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Performance management and Balanced Scorecard – a link for public sector

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Abstract: This paper aims to identify and quantify different means of improving performance management in the public sector by examining the reporting practices of local governments. It emphasizes the public interest in reporting and the need to provide relevant and meaningful information to stakeholders. For this purpose, the research methodology uses the accountability disclosure framework combined with the Balanced Scorecard structure to assess the quality of online reporting, throughout an index designed by accessing the different sections of websites and the annual reports. A linear regression analysis was performed, searching for a relationship between the accountability index developed and various external factors. The empirical results show medium disclosure levels among local government websites, the scores reached exposing considerable fluctuation in the quality of disclosure. Also, we confirm that good practices of higher online transparency could improve administrative efficiency, increase trust in local government, and ultimately promote democratic governance. This paper has a high level of originality by proving a model of disclosure for increasing performance reporting of local governments to meet the need for greater accountability, thus being a support for improvements of digital transparency.

Keywords: performance management; balanced scorecard; accountability; disclosure; local governments in an emerging country

JEL Classification: H41, I18, M40

1. Introduction

Recent developments in the public sector led to increasingly taking over various approaches from the private sector. Many managers within public organizations are willing to balance the interest of greater openness with private-sector effectiveness (Halachmi&Greiling, 2013). Thus, concepts like performance, transparency, accountability and efficiency become common in “public institutions’ language”, as well as the focus of their actions.

This study aims to identify and quantify different means of improving performance management in the public sector, focusing on e-government as a valuable tool to enhance transparency and increase accountability, thus keeping under control unethical behavior.

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Our paper exceeds prior research in this field from multiple perspectives. Starting from the main challenge of public institutions – having a high-performance management, this paper does emphasize not only the role of Balanced Scorecard (BSC) in this respect but also assesses the extent to which its implementation raises management quality. The BSC provides a link between internal reporting of key performance issues and the need for a community organization to report to the public, thus, improving the image of local governments and citizens' confidence. Moreover, BSC has the potential to improve organization's activity by providing management information for decision makers, but also relevant and detailed information to stakeholders.

Consequently, by taking the BSC model from the private sector, this study is trying to adjust it for public organizations and in-depth analyzing it by developing a different ranking specific for the public sector. Furthermore, starting from the content and importance of the four perspectives of the BSC, we focused on two dominant - customers/stakeholders and the financial one, by analyzing in details their content and reorganizing them by features of the public sector.

On the other hand, transparency is both theoretically and practically addressed through the analysis of 42 local government websites, the information collected respecting the BSC principles. Consequently, this study seeks to contribute empirical evidence by determining those factors that have an impact on the content of local government websites, thus aiming to provide information that might serve to improve their digital relations with the inhabitants.

The research methodology for achieving our goal was performed using E-views analysis, mainly descriptive statistics based on computing means, but also regressions for identifying the relationship between our results and those of other researchers.

The first part of this study is a qualitative research based on literature debate, describing the state of the performance management in the public sector and the correlation with the BSC model. Also, the study comprises a quantitative analysis conducted to establish the real influence of BSC on financial statements and other information (financial and non-financial) disclosed by the local governments, thus determining the level of transparency throughout the Local government accountability (LGA) index developed. Thus, the paper enriches the literature by expanding the BSC theory through online reporting. For this purpose, our study uses the Modified Accountability Disclosure (MAD) framework combined with the BSC structure as advanced by Niven and Mann (2003) to develop a disclosure index for assessing the quality of the information published by local governments on their websites. The purpose of MAD is to codify the current disclosure for determining a qualitative score for the information disclosed. For defining the overall level of disclosure, a simple disclosure index (LGS) using Cook's methodology was developed.

The empirical results of this study reveal a medium performance expressed by accountability disclosure scores reached by sampling local governments with a

remarkable fluctuation in the quality of disclosure. Moreover, the regression analysis performed offers a relevant image of the Romanian local government, whose quality of disclosures provided are positively associated only with the population, while the economic wealth and the Internet access present no influence over the accountability level. These results are offering us the opportunity to make comparisons with prior related studies focused on the same topic and area of research (Piotrowski & Van Ryzin, 2007). Consequently, the results support the existence of a close relationship between performance management and the BSC model, with adaptability to the public sector.

The paper proceeds as it follows. Firstly, we briefly review the prior literature concerning performance management (section 1) closely related to the BSC framework (section 2), focusing on their power to improve public accountability and enhance transparency through online performance reporting. Then, we presented the research framework (section 3) focusing on the methodology of developing the LGA index, by explaining the items selection and weighting, as well as data collection and scoring for measuring the quantity and quality of disclosure. Finally, we provide our research findings (section 4) by testing the hypotheses developed related to e-government determinants influence over the quality of disclosure and discussing their implications, closely related to prior studies focused on the same goal. We conclude our study by highlighting the close relationship between performance management and Balanced Scorecard, a “real lasting marriage”.

2. Performance management in public sector

During the last decades, the public sector was marked by two “dominant paradigms” – New Public management and good governance – both trying to improve accountability and enhance transparency through performance management systems providing information more comparable, relevant and useful for decision-making within the public sector.

According to the state of the art, there seemed to be inaccuracies in conceptual, contextual and definitional approaching performance management and performance measurement, which have often been used synonymously in the literature because they are closely linked concepts.

Many different definitions of performance management exist in the literature (Lebas, 1995), proving that it encompasses a wide range of activities: planning, organizing, coordinating, leading, controlling, staffing and motivating (Coste, Tiron-Tudor, 2015). Thus, it supports the conclusion that management is the largest domain which includes performance measurement as a component (Samsonowa, 2012). However, the distinction between performance measurement as an accountability tool and performance management as a steering instrument is not often made in the day to day use of performance measurement in the field of public services (Greiling, 2006).

