is presented via interpretation of differences in the corporate governance index in different industries,



TABLE 1. Aggregated index of corporate governance of Lithuanian SOEs

	All SOEs:	Sectors / Industries:				Groups / functions:			Legal form:		Size:	
		Energy	Transport	Forestry	Other	1A	1B	2	VI	AB / UAB	I-II	III-V
I. Transparency	5.36	5.15	6.06	6.05	4.63	4.19	5.99	5.11	5.59	4.90	6.26	5.15
I.1. Quality of management reporting	7.90	7.47	8.59	9.22	6.76	5.70	8.89	7.87	8.64	6.47	8.44	7.78
I.2. CSR policy	4.88	4.38	6.74	5.12	3.94	3.54	5.58	4.39	5.00	4.61	6.80	4.41
I.3. Application of IFRS	0.52	3.13	1.52	0.00	0.17	0.33	0.57	0.59	0.28	1.00	2.40	0.09
I.4. (Positive) external audit opinion	8.17	5.63	7.39	9.88	7.58	6.94	8.93	7.73	8.52	7.50	7.40	8.35
II. Composition of the Board	5.81	6.49	5.28	5.76	6.04	6.43	5.78	5.28	5.66	6.11	4.75	6.06
II.1. Board independence	6.13	4.38	4.32	10.00	3.67	4.20	7.74	4.17	7.27	3.82	4.09	6.61
II.2. Availability of key competencies in the Board	5.60	9.58	6.74	4.96	5.29	5.60	5.50	5.83	5.48	5.83	7.27	5.20
II.3. Employees' participation in the Board	8.61	8.13	9.89	7.50	9.04	9.40	8.06	9.17	8.25	9.34	9.55	8.39
II.4. Cases of board members being present in more than 3 boards	3.85	6.25	3.41	0.60	6.89	6.80	2.38	4.60	2.60	6.32	2.38	4.18
II.5. Structure of the committees	0.91	6.67	0.39	-	0.00	6.67	1.90	0.00	0.00	3.33	0.91	-
II.6. Composition of the Board	0.00	0.00	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
III. Quality planning and internal control system	7.05	7.19	6.59	7.88	6.62	6.33	7.42	6.95	7.44	6.30	7.26	7.00
III.1. Quality of strategic planning	4.04	7.50	5.23	2.21	4.91	4.26	3.62	4.82	3.61	5.00	5.53	3.76
III.2. Quality of internal control system	8.06	7.19	7.01	9.77	4.35	6.94	8.63	7.93	8.71	6.81	7.80	8.13
III.3. Quality of strategy management and monitoring	5.59	3.75	6.96	10.00	5.25	3.23	3.93	9.12	7.66	3.48	6.80	5.15
ROE	-	1%	11%	19%	2%	0%	11%	5%	11%	-1%	1%	9%
EBIDTA	-	92.542	32.734	1.586	1.653	934	20.617	5.551	4.603	28.393	60.357	1.390

groups and / or functions attributed to SOEs, the legal form and size of the companies<sup>5</sup>.

The results of the analysis of the Lithuanian SOEs corporate governance index given below show that the element of transparency (including such aspects as the clarity of goals set to SOEs, the quality of the description of SOEs performance, their organizational and management structure, etc.) is being evaluated most positively in the transport and forestry sectors. This fact could be explained by the reasons that these industries have a quite standardized type of activities and a rather consistent pace of development

<sup>5</sup> Different angles of the analysis:

- industry / sector (energy, transport, forestry, other sectors)
- level of “commercialization” of functions of the SOEs (Group 1A – SOEs responsible for the implementation of commercial functions only, 1B – mixed (both commercial and social) functions), 2 – social functions)
- legal form of SOEs (AB, UAB, VI)
- size of SOEs (categories I-IV).



throughout the years of Lithuanian independence, including the minimal number of reforms and changes within the industry (1990–2010). On the other hand, the results of the energy sector, having the score lower by almost 1 point, could be explained by the radical changes within the industry and the complexity of the organizational set-up of Lithuanian energy companies.

However, when talking about the structure of the boards, the energy sector is the obvious leader, as it was the first “pilot” for the implementation of SOEs’ reform in Lithuania, including independent board members into their management structures.

