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PHD THESIS SUMMARY

*Managerial accounting – instrument for
performance improvement in the higher education
system in Romania*

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MANAGERIAL ACCOUNTING – INSTRUMENT FOR PERFORMANCE IMPROVEMENT IN THE HIGHER EDUCATION SYSTEM IN ROMANIA

Key words: managerial accounting, management accounting, controlling, controlling methods, target-costing, target-costing method, method of costs associated to product life cycle, performance, governance of the higher education system, funding mechanism and templates, subsidizing, underfunding, academic body, education process, performance and quality indices at higher education level, demand and supply on the education service market, European system for education and academic training, Hyperion University, competitive advantage.

1. Motivation, actuality and interest of the research theme

The theme choice motivation consists in the aim to identify modalities to streamline the activity of higher education institutions in Romania, which are facing problems generated mainly by system underfunding. Universities require realistic and valid forecasts to survive, and the involved costs have to provide both for the supportability by different beneficiaries categories and the prosperity at institutional level.

Therefore, there is an increasing need for valuation, information and communication regarding the costs of higher education. That was also the reason for this demarche, which attempt to prove for the fact that private Universities have to be aware of the shortage of funds raised from study fees and become more cautious on costs calculation. Very often, managerial structures but also students require the detailed justifying of the way money is spent. As a result, accounting instruments are most accurate to highlight education-associated costs, this being the only way to calibrate the study fees in order to meet both the demands of the potential students and the need of institutional survival and/or prosperity.

We consider that accounting instruments will gain a more and more important place on the context of lack of accuracy both on identifying and valuation of the offered education services. It is required to identify alternative recognition and valuation ways for such costs.

Education services are a particular category within the service industry due to their particularities generate by the dynamics of such service market, directly affected by population dynamics and also by the dynamics of the economy of their various areas, conditioning the available labor supply on a certain date. In case of Romania, the past years experience proves for the strong influence of the political and administrative context on the dynamics of the education services' market.

Competitiveness and survival of education services on a dynamic market with strong competition can not be achieved without costs forecast and management on a manner able to meet the performance and opportunity criteria during their life cycle. The concept of educational service life cycle becomes extremely important within the particular context of such service, due mainly to the market dynamics affected by several factors, analyzed within this thesis.

From theoretical point of view, this work intends to provide for additional knowledge on the definition and analysis of the managerial accounting methods in the higher education institutions of our country, proving for the importance of their deployment and building a general approach of this theme.

From application point of view, the results of this research are intended to provide clear answers on the sizing and dynamics of the national higher education system costs and also on the performance valuation at system level regarding the costs. Also, the relevance of the subject of approach in this work is intimately connected to its potential future contribution to the development of knowledge on the area of approach.

Since each research area has to settle its own progress dimension and to define own concept milestones, the *motivation and importance of this research* can be found in the priorities of economic research, respectively the revaluation of the concepts of managerial accounting and higher education performance, which are not a static concept, but a dynamic environment, with the main goal to add value.

The subject of this demarche is motivated, first, by the need to place the research on the applicable managerial accounting methods on the higher education system within the contemporary, national and international context, and, second, by the impetuous need to renew and perfection costs calculation in order to provide for a most realistic view on the results of the Universities, in close relationship to the demands of the beneficiaries.

In this context, we regard as extremely important the theme of the work „*Managerial accounting - instrument for performance improvement in the higher education system in Romania*”, both as an abstract and, especially, as a practical view.

The importance of this scientific research may be at least justified by the following arguments:

- ✓ contribution to the stage of knowledge on the higher education system in Romania starting with several history facts and evolving to the presentation of the European governance system of the higher educational system, problems and challenges on funding mechanisms and templates, respectively the national strategic priorities on the higher education in Romania;
- ✓ contribution to the stage of knowledge on the managerial accounting area, with direct implication on the performance management in the higher educational system at the level of Hyperion University in Bucharest, component of the higher educational system in our country;
- ✓ contribution to the knowledge of the significant stages for the evolution of the demand and supply on the education service market in Romania within the context of a competition market of the high education services;
- ✓ provides for the detailed presentation and analysis of dimensions, methods and specific techniques of managerial accounting, highlighting the method of LCC - Life Cycle Costing – the foundation of applied cost targeting, respectively of Cost targeting (TC), allowing the accountants on the higher education system to assess correctly the costs involved by the specific activity on this area;
- ✓ highlights the fact that, within the current economical and financial context, in the quantifying process of impact generated by the application of the LCC and TC methods, competitive advantage is extremely important due to its significant influence on the management of the higher education institutions' performance;
- ✓ performs an empiric research leading to the sensitivity analysis on the LLC method template. Based on the results of multi-direction analysis, we have concluded that a positive return of a study program on the entire life cycle may be achieved by the annual increase of the number of students and of the education fee. For a constant number of 50 students each year it is impossible to reach the return threshold, a license/master program being entirely inefficient for education fees amounts between 3.000 lei and 5.000 lei.

Due to the complexity and social implications generated by the higher education system in Romania, respectively the motivation in the paragraphs above, we consider that the theme „*Managerial accounting - instrument for performance improvement in the higher education system in Romania*”, is of certain actuality, and the theoretical and

practical presentation involves, as a mandatory request, practical area experience, research and permanent documentation.

2. Research context

Up to the year 1989, the higher education system operated within the context of a centralized planned labor market and each graduate was assigned a specialized position. The concept of unemployment was practically non-existent, despite to the fact that there were many positions without an economic reason. Graduates were choosing the assigned positions based on the graduation average mark, motivating the students to learn for obtaining an average mark as high as possible.

