CORPORATE GOVERNANCE AND PERFORMANCE OF ROMANIAN STATE-OWNED ENTERPRISES: ASSESSING TRANSPARENCY AND ACCOUNTABILITY LEVELS

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Abstract: *This article examines the impact of transparency, a key aspect of good governance, on the performance and audit opinions of Romanian state-owned enterprises (SOEs). A transparency and corporate governance disclosure index (DI) was developed and analyzed by applying an econometric model. The results show that compliance with corporate governance laws has not improved SOE financial performance but reveals a significant correlation between transparency levels and audit opinions. The mixed objectives of state-owned enterprises and the (inappropriate) performance measurement tools for these types of companies are key factors influencing the results obtained. This research provides insights for public managers and board members to enhance SOE efficiency and compliance with corporate governance regulations.*

Keywords: state-owned enterprises, corporate governance, transparency, performance, auditor opinion.

JEL codes: H11; H41; M14; M48; C12

Introduction

State-owned enterprises (SOEs) are companies under the control of public authorities at all government levels, either by majority ownership by one or more public authorities or otherwise by exercising an equivalent degree of control (Papenfuß et al., 2020; Grossi et al., 2015; OECD 2015). They are required to demonstrate public confidence and credibility (Grossi and Thomasson, 2015). During the last decades, the government's credibility has been negatively affected by recent financial scandals and different corruption cases worldwide (Saéz-Martín et al., 2017). In this context, public sector entities, in comparison to private entities, are expected to be more accountable to different stakeholders since they are publicly funded (Greiling et al., 2015; Andrades et al., 2019). The main challenge for governments as "owners" of these types of public companies is to find out the equilibrium between their active shareholder roles but not interfere with company management and their impartial pursuit of public policy objectives (AAAS, 2018, p. 8).

Worldwide, SOEs represent about 10% of the global GDP and provide critical infrastructure and services in areas where high trustworthiness is of greatest importance (Bruton et al., 2015). The study developed by OECD in 2014 emphasizes their importance in the economy, showing that SOE portfolios from 34 countries had a combined value of 2 USD trillion USD, with 6 million employees representing up to 10% of the overall workforce (OECD, 2014; Papenfuß et al., 2020). In Romania, the SOEs' joint sales amount in 2017 represented 5.6% of the Romanian GDP. Moreover, the number of Romanian SOEs increased from 209 in 2017 to 211 in 2018 and employed over 186 thousand people (Ministry of Finance, 2014-2018; National Institute of Statistics, 2014-2018). The fact that large companies in Romania maintain a significant public ownership must be a guarantee that the economic value is created and maintained for the benefit of the Romanian

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citizens. The need to improve Romanian public sector entities' performance has mainly economic reasons: the functionality, solvency and liquidity of these societies have a broad influence on the whole economy as Romanian state companies have begun to be seen as an important vector for economic recovery and state budget balancing (AAAS, 2018, p.6). To reduce the existing malfunctions in the management and administration of SOEs (totally or majority owned by the state), the Romanian Government adopted an emergency regime the Government Emergency Ordinance (GEO) no. 109 from 30 November 2011 on Corporate governance of public entities. GEO no.109/2011 complements Law no 544/2001 regarding the free access to public interest information, both regulations creating legislative and administrative premises that should lead to increasing efficiency and performance of SOEs (Cioc et al., 2012).

Considering the important role that SOEs have in the economy, several studies focus on ways of increasing their efficiency and performance based on a good governance (Aivazian et al., 2005; Bozec et al., 2002; Wong, 2004; Papenfuß et al., 2020, Lin et al., 2008). Good governance is defined as "a mode or model of governance that leads to social and economic results sought by citizens" (Plumptre et al., 1999). In such regard, we acknowledge the assumption that SOEs' efficiency, performance and confidence among citizens can be improved through increased transparency (Andrades et al., 2019; Royo et al., 2017). Ball (2009) and Andrades et al. (2019) approached transparency from accountability, good governance and internal process perspective. Lindstedt et al. (2010) argue that transparency may reduce corruption, but it also highlights that making information available will not prevent corruption if the conditions for publicity and accountability are weak. So, the second perspective of Ball (2009) and Andrades et al. (2019) is introduced: transparency is also a key element of good governance. The link between governance and the public enterprise' organizational and managerial performance results from the nature of good governance, which involves ensuring compliance with legal obligations and protection for shareholders against fraud or organizational failure (Cioc et al., 2012).

