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DOCTORAL THESIS

**RESEARCH ON OCCUPATIONAL HEALTH AND
SAFETY PERFORMANCE WITHIN THE FRAMEWORK
OF
CORPORATE SOCIAL RESPONSIBILITY**

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Content	3
Acronyms and notes	5
List of figures	6
List of tables	8
Introduction	11

C O N T E N T

PART I. PRESENT STAGE OF THE KNOWLEDGE REGARDING THE ISSUE OF OCCUPATIONAL SAFETY AND HEALTH WITHIN THE FRAMEWORK OF CORPORATE SOCIAL RESPONSIBILITY. CORRELATIONS

CHAPTER I. CORPORATE SOCIAL RESPONSIBILITY – A GLOBAL BUSINESS STRATEGY	17
1.1. Emergence and evolution of the concept of corporate social responsibility	17
1.2. SWOT analysis of CSR domain in Romania	20
1.3. Dynamics and perspective of CSR domain at a national level.....	23
CHAPTER II. POSITION, ROLE AND IMPORTANCE OF OCCUPATIONAL SAFETY AND HEALTH WITHIN THE FRAMEWORK OF CORPORATE SOCIAL RESPONSIBILITY	34
2.1. Social responsibility – a strategic approach for sustainable businesses	34
2.2. Position of Occupational Safety and Health within the framework of Corporate Social Responsibility.....	38
2.3. Systematic integration of occupational safety and health within business management	42
2.4. Relations among the strategic coordinates of OSH and CSR	50

PARTE II. CONTRIBUTIONS REGARDING THE EMPIRICAL RESEARCHES IN CONNECTION WITH OCCUPATIONAL HEALTH AND SAFETY WITHIN ROMANIAN CORPORATIONS

CHAPTER III. APPLIED STUDY CONCERNING THE ANALYSIS AND DECREASE OF OCCUPATIONAL RISKS SPECIFIC FOR THE ACTIVITIES CARRIED OUT AT POLICOLOR ORGACHIM GROUP	55
3.1. Policolor Orgachim Group – representative of corporate social responsibility	55
3.2. Presentation of the productive sub-system of S.C. POLICOLOR S.A. Bucharest.....	58
3.2.1. <i>Equipment, devices, transportation means used for carrying out the activities of S.C. POLICOLOR S.A. Bucharest</i>	58
3.2.2. <i>Description of the main stages of the technological processes carried out at S.C. POLICOLOR S.A. Bucharest</i>	59
3.3. Methodological aspects concerning the analysis and decrease of occupational risk	60
3.4. Analysis of labor accidents and occupational illnesses specific for the work places at S.C. POLICOLOR S.A. Bucharest	62
3.5. Analysis and decrease of the professional risk at the work places at S.C. POLICOLOR S.A. Bucharest where unacceptable risks have been determined through the analytical method of evaluating occupational risks	63
3.6. Considerations concerning the evaluation of the professional risks at the analyzed work places at S. C. POLICOLOR S.A. Bucharest	79

CHAPTER IV. EMPIRICAL RESEARCH CONCERNING THE REPORTING OF OCCUPATIONAL HEALTH AND SAFETY ASPECTS BY ROMANIAN COMPANIES – METHODOLOGICAL GROUNDS.....	82
4.1. Reporting occupational safety and health – a component of non-financial reporting	82
4.2. Methodology of research	86
4.2.1. <i>Sample composition</i>	86
4.2.2. <i>Research methods employed</i>	87
4.2.3. <i>Grounding the global OSH reporting index – a dependent variable of the research.....</i>	88
4.2.4. <i>Determinants of OSH reporting. Independent variables of the research</i>	90
CHAPTER V. ANALYSIS OF STATISTIC DATA CONCERNING THE REPORTING OF OCCUPATIONAL HEALTH AND SAFETY PERFORMANCE BY ROMANIAN COMPANIES	94
5.1. Descriptive analysis of the data.....	94
5.1.1. <i>Descriptive analysis of scalar variables</i>	94
5.1.2. <i>Descriptive analysis of nominal variables</i>	104
5.2. Applying parametric tests	106
5.2.1. <i>Testing the hypothesis concerning the significance of the average for the global reporting index variable</i>	106
5.2.2. <i>Applying the parametric test for the paired samples</i>	109
5.3. Analysis of dependence relations among statistic variables	113
5.3.1. <i>Analysis of the correlations among scalar variables owing to Pearson coefficient.....</i>	113
5.3.2. <i>Analysis of variation (ANOVA)</i>	124
5.4. Discriminant analysis.....	133
CHAPTER VI. CONCLUSIONS, CONTRIBUTIONS AND FUTURE RESEARCH PATHS	141
6.1. Conclusions.....	141
6.2. Contributions.....	145
6.3. Limitations of the study and future research paths.....	148
6.3.1. <i>Limitations of the study</i>	148
6.3.2. <i>Future research paths</i>	149
BIBLIOGRAPHY.....	151
ANNEXES	
ANNEX 1	161
ANNEX 2	162
ANNEX 3	166
ANNEX 4	175
ANNEX 5	183
ANNEX 6	185