Although we inherited a higher education system based on quality, skills and attitude, we are currently “desperate” to obtain university diplomas that are no longer insurance for a position, etc. In fact, although our individual intelligence has been cultivated, the group intelligence has been repressed.

The current higher education system delivered the output requested by the labor market, but an output lacking consistence, and with few quality features. Nobody followed the track of university output on the labor market to detect the eventual defects of the educational process. We have reached a stage that the Universities are delivering poor quality graduates, not being integrated on the labor market. We have to consider the fact that a free market has been established, and the Universities have to follow its evolution continuously and with maximal professionalism. Unfortunately, most high schools deliver training quite different of the challenges having to be faced by the graduate on his/her work.

It is necessary for the higher education to become customized, respectively not to be based on fixed variables, but on universal-valued features, because the employers' requirements are very dynamic. A high school graduate shall achieve wide competence, in order to be able to adapt to various contexts. He/she shall be able to develop various knowledge and skills, not to reproduce them. This is the reason why he/she will choose an university not delivering him/her standard knowledge, but orientation and support in knowledge, developing his/her creativity and independence which are so necessary in the contemporary society.

Attempting to avoid various problems generated by the institutional governance, Universities in most European countries and not only tried to reform the institutional governance system by implementing extremely different templates but attempting to reach the same goals and objectives. Based on the university autonomy, the responsibility of institutional governance encumbers entirely to the higher education institutions. University management has been, traditionally, an exclusive attribute of professors, researchers or experts on the area. But, with the assumption of additional responsibilities, once assigned to area ministries, the university management institutional structures became subjects of significant changes.

As a result, we have placed our research within the current economical and social context, characterized by the fast technology development, increase of the domestic and international competition, diversified customer's preference and decrease of the life cycle of products and services. All these proved for the loss of the relevance of traditional costs management methods and imposed the development of a new dimension of cost concept, relevant cost valuation and calculation, strategic managerial accounting, etc.

The first question on settling a research area is "why?" Why do we need a strategic cost management method? In order to answer this question, we have to analyze the global economical, social and political environment on which the entities are carrying on their business. This way, we can identify a set of its features concerning the competitiveness increase regarding the product price, fast changes of technology and information, increased customer demands and changes on their preference, variation on resource prices, limitability of resource, legislation constraints generated by scarce resource and environment politics promotion, etc. Therefore, we need strategic cost management methods able to allow cost forecasts before their generation, to contribute to ongoing improvement of the product and processes involved in its offer, to focus the customer within the method implementation and to engage the entire value chain on the application.

The contemporary trend is for the market to govern the Universities, and these ones to focus on the customer. Universities get more and more inspired by the business area on the attempt to obtain results on a competitive market. They are mainly focused on the involved parties - students, parents, partners, public institutions, etc. – but maximal focused on the financial area.

Universities have to perform realistic and valid forecasts in order to survive, and the involved costs have to insure both the supportability by the various categories of beneficiaries and the prosperity at institutional level. This way, there is an increasing need

for valuation, information and communication on the higher education costs. Private Universities have to be aware of the shortage of funds raised from study fees and become more cautious on costs calculation. Very often, managerial structures but also students require the detailed justifying of the way money is spent. As a result, accounting instruments are most accurate to highlight education-associated costs, this being the only way to calibrate the study fees in order to meet both the demands of the potential students and the need of institutional survival and/or prosperity.

The failure to apply the traditional methods of management accounting and cost calculation pointed to the modern methods on this area. We found interesting the life cycle costs method (LCC) and the cost targeting method (TC). The integral application of the management accounting and cost calculation methods leads to a competitive advantage compared to the classic methods of management accounting.

3. Positioning of the epistemological research

Positioning of the epistemological research intended to settle the:

- ✓ issues;
- ✓ assumptions;
- ✓ research methods;
- ✓ assumptions validation methods.

Questions were formulated on the causal relationship between the studied phenomena, followed by the analysis of the ways to approach the issues and ending with conclusions meant to base the validity of assumptions, but also future plans for ongoing and deepening request.

The main research question has been: *Which are the most suitable methods and techniques of managerial accounting able to be applied on the costs management of a University?*

This question has raised further implicit questions:

1. Which factors lead to a change of paradigm in educational system management?
2. What is the position of the educational system in Romania within the context of the European education service market?
3. How can we define the term of “performance of the educational system in Romania” reported to the European performance criteria?

4. How can we apply the modern methods of managerial accounting in the particular case of educational services in order to insure a reform of the managerial accounting methods in higher education institutions?

5. Which are the elements allowing to identify the sources of competitive advantage of private higher education institutions and to obtain this by performance management?

The necessity of the study performed within this research emerged from the observations gathered during more than 10 years on which I held the position of a Financial Director within the Hyperion University, revealing the lack of accuracy of the costs related to the provided services – generated by the failure to include all expenses related to the provided education services – or of the costs related to the various research projects. In this context, we have identified the need for alternative identification and valuation of such costs. The failure to apply the traditional management accounting and cost calculation methods pointed to the modern methods on this area, from which we selected the product life cycle costs (LCC) and the method of cost targeting (TC).

4. Hypotheses and research objectives

1. The integral application of the management accounting and cost calculation methods lead to a competitive advantage reported to the application of the classic methods of management accounting.

2. Identification of the most adequate methods of forecast and education services costs management during their life cycle.