“Management could hardly exist without measurement”, claimed Lebas (1995). Consequently, performance management is viewed more broadly as a management tool that seeks to improve the performance of the public sector through the setting of targets, but whose fulfilling remains uncertain (Radnor & McGuire, 2004). Controversy, performance measurement focuses more narrowly on performance indicators, the metrics used to fix how an organization is performing.

On the other hand, performance measurement seems to fall into “accountability paradox” because it represents a tool for measuring managers’ performance toward outputs achievement while also serving the public interest, thus addressing both a quantitative and a qualitative issue (Dubnick, 2005). Performance measurement as an essential and necessary tool of performance management (Goh, 2012) was often used to demonstrate accountability through performance reporting to government agencies (Wichowsky & Moynihan, 2008) or in different public sectors such as health (Kim, 2007) and education (Sanger, 2008).

However, the relationship between accountability and performance was always contested, due to the multidimensionality of the accountability concept (Christensen & Lægreid, 2015), that proved to have the qualities of a “chameleon” (Sinclair, 1995). Public accountability particularly refers to the reporting of comprehensive information about the condition, activities, performance, and progress to all those with social, political and economic interests (Coy & Dixon, 2004). Thus, it implies different stakeholders whose economic and political interests overlap (Pilcher et al., 2013), performance measurement being necessary to demonstrate both external and internal accountability (Tilbury, 2006). A key element in enhancing public accountability is transparency (Koppell, 2005). The public access to sufficient and meaningful information on the quality, quantity and cost of services provided and activities undertaken by local authorities (Rutherford, 2000) is essential in assessing their achievements throughout performance reporting (OECD, 2004). The reporting of performance information enables a public organization to disclose and be responsible for its actions as a necessary response to public pressure for accountability (OECD, 2004). So, transparency can improve accountability, the quality and type of data that are made available determining whether it can be used effectively for accountability purposes (Ferry & Eckersley, 2015).

In support of this approach lies the researchers’ idea that the annual report is “the only comprehensive statement of stewardship available to the public”, that meets the information needs of a broad range of stakeholders, thus discharging public sector accountability (Hooks et al., 2012). Thus, many studies examined annual reports for assessing transparency, being focused on reporting performance indicators in various public sectors such as universities (Nelson et al, 2003; Coy & Dixon, 2004), museums (Wei et al., 2008) and city councils (Ryan et al., 2002; Hooks et al., 2012).

On the other hand, due to the latest developments in the information and communication technologies, internet became a powerful channel of

communication that mainly contributes to the establishment of a dialogue between the administration and the public (Tiron-Tudor et al, 2009), thus offering both the digitization of public services and greater economic transparency. Considering the latest development of the e-government initiatives in the European Union at both regional and local levels (Torres et al, 2005), websites became increasingly used to disseminate information and to facilitate the access to government services, thus improving accountability. (Tiron-Tudor et al, 2010)

Multiple systems or frameworks have been developed, designed to improve accountability by linking strategy and performance to various stakeholder needs (Harrison et al., 2012). One of these is the BSC, a performance measurement framework that expanded the traditional financial metrics with strategic non-financial performance measures, for providing a more “balanced” view of organizational performance (Kaplan & Norton, 1996). Later, it was amended accordingly for the public sector by Niven & Mann (2003) and used as a framework for measuring the performance of e-government and e-service delivery (Alhyari, et al., 2013). Thus, its potential to improve transparency and accountability in the public sector became widely recognized. (Sintejudan, & al, 2014)

Because the BSC offers information not only for management about how an institution is performing, but also detailed and relevant information for stakeholders, it was often used as a framework to develop a performance accountability disclosure index. By emphasizing the public interest aspect of reporting and the need to provide relevant and meaningful information to stakeholders, this disclosure index of best practice performance reporting might improve the transparency and public accountability, both necessary to ensure good governance (Hood, 2010).

3. Balanced Scorecard – a new approach for public sector

Brito (2008) expressed that public information available online is scarce. Thus, we can correlate the lack of accessibility or consistency with the lack of a framework for an efficient performance management reporting system, although the latest reforms have initiated significant changes to performance management in public sector organizations (Vesty, 2004).

In this study, we focus on the BSC model, following quantitative and qualitative changes imposed by the adaptability to the public sector, according to Niven & Mann (2003). These authors argue that in the public sector, managers, executives and employees need a system able to count the inputs and outputs, but most important to support reaching the organization’s real mission. Monitoring performance and learning from the results, will provide information able to offer guidance towards achieving the mission (Niven & Mann, 2003).

The implications of this system became a broad topic of discussion. However, the empirical research on BSC is still insufficient and the scientific community could

not find support to all the premises of the model (Dias Jordão& Casas Novas, 2013). Prior literature does not recognize either the causal model between indicators and perspectives (Ittner&Larcker, 2001) or that the systematized relationships by BSC are not causes but logical relationships (Norreklit, 2000). The publication Harvard Business School Review (2015) had estimated that the BSC is one of the most influential business ideas. It reminded us that new mandates for transparency and collaboration, plus a cash-strapped public sector that must reduce costs –all required a balanced performance data.

In time, the BSC gradually gained popularity in the USA, Europe, Australia and Latin America (Janota& Major, 2012) and its application spread among different business sectors including the public one. Performance measurement with a diverse set of financial and non-financial measures assists to improve decision-making. Kaplan and Norton (1996) claim that the BSC allows organizations to move away from the sole reliance on measures of past performance, and to include others that are considered to be more forward-looking (Vesty, 2004).

3.1. Perspectives' framework in public sector – content

The four perspectives addressed by Kaplan and Norton (1996) are Financial Perspective, Customer Perspective, Internal Business Processes and Learning and Growth Perspective.

The financial perspective addressed to the public sector involves the development of a high-performance management of financial resources. It includes financial information of the organization, widely used by managers not only in planning and budget execution, but also in the development of complex analysis related to the efficiency of resources used. In this context, the main question is “To succeed financially, how should we appear to our shareholders?”. Getting a higher value in return for the fees paid by taxpayers should be the focus of any public institution.