Importance of the research subject

The importance of the research subject is given by the last tendencies manifested at a European level in the field of reporting the sustainability of the operations carried out by the business organizations including more than 500 employees, which target balancing financial data with “non-financial” data. Under such circumstances, the interest of the management of large corporations in occupational safety and health – an important topic of the new non-financial reporting – tends to increase exponentially, determining benefic effects upon competition and business development.

Necessity of the subject

The issue of measuring the performance of corporate safety and health under the framework of social responsibility and sustainability is scarcely analyzed in Romania. Although this has been the main motivation in choosing this subject, it, nonetheless, combined subsequently with the vivid interest and curiosity for investigating and discovering a series of new elements that concern the theoretical aspects and the practical paths of action through which Romanian corporations adapt to the legal framework existing at the level of the European Union in this domain, while identifying adequate manners of quantifying and reporting safety performance within larger contexts such as reporting corporate social responsibility, non-financial reporting or integrated reporting.

Objectives of the thesis

The general objective of the doctoral thesis is the carrying out of a coherent methodological approach accompanied by founding and applying efficient pragmatic instruments for the analysis of corporate safety performance and for establishing the optimal framework for integrating them within the modern management systems of responsible businesses.

Structure of the thesis

The doctoral thesis includes 6 chapters and 152 pages dedicated to the scientific approach and 35 pages containing the 35 pages of the 6 annexes. As a whole, I have elaborated and included in the thesis 57 figures, 105 tables and 224 bibliographical references.

The chapters and paragraphs that structure the thesis come one after another logically, following a normal translation from describing the theoretical framework of the thesis to displaying my own empirical researches that regard the deepening, integration and customizing documentation approaches and collecting, investigating and interpreting an important amount of statistic data that ground the research. The results obtained rely on a proper statistic and mathematic system, based on a series of correlation and discriminant analyses that accurately show the evolution and dynamic of the phenomenon of measuring and reporting the performance of occupational safety and health in Romania.

The first part of the doctoral thesis deals with carrying out a synthesis of specialized works that concern the issue of occupational safety and health approached under the framework of corporate social responsibility.

Chapter I, entitled “*Corporate social responsibility – a global business strategy*” describes synthetically the large number of debates and the various point of view that have been registered by specialized works, over time, in connection with defining corporate social responsibility. Meanwhile, I make a presentation of the institutional framework and the key actors having responsibilities in the area of turning the CSR concept into an operational device in our country; I have also carried out a SWOT analysis of the present stage of the knowledge of this concept in Romania. Meanwhile, the synthesis of the newest statistic researches at a national level published by prestigious consultancy companies (Ernst & Young, CSRMedia.ro, Valoria Business Solutions, etc.) allowed me to grasp a series of representative coordinates and to emphasize the most obvious

trends that are going to come out in the near future in connection with the evolution of CSR.

The second chapter is entitled “*Position, role and importance of occupational safety and health within the framework of corporate social responsibility*” and carries out a complex analysis of the manner according to which the two concepts mix in the management theory and practice of modern corporations. As far as the corporate social responsibility for employees is concerned, occupational safety and health surpasses the minimal requirements settled by the legislative framework in force concerning the providing of the employees’ safety and health at their work places and the prevention of the risks of accidents and professional illnesses, while providing the conditions for developing and strengthening a safe and comfortable environment for the employees, which is able to guarantee increased levels of professional satisfaction and labor motivation. Considering a larger perspective, I have also approached the management systems for labor safety and health in accordance with a traditional and systematic conception, structuring the main ingredients an ideal LSH management system should include. An important part of this chapter concerns the presentation of a series of *levels of systematic integration of occupational safety and health* within business management: integrated management of health; total management of quality; “Lean Production” concept; business excellence models; Six Sigma concept, “Balanced Scorecard” system, etc. The last paragraph of this chapter displays a review of the documents issued at an European and national level concerning the issue of occupational safety and health from the perspective of a micro-economic context within the framework of corporate social responsibility: *Community strategy for labor safety and health* for the period 2002-2006 and 2007-2012; *European strategic framework for work place health and safety* for the period 2014-2020; *National strategy in the domain of labor safety and health for the period 2017-2020*, etc.

The second part of the doctoral thesis, displaying an increased applicative character, contains two distinct empirical researches that have in view:

- The application of modern methods for the evaluation and eliminating occupational risks in industrial corporate environments;
- The studying, relying on surveys, of the phenomenon of reporting occupational safety and health performances by socially responsible companies in Romania.