Chapter	General objectives	Specific objectives
1. General and specific in the higher education from Romania – evolution, context, structure	- Identification of the main characteristics of the educational system from Romania within the context of the European governance.	- Analysis of the economic, social and political context where the educational system frames and of the transformations achieved in time. - Identification of the factors that led to a paradigm change within the educational system management.
2. The European market of educational services	- Positioning of the educational system from Romania within the context of the European market of the educational services and defining its performance notion by reporting to the performance European criteria.	- Analysis of the supply and demand of educational services in Romania within the context of the European integration and of globalization. - Comparative analysis of the European educational systems and

3. Theoretical fundaments regarding the managerial accountancy and its organization

- Analysis of the conceptual frame of the managerial accountancy and of the way the modern methods of the managerial accountancy may be applied in the particular case of the educational services.

4. Calculation of costs by the method of the costs associated to the life cycle and the method of the target costs

- Theoretical substantiation of the main modern methods of the managerial accountancy previously identified as being adequate to reform the system of the managerial accountancy in the higher educational institutions.

5. The system of the higher private education from Romania. Comparative analysis Romania-the countries of the European Union

- Identification of the particularities of governing the private higher education within the European context and Hyperion University positioning – case study object – within this context.

6. The competitive advantage, premise of ameliorating the performance in the private higher education institutions

- Defining the research context (methodology, investigation field, hypothesis and objectives specific for research).
- Identification of the competitive advantage sources of the private higher education institutions and of the ways of obtaining this by the performance management.
- Analysis of the performance patterns in the higher education.

the positioning of the Romanian educational system within the EU frame.

- Defining the fundamental and evolutionary characteristics of the managerial accountancy by underlying the actual tendencies of the managerial accountancy and of the connections with other disciplines.

- Analysis of expenditures and of costs' behaviour in the higher education.

- Synthesis of the main characteristics of the modern methods – LLC and TC and of the way of these ones' implementation.

- Analysis of the particularities of the chosen methods for managing the performance within the higher education.

- Identification of the advantages and disadvantages of using these methods within the particular context of the educational services.

- Performing a comparative survey of the particularities in governing the private higher education in Romania and in the EU.

- Quantitative and qualitative comparative analysis of the private educational system in Romania and in EU.

- Analysis and valuation of the structural and functional guiding marks of Hyperion University of Bucharest in order to define the object of the applied research.

- Analysis of the general context of the educational services market in order to identify their particularities which influence the way of their management from the accounting and financial point of view.

- Examination of the modern methods for the assessment and management of educational services costs and of the research projects during their life cycle.

- Defining and application of the most appropriate methods and techniques of the managerial accountancy that can be applied in the management of an university's costs.

General objectives of the case study:

O1: analysis of the general context of the education services market in order to identify its particularities affecting their management mode by the accounting and financial point of view;

O2: examination of the modern methods of forecast and management of education services and a research projects costs during their life cycle;

O3: determination and analysis of the most suitable methods and techniques of managerial accounting able to be applied on the costs management of a University;

Case study-specific objectives:

1. Valuation of the social-economical context on which the entity is carrying on its activity;

2. Identification of the management accounting methods and cost calculation which may be applied on the educational area;

3. Practical application of the identified methods;

4. Results analysis.

The performed study aimed to present an application example of the life cycle costs method for an educational service – a license program within the economy area, in order to identify if the results of the LCC method can add value to accounting information concerning costs relevance or the cost element of production or service provision.

Regarding the obtained results, we concluded that the application of the LCC method provide a new vision on the production cost structure and also additional information able to streamline the entity's activity.

5. Research methodology

The research methodology involves several methods and techniques adapted to the objectives mentioned above. As shown in the previous paragraphs, the general structure of the thesis has been conceived on two directions:

I. study of Specialty literature and revelation of the current level of knowledge in the area of approach, and

II. proper research or applicative research, starting with objectives substantiating based on conclusions of the analysis of the current research stage, corroborated with the detailed analysis of the way the Hyperion University in Bucharest organize and keeps its management accounting and cost calculation.

To conduct the documentation research, we consulted 186 references consisting mainly in books, articles and specialized studies published in the Romanian and international Specialty literature and also the legislation sources or sources available on specialized websites.

The subsequent applicative research was based on the documentary research which provided for the extremely detailed analysis of the theoretical results in being and/or for the validation of the settled assumptions.

The general research methodology was based on three general research types, namely: fundamental research, applicative research and empiric research. Unlike the applicative research, which aim is to identify solutions able to explain applied theoretical templates, the goal of the fundamental research is the theoretical modeling of certain phenomena. The two main types of research are, therefore, complementary. The third type of research, the empiric research, is completing the conceptual research area by the statistical validation of the formulated assumptions or of the results obtained by the application of the other research types.

In order to validate the research results we have used the scientific reasoning based on which we generated new ideas included in the research conclusions part.

The used scientific reasoning types were the inductive reasoning and deductive reasoning. In order to identify research assumptions, and also to select the research-requested data and to validate the research assumptions, the deductive reasoning has been applied. Also, the same type of reasoning was used to identify the degree of assumptions validation, based on logical deduction.

From a different perspective, the one of research methods classification, within this thesis we have used both quantity methods and quality methods. Regarding the quantity methods, these were mathematical, statistical and econometric methods. A significant part of the case study was assigned to the econometric test of the formulated assumptions, giving more value to the results.