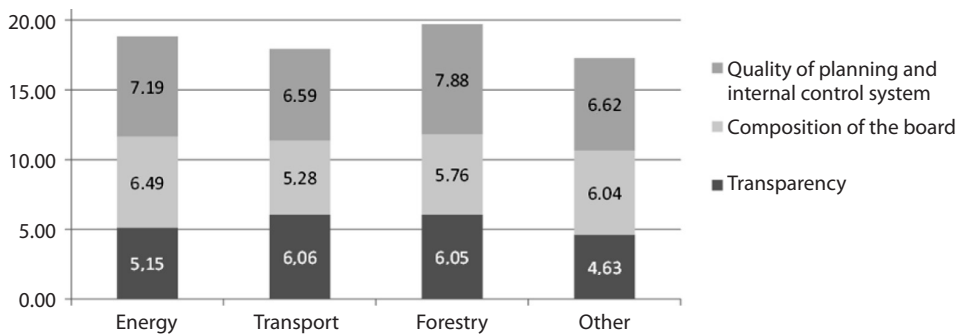


FIG. 2. Corporate governance index in Lithuanian SOEs by sectors

The evaluation of the strategic planning and control practices in Lithuanian SOEs has shown that the absolute majority of SOEs have consistent monitoring systems for their strategies; more than half of SOEs have stated that the principles and guidance for strategy monitoring is clearly defined in their internal procedures. Moreover, most of the SOEs claim that internal control systems are fully effective, with internal control procedures being set and effectively working. Almost all biggest SOEs have stated that specific operational audits are also commonly used to ensure the efficiency of SOEs’ operations.

The main point coming from the analysis of Lithuanian SOEs responsible for the implementation of different types of functions (commercial, mixed, social) is that the highest score of corporate governance goes to the group 1B – SOEs having “mixed”(both commercial and non-commercial (social)) functions attributed to their strategies.

Moreover, the companies of this group could be singled out due to the (i) quality of the strategic planning and internal control, and (ii) transparency (accountability) measures implemented. This fact could be explained by the size and strategic influence of SOEs falling into this group; such companies as Lithuanian railways, Lithuanian post, National sea port authority are the organizations of a complex organizational setup and needing quite an advanced management structure and governance principles. When it comes to reporting, this aspect could also be explained by the higher attention and pressure coming from society and the government itself.

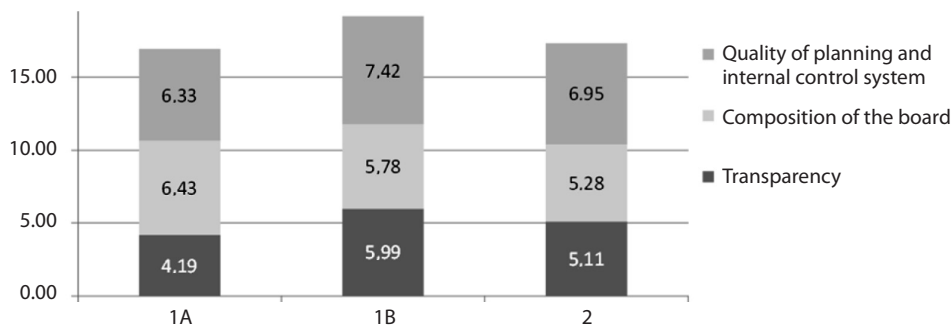


FIG. 3. Corporate governance index in Lithuanian SOEs by the type of prescribed functions

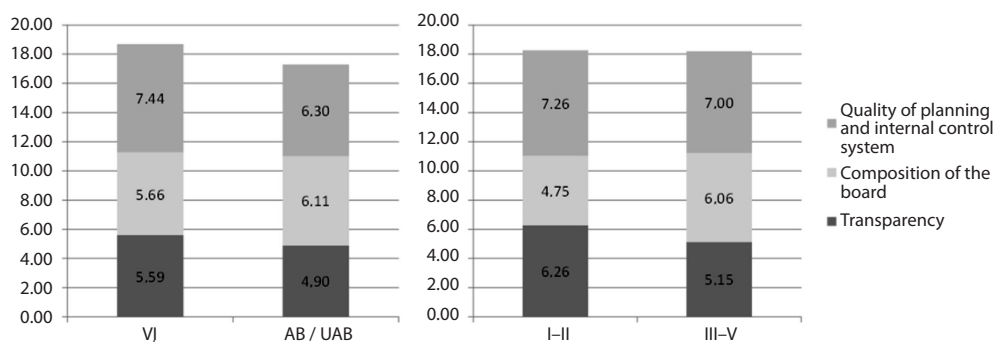


FIG. 4. Corporate governance index in Lithuanian SOEs by (i) legal form and (ii) size (I-V)