The main goal of this paper is to analyze the impact of transparency, as a requirement of good governance, on SOEs' performance and the auditing opinion. The research has been approached in a progressive way: first, we constructed a transparency and corporate governance disclosure index (DI); then we analyzed the effects of DI upon SOEs' performance and auditing opinion. An econometric model that incorporates the analyzed variables is presented in the paper. In the case of Romanian SOEs, the value of constructed DI does not influence the performance of these type of companies, while the DI score significantly leads to an audit opinion without reserve. The paper includes a literature review that outlines the background of empirical research, followed by a section that describes the research design and the used methods, an analysis of the results, a discussions section, and ending with a set of conclusions.

Background of the study

Previous academic studies have broadly analyzed the research patterns on public administration and management (Bruton et al., 2015) focused on the more general stream of literature on privatization and nationalization reform (Aivazian et al., 2005; Skare et al., 2016; Smith et al. 2001, Murray, 2010), or alternatively, on the SOEs' role in economies (Buge et al., 2013). There are several arguments in the literature that justify the increasing number of studies focusing on SOEs. First, they are called to be accountable for society as they play a pivotal role in today's global economy; second, they are operating at the intersection between public and private sector, having to deal with financial and non-financial goals (Andrades, 2019); third, they must meet informational needs of a large and heterogeneous group of stakeholders (Grossi et al., 2015). Since a considerable amount of public expenditures are directed to this type of public entity, requirements and pressure for effectiveness, efficiency, sustainability and transparency are increasing (Grossi et al., 2015; Florio and Fecher, 2011; Whincop, 2017).

One of the most debated points of view emphasizes the privatization reform as an improvement of SOEs' governance. The usefulness of privatization is a topic frequently analyzed by researchers all over the world. Some argue that privatization is necessary to significantly improve the performance of SOEs (Aivazian et al., 2005; Shleifer, 1998). Contrarily, others consider that privatization is not the sole right solution to restructure public enterprises (Allen and al., 2000).

The effects of governance and transparency upon SOEs' performance has gained importance in the most recent empirical research, but usually it is focused on countries outside Europe: Canada (Bozec et al., 2007), Ghana (Christensen, 1998), China (Du, 2012; Girma et al., 2008; Perkins, 1996, Ralston et al. 2006), and Chile (Luders, 1993). Despite the comparably high number of Chinese SOEs' performance-related studies, for instance, there is still a general lack of empirical evidence to confirm the improved SOE efficiency in European countries. Wong (2004) demonstrated in his research that adopting an integrated approach encompassing clear directions, political insulation, and transparency can improve the governance of SOEs and clear the path to a higher level of performance. Therefore, board composition (Castro et al. 2016), board independence (Zhang et al., 2018), executive compensation (Acero et al. 2020; Cui et al. 2021), selection and appointment of board members (Yu et al., 2020) are elements that could positively influence the SOE performance, but it can vary depending on the country context. However, Bozec et al. (2002) argue that the social objectives of SOEs still have a negative impact on the performance of the organization, as they bring extra costs or a reduction of revenues to the firm. A valuable support in the renewal of public management (aiming to reduce the social objectives of SOEs and consequently to improve the SOEs performance) is the role played by audits. The audit report can be used as a starting point in identifying the system-level corporate governance problems (Domokos et al., 2016).

The current study contributes to literature by filling a research gap in the emerging field of SOEs' corporate governance and transparency in European countries. In addition to other studies that investigate the performance of public entities, such as SOEs, the research introduced the audit opinion variable alongside corporate governance aspects. Thus, this research could be used by public managers as it provides a clear overview of the level of compliance with Romanian regulations on corporate governance and transparency. Also, this research could help board members and managers identify ways of improving public trust.

Research design and methods

The empirical research aims to analyze the relationship between transparency and SOEs' performance and auditing opinion, by testing the following hypotheses:

H1. The adoption of transparency and corporate governance regulations has a direct influence on SOEs' performance.

H2. SOEs' level of transparency influences the audit opinion.

The data sources we use in this study include 54 Romanian state-owned enterprises, entities that operate under the authority of the Ministry of Economy, Transport and Energy. The methodological approach used to determine our sample is based on secondary data and presumes the following steps. First, we performed a manual content analysis (Krippendorff, 2013) of Ministries' Financial Statements published on their websites to identify the total value of shares owned by each ministry in state-owned companies. The Financial Statements included in our analysis present data related to the 2017 fiscal year. From the total number of 24 ministries, we further removed those ministries with missing data or abnormal observations (9 ministries – no information disclosed; 4 ministries – 0 value of shares owned by the ministry in state-owned companies). We thus use the Ministry of Energy, Ministry of Transport, and Ministry of Economy as our final sample. These 3 ministries are representative as our sample accounts for 98% of the total value of shares owned by Ministries in SOEs.

