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## The Degree of Reporting of the Environmental Information by the Economic Entities in Romania

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### Abstract

Through this scientific paper, the authors aim to highlight the importance of environmental reporting for the economic entities in Romania. Considering the stage of the researches undertaken by the specialized literature up to the recent realizations of different specialists on environmental reporting by the economic entities from different activity domains, the authors of this paper demonstrate the importance of the elaboration and of the publication of the information concerning the environment, by means of the environment reports that permit a general perspective on the activity of the economic entities, on the shortcomings and disturbances appeared during the activity and on the opportunity of taking the best corrective measures in order to attain the goals established through the corporate strategy. Environmental reporting - an important communication tool that can assure a greater transparency and a better engagement with the stakeholders - is part of the sustainable and voluntary reporting that seems to be guided by the pressures of the market [1]. Following the study undertaken on a national level, we have noticed that so far there is no regulation to oblige the economic entities in Romania to provide the information users with separate environmental reports or specific information concerning the environmental impact, so that the commitment of the entity to the environmental information users remains an option, and not an obligation, for the corporate leadership. The paper ends with the authors' conclusions concerning the enlargement of the framework of successful implementation of the environmental reports in the economic entities of Romania.

**Keywords:** Information, Environmental Report, Environment, Economic Entities.

### Introduction

The concept of environmental report is largely used in the francophone culture and represents the means to synthesize some necessary information for the leadership of the entity. In the context of a competitive business environment for the economic entities in Romania, the environmental report can represent the best way of highlighting the environmental indicators, allowing the visualization of a general tendency in the analyzed evolution of these entities. In agreement to its established goals, each economic entity can establish/construct its own structure of this reporting. Although there are several conceptions

concerning the environmental report, it is always understood as a work tool, serving to control, foresee and plan certain actions related to a responsibility domain from inside the economic entity [1]. The evolution of the competitive environment of the economic entities has brought to light the control paradigm and has made it necessary to pass to the paradigm of the monitoring of the economic entities' activity. The managers of the economic entities are sooner or later faced with problems whose correct and rapid solution may be the only way of survival and sustainability on the market for the entity they are leading. In order to be able to answer the problems they are faced with, the managers need pertinent information concerning both the general activity and the particular aspects of the economic entity. In order to pursue the realization of the established goals on all the levels, an economic entity needs information tools, one of them being the environmental report. So, the main objective of this research is to identify the degree (the level) of reporting of the environmental information by the Romanian enterprises listed on the Bucharest Stock Exchange. When we started the present research, we had numerous studies available for analysis, made by a series of prestigious academics from the Academy of Economic Studies, who studied the increasing importance of the presentation of the information on the environmental and social performance in the annual corporate reports. They identified the degree of presentation of their general social and environmental aspects and of their social and environmental performance by 100 international enterprises listed on the London Stock Exchange. Consequently, the authors of this paper decided to continue these researches on a national level. So, this study relies on a sample of 63 enterprises of Romania, all of them listed on the Bucharest Market Exchange, enterprises whose economic activity has a significant impact on the environment, from the domains: forestry, extractive industry, processing industry, power industry, transports and constructions. We shall mention that we have chosen these domains after having analyzed the report "Expenses, production and financing of the environmental protection in the year 2010", a report provided by the National Statistics Institute, and, from it, the enterprises from the above-mentioned domains that recorded the highest ratio of the expenses made for environmental protection. So far, in the economic entities of Romania that apply environmental reporting there is still no set of nationally-valid well-defined synthetic accounting document meant to highlight the environmental situation of an entity. For this reason, the main purpose of our paper is to show the importance of the use of specialized information in the elaboration of environmental reports as a useful document in making decisions and in improving the performance of the economic entities in Romania.