The evaluation of the competence of the boards showed that most of the SOEs have the boards with a correct composition (according to the “Guidelines of State Ownership” released by the Ministry of Economy of the Republic of Lithuania, 2012) of the competences, including strategic management, finance, and appropriate industry. However, for most of the cases, these competencies were gained in the public sector and not in private market driven organizations which could itself raise doubts as to the quality of competence developed by a member of the board. Nevertheless, the group of SOEs responsible for the implementation of commercial functions only (1A) is to be singled out as an exception having the biggest part of the Boards with at least minimal experience of the board members coming from the private sector. Even though this fact is self-explanatory and intuitive, it could be explained as a hygienic factor requiring an efficient control of this type of SOEs.

The analysis of SOEs by the legal form of the set-up was surprising due to the fact that state companies (VIs) were evaluated having a better maturity of the corporate governance practice as compared to public and / or limited stock companies (ABs and / or UABs, respectively). On the other hand, the size of a SOE had a positive influence on

the quality of the strategic planning and internal control (groups I–II), while the quality of the boards had a higher score in smaller SOEs (III–V).

### ***Links between corporate governance and SOE efficiency***

The above given initial analysis of the maturity of corporate governance in different Lithuanian SOEs shows the current state of the development of managerial practices and singles out the areas which need the biggest attention from its principal – the government. However, it does not give an answer to the main question of this paper: what is the actual effect (if any) of having a better corporate governance system? Thus, based on the developed analytical model, the scores of the corporate governance were correlated with the ratios of profitability (EBITDA) and ROE of the Lithuanian SOEs.

As described above, the main purpose of such analysis is to understand whether different levels of maturity of corporate governance influence the managerial efficiency of Lithuanian (and other Baltic) SOEs. This kind of analysis by itself will answer at least two areas of questions:

- theoretical – testing the applicability of the NPM paradigm to the most “commercialized” part of the CEE public administration area,
- practical – showing the level of investment and management areas on which it would be reasonable to focus corporate governance in SOEs.

### ***Correlation between structural elements of SOEs and management efficiency***

Firstly, the set of structural elements dividing Lithuanian SOEs in to certain groups has been taken to understand what the key elements determining the managerial efficiency of SOEs are (as part of the elements included into the analysis were the size of a SOE, legal form, type of the functions attributed to SOEs, a SOE being listed in the stock exchange, and others).

The results of the correlation analysis (two-tailed statistical significance tests applied using Spearman’s rank correlation coefficients) showed a strong pair correlation ( $r = -0.730$ ;  $p < 0.001$ ) between the size of SOEs (number of employees, value of assets managed, etc.) and EBITDA, which would confirm the general expectation that bigger companies should generate a bigger turnover. However, interestingly enough, the same test was not positive for the ROE side: even though the significance level was not sufficient to state the opinion about the correlation, the fact itself that the size of SOEs’ operations did not show a positive correlation with ROE could lead to a valid conclusion that in order to ensure the positive ROE in bigger originations, a stronger set of skills, management competence and structure is needed.

Interesting results are being drawn from the analysis around the legal form of SOEs – the comparison of limited and public liability companies (UAB / AB) and state

companies – (VĮ) revealed that the legal form of the SOE does have an influence on its performance: EBITDA was identified to be significantly higher (more than 6 times) in the UAB / AB type of companies, while ROE was higher in VĮs (more than 15 times).

To explain the above, findings it would be worth looking into the industrial setup of the analyzed SOEs, the form of state companies (VĮ) being dominated by forestry type of SOEs, which (i) have a substantial amount of entities (~40) managed by the similar principles and (ii) have high financial results, which by themselves have a positive influence on the correlative analysis and partially explain the question of high margins (compared to a lower turnover) in the analyzed block of SOEs.

