SZENT ISTVÁN UNIVERSITY

Gödöllő

Ph.D THESIS

THE PROJECT CONTROLLING IN THE PRACTICE TO IMPROVE THE MANAGEMENT OF THE CONSTRUCTING COMPANIES

Written by:

Szabó, Zoltán László

Gödöllő

2016

Name of Doctoral School: **Management and Business Admnistration Sciences**

Field of Doctoral School: **Management and Business Administration**

Leader of Doctoral School: **Prof. Dr.. Lehota József DSc.**

                                      full professor

                                      Institute of Business Sciences

Supervisor: **Prof. Dr. habil Zéman Zoltán Ph.D.**

                                      full professor

                                      Institute of Business Sciences

…………………………………….   ………………………………

Leador of the School   **Supervisor**

Table of contents

1 ACTUALITY OF THE TOPIC, MAIN OBJECTIVES

Due to the global economic crises and the forthcoming huge shortage of financial sources on the investors' side, all investors, real estate developers and main constructor companies landed in difficulty since these companies are in a value and process chain and acting based on each other and the negative effects came for all on the market at the same time

The restructuring of the world's financial market caused the reduction of the sources and the increased requirements of the project owners have almost stopped this segment of the industry. In addition, these difficulties were enhanced by the fluctuation in the political regime causing uncertainty after elections and cancelling or postponing large state or EU financed projects in Hungary.

That was the status of the domestic construction industry at the beginning of the 2nd decade of the 2000s.

This situation made my topic very relevant and understandable cause only the well prepared, well managed and well controlled company can survive it and can create the maximum profit.

Most of the SMEs are not aware of the definitions or the CEOs are using the tools of controlling intuitively.

That was the reason why I felt necessary to elaborate a method and a model which implements a controlling specified to the construction industry.

The controlling process – in a traditional meaning- does not create value since the main objective is to reveal the problems inside the company and seek for solutions involving the relevant managers of the certain departments and as result to increase the profitability of the company.

The main tasks of the controlling are to support the management, provide the information to decisions, consultancy and moreover the development of the controlling tools and methods.

The controlling model I has developed enables to handle sector-specific problems and makes the companies to step on the way of ascending success.

In this context, it is not else as a decision supporting system which includes the studies, options and other essential measures for correction to execute a project.

1.1 Why this thesis?

A controlling system can be efficient only in that organization which puts the responsibility and decision into the spotlight. In case of a largescale company employing a controller or running a controlling department is a must to operate efficiently.

Of course, the size of the company can influence the pre-conditions (management accounting, planning, reporting and monitoring) of the controlling structure.

As the result of the planning process we can determine the capability of the planning department, the objectives, the premises, the possible problems, the measures to prevent those, the persons in duty, the review of the resources, the deadlines, the authorized persons of the different fields, etc.

During the planning and executing the key figures must be checked and in case of significant difference the controller must investigate the reasons and he must propose options to solve the problem. If the plan cannot be executed, the difference is too large between the plans and facts the reengineering is a must.

At SME level the management is not familiar with the definitions mentioned above or the CEOs are using instinctively the general tools of the controlling. That's why my aim is to analyze the way to the definition and application of the preconditions and standards, the launching of controlling systems and the shift in the management's approach. In addition, I would like to offer alternates to carry out the things mentioned above.

I would like to present, elaborate and develop the construction industry specific project controlling of which launch to a constructing company can result the execution of the preferential future norms, standards, competences behaviors, and moreover it means the engineering of the exact operative actions for the conscious company management. In addition, it makes possible to define the frames of the operation.

In my opinion this is that approach which matches the most to the substance of controlling philosophy (future, objective, expense and decision orientation). And due to these reasons, it is much more applicable for a modern, pragmatic top management to use the project controlling to check, direct and monitor the processes in the constructing industry.

1.2 Objectives

The main objective of my research was to answer how successful the controlling can be in the constructing industry, how the certain controlling systems can be integrated into the organizational structure and how the controlling can support the management with its tools to make strategic decisions to run the company especially in case of project based processes which are typical in the constructing industry.

The main targets of my study regarding the facts mentioned above:

- I intended to show, elaborate and develop those standards, competences and samples which are preferred in the future at the launch of sector-specific controlling tools.