### **Literature Review**

In the Romanian and international specialized literature, very many researchers and academics have expressed their viewpoint on environmental reporting, some of them militating for its successful implementation, while others criticize it. In order to meet the information demands coming from the market and to provide credible relevant information for the enterprise, it is necessary for the reporting model to go beyond the traditional financial reporting model. The practices of environmental reporting have been the research object of numerous studies. Most of the works from this area can be classified into four categories:

- Those analyzing the features of the entities presenting environmental information: (Singhvi and Desai, 1971; Barrett, 1976; Cooke, 1989 and 1993; Wallace and Naser 1995; Raffournier, 1995; Deegan and Gordon, 1996; Adams et al., 1998; Ahmed and Courtis, 1999; Depoers, 2000; Chavent et al., 2006);

- Those analyzing the relation between environmental performance and the disclosure of the environmental information: (Ingram and Frazier, 1980; Wiseman, 1982; Guthrie and Parker, 1989; Brown and Deegan, 1998; Neu et al., 1998; Deegan et al., 2000; Hughes et al., 2001);

- Studies analyzing the variation of the environmental reports in the entities from different countries: (Fekrat, 1996; Stitle, 1997; Williams, 1999; Buhr and Freedman, 2001; Holland and Foo, 2003; Nyquist, 2003; Yusoff, 2006; Yamamoto, 2007; Jorgensen and Sodorstrom, 2006);

- Studies analyzing the variation of the environmental reports in a certain country for different entities from the same sector or from different activity sectors: (Gamble, 1995; Deegan and Rakin, 1996; Walden and Schwartz, 1997; Cornier and Magnan, 1997; Brown and Deegan, 1998; Larrinaga, 2002; Deegan, 2002; Burrit, 2002; Taylor, 2007; Sumiani, 2007).

Regardless of their respective fields of preoccupation, most of these authors agree that these pieces of information represent a particularly useful tool, necessary in order to administrate, coordinate and harmonize the activities inside an economic entity. So, a part of the specialists have observed some real successes in the implementation of the environmental reporting system by the economic entities from certain countries [2, 3, 4].

## **Research and Methodology**

### ***Research Questions***

This paper intends to explore the local attempts of implementing environmental reporting made by the economic entities of Romania. In order to survey the level of the success of this implementation in the above-mentioned entities, we had in view the analyses of the financial accounting specialists of Romania, and those of the multi-level managers from different economic entities with state capital. In other words, the authors have tried to find answers to the following questions: *What is the level of the environmental reporting in the economic entities of Romania? Does the information provided by the entity meet the expectations of the users of this environmental information? What are the main financial and non-financial reports based on which the economic entities publish environmental protection information? To what extent do the annual reports presented by the companies in Romania contain financial information related to the environment (environmental costs level, environmental benefits value)?*

### ***Instruments***

The projection of this research deals with the theoretical-methodological implications determined by means of the questions launched at the beginning of this study. For the relevance of this study, we used as research means: interviews with employees (analyses made by the employees directly involved in the corporate activities), the accounting records of the economic entity (through the collection and the analysis of the previously highlighted data, the analysis of the expenses per cost centres based on the different types of records) and the examination of the internal corporate documents (Annual report according to the Regulations of CNVM (National Securities Commission) 1/2006). As the enterprises included in this study are listed on the Bucharest Market Exchange and have the obligation to realize their Annual Report according to the CNVM Regulations 1/2006, the authors have used the content analysis as a research method, have investigated the information on environmental protection and have chosen this research method starting from the conclusion of the authors Milne and Adler [5], who hold that "it is the most used investigation method for the social

and environmental reporting of the economic entities". The quantitative measurement of the environmental information presented in the reports can be realized using several methods. For instance, Gray (1995) suggested the use of the number of words, sentences or pages. According to the authors Deegan and Gordon (1996); Zéghal and Ahmed (1990), the most used method for quantifying the reports in this domain is the number of words, a procedure that we have used as well in the present research. Along with the overall analysis of the presentations of environmental information by means of the annual report made by the enterprise, our research investigates a series of hypotheses to establish whether the level of the environmental reporting varies in agreement to certain corporate features, such as the declared turnover and the declared expenses for environmental protection.

### **Data Testing and Analysis**

In the research undertaken in order to answer the questions formulated, the authors established the following research hypotheses: H1. The level of the environmental reporting in the case of the economic entities of Romania depends on the volume of the environmental protection expenses recorded and reported by the entity; H2. The level of the environmental reporting is higher in the case of the entities with a higher turnover.