The further analysis was continued with a comparison of SOEs having different goals and functions – commercial (1A), mixed (1B) and non-commercial/ social(2) (SOEs transparency guidelines issued by the Ministry of Economy of the Republic of Lithuania, 2012).

The results of the analysis proved that both EBITDA ( $p = 0.002$ ) and ROE ( $p < 0.001$ ) had statistically significant differences (see Table 2). Interestingly: (contrary to the theoretical model presented in this paper), the best results were demonstrated by the categories 1B and 2 (SOEs having mixed and social functions), while SOEs responsible for the commercial activities (category 1A) had significantly worse results.

TABLE 2. Impact of the functional distribution of SOEs on their managerial efficiency

		N	Mean
EBIDTA	1A – commercially driven SOEs	29	933
	1B – SOEs having mixed functions and goals	70	20 616
	2 – SOEs responsible for social functions and goals	34	5 550
	Total	133	12 473
ROE	1A – commercially driven SOEs	29	0.0345
	1B – SOEs having mixed functions and goals	70	11.30
	2 – SOEs responsible for social functions and goals	34	4.59
	Total	133	7.13

On the one hand, such results raise the question of a potential politization of the SOE management and / or the lack of competence of executives responsible for the management of “commercial” SOEs; on the other hand, such results could indicate a potential usage of such SOEs for the financing (direct and / or indirect) of appropriate political parties, which could negatively influence the financial performance of related SOEs.

Different scholars agree that it is quite usual for SOEs to take the status of a natural monopoly (Shapiro et al., 2009; Mac Carthaigh, 2009; Ha-Joon Chang, 2007; Pollitt, M., 1999). Thus, one of the tests applied in this research was related to a comparison of managerial efficiency in the SOEs that could be attributed to the group of natural monopolies and those working in the competitive market. The results of such a comparison have shown that managerial efficiency is rather different (EBITDA  $p = 0.031$ , ROE  $p = 0.003$ ) (see Table 3).

**TABLE 3. Impact of the type of SOEs on the managerial efficiency**

	<b>Natural monopolies</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
EBIDTA	Non-monopolies	93	1 452	3909.34
	Natural monopolies	40	38 097	1.212
ROE	Non-monopolies	93	8.75	15.81
	Natural monopolies	40	3.35	6.96

One of the hypotheses raised in this paper states that natural monopolies would first of all be interested in raising their turnover (EBIDTA), however (should this not be closely monitored by the regulatory bodies), they would be less motivated to increase their ROE. The results of the analysis confirm that, based on the analysis of Lithuanian SOEs, we can state that EBITDA was significantly higher for the natural monopolies (firstly due to their size and strategic position in the market); however, they had a worse position on the ROE.

The involvement of the CEO in the Board was analyzed by different scholars based on different paradigms (mainly principal-agent theory, NPM, etc.) and highlights the assumption that the separation of strategic and operational management should result in a higher management efficiency (due to the better segregation of control and supervision functions, clear definition of roles and responsibilities).

The analysis of SOEs which have an established Board has shown that almost half of them have CEOs as members of this structural unit. Based on the recommendations and guidelines of OECD (2005), such a situation does not ensure a proper segregation of (i) the operational management function (responsibility should go to the administration of the SOE) and (ii) the control / supervision function (responsibility of the board). Moreover, this would also negatively influence the achievement of SOEs goals (Mallin, 2004).

Nevertheless, the analysis of Lithuanian SOEs has revealed that ROE ( $p < 0.001$ ) is significantly higher in the companies that have the CEO as part of the Board. A comparison of the management efficiency ratios shows that the presence of the CEO in the board in most cases has a positive influence on both EBITDA and ROE. Moreover, this trend is being observed across all industries – energy, transport, forestry, and others.