Relevance of the current stage of knowledge in the area of managerial accounting was achieved by the scientific documentation method, presuming a stage of information on existing sources, data collection, study of identified sources and synthesis of information provided by these, respectively valuation of synthesis results in order for a critical analysis of the current stage of knowledge in the area of approach. Methods used in this stage were contents analysis and comparative method. The empiric research was based on data and information provided by the Hyperion University in Bucharest.

The demarche of this research used iteratively induction and deduction on the observation of the studied phenomena and on conclusion drawing, the analysis going on both from general to particular, and vice versa.

The research methodology used on the empiric study was based on the quantity research aiming to validate the formulated research assumptions and to reach the proposed objectives in order to demonstrate the way the Cost targeting method application in higher education institutions in Romania generates a competitive advantage, which is the base of performance management in higher education institutions.

On the documentation stage, we have analyzed the calculation methodology used in the Hyperion University in Bucharest to calculate the costs of university study programs. On the documentation date, data on the time period 2008-2010 were available. We consider that this fact has no negative effect on the performed research, since the goal of the documentation stage was to identify and analyze the application way of managerial accounting at the Hyperion University in Bucharest and to analyze its efficiency and effectiveness from the information utility point of view, but also from the perspective of profitability and competitive advantage.

As research methods we used direct observation, data takeover from official financial accounting documents, from other analysis and managerial reports and also mathematical modeling.

6. The general structure of research

The work has been structured in seven chapters, the last one being dedicated to final conclusions and recommendations, to the own contributions, but also to the presentation of future directions of research and dissemination of research results. The entire work focuses on the issues of higher education in our country, approached in the context on a very intensive competitive environment, absolutely different from the "closed environment provided by the government institutions monopoly on the national education framework".

It was emphasized that in the Community area of higher education it is impossible to separate the public and private higher education. This is also the reason why "each university shall redefine its image, perspectives, mission and to develop its competitive capacity in a strong competitive context". This is the general context on which we tried to

identify the most adequate methods of forecast and management of the costs of education services and research projects on their life cycle.

We focused on 8 general objectives and 15 specific objectives, approached during the entire research, their achievement being synthesized in chapter 7, within the context of the synthesis of our own contributions with the proposed objectives.

This study tried to provide for an example of application of the method of life cycle costs of an educational service, in order to identify if the LCC method's results may add value to accounting information on cost emphasis or production cost element.

The last chapter synthesizes the most important general conclusions of the research and draws the proposed research direction in order to continue the concerns of the doctoral thesis.

7. Synthetic research contents

The first chapter of the thesis, „*General and specific in higher education in Romania – evolution, context, organization*” approaches the features of a transition system starting with several historic facts and up to the European governance system of the higher education system, problems and challenges, funding mechanisms and templates, respectively the national strategic priorities for the higher education in Romania.

Up to the year 1989, the higher education system operated within the context of a centralized planned labor market and each graduate was assigned a specialized position. The concept of unemployment was practically non-existent, despite to the fact that there were many positions without an economic reason. Graduates were choosing the assigned positions based on the graduation average mark, motivating the students to learn for obtaining an average mark as high as possible.

Although we inherited a higher education system based on quality, skills and attitude, we are currently “desperate” to obtain university diplomas that are no longer an insurance for a position, etc. In fact, although our individual intelligence has been cultivated, the group intelligence has been repressed.

The current higher education system delivered the output requested by the labor market, but an output lacking consistence, and with few quality features. Nobody followed the track of university output on the labor market to detect the eventual defects of the educational process. We have reached a stage that the Universities are delivering poor quality graduates, not being integrated on the labor market. We have to consider the fact

that a free market has been established, and the Universities have to follow its evolution continuously and with maximal professionalism. Unfortunately, most high schools deliver training quite different of the challenges having to be faced by the graduate on his/her work.

It is necessary for the higher education to become customized, respectively not to be based on fixed variables, but on universal-valued features, because the employers' requirements are very dynamic. A high school graduate shall achieve wide competence, in order to be able to adapt to various contexts. He/she shall be able to develop various knowledge and skills, not to reproduce them. This is the reason why he/she will choose an university not delivering him/her standard knowledge, but orientation and support in knowledge, developing his/her creativity and independence which are so necessary in the contemporary society.

Attempting to avoid various problems generated by the institutional governance, Universities in most European countries and not only tried to reform the institutional governance system by implementing extremely different templates but attempting to reach the same goals and objectives. Based on the university autonomy, the responsibility of institutional governance encumbers entirely to the higher education institutions. University management has been, traditionally, an exclusive attribute of professors, researchers or experts on the area. But, with the assumption of additional responsibilities, once assigned to area ministries, the university management institutional structures became subjects of significant changes.

Regarding the public funding granted to the Universities, this depends on the fulfillment of various criteria settled by the central authorities who not only regard the input, but also the output. Despite all efforts, statistical figure reveal in Romania a deep underfunding of the higher education. „Annual reproduction of underfunding in higher education determines the wear of the physical patrimony, a low level of endowment of specialty laboratories and lecture rooms, absence of efficient university management, insufficient resources for documentation - communication, decrease of material expenses and investments in material base and also a shortage of extra-budget resources indispensable for quality assurance”. The approach of the underfunding problem by the Universities materialized in an unprecedented dynamics of the number of students registered in the fee system, in the development out of control of new study programs and also in the absence of interest in the growth of scientific research which is a consumer of funds.

“The European higher education services market”, the second chapter of the demarche, approaches the demand and supply on the education service market in Romania within the context of a competitive market of the higher education services.