Before presenting the results obtained following our research, we consider it necessary to present several elements related to the methodology of our research. In order to test the hypotheses of our study, we used the Pearson correlation coefficient (the Pearson product-moment correlation coefficient). The Pearson coefficient is largely used in empirical research, as an indicator of the linear dependence between two variables, determining the extent to which the variables are linearly related to each other. To test the significance, the correlation coefficient is used; it can take values between -1 and +1. The research was realized via the content analysis of the annual reports of the economic entities listed on the Bucharest Market Exchange for a period of three years, starting with the year 2010. The authors have chosen this longitudinal research in order to know the evolution of the phenomenon of the environmental information disclosure in time. Following the analysis of the annual reports from the end of the three years, it has been noticed that the number of words afferent to the environmental information does not change significantly during the period under analysis 2010-2012 (about 90% of the entities of the sample published the same amount of environmental information), which has determined us to present in a centralized way only the information published at the end of the last year of the period under analysis, namely the year 2012.

### **Results and Discussions**

To validate the hypotheses of this research, the authors have analyzed the dependence among variables, using the Pearson correlation coefficient, so: *H<sub>1</sub>: The level of the environmental reporting in the case of the economic entities of Romania depends on the volume of the environmental protection expenses recorded and reported by the enterprise.*

H<sub>1-a</sub>: The two variables are independent. The hypothesis is null. H<sub>1-b</sub>: The two variables are dependent.

Table 1. The correlation coefficient between the variables environmental protection expenses and environmental information

	Environmental protection expenses	Environmental protection information
Environmental protection expenses	1	.904*
Pearson Correlation	-	.013
Sig. (2-tailed)	6	6
N		
Environmental protection information	.904*	1
Pearson Correlation	.013	-
Sig. (2-tailed)	6	6
N		

\*. Correlation is significant at the 0.05 level (2-tailed).

[Projection made using the SPSS program]

The correlation between the dependent variable “environmental information” and the independent variable “environmental protection expenses” is represented in Table 1, using the Pearson coefficient. We can notice that its value is positive and quite high (0.904), which proves that there is a relation of very significant dependence between the two variables, while Sig.<0.05. At the same time, this proves the existence of a very intense directly proportional relation between the level of the environmental information disclosed by the entity and the value of the expenses concerning the environmental protection recorded by it. The likelihood for the variation of the environmental reports to be influenced by the environmental protection expenses is of 81.72% (the R Square coefficient = 0.8172). In figure 1, the authors have presented graphically the correlation between the two variables according to the activity domain of the enterprises included in the study. One can note the ascending trend given by a positive correlation between the two variables. Therefore, on the basis of the information presented, one can state that the hypothesis: “The level of the environmental reporting in the case of the economic entities of Romania depends on the volume of the environmental protection expenses recorded and reported by the entity” is validated.

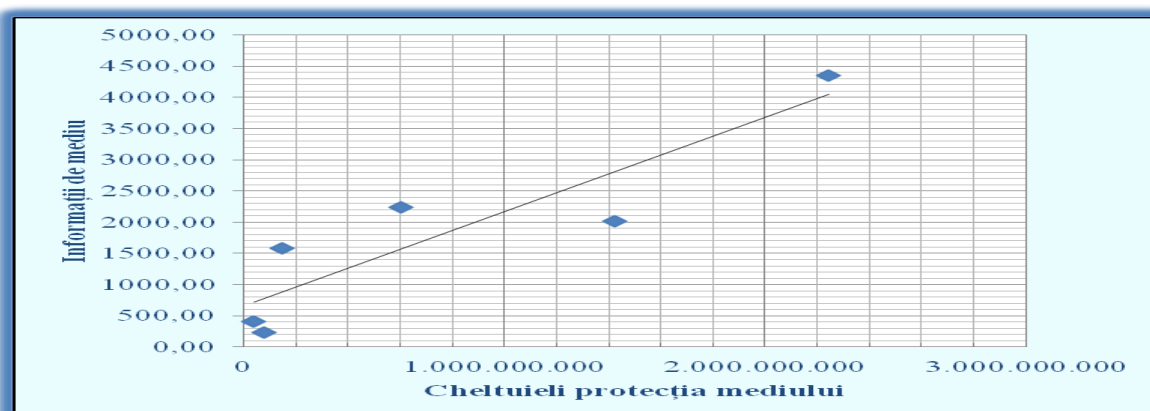


Figure 1. Graphic representation of the dependence between the environmental protection expenses and the level of the environmental reporting for each activity domain under analysis  
**H<sub>2</sub>: The level of the environmental reporting is higher in the case of the entities with a higher turnover**