**TABLE 4. Impact of CEOs participant in the Board on managerial efficiency**

	<b>CEO as the member of the Board</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
EBIDTA	CEO – NOT a member of the Board	73	4 692	17 204.82
	CEO – member of the Board	60	21 940	99 192.99
ROE	CEO – NOT a member of the Board	73	1.19	13.87
	CEO – member of the Board	60	14.35	10.21

The explanation of the above-mentioned results could be related to the better reporting and availability of data to the board. Additionally, it could also be explained by the size of the Lithuanian market and the respective (small) size of SOEs which (because of

the administrative burden) cannot allow themselves to have administration and boards fully separated. Besides,, such a situation could also be a limiting factor for the proper development of quality management systems (including corporate governance) within Lithuanian SOEs (due to the additional administrative burden) and indicate the potential gaps of the managerial competency within the boards (Mallin, 2004).

### *Corporate governance as a determinant of managerial efficiency in Lithuanian SOEs*

As highlighted in previous chapters, the main purpose of this research is to evaluate the influence of features reflecting “best governance” of SOEs on managerial efficiency. Therefore, the further stages of research include the analysis of specific corporate performance elements attributed to “best governance practice”, those being tested to ROE and / or EBITDA ratios of appropriate SOEs.

It should be noted that only 32% of the state-owned enterprises could have been identified as having the elements of best governance practice implemented (e.g., significant part of private equity in the overall capital structure of an enterprise, listing of the enterprise, the division of enterprise administration and governance functions between functions of the board and administration) (OECD, Guidelines on Corporate Governance of State-Owned Enterprises, 2005). Evaluating one of the key aspects – SOEs’ boards independence – it is important to note that only two out of 149 boards of SOEs may be treated as relatively independent (independent board members (non-civil servant) in such enterprises make over 50% of votes<sup>6</sup>).

As highlighted in the OECD Guidelines, the low rate of independence of the boards of enterprises may possibly form assumptions on a potential governance practice inflexibility or *decisions* being highly *politicized*.

Further, the paper presents an analysis of the correlation coefficients pertaining to the SOE governance index elements and SOE performance efficiency (results of this analysis are provided below).

The results of the analysis show that:

- *There is a positive (moderate) correlation between the transparency variable and the EBITDA of SOE ( $r = 0.442$ ;  $p < 0.001$ ), which means that the higher is the Transparency of SOE performance (first, of all, the comprehensiveness and clarity of operation reports, publication of operation information, and external control), the higher EBITDA of SOE, and vice versa.*

It is important to note that a positive correlation between the transparency variable and EBITDA is noted not only on the generalised level but is also apparent in the following:

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<sup>6</sup> Note: in the context of the further research, it is important that in both cases these were energy sector enterprises.

- (i) many sectors in which Lithuanian SOEs operate (not including enterprises of the forestry sector, which experienced hard times due to reduced wood prices in 2012);
- (ii) index elements providing a detailed view of SOE performance indices and transparency field:
  - I.1 Quality of management reporting.
  - I.2 CSR policy.
  - I.3 Application of IFRS.

Additionally, the results of the analysis show that:

- a neutral correlation of the audit opinion related element (I.4 Positive external audit opinion) may be explained by a relatively low level of the integration of SOEs in the open economy, i.e. in major part of Lithuanian SOEs the audit opinion is used for internal purposes only. Meanwhile, in energy sector enterprises, most of which are listed, positive external audit opinion strongly correlates with the EBITDA index of the enterprises. This fact may also be explained by a relationship between energy sector enterprises and capital investments in major investment projects and the importance of audit opinion in order to receive financing from international financial institutions;
- analyzing the relationship between the transparency of SOEs and EBITDA (not in the context of the branch of economy but in the context of functions attributed to it), a positive (moderate) correlation is noticed in mixed (1.B) and social (2) SOEs, whilst in commercial enterprises (1.A) no statistically reliable correlation was established.

In general, it may be stated that the transparency of SOEs performance strongly influences the managerial efficiency of SOEs and is especially evident in large SOEs which are first of all focused on satisfying the public needs;

- *there is a positive (weak) correlation between the transparency variable and ROE ( $r = 0.181$ ;  $p = 0.037$ ). This relationship shows that the higher transparency is linked with a higher profitability of the equity of SOE and equity return (and vice versa).*

It should be noted that a comparison of EBITDA with ROE shows an obvious difference in correlation intensity, which (based on the above theoretical insights) first of all should be explained by the effect of regulation requirements to SOEs, i.e. the largest state-owned enterprises are subject to publication of financial performance; however, this does not by itself cause a better financial performance of these enterprises. A higher economic return is first of all associated with the goals of enterprises (social vs. profit) and the quality of supervision (control) thereof (it should be noted that the correlation between external audit results (I.4) and ROE is one of the strongest in the context of this analysis and is similar to the element of comprehensiveness of performance reports / notes (I.1)).