Stakeholders/customer perspective is highly extensive, including citizens/taxpayers/clients, government, central and local authorities, companies, EU institutions, international organizations and financial institutions. The relationship with stakeholders is extremely complex, involving multiple conditionings and adaptations not only of information channels used, but also related to the volume and the aggregation level of the information submitted to each category of beneficiary. The appearance of dark entities and opaque institutions must change through the adoption of appropriate conduct adapted to the needs of the final beneficiaries and intermediaries. Al-Najjar&Khawla (2012) suggest that managers must create measures to provide an answer to the following question: "How should we appear to our customers for achieving our vision?".

The Internal Business Perspective describes essential internal processes which lead to stakeholders' satisfaction and the financial results of the public institution (Nistor, 2010). Managers are required to identify measures for answering the question: “What business processes must we excel at for satisfying our customers

and shareholders?” The results of the internal business processes are the central themes of this perspective leading to financial success and satisfied customers.

Finally, under Learning and Growth perspective, management should search for answers to the question: “How will we sustain our ability to change and improve for achieving our vision?”. This perspective refers to organization’s employees, measuring the extent to which the institution exerts efforts to provide them opportunities to grow and learn in their field (Al-Najjar&Khawla, 2012).

3.2. Financial and stakeholder perspective - reordering in the public sector

Even if the academic literature on BSC performance measurement and BSC adoption and usage in public sector entities is minimal (Zaman 2003), its recognition as a strategic system appropriate for the public sector started around 1996 (Kaplan & Norton, 1996). Since then, the theoretical and practical experience has drawn a new hierarchy, where perspectives were adapted to the needs. By changing the architecture of the model, BSC was rearranged to place customers at the top of the hierarchy in such a context where both the customer pays for the service and receives the service.

Modell (2003) also suggests that the inability of public sector organizations to link their broad range of performance indicators to organizational goals (loose coupling) is not a sign of weakness, but as a natural response to the need to provide information to a broad range of customers.

The improved performance management requirements for public managers are demanding proof of programs’ successes (Callahan & Kloby, 2007). For the public sector to achieve greater efficiencies in serving customers while reducing overall costs and improving performance is required by stakeholders. The BSC created by Kaplan & Norton (1996) as a performance measurement framework, evolved later from its original internal approach to an external approach. So, basing on the four perspectives defined by Kaplan & Norton (1996), the financial perspective is not necessarily seen as the first one, but it has more and more relevance. Partly, the perspective of the public contract is demanded as the first viewpoint, in which corporate, social and cultural goals are brought in (Vogt et al., 2004). The Customer Perspective must be enlarged so that it contains various categories as shown the previous section.

Kaplan & Norton (2006) suggest that “the financial measures are not the relevant indicators of whether the agency is delivering on its mission”. The last decade has shown dramatic changes in public funds’ allocation, requiring significant changes in organizational management and their performance measurement tools. Nowadays, the majority of public sector institutions tend to become entrepreneurial units, in which extra-budgetary sources strongly sustain public funds. Financial profitability has become an essential requirement also for the public sector (Nistor, 2010).

4. Research framework

4.1. Methodology

According to the literature, transparency can be measured by constructing a disclosure index. This index generates a score indicating the degree of exposure of certain preselected features (Abraham & Shrides, 2014). The notion of disclosure index has often been used by researchers to assess the quantity, but also the quality of transparency of the public sector entities. This method originally developed from the accountability literature by Coy et al. (1993) is known as The Modified Accountability Index (MAD). The MAD index allows for differences in the quality of specific disclosures applying a six-point scale (0-5). Further, items in the index can be weighted using a three-point scale (1-3) based on the perceived importance. The main purpose of MAD is to codify the current disclosure to determine a quality score for the information disclosed. The method has been widely used for shaping the quality of the annual reports in several areas of the public sector, such as city councils (Ryan et al., 2002) or universities (Nelson et al, 2003).

This study uses the MAD framework combined with the BSC structure specially designed by Niven & Mann (2003) for publicsector, aiming to determine a disclosure index for assessing the quality of the information disclosed by local governments on their websites. Most local governments in Romania do not publish online their annual reports comprising all relevant information. Hence, the index has been modified by including other features considered to be necessary for local governments. Since the index was specially adjusted for measuring accountability in local governments, we will further refer to it as The Local Government Accountability (LGA) Index.

4.2. The development of LGA index

The original version of MAD index (Coy et al., 1993) comprises four main sections as follows: "Overview", "Service Performance", "Financial Performance" and "Physical and Financial Condition". For our further investigation, we adapted the MAD index according to BCS sections.

Based on the available information, we included within each section several individual items considered to be relevant to our investigation (see Table. 1).

The first category in our model is "Customers/Stakeholders" and includes (same for all perspectives) "goals" and "objectives", measurable targets to be achieved within a particular time frame, as argued by Christensen et al. (2015). Public sector organizations are accountable to a high diversity of stakeholders with less clear "prioritization mechanisms and hierarchies" (Greiling et al., 2015). These are also expected to disclose environmental and social information (Gray et al., 2009), thus, the concept of environment has also been included in these criteria. The next item in this category is "customer satisfaction" which is positively linked to

performance, because including stakeholders' interests in the organization's mission results in a higher satisfaction level (Camarero, 2009). Customer satisfaction is increasingly recognized as one key indicator of performance within public sector agencies (Wei et al. 2008). Another item placed in this category is the Mayor's report (Ryan, et al., 2002). Since the mayor is elected based on citizens' right to express their vote, we consider important for them to be aware of the extent to which the person they defended has been fulfilling its obligations. The last item "taxpayers", consider that citizens are the financiers of the local government's activities, thus having a notably important position.