- I wanted to develop the exact action plan and the frame of the operation to execute the conscious strategy of the business management.
- I wanted to receive answers how the Hungarian constructing companies had adapted to the changed business environment and globalization for the last decade using the controlling unit preferably at strategic level if they had it at all.
- I intended to measure how the controlling has penetrated the general business practice of the Hungarian constructing companies. I wanted to know is there any progress considering the controlling in that branch at all, is the controlling useful to handle or to survive the recession.
- I wanted to highlight how successful the controlling can be in the construction sector how the certain controlling tools can be built into the company structure and how it can assist the top management making strategic decisions and running the company operatively.
- After analyzing the results of my survey, I wanted to submit a best practice to the Hungarian constructing companies to show what practical benefits can be gained from using the controlling tools either in a separate or in an integrated business unit

In accordance with the above listed my pre-concept regarding the thesis can be summarized in the following hypothesis:

H.1. After defining the elements and processes of the industry specific project controlling I might clarify the basic qualitative and quantitative norms and the principles related to the measurement of the performance.

H.2. Due to my analysis, I might have an insight into the basic functions of the task specific project controlling, the difficulties of the elaboration of parameters, standards and the development of the related strategy and **I can offer alternatives to fight them off**

H.3. I could implement variant solutions for the more common application of the constructing project controlling, for the determination of the pre-conditions, standards of its launch and for the way to the paradigm shift in the company management.

H.4. During my research, I could determine how the project controlling can become a key factor to increase the productivity and effectivity of the constructing SMEs by the monitoring the tasks of these companies.

H.5. Those factors might be defined, which are determining the specifications of the constructing project controlling and I might set up a definite correlation between the specifications and the general methodology. **At the end of the research the results could be integrated into the daily routine of the constructing industry.**

2 THEME AND METHODOLOGY

Receiving all the support and assistance from my lecturers and colleagues I have summarized the results of my 5 years long research in my dissertation. The topic is specific and I could apply several complementing methods of project controlling which are typical in the constructing SMEs.

2.1 Research plan

The main reason of the research plan was to execute the project in structured system and with process oriented approach in order to ensure the consistency the deadlines and the highlighting on the research. It was vital for me to get over the challenges of this dissertation parallelly managing my everyday task in my own company working in the constructing industry.

2.2 Literary overview

I have executed the theoretic overview of the controlling by processing the domestic and international scientific references. I have overviewed the controlling concepts, the general tasks of controlling, the different controlling systems and theirs place in the organizational structures especially the project controlling. I have examined the external and internal factor which are influencing the controlling systems, the specialties of the controlling systems and I looked at the relation of the constructing industry too.

2.3 Case studies, analysis of documents

On the one hand using the strategic case study of ÉVOSZ (Association of Constructing Entrepreneurs) in 2015., the content of the scientific literature, the consequences of the questionnaire and the in-depth interviews I have summarized the results in a flow chart which were elaborated based on the experiences at my own company. On the other hand I have tried to make more understandable and more applicable the project controlling by presenting international constructing case study and introducing a project controlling guideline for SMEs which can be implemented into the daily routine.

2.4 Methods of data analyzes and statistic processes

I had to look at the different research methods with pluralistic approach. The selection of a method can serve discovering, describing or explaining purposes. I guess to answer the questions like who, what, where or how much, the questionnaire based survey is the most appropriate tool. But for the questions like how and why I had to apply the in-depth interview as a survey technique.

- The cumulated data received from constructing companies I studied with questionnaire based survey were analyzed and processed by **SPSS statistic software**.

- This questionnaire based survey provided me a chance to create a database with a relatively large number of elements. The main aim was to use indicators, excel sheets and graphs for the better presentation of the results of the survey. The largest advantage was

the standardized questionnaire. Considering certain parts of the dissertation of **KOMÁROMI K. (2013)** I could rise several questions regarding the same topic which made the data processing more flexible. Although the companies treat the strategy, the organizational structure, the details of their activity as confidential I trusted that I could use the more simple and wider sampling which was the questionnaire sent to the companies (accepting the limits in time and resources).