If compared to the industry, we may say that the university system delivers, as end product, human resource, high qualified personnel to the labor market, including the educational one. This “industry” acts on the education service market, organized in a national network governed by the classic human resource demand - supply law. Same as on other markets intervene the price - competition arbitrage, supported by the legislation in force, by specific regulations, but also by certain prejudices of the involved individuals. The particular feature of the educational market is that the exchange currency, the money, never passes directly from customer to vendor, but is assigned by the state, family, community, etc. Even more, the state intervention on this market is extremely active, and individual desire and needs are particularly important.

For the proper operation of the education services market, we consider that the market has to be regulated, by the informational point of view, by a feedback outside the market and by a feedback inside the market. Both shall pass a command system coordinated by the meritocracy. One way or the other, the education market is dynamic and on ongoing change, and the economical – social factors and internationalization require the Universities to reassess the assumed mission and an increased flexibility to match present evolution.

The third chapter of our research, *“Theoretical Fundamentals on managerial accounting and its organization”*, reviews the evolution of managerial accounting and cost calculation, strongly influenced by globalization. It also highlights the fact that the managerial accounting systems shall identify correctly all elements affecting performance since the prerequisite of managerial accounting is precisely this performance, without which organizations can not reach their objectives.

Regarding the costs, not their value is the defining element for managerial decision, but the understanding of their behavior and relevance to the issue of specific decisions and also of the effect of costs variation on the profit and its taxation.

Chapter four, *“Cost calculation using the method of LCC - Life Cycle Costing and method cost targeting (TC – Target Costing)”* takes over the theoretical and practical essence of the two methods. The approach is based on the general perspective of a free market, where the price of a product or service represents a function of two variables – demand and supply – and the costs involved by the offer of a product or service are the

result of several decisions of the economic entity, being able to exist prior to conceiving the said product or service. In this context, the efficient costs management is defined as the attempt to eliminate them in the conception stage of the product/service and not to decrease them on their generation.

Regarding the method of cost targeting, the main idea is to offer products or services of higher quality level at a competitive price and low costs able to generate a reasonable profit. This goal can be achieved by decreasing the costs of production factors during the life cycle of the product or service, especially on the planning, design and development stage.

The fifth chapter of research, “*The private higher education system in Romania. Comparative analysis Romania – European Union countries*” focuses on the particularities of governance of private higher education, pointing to the Hyperion University in Bucharest where, despite of a substantial revenue decrease and increase of the number of professors involved in the educational process, the profitability index was superior to the one of the year 2013, the equivalent of activity streamline.

Chapter six of the work, “*The competitive advantage, prerequisite for performance improvement in private higher education institutions*” is a consequence of the observations gathered during the more than 10 years on which I held the position of Financial Director of the Hyperion University in Bucharest. Personal analysis revealed the lack of accuracy of costs related to provided services or to various research projects (the failure to include all expenses in their structure), from the perspective of their relevance in the decision process. In this context, I supported the requirement to find other alternatives to identify and value these costs. The failure to apply the traditional management accounting and cost calculation methods pointed to the modern methods on this area, from which we selected the product life cycle costs (LCC) and the method of cost targeting (TC).

The last chapter synthesizes the most important general conclusions of the research and draws the research directions proposed in order to go on with the work in the area of this doctoral thesis.

8. Conclusions, personal contribution, research limits and perspective

The higher education in the current period is quite different from the system in being prior to the revolution in December 1989. Besides the regime change, specific

factors emerged (demography, technical and technological discoveries, information society based on knowledge etc.), transforming completely the structure and functionality of the Universities, especially since private Universities were established. It is a certain fact that the higher education system in our country had to face many challenges on its evolution from the planned system to the democratic, market system. Even so, the main objective of the entire system remained the education focused on the student.

It is also required to proceed to a differentiation at institutional level, which can be particularly noticed at study program level. In Romania, study programs, no matter their developing University, are almost identical by the point of view of the structure but also of study disciplines. Even more, the effective content of disciplines is very similar. As a result, there is no educational diversity or practical relevance. We consider that the university study programs should be more flexible and adapted to the real requirements of the labor market.

We consider that the didactic act is distinct from research, and specializing of certain people only on research (people doing just research), can not be overcome by a professor, no matter its skills and specializing. Focusing exclusively on research, professors would neglect the students, same as focusing exclusively on the didactic educational act, would generate the negligence of scientific research. It is necessary to depart the two activities, especially since most Universities are oriented to lectures, currently being a very low number of research Universities worldwide.

The education market is dynamic and on permanent change, and the economical – social factors and internationalization requires Universities to readjust the assumed missions and to be more flexible in relationship to present evolution. Universities shall restructure their study programs in order to meet fast the labor market requests. Optimizing the insertion of University graduates in the economic environment is essential. Both Universities and economic environment need each other, which fact forces them to cooperate, and the latest trends are to involve Universities in solving of more and more complicated community problems.

The internationalization of the higher education system determines the Universities in Romania to face very hard competitive challenges, in an environment entirely different from the state monopoly on the national education system. Within the European Space higher education context, there is no difference between the public and the private higher education system. The status of State University will no longer generate a distinct regime,

which will require to redefine their mission and to develop the competitive capacity in an extremely strong competitive environment.

Managerial accounting is still on incipient stage, being in many organizations only an auxiliary product of financial accounting. Besides these, the area recorded in the past twenty years an obvious development, with recognized status of independent area, clearly defined and strictly delimited from financial accounting. According to some researchers, the 80s and 90s established a revolution regarding the innovation of managerial accounting theories and procedures.