Secondly, we continued with the selection of the SOEs owned by the Ministry of Energy, Ministry of Transport, and Ministry of Economy. In this regard, we accessed the website of each ministry to find a list that includes all SOEs held. According to the information found on their website, the total number of SOEs held by the Ministry of Transport (26 SOEs), Energy (24 SOEs), and Economy (37 SOEs) is 87. 54 companies out of 87 are included in our final sample, the remaining ones being excluded because they were inactive (5 SOEs), in reorganization (19 SOEs), or had an inactive/invalid website (6 SOEs). Also, the SOEs whose share capital is held by other SOEs included in our analysis were excluded (3 SOEs). We double-checked the accuracy of data by comparing the annual reports regarding SOEs published by the Ministry of Public Finance with the information found on the Ministries' websites.

Having set and explained our sample we moved forward to determine how to measure the amount of online information disclosed by the Romanian SOEs selected for this study. In this vein, we conducted a web-content analysis. Other researchers often used this type of analysis in prior studies focused on public accountability (Coy et al., 2004), transparency (Cheung et al., 2010), social and environmental reporting (Giannarakis, 2014; Ali et al., 2017). This research method is used to quantify the presence or absence of certain items with a value of 1 when the item is disclosed and 0 otherwise (Garde et al., 2013; Andrades et al., 2019). Therefore, as other researchers as Venturelli et al. (2017) addressed the same research method, we used a dichotomous approach to quantify the information for 13 out of 14 variables (excepting Criterion of members' independence (MDI)). Based on the assumption highlighted by Zhang et al. (2018); Thenmozh et al. (2020) in their studies that the independence of board members positively affects the SOE's performance, an in-depth measurement scale from "0" to "2" was used, as follows: 0 - if the information (declaration of interests) was not provided for at least one of the board members or if more than 50% of the board members are party members; 1 – if less than 50% of the members are politically affiliated; 2 – if none of the board members is politically affiliated.

Based on an in-depth analysis of the regulations we were able to identify those elements associated with obligations of information disclosure. We created a disclosure index to measure the amount of information disclosed by Romanian SOEs based on the requirements included in Law no. 544/2001 on free access to public interest information, and Government Emergency Ordinance No. 109/2011 on corporate governance of public entities. The total number of items set to quantify the amount of information disclosed by Romanian SOEs following the legal requirements is 14 (see Table 1 Variables used for DI construction).

Table 1. Variables used for DI construction

Variables	Definition
LOF	Specific legislation regarding the organization and functioning of the public institution. Variable coded 1 if the firm discloses Government decision regarding the SOE establishment; Law no.544/2001 on free access to public interest information; Government Emergency Ordinance no.109/ 2011 on corporate governance of public enterprises; Other specific regulations depending on SOE activity, and 0 otherwise
CEt	Variable coded 1 if SOE discloses the Code of ethics and 0 otherwise
ROF	Variable coded 1 if SOE discloses the Regulation of organization and functioning, and 0 otherwise
AGAD	Variable coded 1 if SOE discloses the General Meeting of Shareholders Decisions for at least the current and previous year, and 0 otherwise Observation: the SOEs organized as Regie autonomous do not have a General Meeting of Shareholders, so for those companies, we left blank
YFR	Variable coded 1 if SOE discloses the following annual financial reports Balance Sheet, Profit and loss Account, Informative Data Report, Fixed Asset Statement, and 0 otherwise
QFR	Variable coded 1 if SOE discloses the following quarterly financial reports Balance Sheet, Profit and loss Account, Informative Data Report, Fixed Asset Statement, and 0 otherwise
AR	Variable coded 1 if SOE discloses the Annual audit report, and 0 otherwise
CAR	Variable coded 1 if SOE discloses the Board members' reports concerning the SOE activity and performance and 0 otherwise
AGA	Variable coded 1 if SOE discloses the component of General Meeting of Shareholders and 0 otherwise Observation: the SOEs organized as Regie autonomous do not have a General Meeting of Shareholders, so for those companies, we left blank
ADCV	List of administrators and directors. Variable coded 1 if SOE discloses the Position, Name Surname, and CV attached for each