Table 1BSC assessment

Categories	Items
Customers/Stakeholders	Goals and objectives; Environment; Customers' satisfaction; Mayor's report; Taxpayers
Financial Information	Goals and objectives; Budget execution; Financial statement; Property statement; Public acquisitions; Investments; Budget
Internal Process	Goals and objectives; Events; City Hall Management; Educational Activities
Learning and Growth	Goals and objectives; Personnel; Equal Employment; Research and Scholarship

The second category is "Financial information" and relates to the disclosures in financial statements and other financial data. In this section, four items have been selected: "Financial statement", "Property statement", "Public acquisition" and "Investments". The "Budget execution" was not considered for this investigation being that the information related to this indicator was not available on the website. Citizens, as taxpayers, are partially the financiers/sponsors of local government's activity, and they are interested in being informed regarding the manner in which public funds are being managed.

The item "events" in the third category refers to community partnerships for evaluating the means by which "local authorities control their functions and relate to their communities" (Ryan, et al., 2002). Further, "city hall management" and "educational activities" are included in our LGA index for analyzing the interest in increasing the quality of the services provide through well-established strategies and more educated and trained employees. Educational activities in the interest of the citizens can contribute to strengthening the bond between the city hall and taxpayers and increase citizens trust. In the last section "Learning and Growth", we included the "Personnel" item to encompass disclosures on councilors, staff and senior management. Human capital is an issue of great interest and information related to this topic should be disclosed in reports that have an extensive readership (Wei et al., 2008) or via the Internet, thus, an "equal employment" opportunity is

included in the development of our LGA index, alongside with “research and scholarship”.

For determining the overall level of disclosure, we created a simple disclosure index using Cooke’s (1989) methodology. Prior studies have widely used this method, for analyzing the content of the public sector entities websites (Caba Pérez et al. 2014). For constructing the disclosure index each site from our sample has been analyzed (for each selected item the score is 1- disclosed or 0 –absent, using a dichotomous variable). The sum of these scores reflects the quantity and extent of performance accountability disclosures in the Romanian local governments. The LGA index also allows for measuring the variations in the quality of individual items by using a six-point (0-5) scale. If the item is not disclosed, it receives a quality score of (0). If the item is presented, it receives a score ranging from (1) poor to (5) excellent, based on the perceived quality of disclosure as it is described in Tabel 2.

**Tabel 2 Extras from qualitative assessment of each item in
“Customers/Stakeholders” category**

Customers/ Stakeholders	5 points	4 points	3 points	2 points	1 point
Mayor’s report	Reference to all activities and achievements set in context of economic, social and political environment	As of 5 but with minor lacks	Broad discussion	Brief description	Bare discussion

Most studies in the literature use a three-point scale in weighting the selected items for highlighting the fact that disclosure of some elements it is more important than others. Without applying this weighting system, each item has equal importance and has no value judgments attached and no risk of incurring scoring bias. However, unweighted elements can also generate scoring bias, by considering all items as equally important. According to Firth (1980) the use of weighted or unweighted scores may influence the results in small proportion or not at all. Therefore, the LGA index in this study does not use weighted items as intent to avoid attaching any personal judgment to the LGA index (Rouf, 2011)

This study analyzes the quantity and the quality of information disclosed by all Romanian local governments in 2014 on their websites. In Romania, there are 42 counties each with a county city hall. However, our sample includes only 39 city halls since 3 were excluded because at the time of this investigation their websites were inaccessible and the information disclosed could not be accessed. For determining the quantity of disclosure, we first verified if the information related to

our selected items is presented on the website and scored it by using a six-point scale (0-5). The sum of the all these elements indicates the quality of disclosure for each city hall and the descriptive statistics for this part of the investigation are presented in Table 3.

4.3. The determinants of quality disclosure in the case of local governments

There are many studies in the literature analyzing the determinants of information disclosed in the public sector. The variables varied from political competition (Tagesson, et al., 2013) to the population (García-Sánchez et al., 2013), internet access and education level (Caba Pérez et al. 2014), or the level of wealth (Wehner & Renzio, 2013). Based on prior literature, this paper aimed to test three hypotheses concerning various factors that encourage city halls to disclose information via the internet, namely the county population, the Internet access based on education level and the level of wealth (county GDP and county mean salary).

According to the literature, the *population* can influence the degree of transparency (Albalade del Sol, 2013) since governments are expected to face higher citizens' demands for information disclosure. As the voters to be allowed to evaluate the performance of an entity, it has also appeared this need for reducing the asymmetry of information between politicians and citizens so (García-Sánchez et al., 2013). For Spanish local governments, Albalade del Sol (2013) discovered that the population has a positive and significant influence on the disclosed level. In the case of Swedish municipalities, the level of disclosure is associated with the tax base, size, tax rate, political majority and financial performance (Tagesson, 2013). Based on these prior studies, the first hypothesis (H1) can be stated as follows:

H1: There is a positive association between the quality of disclosure and the population size.

Many studies in the literature have established a positive association between the *level of wealth and e-governance* (Kim, 2007). Moreover, according to prior research, countries with a high economic wealth are more transparent when it comes to disclosing financial information (Piotrowski & Van Ryzin, 2007) and a significant association has been found between the number of electronic services and GDP. Tolbert et al. (2008) analyzed the relationship between the development of e-government and economic wealth, among other factors in 50 American states, finding a significant association. However, Gallego-Álvarez et al. (2011) examined the determinants of e-government development in the larger municipalities from 81 countries worldwide, but the results revealed no relation between economic wealth and the development of digital administration. Considering these prior studies, the second hypothesis (H2) is:

H2: There is a positive association between the information disclosed on the website and the level of wealth (county GDP and county mean salary).

Kim (2007) points out that the greater the proportion of *Internet* users, the greater the number of people who could access public entities' websites and demand for more transparency. Hence, in societies with an increased number of internet users, the online availability of public information is likely to be greater. *Citizens' education* level is a factor that influences the amount of information disclosed on websites. Researchers argue that an educated population will demand a higher volume of information from the public administration (McNeal et al., 2007). For analyzing the influence of the internet access and education over the level of disclosure, the study takes into consideration the number of people with internet access, which also have a college degree and above.