The third chapter of the thesis includes a vast case study that regards the analysis and decrease of occupational risks specific for the production activities carried out by Policolor Orgachim group, one of the leaders that promote the programs for corporate social responsibility at a national level and also a regional leader in the field of varnishes and paints technology in the area of South-Eastern Europe. In the case of this company, a quantitative analysis method is applied, measuring and decreasing accident risks, which matches the stipulations of Law 319/2006 of Labor Safety and Health (with subsequent changes and completions) and the national harmonized standards which stipulate the binding and principles of work place risks. The essence of the method consists in identifying all the risk factors in the analyzed system, followed by measuring risk magnitude, as a product between the level of seriousness and the frequency of the maximally predictable consequence. The results of the evaluation allow, in accordance with the estimations performed, asserting a series of technical and organizational measures having a preventive character, which have as a goal the decrease of the risk of professional accident and illnesses considered as being extremely high and, as a consequence, unacceptable. The evaluation of work place risks within the analyzed corporation considered all its production and administrative subunits; meanwhile, programs of adapted measures, focusing on eliminating and fighting the potential causes that might result in labor accidents and professional illnesses have been designed, in connection with the risk level identified for each particular situation.

The fourth chapter of the thesis settles the methodological foundation for organizing and carrying out the empirical sample research that regards the reporting of the occupational safety and health performance of Romanian companies. The chapter describes the coordinates of reporting the CSR and LSH aspects under the new contexts specific for non-financial reporting and integrated reporting. Meanwhile, I have displayed in detail the stipulations of Directive 2014/95/EU concerning non-financial reporting as well as the efforts for adapting Romanian legislation with a

view to integrating the demands of the Directive and the impact of this normative document upon the business environment in Romania. The presentation of the methodology of the research made in connection with the performance of LSH had in view the following coordinates:

- Making up the sample including 35 corporations reporting in the domain of sustainability or CSR and LSH;
- Briefly presenting the quantitative – qualitative approaches and the methods that are used throughout the thesis;
- Displaying the concrete manner of grounding the *global index for reporting in the domain of labor health and safety*, which plays the part of a dependent variable in the context of the complex statistic framework carried out in the next chapter;
- Presenting the influence or determining factors of reporting in correlation with other empirical researches in specialized works that approached this issue.

In this methodological part of the thesis, for each of the determining factors to be analyzed, I have identified: corresponding variables; manners of operationally defining these variables included within the study; variable category that formalizes the analyzed factor (numeric variable, nominal variable or dichotomy variable) from a statistic and mathematic point of view, namely the work hypotheses of the research.

Chapter V is the largest one within the structure of the thesis and is entitled “*Analysis of statistic data that concern the reporting of occupational health and safety by Romanian companies*”. With a view to checking the research hypotheses settled in the previous chapter, I made use of a complex statistic and mathematic system that allowed the adequate processing and interpreting, owing to SPSS software (*Statistical Package for Social Sciences*) of a large amount of quantitative and qualitative data that regard the selected sample including the 35 corporations. In accordance, after the descriptive analysis and the testing of the normality of the values registered by the numerical variables, relying on the indices of central tendency and of distribution form, I carried out Pearson correlation analysis, which determined the identification of the connections between the dependent variable and the analyzed quantitative variables; further, I carried out ANOVA analysis for the study of the possible associations between the dependent variable and the nominal independent variables. Finally, the discriminant analysis in the last paragraph enabled the designing of a mathematical function by way of which it is possible to make predictions, displaying a high level of accuracy, that regard the values of LHS global reporting index of Romanian corporations and the estimation of performance resulting in the domain.

Chapter 6, “*Conclusions, contributions and future research paths*” emphasizes the most relevant results and aspects that come out of the analysis of theoretical notions, models, approaches, case studies and empirical researches already made. My own contributions as part of the doctoral thesis are analyzed along the two perspectives that mix and condition each other during my scientific approach: the theoretical perspective and the pragmatic perspective, while emphasizing the manner of disseminating and capitalizing them. Meanwhile, the limitations of the study resulting from a series of objective conditions that influenced the research and from the difficulties that regard the access to variable and unitary data have also been detailed. The last part of the chapter shows a series of main research directions that might be approached in the future and which I consider able to bring more understanding and perspective regarding the factors that influence corporate performance in the domain of occupational safety and health.