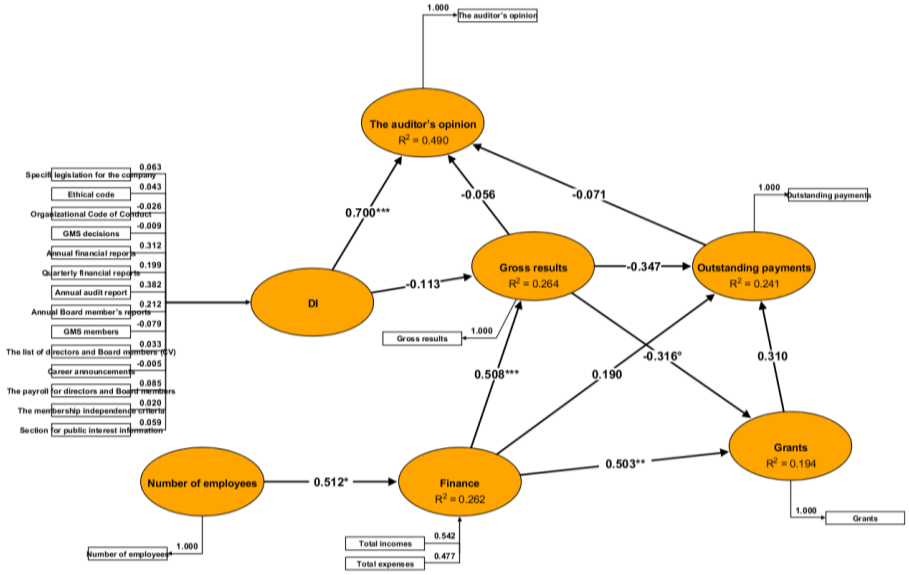
	member, and 0 otherwise
JOAD	Career – administrators and directors. Variable coded 1 if SOE publishes on its website vacancies for the position of administrator and board members, and 0 otherwise
SAD	Each public company must provide, on their website, information regarding the level of remuneration for their administrators and directors and the decision of the salary rights set according to the specific law. So, we coded 1 if the information was provided, and 0 otherwise.
PII	Each public enterprise must have a section of public interest information with the following options: the contact person responsible for Law 544/2001; A form for information request according to Law 544/2001; The manner of contesting the decision and the complaint forms (refusal and exceeding the legal term for providing the information). So, we coded 1 if all information was provided, and 0 otherwise.
MDI	Criterion of members' independence. Each person from the board was checked in order to see if they were members of a political party. In this vein, we checked the individual declarations of interest (DI) for all board members. We coded 2 if none of the board members is politically affiliated, 1 if less than 50% of the members are politically affiliated, and 0 if DI was not provided for at least one of the members.

Source: Author's own projection

Due to the fact that the main goal of the research is to examine the relationship between the impact of transparency as a requirement of good governance on SOEs' performance and the auditing opinion, we included in our analysis the following quantitative variables: total revenues (VT), total expenses (CT), grants (GRnT), gross result (GR), outstanding payments (PlRest), and number of employees (Ang). Other researchers used the same quantitative variables in their studies: Achim et al. (2016), Nurharjanto et al. (2018), Andrades et al. (2019), Goldeng et al. (2008), Bozec et al. (2002). Nominal and ordinal variables were evaluated in terms of frequencies and percents. The form of distribution was also evaluated and transformations applied to reduce variability, when needed. Variables with only positive values were transformed using the natural logarithm, while those with both positive and negative values were standardized.

There are several methodological possibilities for constructing a Disclosure Index for the state-owned Romanian companies from the sample. For this particular case, we opted for the Structural Equation Modeling (SEM) approach. The analysis starts from the introduction of the 14 criteria into the index – for this, the composite construction method was employed, as the DI was built through the analysis. Since the main interest was to assess the impact of the Disclosure Index upon the Auditing decision and upon the performance of the companies, all the variables of interest and the interactions among them were introduced in the analysis. The final model was established based on quality parameters and post-estimation evaluation. The scheme of the final model is presented in Figure 1 and discussed in the Results part.

Figure 1. DI vs. audit results and performance – final model



Source: own construction in Adanco 2.1

Symbols used in the construction for the significance level, as defined in the software, are: *** p-value = 0.000,** significant at 1% critical level, * significant at 5% critical level, * significant at 10% critical level. The higher the level of the DI, the higher the level of disclosure.