H3: There is a positive association between the information disclosed on the website and the internet access based on the education level of citizens.

For determining the factors that might have an influence on the quality of disclosure, the study applies an OLS linear regression, and the results of this investigation are presented in Table 5. The analysis was performed in 2015 and all researchers assessed all town halls so as to avoid the risk of inconsistencies.

5. Results

The result of our analysis reveal that the mean of performance accountability disclosure score (Table 3) is 47.42 out of a maximum possible of 85. Also, it can be observed the range of scores from 31 to 68 that expose considerable fluctuation in the quality of disclosure. Moreover, the results also reveal that none of the city halls achieves the maximum level of quality disclosure.

Table 3 The quality of disclosure

n=39	2014
Mean Score (max=85)	47.42
Std.Deviation	8.18
Minimum	31
Maximum	68

In the "Customers/Stakeholders" category, the overall average level of quality disclosure is 2.94. Only two city halls score the maximum five for "environment", while seven of them score 0 (zero) for not disclosing any information. It is notable that most entities register a score of 3, omitting to present footnotes on the environment report. On the "objectives" area, the situation is slightly different as six units score the maximum five. The "mayor's report" item and "customer's satisfaction" register the same average of quality (3.41). Nevertheless, some difference can be observed. The "Customer's satisfaction" zone registers the higher number of units scoring the maximum level of quality (8).

The summary of the results for this category is presented in Table 4.

Table 4 “Customers/Stakeholders”- Results

Disclosure	Environment	Objectives	Mayor's Report	Customers' Satisfaction	Tax Payers
Level 5	2	6	7	8	5
Level 4	7	8	18	20	10
Level 3	13	8	6	3	13
Level 2	5	6	4	2	6
Level 1	5	2	0	0	1
Level 0	7	9	4	6	0
Mean disclosure	2.35	2.56	3.41	3.41	3

However, six city halls do not disclose any information on this matter. On the other hand, for the “mayor’s report” item seven entities are scoring five, but only four units score zero for not disclosing the report. In case of “taxpayers”, the average quality of disclosure is 3, with thirteen units ranking this level for missing to disclose minor aspects on ethnic groups.

Regarding the category “Financial information”, the average level of disclosure scores is 3.11. The Romanian local governments register an average quality level of 4.87 for “budget information” and 4.61 for “budget execution”. Aside from four city halls that obtained zero for their total lack of disclosure, all the other units present their budget and budget execution account in a PDF format as a scanned form of the original budget document. The approval signatures on the report confirm that the information is genuine, and the reports are prepared according to the law’s stipulations, thus scoring a maximum of five. The Romanian city halls provide comprehensive information regarding “property statements” with an average of disclosure of 3.28, but with a significant number of units receiving a rate of five. For the “public acquisitions” and “investments” areas, it appears that most units fail to disclose two significant components, such as policy disclosure in case of “public acquisitions”, thus generally ranking three. “Financial statements” is the most fragile area of this section with an average grade of 0.82 with only nine entities out of 39 presenting a sporadic disclosure with major assets omitted, while the other entities do not disclose information at all.

For the “Internal processes” category, the general level of quality is poor, being the weakest area of reporting. The average of disclosure scores 2.23 with two city halls that do not provide information for any of the three items. Few cases provide comprehensive internal process information and trends. However, the highest score is 13 (maximum 15) and was obtained by two units. On the “city hall management”

item, even if most entities disclose separately titled section comparing financial and non-financial performance with objectives, the average score still does not exceed 2.47. Within this category, “educational activities” achieves the highest average of disclosure (2.97), while for the “events” zone, only 11 city halls provided brief references mostly.

For the “Learning and growth” section, the maximum score is 12 out of 15, being reached only by one city hall. It appears that “equal employment” is the strongest link to this section with an average of disclosure of 3.76 and with a great number of entities presenting titled sections, separately disclosing descriptive information about appropriate groups, gender, ethnic, disabled, and the eligibility conditions for occupying a certain position. For the “research and scholarship” item, however, most units disclose the number of publications, research projects, activities within the projects, the average scores is 3. The area of “personnel” is poorly disclosed, being the weakest item in this section (average of 0.28) with only three local governments providing information concerning this issue but with several lacks (average of 3.66).

Regarding the determinants of the quality of disclosure in Romanian local governments, it appears that among all selected variables only the level of the population has an influence on the LGA index, as presented in Table 5 and Table 6.

Tabel 5 Correlation matrix

	LGAIndex	Ln_population	Mean_salary	NetAccess	CountyGDP
LGAIndex	1.000000				
Ln_population	0.058816	1.000000			
Mean_salary	0.142186	0.724138	1.000000		
NetAccess	0.059631	0.916318	0.824657	1.000000	
CountyGDP	0.098839	0.727779	0.839645	0.931414	1.000000

Table 6 The determinants of the quality of disclosure

Variables	Coefficient	Std. Error	t-Statistic
Ln_population	3.315220**	1.279492	2.591044
Mean_salary	0.007850	0.012548	0.625612
NetAccess	-4.71E-05	3.63E-05	-1.298048
CountyGDP	0.000660	0.000889	0.742031

*p<0.10; **p<0.05; ***p<0.01

The level of the population presents a positive and significant influence on the quality of disclosure (p=0.014), so *hypothesis H1 is confirmed*. The governments of countries with larger populations are more predicted to disclose higher quality

reports (García-Sánchez et al., 2013). This result is also supported by Albalade Del Sol (2013), who argue that the higher the size of the population the greater the pressure of making information available to all interested parties.