The excessive volume of available information does not add value to organizations but, contrary, impedes the decisional process. Therefore, many organizations generate unnecessary costs from wrong decisions or have an excessive resource consumption to justify wrong decisions. As bigger the information volume, as larger the uncertainty, this fact being due especially to the absence of information organization. Available information has never been so complex and difficult to be interpreted, slowing the organizations answer to risk.

In order to be successful, organizations need an efficient managerial accounting system in completion of their financial accounting system, which is not sufficient for planning and forecast since it is oriented to the past. Also, decisions are not issued necessary only by managers, different levels employees being involved in the decisional process with each one's expertise and impact on the final decision.

The value added by managerial accounting derives from the extraction of value from information, providing for a more objective view on the decision issue base. Managerial accounting provides for structured solutions to non-structured problems, being essential especially on forecasting and budgeting, and requesting a strategy for the managerial accounting which shall include the organization priorities, managerial accounting needs based on customer requests, deficiencies and opportunities, available technologies and performance measures.

Following the application of the TC method, that may be considered an increased aggressive method; there is many times a significant difference between the initial costs and target costs. This is normal regarding the target costs settlement moment, meaning the conception stage of the product or service. This difference may be cancelled by using the value engineering method (IV), focused on the supply of products or services more functional, more secure, more adequate and more useful, at a lower cost. The application of the value engineering method involves three stages overlapping the stages of the LCC

method related to the time interval between the product or service conception and the preliminary stage of production. On a first stage, the value engineering method focuses on the general concept of the product or service, attempting to identify the most adequate technology or method to offer the concerned product/service. Subsequently, there is a stage of focus on the design of the product/service, based on the results obtained on the first stage. The last stage focuses on certain detail elements, not being up for consideration in the previous stages. We can notice that the value engineering method is an inductor of the cost targeting method, the last one having a few additional features, such as the involvement of the entire value chain, method focus on design and manufacture, and cost decrease efforts based on customer requests.

Both the method of costs associated to the life cycle of a product (LLC) and the cost targeting method (TC) represents modern developments of the managerial accounting application of the TC method based on the preliminary application of the LLC method or on the use of its defining elements.

The traditional management accounting determines the cost of a product or service by incorporating the costs of the resources involved in the production of the concerned product/service. This way, the production cost is formed by amounting the direct costs - raw materials and materials with the indirect costs (both variable and fixed), rationally assigned. Fixed production costs may be included using absorption rates or using the ABC method (method of costs based on activities). No matter the assignment method, indirect costs are included based on their current budget. Following the incorporation of these indirect costs, the profit margin is determined, following the determination of sales price and unit profit.

A first disadvantage of the conventional or traditional methods for the calculation of the production cost consists in the price determination based on the production which does not guarantee the existence of a market for that product. It is also possible that the product or service owns attributes not appreciated by customers at their real value, these being not willing to pay the requested price, same as there is a possibility for the market to have such products or services at a lower price or with intrinsic larger value at the same price. This disadvantage may be cancelled by using the TC method which approach is opposite to the one of traditional methods, starting from the sales price.

Another disadvantage of traditional methods is the incorporation in the production cost only of the current costs. Besides these, marketing of a product or service presumes the existence of marginal costs and also of potential fixed, additional costs of the period.

Even more, there may be additional costs related to research and development or costs generated by the completion of the life cycle of the product. This disadvantage is cancelled by using the LLC method.

Regarding the definition of marketing activity as being the managerial process of identifying, anticipation and profitable customer satisfaction, we may consider the TC method as a costs approach by marketing activity perspective. There are several questions requesting an answer from marketing activities and concerning the homogeneity or heterogeneity of customers, specific product's attributes which are characteristic for each market segment, the price customers are willing to pay, the main competitors in being, modalities of promotion and distribution of then product. Also, marketing is not a passive approach but an active one, intended to anticipate customer requirements and also the development of prototypes or usage of detailed research techniques.

Usually, the entity shall own an interval for the product price. Also, the economical entity has the product attributes under control but has no control on the market, customers or competitors. There are countless constraints on the product and its sales price and the entity shall focus on the offer of the product requested on the market at an acceptable and competitive price that shall also generate profit to the entity. Therefore, the TC method is obviously useful because it starts from the sales price and goes the opposite way to costs determination by decreasing the price with the profit amount. This way, the entity is forced to identify the methods to control the costs, maintaining them within certain limits. This approach involves the formation of a multi-functional team, able to include personnel specialized in marketing, accounting, production, quality control, etc., that are essential in the stages of design and production. Also, the deployment of the TC method is focused on the stages of planning and design, providing for an advantage in order to eliminate the products which are to expensive to manufacture or not having an acceptable profitability. The understanding of costs causes allows for an efficient cost control, another useful method being the value engineering method which aims to maximize the utility of a product in parallel to costs decrease.

As mentioned before, the TC method focuses on the cost control in the stage of design and production, but these stages may generate, on their turn, specific costs. Also, other additional costs may be generated after product sales, such as the costs related to warranty or facility dismantling costs after the discontinuation of the production of the concerned product. The profit generated by a product or service shall be analyzed in whole, by calculation of total revenue and total costs generate on its entire cycle. This is how the

application of the TC method shall point to all stages of the life cycle of the product or service, if a complete analysis of profitability is desired. The main life stages of products or services subjected by the application of the TC method are design, production, the operation stage and the marketing of the product or service.

The main elements pointed by the LLC method concerns the consideration of all costs generated by the life cycle of a product or service if it is desired to determine the unit cost or profit, paying an equal attention to all costs if it is desired to decrease the unit cost or to reach the target cost, identification of connections in being between the different cost categories and the way these may be influenced and also the identification of future costs on the time of the analysis.