Models in all stages of the analysis were validated using different statistical procedures. We assessed the goodness-of-fit of the model based on three parameters: SRMR (Standardized Root Mean Residual), dULS (Unweighted Least Squares Discrepancy) and dG (Geodesic Discrepancy). For the model to be valid, the values of these parameters have to be lower than the 95% and the 99% confidence limits. Additionally, we present three major reliability parameters: Cronbach's alpha (α), Dijkstra-Henseler's ρA and Joreskog's ρC. A range of post-estimation procedures were run in order to validate the results, including bootstrapping inference for significance analysis. The final step of the analysis was to run the Heterotrait-Monotrait Ratio of Correlations (HTMT) to assess the discriminant validity of the model. Values lower than 1 are the emphasis of discriminant validity between two constructs. The lower the value, the better the fit, namely the higher the discriminant validity. All these validation procedures were compared between different analysis stages to see if the model has improved.

The robustness of the results was evaluated both through post-estimation procedures related to the SEM method and through the more classical Principal Component Analysis. The latter is similar to SEM, but it does not require endogenous variables in the model. Yet, it does not allow for multidirectional relationship assessment. This method performs a reduction of some highly correlated factors into a smaller number of groups, called components. Additionally, it allows for the computation of the scores for each component.

The analysis procedure respected all the requirements of the method, concerning the level of commonalities and loadings (in the sense that the commonalities of the variables were evaluated in order not to be lower than 0.4, while the loadings were compared to have independent components – i.e. not to have a variable with high loadings in more than 1 component). The Kaiser-Meyer-Olkin (KMO) and Bartlett's Sphericity tests were used to assess the validity of the PCA results. In this case, the KMO = 0.594, while the p-value for Bartlett's test = 0.000 < 0.05. Consequently, we can conclude that the analysis is reliable.

After estimating the DI with the SEM, we also estimated it using the PCA and compared the results, both in terms of real values and rankings, and in terms of the relationships between the DI and the audit decision, on one hand, and the DI and the performance of the company, on the other. Comparisons were run based on paired samples test. However, these tests are of two kinds, parametric and non-parametric, and their usage depends on the shape of the variables' distributions. That is why, first, normality tests were applied. Both DI scores (SEM and PCA) turned out to be non-normally distributed (see Table 2, all Sig = 0.000 << 0.05). Consequently, the comparison was run using the non-parametric tests. For this procedure, we applied for the Wilcoxon test. It compares the rankings of the variables and evaluates similarities between them. The null hypothesis is that the two distributions are similar, with the alternative that they are not.

Table 2. Normality tests applied for the DI

Tests of normality	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	p-value	Statistic	Df	p-value
DIPCA	0.185	49	0.000	0.832	49	0.000
DI	0.277	49	0.000	0.666	49	0.000
a. Lilliefors Significance Correction						

Source: own calculations in SPSS 24.

As a final stage of the robustness checks, regression analysis was performed between the DI obtained through the PCA method and performance expressed through the gross results of the

companies: they are all scale variables, so classical linear regression was employed with the following form:

$$\textbf{Performancei} = \alpha + \beta * \textbf{DIPCAi} + \varepsilon i \qquad \textbf{(eq. 1)}$$

But there are 14 variables in the DI. That is why the PCA was also run without restrictions in respect to the number of factors to be computed. In this form, the 14 criteria were grouped into 5 distinct components, each of them comprising a certain aspect of a company's activity and regulations. These components are described in the results part. This is the total number of components evidenced by the analysis of the explained variance.

Additionally, the influence of each of these components upon the performance is evaluated just as in the case of the global DIPCA, by respecifying equation 1 by replacing the DIPCA with each of the components. Since the components are independent, the multiple linear regression model was constructed:

$$\textbf{Performance} = \alpha + \beta 1 * C1i + \beta 2 * C2i + \beta 3 * C3i + \beta 4 * C4i + \beta 5 * C5i + \varepsilon i \quad \textbf{(eq. 2)}$$

Estimations were run in ADANCO 2.1 and Excel for the SEM and SPSS 24 for the descriptive analysis, the PCA, and the regression analysis.

After all the analysis procedures, the final DI scores were standardized on the [0;1] scale to be able to make interpretations in terms of low, medium, or high levels of disclosure, using the 3 standard intensity intervals – [0; 0.3], (0.3; 0.7] and (0.7; 1]. The standardization was run using the min-max criterion, based on the formula:

$$\textbf{DI standard} = (\textbf{DI} - \min(\textbf{DI}))/(\max(\textbf{DI}) - \min(\textbf{DI}))$$

Results analysis

A significant number of aspects were considered in order to assess the disclosure degree of the analyzed sample, as previously mentioned. These aspects, 14 in number, were first put together in an index using the SEM composite method, as described in the methodological part. The highest loadings and weights were to be found in the case of the financial reports, both in annual and quarterly form, the annual report of the Board members, and the annual audit report (see Fig. A1 and Table A1). The construct performs very well in terms of variability when the Dijkstra-Henseler's rho (ρA) and the Joreskog's rho (ρC) are assessed (1 and 0.712 respectively). It is slightly below the limit for the classical Cronbach's alpha (0.698).