The level of wealth does not seem to influence the amount and the quality of disclosure. Prior researches argue that the higher the level of wealth the larger the amount of information disclosed (Piotrowski & Van Ryzin, 2007, Kim, 2007; Tolbert et al., 2008). The development of ITC infrastructure in the public sector is strictly related to the level of economic development, which is also essential for implementing e-governance and online disclosure practices. Moreover, a higher standard of wealth per capita allows in purchasing information communication tools that facilitate access to online information. However, *hypothesis H2 cannot be confirmed*.

As regards the Internet access based on the education level, it appears that it does not have a significant influence on the quality of disclosure. A certain degree of education is necessary to acquire computer skills and it is expected that a high standard of internet use could influence city halls in disclosing more information online. Moreover, Kim (2007) argues that an increased number of internet users can influence in a positive manner the level of information disclosed. However, *hypothesis H3 cannot be confirmed*.

6. Conclusions

Cambridge Business English Dictionary defines performance management as those activities meant to ensure that goals are consistently being met in an efficient and effective manner. While effectiveness was defined as compliance with customer requirements, efficiency shows how the organization's resources are used to achieve customers' satisfaction levels (Neely et al., 1996).

Enhancing performance accountability, especially in the context of new public management (NPM) has often been discussed worldwide, requiring not only improvements in public accountability of governments, but also greater transparency for increasing citizen's trust. In this context, the concept of the Balanced Scorecard (BSC) is a strategic management system for organizational performance that uses strategic development, operational and individual plans as support for communication, monitoring and improving organizational performance. BSC is presented as an essential factor for the implementation of the strategy, being also appreciated as an organizational capability.

The effectiveness of BSC either in the public or private sector is given by its use in the three critical dimensions: performance measurement, strategy management and as a communication instrument (Nistor, 2010), involving all the parties concerned in quality awareness and a new cultural strategy.

Based on an in-depth literature review, we appreciated that the perspectives order for the public sector is different, the stakeholders' perspective being the first one,

while the financial perspective is placed in the second position. Further, in this context, we create an index (LGA) based on the MDA framework combined with the BSC structure as advanced by Niven & Mann (2003), aiming to assess the quality of the information disclosed by local governments on their websites. In the Romanian context, the Law No. 544/2001 regards the free access to information of public interest and contains the list of information that must be disclosed by any public institution either by posting on their websites or in public places. The annual report is one of the items that should be voluntarily disclosed according to this law. However, in Romania, most local governments fail in complying with these requirements. The results of our investigation highlight that local governments in our sample present severe lacks not only with respects to the quantity of the information disclosed, but also concerning the complexity and comprehensiveness of the information if made publicly available. The mean of disclosure level is 47.42 with none of the local governments being able to reach the maximum score (85 points).

Thus, we demonstrated that applying BSC manages to improve the quality and performance management in the public sector through the positive growth margin (37.52), especially considering that the development of the LGA Index was exclusively based on financial and non-financial items specific to the public sphere (see Appendix 1). Moreover, our results are in consent with those reached by similar studies that examined the effectiveness of BSC's dimensions in improving e-government service delivery performance (Lawson-Body, et al., 2008).

To better argue this conclusion basing on prior literature, this study aimed testing three hypotheses concerning the factors which encourage local governments to disclose information via the internet. The research considers as influence factors the size of the population, the level of wealth (county GDP and county mean salary) and the Internet access based on education level. The results show that there is a positive and significant association between the size of the population and the quality of disclosure while the standard of wealth and the Internet access present no influence over the accountability level. Therefore, only the first hypothesis (H1) can be validated.

The limits of our study came from the sample of local governments, the limited number of e-government determinants and the fact that only one-year data were considered for analysis. Also, these results reveal what has been found on the websites at a single moment in time. Thus, it may not reflect the current level of information disclosed online by local governments, especially considering that the websites are being constantly updated.

In conclusion, our study highlights the close relationship between performance management and the BSC. An appropriate application of the BSC adapted to the public sector would ensure a full information disclosed with a direct impact both on users' needs and public institutions' degree of transparency and level of performance. Nowadays, in the era of the new public management, a correlation between management and e-governance is remarkable. Thus, we certainly could

state that the fulfillment of the two parties (management and BSC) would provide a “real lasting marriage”, whose beneficiary would be all users involved in interacting with the public sector.

We believe that in the globalization process, the public sector can no longer be seen isolated, the implication of the national aspects being important. Knowledge of those particularities, (e.g. Romanian public system), places the research in the sphere of interest of theoreticians interested in analyzing emerging countries, as parts of the European Union, and practitioners who manage to find justifications and solutions to similar issues faced in their national systems.

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7. References:

- Abraham, S. and Shrivies, P.J. (2014). Improving the relevance of risk factor disclosure in corporate annual reports. *The British Accounting Review*, Vol. 46, No. 1, pp. 91-107.
- Albalatedel Sol, D. (2013). The institutional, economic & social determinants of local government transparency'. *Journal of Economic Policy Reform*, Vol. 16, No. 1, pp. 90-107.
- Alhyari, S., Alazab, M., Venkatraman, S., Alazab, M. & Alazab, A. (2013). Performance evaluation of e-government services using balanced scorecard. *Benchmarking: An International Journal*, Vol. 20, No. 4, pp. 512 – 536.
- Al-Najjar, S.M. & Khawla, H.K. (2012). Designing a balanced scorecard to measure a bank's performance: A case study. *International Journal of Business Administration*, Vol. 3, No. 4, pp. 44-53.
- Brito, J. (2004). Improving government transparency online. *Public Manager*, Vol. 37, No. 1, pp. 22-26.
- Caba Pérez, M.C., Rodríguez Bolívar, M.P. & López Hernández, A.M. (2014). The Determinants of Government Financial Reports Online. *Transylvanian Review of Administrative Sciences*, No. 42 E/2014, pp. 5-31.
- Callahan, K. & Kloby, K. (2007). Collaboration meets the performance measurement challenge. *Public Manager*, Vol. 36, No. 2, pp. 11-24.
- Camarero, C. & Garrido, M. (2009). Improving museums' performance through custodial, sales, and customer orientations. *Nonprofit & Voluntary Sector Quarterly*, Vol. 39, pp. 846-868.
- Christensen, T. & Lægheid, P. (2015). Performance and accountability — A theoretical discussion and an empirical assessment. *Public Organization Review*, Vol. 15, pp. 207 – 225.

