

Bucharest University of Economic Studies
The council for Doctoral Science
Doctoral School of Accounting

**THE ROLE AND UTILIZATION OF ACCOUNTING
INFORMATION IN THE PRE-UNIVERSITY EDUCATION
SYSTEM**

Szekeres (Vancza) D. L. Gabriella

Academic supervisor: Professor Mihai Păunică PhD

Bucharest, 2024

CONTENTS

INTRODUCTION	6
1. EDUCATION, AN IMPORTANT FACTOR IN THE DEVELOPMENT OF THE ECONOMY AND SOCIETY	8
1.1. THE DEVELOPMENT OF PUBLIC EDUCATION SYSTEMS.....	9
1.2. THE EVOLUTION OF PRE-UNIVERSITY EDUCATION IN ROMANIA	13
1.3. MODERN EDUCATIONAL SYSTEMS.....	15
1.3.1. Overview	16
1.3.2. Comparative Analysis of Educational Systems in Europe.....	20
1.3.3. Financial Autonomy of Education Systems	23
1.4. CHAPTER CONCLUSIONS.....	25
2. THE CURRENT STATE OF RESEARCH.....	27
2.1. PUBLIC ACCOUNTING - ROLES AND APPROACHES.....	27
2.2. ACCOUNTING INFORMATION IN PRE-UNIVERSITY EDUCATIONAL INSTITUTIONS.....	31
2.3. FUNDING OF MASS EDUCATION UNITS.....	36
2.3.1. Funding of Educational Institutions in Romania.....	41
2.3.2. Funding of Inclusive Education.....	44
2.4. BUDGET REVENUE AND EXPENDITURE INFORMATION IN THE PRE-UNIVERSITY EDUCATION SYSTEM.....	47
2.5. REVENUES AND EXPENDITURES OF PRE-UNIVERSITY EDUCATIONAL INSTITUTIONS.....	51
2.6. THE RELATIONSHIP BETWEEN FUNDING AND THE RESULTS OF THE EDUCATION SYSTEM.....	52
2.7. THE RELATIONSHIP BETWEEN COSTS AND RESULTS IN PRE-UNIVERSITY EDUCATION.....	56
2.8. AUTONOMY OF EDUCATIONAL INSTITUTIONS.....	66
3. RESEARCH OBJECTIVES.....	71
4. RESEARCH METHODOLOGY.....	73
5. ANALYSIS OF INFORMATION PROVIDED BY THE ACCOUNTING OF EDUCATIONAL INSTITUTIONS	83
5.1. COMPARATIVE ANALYSIS OF EDUCATION SYSTEMS FUNDING.....	83
5.1.1. Statistics on the Level of Funding of the Pre-University Education System.....	87
5.1.2. Inclusive Education and Its Funding.....	93
5.2. COMPARATIVE ANALYSIS OF EXPENDITURES IN THE PRE-UNIVERSITY EDUCATION SYSTEM	99
5.2.1. Types of Expenditures in Pre-University Education.....	99
5.2.2. Current Expenditures in the Pre-University Education System.....	101
5.2.3. Capital Expenditures.....	117
5.3. CHAPTER CONCLUSIONS.....	125

6. THE INFLUENCE OF FUNDING AND EXPENDITURES ON RESULTS IN THE PRE-UNIVERSITY EDUCATION SYSTEM	125
6.1. RESEARCH METHOD.....	125
6.2. RESEARCH DATA.....	128
6.3. THE INFLUENCE OF ACCOUNTING INFORMATION ON RESULTS.....	131
6.4. CHAPTER CONCLUSIONS	138
7. ACCOUNTING INFORMATION - SALARIES AND THE STUDENT-TEACHER RATIO - AND RESULTS IN PRE-UNIVERSITY EDUCATION.....	141
7.1. RESEARCH METHOD AND DATA.....	142
7.2. THE LEVEL AND EVOLUTION OF SALARIES IN OECD AND PARTNER COUNTRIES.....	143
7.3. THE RELATIONSHIP BETWEEN SALARY LEVELS AND STUDENT-TEACHER RATIOS AND PISA SCORES.....	149
7.3.1. The Relationship Between Salaries and PISA Scores	150
7.3.2. The Relationship Between Student-Teacher Ratios and PISA Scores.....	153
7.3.3. Variables and Definition of Regression Models.....	154
7.3.4. Regression Model for Mathematics.....	155
7.3.5. Regression Model for Reading.....	158
7.3.6. Regression Model for Science.....	161
7.4. CHAPTER CONCLUSIONS.....	164
CONCLUSIONS.....	168
BIBLIOGRAPHY	175
ANNEX 1.....	185
LIST OF ABBREVIATIONS AND ACRONYMS.....	187
LIST OF TABLES	188
LIST OF CHARTS.....	189

Keywords: public accounting, accounting information, pre-university education funding, education expenditures, relationship between accounting information and PISA scores.

Summary

This doctoral thesis conducted an extensive study on the role and opportunities for leveraging accounting information in pre-university education with the aim of evaluating the possibilities for enhancing the system's performance. The first part of the thesis presented the theoretical aspects of accounting in pre-university educational institutions, with particular emphasis on public accounting, highlighting the importance of financial data in macroeconomic analyses of pre-university education systems worldwide. Additionally, analyses were conducted on financial data from pre-university education systems globally, utilizing statistical data available on official global and European platforms. Furthermore, the potential utilization of accounting information was examined, assessing its influence on the academic outcomes of students in the pre-university education system for the interpretation of results from an economic perspective and the formulation of forecasts where the research method allowed for such possibilities. The paper conducted analyses using quantitative statistical methods on a set of macroeconomic variables and verified the existing correlations among them to identify cause-and-effect relationships in order to provide solutions for decision-makers to implement educational policies that can improve the performance of the system.

To emphasize the importance of accounting information in the pre-university education system, established statistical analysis methods were employed, including level analyses, descriptive statistics, and mathematical regression. These methods were used to identify development trends, explore cause-effect relationships, and examine correlations between the most significant influencing factors, drawn from the array of accounting information, and students' academic performance. The analyses aimed to highlight the role and significance of accounting information, and based on the formulated conclusions, to provide, on the one hand, commentary on the results obtained from an economic and econometric perspective, and on the other hand, to use the results for future forecasts.

The results allowed the conclusion that the role of accounting information in the pre-university education system is crucial, and its utilization can be beneficial for various categories of users. It has practical and theoretical applications in fields such as the development of public and governmental policies, analyses conducted by international institutions, academics, and researchers, as well as in the public and private sectors, non-governmental organizations, and foundations.