While analyzing the board independence, competence, composition and other aspects of SOEs' boards and their influence on the performance efficiency of SOEs, the following should be noted:

- on the generalized level, a negative (moderate) correlation between the composition of boards and EBITDA ( $r = -0.233$ ;  $p = 0.013$ ) is observed, which shows that the SOEs whose composition of boards meets the OECD normative requirements (boards of independent members, formed based on the requirements of different competences and by ensuring a proper segregation of governance and monitoring functions) have a relatively lower profitability.
- While evaluating separate elements of the board composition index, attention should be paid to the fact that the independence variable of boards (II.1) was the only one that showed a *moderate positive correlation with ROE* ( $r = 598^{**}$ ,  $p < 0.001$ ). It is important to note that SOEs of mixed function, i.e. both social and commercial, had the highest correlation index ( $r = 770^{**}$ ,  $p < 0.001$ ).

In order to explain the reverse relationship among the other indexes of board composition (II.2-4) and ROE, first the particularity of the Lithuanian economy should be noted, i.e. a relatively small Lithuanian market and small SOEs, wherein the segregation of SOEs management, based on the best governance practice, does not serve the purpose and / or is not necessary (see additional argumentation above).

For the previously mentioned reasons it may be stated that the attraction of independent members to a SOE board (first of all the depoliticisation of the boards and reduction of influence of political governance) positively influences the positive return for the key owner – the state, meanwhile other elements (insurance of different competences in the boards, segregation of strategic and administrative governance, a larger interest of board members in selected SOEs or formation of various committees in SOEs) have a negative effect on the ROE of SOEs.

It is important to note that the previously shown results, at least in part, confirm one of the key statements – a SOE board independence and the inclusion of politically unassociated members into the governance of SOEs have a positive effect on the efficiency of governance of SOE performance and on the equity return.

- *A positive (weak) influence of strategic planning and internal control was noted on the ROE variable* ( $r = 0.179$ ;  $p = 0.041$ ). This means that the higher the variable of strategic planning and internal control, the higher the ROE (and vice versa). It is interesting that:
  - all elements of the strategic planning and internal control index (without including the quality of strategic planning) have a positive effect on the return variables of SOEs. Specific attention should be paid to the following:
    - The quality of strategic planning (III.1) is negatively related to ROE ( $r = -377^{**}$ ,  $p < 0.001$ );

- meanwhile, the positive effect of the quality of internal control system (III.2,  $r = 439^{**}$ ,  $p < 0.001$ ) and strategy implementation monitoring (III.3,  $r = 454^{**}$ ,  $p < 0.001$ ) variables on the performance efficiency of SOEs is the highest.

The explanation of these relationships leads to the conclusion that, despite the negative effect of strategic planning, which is methodically irregular and does not meet requirements of standards, the positive return to Lithuanian SOEs is ensured by a strict observance of the selected strategy and set goals and by the internal control system.

Pursuant to the results of the previously mentioned analysis and considering strong relationship between independent and dependent variables, the regression model with the below-provided variables was made in order to establish which of the selected variables mostly influenced the efficiency of SOEs performance (results of the regression model for corporate governance and managerial efficiency are presented in Table 5).

TABLE 5. Regression model for corporate governance and managerial efficiency

Variables for regression model	Standardized coefficients (Beta)	t	Sig.
(Constant)		-4.444	0
I.1 Quality of management reporting	0.11	1.238	0.218
II.1 Board independence	0.479	5.127	0
III.2 Quality of internal control system	-	-	-
III.3 Quality of strategy management and monitoring	0.074	0.736	0.463
III.4 Implementation of operational audits	0.144	1.711	0.09

Model	R	R square	Adjusted R square	Std. error of the estimate
1	0.599a	.359	.335	12.19486

a) predictors: (constant), VAR3.4, VAR2.1, VAR1.1, VAR3.3.