- Cooke, T.E. (1989). Disclosure of the corporate annual reports of Swedish companies. *Accounting and Business Research*, Vol. 19, No. 74, pp. 113-124.
- Coy, D., Tower, G. & Dixon, K. (1993). Quantifying the quality of tertiary education annual reports. *Accounting and Finance*, Vol. 33 No. 2, pp. 121-129.
- Coy, D. & Dixon, K. (2004). The public accountability index: crafting a parametric disclosure index for annual reports. *The British Accounting Review*, Vol. 36 No. 1, pp. 79-106.
- Coste A, Tiron-Tudor A performance measurement in higher education, literature review, SEA: Practical Application of Science, 2015
- Dias Jordão, R.V. & Casas Novas, J.L. (2013). A study on the use of the balanced scorecard for strategy implementation in a large Brazilian mixed economy company. *Journal of Technology Management and Innovation*, Vol. 8, No. 3, pp. 98-107.
- Dubnick, M. (2005). Accountability and the promise of performance: in search of the mechanisms. *Public Performance and Management Review*, Vol. 28, No. 3, pp. 376-417.
- Ferry, L. & Eckersley, P. (2015). Accountability and transparency: A nuanced response to etzioni. *Public Administration Review*, Vol. 75 No. 1, pp. 11-12.
- Firth, M. (1980). Raising finance and firms' corporate reporting policies. *Abacus*, Vol. 16, No. 2, pp. 79-99.
- Gallego-Álvarez, I., Rodríguez-Domínguez, L. & García-Sánchez, I.M. (2011). Are determining factors of municipal e-government common to a worldwide municipal view? An intra-country comparison. *Government Information Quarterly*, Vol. 27, No. 4, pp. 423-430.
- Garcia-Sanchez, I., Frias-Aceituno, J. & Rodriguez-Dominguez, L. (2013). Determinants of corporate social disclosure in Spanish local governments. *Journal of Cleaner Production*, Vol. 39, pp. 60-72.
- Goh, S. (2012). Making performance measurement systems more effective in public sector organizations. *Measuring Business Excellence*, Vol. 16, No. 1, pp. 31-42.
- Gray, R., Dillard, J. & Spence, C. (2009). Social accounting research as if the world matters. *Public Management Review*, Vol. 11, No. 5, pp. 545-573.
- Greiling, D. (2006). Performance measurement: a remedy for increasing the efficiency of public services?. *International Journal of Productivity and Performance Management*, Vol. 55, No. 6, pp. 448-465.
- Greiling, D., Anton, A. & Stötzer, T.S. (2015). Sustainability reporting in the Austrian, German and Swiss public sector. *International Journal of Public Sector Management*, Vol. 28, No. 4/5 pp. 404 – 428.
- Halachmi, A & Greiling, D. (2013). Transparency, e-government, and accountability. *Public Performance and Management Review*, Vol. 36, No. 4, pp. 562-584.
- Harrison, J., Rouse, P. & de Villiers, C. (2012). Accountability and performance measurement: a stakeholder perspective. *The Business and Economics Research Journal*, Vol. 5, No. 2, pp. 243-258.

- Hood, C. (2010). Accountability and transparency: Siamese twins, matching parts, awkward couple?. *West European Politics*, Vol. 33, No. 5, pp. 989–1009.
- Hooks, J., Tooley, S. & Basnan, N. (2012). An index of best practice performance reporting for Malaysian local authorities. *Journal of Applied Accounting Research*, Vol. 13, No. 3, pp. 270 – 283.
- IPSASB (2013). Handbook of International Public Sector Accounting Pronouncements, published by International Federation of Accountants (IFAC).
- Ismail, S., & Abu Bakar, N.B. (2011). Reporting practices of Malaysian public universities: The extent of accountability disclosure. *African Journal of Business Management*, Vol. 5, No. 15, pp. 6366-6376.
- Ittner, C.D. & Larker, D.F. (2001). Assessing empirical research in managerial accounting: A value-based management perspective. *Journal of Accounting and Economics*, Vol. 32, No. 1-3, pp. 349-410.
- Janota, R. & Major, M.J. (2012). The Balanced Scorecard in a pharmaceutical company. *Global Advanced Research Journal of Management and Business Studies*, Vol. 1, No. 6, pp. 240-252
- Kaplan, R.S. & Norton, D.P. (1996). Using balanced scorecard as a strategic management system. *Harvard Business Review*, Vol. 74, No. 1, pp. 75-86.
- Kaplan, R.S., & Norton, D.P. (2006). Alignment: Using the balanced scorecard to create corporate synergies. Harvard Business Press, Boston, Massachusetts.
- Keerasuntonpong, P., Dunstan K. & Khanna B. (2014). Examining Statements of Service Performance: Evidence From Wastewater Services In New Zealand. *Journal of Public Budgeting, Accounting & Financial Management*, Vol. 26, No. 4, pp. 614-642.
- Kim, C. (2007). A cross-national analysis of global e-government. *Public Organization Review*, Vol. 7, No. 10, pp. 317-329.
- Koppell, J. (2005). Pathologies of accountability and the challenge of multiple accountability disorder. *Public Administration Review*, Vol. 65, No. 1, pp. 94-108.
- Lawson-Body, A., Keengwe, J., Mukankusi, L., Illia, A. & Miller, G. (2008). E-Government service Delivery Performance: an adaptation of the balanced scorecard to the public sector. *Journal of Electronic Commerce in Organization*, Vol. 6, No. 2, pp. 11-28.
- Lebas, M. (1995). Performance measurement and performance management. *International Journal of Production Economics*, Vol. 41, No. 1–3, pp. 23–35.
- Modell, S. (2003). Goals versus institutions: the development of performance measurement in the Swedish university sector. *Management Accounting Research*, Vol. 14, pp. 333-359.
- Neely, A.D., Mills, J., Platts, K., Gregory, M. & Richards, H. (1996). Performance measurement system design: should process based approaches be adopted. *International Journal of Production Economics*, Vol. 46-47, pp. 423–431.
- Nelson, M., Banks, W. & Fisher, J. (2003). Improved accountability disclosures by Canadian Universities. *Canadian Accounting Perspectives*, Vol. 2, pp. 77–107.