The degree of novelty of the thesis is connected with the progressive, holistic and interdependent approach of the modern concepts and instruments that concern occupational safety and health, corporate social responsibility, modern business management, sustainability and corporate performance. The original processing of these elements is completed by the pragmatic approach of the aspects concerning the evaluation of occupational accident and professional illnesses risks, namely by the empirical research carried out in connection with the leaders of LSH reporting. Besides, this statistic research relying of a sample may be considered as an absolute

novelty in Romanian scientific works. The structure of my doctoral thesis has been conceived in a manner that allows the elements of scientific novelty and pragmatic contributions to get systematized in the final chapter.

Degree of complexity

Having considered the multivalent character of the aspects approached, the need for documenting and the structural display of the economic and legislative evolutions regarding the subject approached as well as the theoretical grounding of the operational concepts and methods and the carrying out of a large number of analyses and statistic tests upon a series of systematized data belonging to a highly complex data base, I employed in-depth knowledge from various domains (occupational safety and health, industrial engineering, corporate social responsibility, business management, statistics, informatics, etc.), which contributed to the inter and multi-disciplinary character of my doctoral thesis.

Conclusions

The conclusions that may come out from this documentary study are the following ones:

- Romania passes through a stage of qualitative and quantitative maturity that regards CSR concept;
- An increase of the interest of decisional factors, at a micro-economic level, in adopting the systems of the integrated management of social responsibility and of occupational safety and health can be perceived;
- The analysis and decrease of work place occupational risk within the industrial companies represents an important management preoccupation meant to contribute to the improvement of the activities carried out;
- The quality of LSH reporting in Romania may be connected with the following influence factors: financial performance of corporations, market share and experience of the company;
- Differences between the quality of LSH reporting carried out by corporations characterized by various forms of capital ownership or which are active in different activity fields and have to face their stakeholders' more or less acute need for informing could be identified.

Contributions

In consideration of the results already displayed, the doctoral thesis brings a series of contributions to the development of the knowledge in the domain of quantifying occupational safety and health performance and of understanding the phenomenon of reporting this performance in Romania, within the enlarged framework of social responsibility and of elaborating and publishing non-financial declarations at the level of corporations. These personal contributions may be synthesized as follows:

- Elaboration of an ample data basis including statistic indices for 35 Romanian corporations that have elaborated CSR reports and/or sustainability reports, including LSH sections;
- Carrying out the content analysis of CSR reports and/or sustainability reports drawn out by corporations included in the sample and grounding the dependent variable "global reporting index";
- Identifying, establishing the causes and implementing the measures for decreasing labor accidents and illnesses risks at the level of Policolor;
- Drawing out a methodology of structured research for carrying out empirical investigations concerning the reporting of occupational health and safety aspects;

- Carrying out the descriptive analysis of numerical and nominal variables relying on the indices of central tendency and of data spreading belonging to the statistic series employed;
- Analysis of the correlations between quantitative variables (numerical) owing to Pearson Correlation coefficient;
- Research of the interdependencies between the global LSH reporting and nominal variables owing to variant analysis (ANOVA);
- Carrying out discriminant analysis for the dependent variable, global LSH reporting index, and designing a statistic and mathematic function for classification and prediction;
- The empirical research carried out in chapters IV and V represents the first such study undergone at a national level focusing on the issue of reporting corporate performance in the domain of occupational safety and health.

Limitations of the study

The researches carried out as part of this doctoral thesis display a series of limitations regarding the results obtained, which have an objective character and mostly came out from a series of external constraints that deal with the availability and adequacy of the statistical data required for carrying out applicative studies. Essentially, these limitations are displayed as follows:

- The sample upon which the empirical research concerning the reporting of the aspects of occupational safety and health in Romania includes 35 corporations, while most of them range within the category of large Romanian companies;
- Owing to the fact that the 35 corporations included within the sample of empirical research displayed heterogeneous values of the analyzed indices, a series of supplemental calculations and statistic procedures were required in order to be able to observe the condition of normality in the case of most independent variables analyzed;
- The manner of grounding the dependent variable, “the global reporting index” is influenced by the author’s subjectivity.

Future research paths

Considering the deepening of the knowledge in the field of occupational safety and health and CSR as well as the mastering of the manner of implementing the statistic instruments of analysis and inference of the data regarding the various indices and variables employed for evaluating corporate performance in various domains, I consider that my future research efforts might include the following aspects:

- Continuation of the studies concerning the CSR and LSH aspects that characterize Romanian companies, by way of *integrating reporting*;
- Enlarging the researches concerning the occupational safety and health performance of Romanian corporations along two coordinates: designing a large sample including corporations that have gathered a certain expertise in this domain and carrying out a qualitative research that includes interviews with the managers and/or LSH/sustainability officers in charge;
- Empirical research of the connections existing between the safety culture and corporate LSH performance;
- Continuing the study of the methods for the evaluation of occupational risks;
- Refining and enlarging the range of statistic methods and packages of informatics programs that may be used for sample researches through including a series of modern descriptive and explicative methods.