Table 2. Correlation coefficient between the variables turnover and environmental information

	Mean	Std. Deviation	N
Environmental information	180,05	301,589	63
Turnover	23,5000	4,56095	63
		<b>Environmental information</b>	<b>Turnover</b>
Environmental information	Pearson Correlation	1	,343**
	Sig. (2-tailed)		,006
	N	63	63
** . Correlation is significant at the 0.01 level (2-tailed). [Projection made using the SPSS program]			

The correlation coefficient between the two variables is positive, which implies a dependence between the two variables, and the value over 0.3 and the value Sig.<0.01 make us support that between the turnover and the level of the environmental reporting there is a relation of average dependence, so that a bigger value of a turnover will determine a higher level of environmental reporting. The variation proportion is low, namely 12% (R Square = 0.1176), which means that only in 12% of the cases under analysis this correlation can be valid. As one can notice, the two research hypotheses related to the variation of the environmental reporting in agreement to the independent variables: environmental protection expenses and turnover have been validated. So, the level of the environmental information published by the economic entities of Romania listed on the Market Exchange largely depends on the level of the environmental expenses recorded by the entity and it also depends to an average extent on the turnover recorded by the respective company.

### Conclusions

In the case of the present research, we have established that the disclosure of the environmental information depends, to a certain extent, on certain factors, such as: the level of the environmental protection expenses, the value of the social capital and the firm's size, yet this does not mean that there are no other factors also influencing the economic entities in the presentation of their environmental information in the financial and non-financial annual reports. The analysis of the correlations presented allows us to conclude that for the national enterprises from the activity domains with a significant impact on the environment, the presentation of the environmental information in the annual reports completed according to the CNVM Regulations no.1/2006 depends to a very large extent (82%) on the level of the environmental expenses. The same thing cannot be stated about the dependence between the level of the environmental reporting and the size of the enterprise, as we can note that the variant proportion of this variable is 12%, and so the turnover has a small influence on the variation of the environmental reporting. The environmental aspects have become significant for an increasing number of enterprises in Romania and can have, in certain circumstances, a significant impact on the financial reports.

In the present research, starting from the theoretical approach of the environmental aspects and by means of the empirical studies carried out on the level of the enterprises in Romania, we have managed to determine the level of the environmental reporting, or at least

its evolution during the last years on a national level, and we succeeded in presenting the factors that influence the quality and the quantity of these reports, factors such as the obligatory aspect of the environmental reporting, the ethical corporate behaviour, the application and the implementation of the accounting standards.

Using two different research methods in our empirical studies –content analysis and interview – we consider that the results of our research are objective. As a limit of our research, we consider that the number of the sample chosen can be estimated insufficient, yet we have wanted to analyze only the reports of those enterprises whose economic activity has a real impact on the environment, which has led to a restraint of the activity domain. The sustainable reporting has the quality of providing information that is essential in the business analysis and that is usually missing from the financial reports. This information completes the financial reports with data that can contribute to a better understanding of the situation of a company by the report users, being related to: the training of the human capital, corporate leadership, environmental risk and responsibility management, innovation capacity. In some situations, the information concerning the sustainable development performances provides details supporting the business analysis. The relevance of a voluntary environmental report is not always the expected one. These reports are published by companies that want to obtain a certain image on the market or want to consolidate the trust they gained concerning the way they integrate the environmental aspects in the development of their activity. Social responsibility becomes the union between the enterprise and the society it is part of, an intermediate stage which, through the accounting of the social and environmental aspects of the economic operations, aims at a sustainable economic development, while environmental accounting, by means of its components – environmental administration accounting and environmental information disclosure, represents a tool allowing one to know the environmental dimension within the social responsibility.

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