However, the goal is to assess the impact of the Disclosure Index upon the auditors' opinion, on one hand, and upon the performance of the companies, on the other. That is why, in the second stage of the SEM analysis, The Auditor's Opinion was included in the model.

The construction obtained for the computation of DI and the relationship with the auditor's opinion is validated through the procedures attached to the methodology. However, problems in the goodness of fit values along with reliability issues are emphasized by these procedures. Only dG is below both 95% and 99% limits, while the other two measurements lie in between (see table A2 in appendix). Reliability is also with some problems. We obtained Dijkstra-Henseler's ρA = 1, just as in the first stage of the analysis, but Joreskog's ρC drops at 0.62. Cronbach's α remains stable – 0.698.

The structural equation model has an overall R2 of 0.481, 0.471 in the adjusted form. The inference procedures returned significant p-values (0.000, t-value = 10.18), the effect coefficient having the value 0.694. We can, thus, conclude that an increase in the DI score significantly leads to an audit opinion without reserves. => **H2. SOEs' level of transparency influences the audit opinion - VALIDATED**

In the last stage of the analysis, performance was also considered. The Gross result was taken as a proxy for the company's performance. Interaction effects present in the SEM allowed for the introduction of several other factors that may increase or decrease the impact of the DI on performance and audit results.

The final form of the model is presented in Figure 1. The impact of the DI upon the result of the auditing process has increased very little, the R2 is now 0.49, while the effect coefficient is 0.7, highly significant, just as previously emphasized. However, the level of disclosure does not influence performance in terms of gross results. Performance is significantly influenced by financial results, which are, in turn, influenced by the number of employees of the company.

Table 3. Total effects interference for the final SEM model presented in Figure 1

	Standard bootstrap results						Percentile bootstrap quantiles			
Effect	Original coefficient	Mean value	Standard error	t-value	p-value (2-sided)	p-value (1-sided)	0.5 %	2.5 %	97.5 %	99.5 %
DI -> The auditor's opinion	0.703	0.725	0.074	9.468	**0.000**	**0.000**	0.513	0.614	0.828	0.847
DI -> Gross results	-0.113	-0.086	0.155	-0.726	**0.468**	**0.234**	-0.497	-0.414	0.183	0.308
DI -> Outstanding payments	0.050	0.044	0.077	0.653	0.514	0.257	-0.157	-0.084	0.212	0.295
DI -> Grants	0.036	0.043	0.068	0.527	0.598	0.299	-0.092	-0.056	0.201	0.305
Finance -> The auditor's opinion	-0.037	-0.035	0.053	-0.691	0.490	0.245	-0.183	-0.149	0.061	0.093
Finance -> Gross results	0.508	0.469	0.150	3.380	0.001	0.000	0.065	0.137	0.726	0.787
Finance -> Outstanding payments	0.120	0.136	0.112	1.068	0.286	0.143	-0.154	-0.098	0.376	0.487
Finance -> Grants	0.343	0.389	0.141	2.431	0.015	0.008	0.030	0.106	0.675	0.786
Gross results -> The auditor's opinion	-0.024	-0.015	0.097	-0.249	0.804	0.402	-0.291	-0.207	0.175	0.250
Gross results -> Outstanding payments	-0.445	-0.454	0.192	-2.318	0.021	0.010	-0.968	-0.838	-0.068	-0.019
Gross results -> Grants	-0.316	-0.374	0.176	-1.794	0.073	0.037	-1.071	-0.785	-0.120	-0.051
Number of employees -> The auditor's opinion	-0.019	-0.022	0.034	-0.556	0.578	0.289	-0.139	-0.107	0.034	0.057
Number of employees -> Finance	0.512	0.570	0.222	2.304	0.021	0.011	0.027	0.169	0.902	0.930
Number of employees -> Gross results	0.260	0.265	0.134	1.935	0.053	0.027	0.002	0.052	0.551	0.635
Number of employees ->	0.061	0.077	0.073	0.845	0.398	0.199	-0.13	-0.04	0.249	0.322

Outstanding payments							2	4		
Number of employees -> Grants	0.175	0.224	0.120	1.466	0.143	0.072	-0.001	0.025	0.499	0.623
Outstanding payments -> The auditor's opinion	-0.071	-0.054	0.104	-0.688	0.491	0.246	-0.299	-0.251	0.166	0.217
Grants -> The auditor's opinion	-0.022	0.000	0.052	-0.422	0.673	0.337	-0.160	-0.082	0.148	0.214
Grants -> Outstanding payments	0.310	0.303	0.317	0.977	0.329	0.164	-0.617	-0.259	0.987	1.046

Source: own calculation using ADANCO 2.1.