Application of the Cost targeting method to ameliorate the performance in the higher education system in Romania represents an issue of high importance.

The conventional or traditional approaches of management accounting and cost calculation are obsolete, reported to the current economical environment, both in case of education institution and of other economic entities. This is due to the fact that these traditional methods attempt to control the costs and quality of products and services after their completion, allowing the temporary balancing of profitability and focusing mainly on elements of the internal environment of the entity. The view provided by these methods is, this way, a general and cumulative view, unlike the view provided by the TC method which is a complex view including the main elements of competitive advantage (quality, cost, time).

The role of the TC method is to consolidate the competitive advantage, a condition absolutely necessary for the economical entities to go on with their activity at a certain level of economical-financial performance, within the context of competition increase due to the large number of private Universities, diversifying and permanent dynamics of customers and their needs and also the constraints imposed by the external environment.

Introduction of a new study program shall proceed with a detailed analysis of market demands, of customers' features and also of competitor offers, conditioning, in most cases, the price on which this may be offered on the market. Also, an analysis of the profitability of a new study program is not complete and relevant if not concerning the entire life cycle of the program, being essential to include the LLC method in the analysis.

One of the main problems in reaching and maintaining a certain profitability rate is to forecast most costs in the initial or service introduction stage, and management of these costs only in their stage of growth, after their generation. The main costs management

problem is, this way, not to include all costs of the life cycle of the services at the initial forecast moment. This way, there is a high risk for a study program cost not being forecasted accurately and not being correctly managed under strategic management terms.

All problems assessed above may be solved by a correct application of the methods TC and LLC and also by implementing service performance and quality ongoing monitoring instruments.

Once the economic crisis emerged, the number of private Universities students decreased considerable, determining the decrease of their revenues. If, in 2009, private higher education institutions in Romania trained ca. 127,000 students, in 2014 their number decreased to 22,000. As a consequence of the decrease of the number of private Universities students, the number of professors also decreased.

Besides the fact that a significant number of baccalaureate graduates have chosen foreign Universities, another unfavorable factor to private Universities was the significant increase of fee places at State Universities. A revival variant would be to attract foreign students by the accreditation of study programs in English language.

Baccalaureate, respectively its low graduation rate, is another cause of the economic decline of private Universities and not only. This situation trends to worsen since the current reality proves for the insufficient training of students for the maturity examination. Also, in absence of a selection examination on faculty admission, baccalaureate became the most important examination.

Another cause for the significant decrease of private Universities' revenues consists in significant amounts invested in co-funding of European projects, amounts which are reimbursed by intermediate bodies with great delay, generating financial conditions close to bankruptcy.

Both the unfavorable legislation (Law no.1/2011) and press campaigns contributed to an ongoing negative image of higher education institutions, leading to the liquidation of some of them.

In this context, the financial target of a private university and not only shall be to maximize revenues and, on the same time, to maintain or even to decrease the expense level. The solution to create own funding resources and to avoid the dependence on a single founder appear as fundamental needs. Also, the calculation of standard costs per student may insure the economic substantiating of fees related to university services. On the same time, creation of organizational cultures based on saving may allow the achievement of financial performance.

We consider that this research is getting a *novelty element* for the performance improvement of higher education institutions in Romania by means of modern methods of managerial accounting since the managers of these institutions need integrated and intelligible information regarding all aspects of performance in this economic area, and also relevant information related to associated costs. Lack of understanding of the performance concept and also of efficient and effective costs management methods and techniques leads to an unprofitable management whose effects results in competitiveness decrease, provision of services without quality and, not last, weak economical-financial results.

By the point of view of contribution to the approached theoretical side, the personal contribution was positive, regarding the identification of relevant specialty references for the approached theme.

The constructive nature of contribution results from the critical analysis performed within the entire thesis, intended to clarify certain terms such as the quality of the higher education system, its performance, vicious cycles and deficiencies of a system in permanent transition, the costs specific to the higher education public and/or private system or system outputs and graduates integration on labor market. The critical analysis was also the base of issue of own graphics and figures intended to clarify various concepts.

In case of the template chosen to value the costs on the life cycle of the product, we performed two types of sensitivity analysis. Both on the uni-directional sensitivity analysis and on the multi-directional sensitivity analysis, the parameters of which values were tested were the number of students and the amount of the annual fee. The choice of these parameters was determined by their uncertainty or by their dependence on factors not under the incidence of decision factors (population dynamics, graduation degree of students in the previous cycle or labor market dynamics).

The sensitivity analysis of the LLC method template may lead to the following conclusions:

- For a constant number of 50 students per year it is impossible to reach the return threshold, since the license program is totally inefficient for education fee amounts between 3.000 lei and 5.000 lei.
- In the variant of attraction of a maximal number of students on each study year, the return can be achieved beginning on the second year of the program and up to the fourth year.

- In case of average numbers of students generated by the analysis of other master programs, the master program is efficient in the years 2 and 3, reaching its global return. Not the same result can be achieved in case of a total number of students during the life cycle under the minimal admissible values of the return threshold (438 students).
- Based on the multi-directional analysis results, we may conclude that a positive return of the study program per total life cycle may be achieved under the terms of annual growth both of the number of students and of the education fee.

Also, based on the regression analysis, we proved for the existence of a very strong reversed correlation between the variable costs of research-development and costs, such as research-development and the operational closing costs.