- Nistor, C.S. (2010). An empirical research about the contain of Balanced scorecard concept in public sector. *Studia Universitatis Babeş Bolyai-Negotia*, Vol. 3, pp. 51-68.
- Niven, P. & Mann, S. (2003). Adapting the balanced scorecard to fit the public and nonprofit sectors. *Balanced Scorecard Step-by-step for Government and Not-for-profit Agencies*. Wiley, New York, NY.
- Norreklit, H. (2000). The balance on the balanced scorecard - A critical analysis of some of its assumptions. *Management Accounting Research*, Vol. 11, No.1, pp. 65-88.
- OECD (2004). Public sector modernisation: governing for performance, available at: <http://www.oecd.org/site/govgfg/39044817.pdf>
- Piotrowski, S. & Van Ryzin, G. (2007). Citizen attitudes toward transparency in local government. *The American Review of Public Administration*, Vol. 37, No. 3, pp. 306-323.
- Pilcher, R., Gilchrist, D., Singh, I. & Singh, H. (2013). The interface between internal and external audit in the Australian public sector. *Australian Accounting Review*, Vol. 23, No. 4, pp. 330-340.
- Radnor, Z. & McGuire, M. (2004). Performance management in the public sector: fact or fiction?. *International Journal of Productivity and Performance Management*, Vol. 53, No. 3, pp. 245-260.
- Romanian Parliament (2001). Law No.544 regarding the free access to information of public interest, [Online] available at <http://legislatie.resurse-pentru-democratie.org/legea/544-2001.php>
- Rouf, A. (2011). Corporate characteristics, governance attributes and the extent of voluntary disclosure in Bangladesh. *African Journal of Business Management*, Vol. 5, No. 19, pp. 7836-7845.
- Rutherford, B. (2000). The construction and presentation of performance indicators in executive agency external reports. *Financial Accountability and Management*, Vol. 18, No. 3, pp. 225-249.
- Ryan, C., Stanley, T. & Nelson, M. (2002). Accountability disclosures by Queensland local government councils: 1997-1999. *Financial Accountability and Management*, Vol. 18, No. 3, pp. 261-89
- Samsonowa, T. (2012). *Industrial research performance management*, Contributions to Management Science. Springer
- Sanger, M.B. (2008). From measurement to management: breaking through the barriers to state and local performance. *Public Administration Review*, Vol. 68, pp. 70-85.
- Sinclair, A. (1995). The chameleon of accountability: Forms and discourses. *Accounting, Organizations and Society*, Vol. 20 No. 2-3, pp. 219-237.
- Sintejudan M, Farcas T, Tiron-Tudor A – Public sector transparency: a conceptual dissection: Practical Application of Science, 2014
- Tagesson, T., Klugman, M., & Lindvall, M. (2013). What explains the extent and content of social disclosures in Swedish municipalities annual reports. *Journal of Management and Governance*, No. 17, pp. 217-235.

- Tilbury, C. (2006). Accountability via performance measurement: the case of child protection services. *Australian Journal of Public Administration*. Vol. 65 No. 3, pp. 48-61.
- Tiron-Tudor A, Popa A, Blidisel R (2009) E-financial reporting within the Romanian public sector governance , *Proceedings of the 9th European Conference on E-government*, Westminster Business School University, Publisher: Academic Publishing Limited, London, England, 2009
- Tiron-Tudor A, Popa A, Blidisel R (2010) Challenges of E-Disclosure in Romanian Local Public Authorities, book *Information Communication Technologies and the Virtual Public Sphere: Impacts of Network Structures on Civil Society*, Pag 242-275, IGI Global
- Tolbert, C. J., Mossberger, K., & McNeal, R. (2008). Institutions, policy and E-government in the American States. *Public Administration Review*, Vol. 68, No. 3, pp. 549–563.
- Torres, L., Pina, V. & Royo, S. (2005). E-government and the transformation of public administrations in the EU countries: beyond NPM or just a second wave of reforms. *Online Information Review*. Vol. 29, No. 5, pp. 531-53.
- Vesty, G.M. (2004). A case study of the balanced scorecard in public hospitals. Master Thesis, [Online] available at http://vuir.vu.edu.au/17897/1/VESTY_2004compressed.pdf
- Vogt, T., Lauer, F., Scholz, G. & Michaelis, J. (2004). Vom Leitbild zur Strategie - Die Entwicklung des Strategiekonzepts der Johannes Gutenberg-Universität Mainz. In: *Wissenschaftsmanagement*, Jg. 20, H. 2, S. 32-38.
- Wehner, J. & de Renzio, P. (2013). Citizens, Legislators, and Executive Disclosure: The Political Determinants of Fiscal Transparency. *World Development*, Vol. 41, pp. 96–108.
- Wei, T.L., Davey, H. & Coy, D. (2008). A disclosure index to measure the quality of annual reporting by museums in New Zealand and the UK. *Journal of Applied Accounting Research*, Vol. 9, No. 1, pp. 29-51.
- Wichowsky, A. & Moynihan, D.P. (2008). Measuring how administration shapes citizenship: a policy feedback perspective on performance management. *Public Administration Review*, Vol. 68, No. 5, pp. 908-920.
- Zaman, M. (2003). Balanced scorecard implementation in Australian companies: an exploratory study of current corporate practice and strategic intent. Central Queensland University