This final model was the best performance in terms of model fit (see Table 4). The most significant disclosure criteria remain the same, with very little change in the factors' weights and loadings in comparison with the initial step of the analysis (see Table 5). Results for the HTMT analysis show that there is discriminant validity between the constructs of the model.

Table 4. Goodness of model fit for the DI construction in the final model

	Value	HI95	HI99
SRMR	0.0840	0.0959	0.1101
dULS	1.6300	2.1252	2.7996
dG	104.5010	112.6468	193.7374

Source: own calculation using ADANCO 2.1.

Table 5. DI – final step construct – loadings and weights

Indicator	DI		Finance	
	Loadings	Weights	Loadings	Weights
Specific legislation for the company	0.1909	0.0627		
Ethical code	0.1578	0.0429		
Organizational Code of Conduct	0.0573	-0.0260		
GMS decisions	-0.0240	-0.0094		
Annual financial reports	0.9090	0.3123		
Quarterly financial reports	0.7579	0.1987		
Annual audit report	0.8804	0.3817		
Annual Board member's reports	0.8034	0.2118		
GMS members	-0.0306	-0.0785		
The list of directors and Board members (CV)	0.1624	0.0327		
Career announcements	0.3160	-0.0055		
The payroll for directors and Board members	0.2181	0.0854		
The membership independence criteria	0.0796	0.0204		
Section for public interest information	0.2637	0.0590		
Total incomes			0.9841	0.5416
Total expenses			0.9795	0.4768

Source: own calculation using ADANCO 2.1.

As described in the methodological part, the next step of the analysis was to evaluate the robustness of the new construct by employing the Principal Component Analysis (PCA). The score of each company obtained through the PCA analysis was compared with the one obtained through

SEM. The Wilcoxon test returned a probability of 0.231 >> 0.05. Consequently, we can conclude that the distributions of the sample companies based on the two scores are similar. Thus, the score obtained through the SEM procedure is similar to the one based on the PCA and both are performant in evaluating the disclosure aspect of the companies.

Table 6. Wilcoxon ranking test – DI vs. DIPCA.

	DI vs. DIPCA
Z	-1.199b
p-value	0.231
a. Wilcoxon Signed Ranks Test	
b. Based on negative ranks.	

Source: own calculations in SPSS 24

The following stage of the robustness check was to evaluate the relationship between the DIPCA and the performance of the company.

In the case of performance, no significant relationship was found between the DIPCA and performance expressed through the gross result (Table 7). This result is similar to the lack of relationship between performance and DI found in the SEM situation. The same type of results was also obtained when all five components were introduced in the regression analysis with respect to the gross results. Only component 2 is significant, but this is only at the 10% level. When considering the standard 5% critical level, none of the DI criteria considered significantly influences the performance of the companies. => **H1 The adoption of transparency and corporate governance regulations has a direct influence on SOEs' performance -REJECTED.**

Table 7. Regression analysis – results for eq. (1).

Model		Unstandardized Coefficients		Standardized Coefficients	T	p-value
		B	Std. Error	Beta		
1	Constant	138163430.3	73001020.2	-	1.893	0.065
	DI_{PCA}	-9312346.3	80803970.9	-0.017	-0.115	**0.909**

Source: own calculations in SPSS 24.

Table 8. Regression analysis – results for eq. (2).

Model		Unstandardized Coefficients		Standardized Coefficients	t	p-value	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	Constant	149188678.4	70704607.86	-	2.110	0.041		
	C1	-84468103.8	83223902.96	-0.147	-1.015	0.316	0.986	1.014
	C2	138095315.8	69340392.85	0.286	1.992	0.053	1.000	1.000
	C3	-32075410.2	69438232.61	-0.066	-0.462	0.647	0.999	1.001
	C4	-15804430.4	69662352.94	-0.033	-0.227	0.822	0.996	1.004
	C5	108675301.2	70742128.28	0.222	1.536	0.132	0.990	1.010

Source: own calculations in SPSS 24.

Based on all the results obtained so far, we can conclude that the constructed DI is a valid and robust measure of the performance of the state-owned companies considered. It can be used in other analysis in order to evaluate how the level of disclosure influences different other aspects of a company.