Results of the regression analysis have shown that the presented model is appropriate ( $R^2 = 0.359$ ) and statistically credible ( $p < 0.001$ ). Moreover, the analysis of Beta coefficients of the independent variables (predictors) shows that:

- The quality of internal control systems (as a variable) has too many interrelationships within the model (multicollinearity) and has to be removed from it;
- The Beta coefficient of the independency of the Board (II.1) is statistically important ( $p < 0.001$ ) and shows that the Board independence has a statistically important influence on ROE.

## Conclusions

It should be stated that this paper could be treated as one of the few attempts to evaluate the effect of the quality management and / or corporate governance on the SOEs as a subject of public administration. Thus, the approach presented in this paper is first of all highly valuable from the methodological approach, encouraging scholars (i) to deepen the analysis of the potential effects of governance models applied in the public sector and (ii) to take an extra step beyond the qualitative assessment of the maturity of our public governance systems.

To sum it up, the results of our analysis show that in many cases correlations between separate governance index elements (and composite parts thereof) and indices of performance efficiency (EBITDA, ROE) are not intense.

First, they show the overall low governance quality of Lithuanian SOEs, which may be explained by the first development stages of the SOE reform. On the other hand, this analysis allows grasping the aspects of governance, which:

- (i) had been given most of attention before the reform was started (this was mostly caused by such external factors as pressure from international organizations and integration processes to different international bodies (e.g., the EU, OECD, etc.));
- (ii) mostly influence the performance results of SOEs (Board independence should be highlighted as the key variable positively influencing the performance results of SOEs).

Despite the limitations of the research (mainly due to the limited succession of the reform), the results presented in this paper do give clear indications that:

- the leading practices of the corporate governance have a positive effect on the results of the Lithuanian SOEs (e.g., mainly Board independence and the quality of the control of performance, but also the application of commercial management principles, proper organizational structures);
- nevertheless, there are also some unexpected aspects showing that some of the elements of corporate governance have a neutral and / or even negative correlation with the managerial efficiency (e.g., employees' participation in the Board, alignment of Board's competences with the best practices).

The above results also lead to the additional questions related to the paradigm in the best way explaining the main determinants of SOEs managerial efficiency. On one hand, SOEs are the most "commercialized" area of public administration, and thus the NPM concepts should be mostly adaptable here (which is also partially proved by the analysis presented in this paper); on the other hand, some of the results indicate that post-NPM concepts (e.g., a better and closer network, political coordination) also positively influence the performance of SOEs.

Moreover, the analysis of the corporate governance allows us to raise the below concerns related to the quality of management in Lithuanian SOEs:

- the results of SOEs corporate governance self-assessment are in most cases positive and show quite a strong belief in the quality of management in the eyes of the executives of Lithuanian SOEs;
- however, even though the relationship between the corporate governance elements and managerial efficiency is relatively poor, this by itself could show that either:
  - (a) executives of the SOEs have been too positive on the maturity of their governance models and in most cases have only the form (including appropriate internal procedures, organizational structure elements, etc.) required by a certain governmental guidance, but not the substance of it implemented (e.g., appropriate segregation of duties, clear independence from political intervention, etc.);
  - (b) corporate governance is not applicable to Lithuanian SOEs (this would confirm the insights of V. Nakrošis and Ž. Martinaitis (2011) stating that NPM principles do not work in the public sector of the CEE region and post-NPM should be applied). The latter fact would also indicate that Lithuanian SOEs are stuck in the early stages of post-soviet transformation and struggling with the acceptance of market-based economy principles;
  - (c) on the other hand, understanding the limitations described above, there is some strong proof showing that the further consistent implementation of the reform would lead to (i) a better managerial efficiency of SOEs and (ii) the further integration of Lithuanian economy into such organizations as the OECD.

Finally, even though the presented model is rather complex and requiring quite a detailed evaluation of corporate governance elements, due to the fact that the variables used in the research are globally accepted and coming from such international standards as the OECD guidelines for corporate governance, it is expected to extend the research into a comparison of SOEs in a broader region the (Baltics, CEE, etc.) which could in future reveal broader insights behind the effects of corporate governance.

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