By the point of view of the structure of this research, a synthesis of our own contributions reported to the general and specific research objectives is shown in the table below.

Chapter	General objectives	Specific objectives	Synthesis of own contributions
<i>1. General and specific in the higher education from Romania – evolution, context, structure</i>	- Identification of the main characteristics of the educational system from Romania within the context of the European governance.	- Analysis of the economic, social and political context where the educational system frames and of the transformations achieved in time. - Identification of the factors that led to a paradigm change within the educational system management.	- synthesizing the main actual needs of the educational system and analysis of the possibilities of reaching them concomitantly with the reaching and maintaining a certain performance level. - emphasizing the importance of integrating the national strategic priorities for the higher education within the own strategy of the educational institutions. - identifying at the higher educational institutions' level of the fields that need assessment and thoroughness (personalization and diversification of the educational offer, implementation of a quality performance management, etc.)
<i>2. The European market of educational services</i>	- Positioning of the educational system from Romania within the context of the European market of the educational services and defining its performance notion by reporting to the	- Analysis of the supply and demand of educational services in Romania within the context of the European integration and of globalization. - Comparative analysis of the	- identification of the main characteristics of the educational system that may contribute to reaching the economic and social performance and to obtaining a competitive advantage on

	performance criteria. European	European educational systems and the positioning of the Romanian educational system within the EU frame.	the European market of the educational services from the request-offer rate perspective. - emphasizing the importance of redefining the universities' mission and of the restructuring directions, necessary to reach performance and maintaining competitiveness in relation with the dynamics of the European market of the educational services.
3. Theoretical fundamentals regarding the managerial accountancy and its organization	- Analysis of the conceptual frame of the managerial accountancy and of the way the modern methods of the managerial accountancy may be applied in the particular case of the educational services.	- Defining the fundamental and evolutionary characteristics of the managerial accountancy by underlying the actual tendencies of the managerial accountancy and of the connections with other disciplines. - Analysis of expenditures and of costs' behaviour in the higher education.	- synthesizing the main characteristics of the managerial accountancy and of the key points in its evolution. - comparative analysis of the methods specific for the managerial accountancy. - identification of limiting the methods specific for the managerial accountancy from the perspective of its application in the higher education institutions.
4. Calculation of costs by the method of the costs associated to the life cycle and the method of the target costs	- Theoretical substantiation of the main modern methods of the managerial accountancy previously identified as being adequate to reform the system of the managerial accountancy in the higher educational institutions.	- Synthesis of the main characteristics of the modern methods – LLC and TC and of the way of these ones' implementation. - Analysis of the particularities of the chosen methods for managing the performance within the higher education. - Identification of the advantages and disadvantages of using these methods within the particular context of the educational services.	- identification of the connection between LLC and TC method and the theoretical presentation of the ways for these ones' application. - emphasizing the specifications of TC and LLC methods within the context of the educational services. - defining the elements that underlie the importance of applying TC and LLC methods in order to ameliorate the performances within the higher education system from Romania.
5. The system of higher private education from Romania. Comparative analysis Romania-the countries of the European Union	- Identification of the particularities of governing the private higher education within the European context and Hyperion University positioning – case study object – within this context.	- Performing a comparative survey of the particularities in governing the private higher education in Romania and in the EU. - Quantitative and qualitative comparative analysis of the private educational system in Romania and in EU. - Analysis and valuation of the structural and functional guiding marks of Hyperion University of Bucharest in order to define the object of	- <u>synthesizing the particularities of governing within the private higher education and of the specific qualitative and quantitative characteristics of the private educational system and positioning Hyperion University of Bucharest within this context.</u> - emphasizing the limits generated by the application of the traditional managerial

		the applied research.	accountancy methods (the method of direct calculation used to determine the price of the offered services) and the need for the implementation of modern methods in order to manage the performance.
6. The competitive advantage, premise of ameliorating the performance in the private higher education institutions	<ul style="list-style-type: none"> - Defining the research context (methodology, investigation field, hypothesis and objectives specific for research). - Identification of the competitive advantage sources of the private higher education institutions and of the ways of obtaining this by the performance management. - Analysis of the performance patterns in the higher education. 	<ul style="list-style-type: none"> - Analysis of the general context of the educational services market in order to identify their particularities which influence the way of their management from the accounting and financial point of view. - Examination of the modern methods for the assessment and management of educational services costs and of the research projects during their life cycle. - Defining and application of the most appropriate methods and techniques of the managerial accountancy that can be applied in the management of an university's costs. 	<ul style="list-style-type: none"> - demonstrating the practical way for the implementation of managerial accountancy modern methods, identified as being necessary following the analysis of the way in which the managerial accountancy is put into practice within Hyperion University. - analysis of the results obtained following the application of LLC method based on the sensitivity analysis and on the econometric analysis. - emphasizing the value plus on which the results of LLC method – respectively, calculation of costs for different life stages of the service bring, with regard to the relevance of costs and the use of the cost type information within the decisional process.

One of the limits of the research is represented by the absence of information specific to State Universities, but especially to private ones, since there is no functional management system of financial data and involved costs at national level.

Regarding the future research directions, we proposed:

- Examination of the relevance of the templates presented within this work and on the level of other higher education institutions.
- Ongoing analysis of correlations in being between the quality of the private higher education, modalities to use the financial resources available to such institutions, and also the economical and social condition of individuals choosing the education in the private system.
- Definition of a performance template specific to the Hyperion University and its implementation.
- Analysis of interactions between quality indices of private higher education and variation of unemployment rate.

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