Discussion

It is unclear why some transparency initiatives manage to influence the behavior of public institutions, while others do not (Fox, 2007). For example, in Spain, the amount of information reported by their SOEs (information required through transparency and corporate governance law) is insufficient and implies non-compliance with the accountability process (Andrades et al., 2019), while our study focused on Romanian SOEs demonstrated the opposite. The approval of the Romanian regulations on transparency and corporate governance provides a mechanism addressed to improve the process of accountability. We considered as a potential reason that led to the high level of information disclosed by Romanian SOEs that the regulation establishes precisely where the information should be disclosed. It provides even a comprehensive layout comprising all the information required, also including details about the place in which the information should be disclosed on the SOEs' website. Another potential reason could be the level of the companies held by the Romanian government and included in our sample: big state-owned enterprises that carry out activities with a high environmental impact. It is assumed that larger companies tend to disclose more information than smaller ones (Deegan, 2002; Branco et al., 2008). Information production and dissemination are costly, and, therefore, big SOEs have more resources to cover these costs (Barako et al.,2006).

But the question remains whether the adoption of transparency and corporate governance law influences SOEs' performance. The results of the study reveal that the financial performance of Romanian SOEs has not been improved after the adoption of transparency and corporate governance law. This can be justified by the rigid character of SOEs and by the contradictory triple objectives of this type of company: social, political, and economic. More specifically, the analyzed SOEs act more like public institutions (not profit-oriented) than private companies (profit-oriented). Even if governments have attempted to separate economics from social goals, to give more autonomy in managing and organizing the SOEs, we consider that the social and political character always prevails. Their role in economies is principally to provide public services that are essential for society, and secondly to make profit (Grossi et al., 2015). The results indicate that compliance with transparency and corporate governance law is not generally associated with improved performance of SOEs. The same conclusion has been drawn by Price et al. (2011) on a study focused on Mexican companies, suggesting that monitoring alone is not enough to bring about fundamental changes (Prince et al., 2011). Also, Haat et al. (2008) stated that disclosure and timeliness are not significant factors influencing the performance of Malaysian companies.

The performance of Romanian state-owned enterprises is significantly influenced by the company size, measured through the number of employees. Previous academic studies highlighted the positive relation between performance and company size arguing that larger companies are more exposed to the public and have a bigger effect on the community (Garde et al., 2013; Royo et al., 2017; Deegan, 2002; Branco et al., 2008). One explanation for this result is that the companies included in our sample provide public services that are essential to society, with a high level of exposure, and have to manage a large amount of resources.

However, a significant correlation has been identified enclosed by the level of Romanian SOEs' transparency and audit opinion. The audit opinion is described in academic literature as an indicator of the quality of financial accountability: each public institution, before disclosing to the public the financial report, it is necessary to conduct an audit process to assess the fairness of the financial report (Adiputra et al., 2018). An unqualified opinion in the audit report represents financial statements of highest compliance with regulations and laws. Different empirical studies

provided evidence that good financial reporting practices (and consequently an unqualified opinion in the audit report) have positive effect on the publication of the financial report through the internet (Adiputra et al., 2018; Styles et al., 2007). So, if a company applies and respects the legal provisions concerning transparency and corporate governance, most probably the regulations regarding the preparation of financial statements are correctly applied.

Conclusions

There is a need for comparative studies on corporate governance of SOEs in different comparable countries, as the results can vary depending on the country's context. Even if the high level of information disclosed by Romanian state-owned enterprises in accordance with legal requirements does not influence the performance of these types of companies, the positive effects could be identified in the auditors' opinion. This represents important evidence for the SOEs' managers as they can use the audit report as a starting point in solving the corporate governance issues and in this way accomplish the general aim of corporate governance to increase the state-owned enterprises' efficiency. One limitation of the research is associated with the level at which SOEs activate. In our study, we included only SOEs held by ministries, so all public companies included in our sample activate at the national level. The current research can be continued by including SOEs that activate at municipal and local levels. A second possible limitation is associated with the use of a dichotomous system rather than a codification that incorporates a more thorough scoring to detect different levels of information disclosed. In addition to the main requirements of corporate governance and transparency aspects, future research should analyze influential variables linked with the profile of the managers, such as age diversity, gender, education level, and relevant experience. Also, the current quantitative research can be complemented by a qualitative one since studies using qualitative methods have a high value for a deeper understanding of the SOEs' puzzles and analyzing different data sources (board members' biographies and executive compensation).

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