- **Questionnaire based survey was planned by** 500 questionnaires sent to constructing SMEs with the assistance of ÉVOSZ. All of 500 companies were classified as SMEs considering that the average number of employees was under 100 (in different categories), the net turnover was typically between HUF 0-5 billion but did not exceeded the HUF 10 billion.

- I prepared a relatively complex questionnaire considering certain elements of the dissertation of **KOMÁROMI K. (2013)** I tried to ask about lot of details. Due to those reasons the questionnaire had 5 chapters I made the questions within:

    I. Elements which are vital to execute the project controlling tasks of the enterprise 4 groups of questions

    II. Interpretation and implementation of the project controlling- 4 groups of questions

    III. Controlling tool- 3 groups of questions

    IV. General details- 7 groups of questions

    V. The structure of the controlling organization - 1 groups of questions

- In case of in-depth interviews I selected these 20 constructing middle and large sized companies from my business network who were the target of my interviews. I had the concept since our personal relations and my professional experiences and insight to the industry I would have easier access to more detailed, more relevant and more reliable information. Although the main criteria of the selection were not the size, the turnover, the number of employees or the ownership I categorized those firms as middle and large sized enterprises. These in-depth interviews were carried out with the top management, with the operative leaders of the certain department, with the financial directors and if there was a controlling department with the head of it. These in-depth interviews took about 75-90 minutes and we focused on 4 main topics. The structure, the group of questions of these discussions were similar with the method used at the questionnaire. At the same time they could give more detailed and sophisticated response to have a better picture.

- The reason of the above-mentioned segmentation and complexity was that up to my latest information this survey was a unique primer data mining because there had been neither domestic nor international survey till that time relating the constructing SMEs. During my research, I highlighted the application of controlling and its impact on the company's market behavior, operation, competitiveness and profitability. I would like to repeat what I have already written I asked only those details I supposed to receive.

- Via ÉVOSZ I contacted 500 SMEs for voluntary data supply. Only 229 companies sent the questionnaire back and 220 were acceptable. This 44% cooperation rate is not a great success but later I will comment it. At the same time the database I had created was representative enough for my research.

- I have used the following software to write my dissertation and to process and analyze the data and to present my results:

  - SPSS statistic software
  - Microsoft Office software
  - Excel 7.0
  - Microsoft PowerPoint 7.0
  - Microsoft Word 7.0
  - Microsoft Visio
 - Edge Diagrammer

2.5 Other methods applied

Besides processing the domestic and international scientific references, analyzing the case studies and the qualitative and quantitative researches I considered the participation at conferences, my publications in scientific magazines and the monitoring of others' publications and the more active presence in the scientific life as important elements of my methodology. In addition, the meetings with professionals from the sector were very important for me cause these events provided me useful guidelines to discover the new scientific progresses and their implementation in the practice.

3   RESULTS

The controlling system of companies is segmented to several subsystems to overview the entire scope. These subsystems are connected to each other and there are some overlapping. Taking into consideration the permanent changes in the external and internal business environment these controlling. To achieve the main objectives of my dissertation I have introduced on the one hand the controlling system and practice of the 220 SMEs involved in the questionnaire based survey and on the other hand the controlling organization and processes of those 20 medium and large sized companies which were studied by in-depth interviews. At the same time, I launch a generally applicable new model which is based on the international research and on my own survey. This model is preferably useful for Hungarian constructing SMEs.

3.1   Results of questionnaire based survey

- Via ÉVOSZ I contacted 500 SMEs for voluntary data supply. Only 229 companies sent the questionnaire back and 220 were acceptable. This 44% cooperation rate is not a great success it was much lower ratio than expected but I could turn it to my profit cause the database I created was even more representative for my research and the questionnaires sent contained lot of useful information and I had important conclusions even before data processing
- The most exciting and most impressive (at least for me) results of the survey I presented in the following groups taking into consideration the existence of the controlling unit or the controlling activity, the application and utilization at strategic decisions and operative management.
- One of my basic principles was that at the SMEs I contacted the average number of employees was between 10-50, and there was no controlling team or only 1-2 employer were dealing with controlling at those companies. Due to that facts, I assumed that the controlling has only a tangential importance in their managerial toolbox.
- While recording the elements, which were necessary to execute the SME's controlling tasks I gained very well noticeable results.
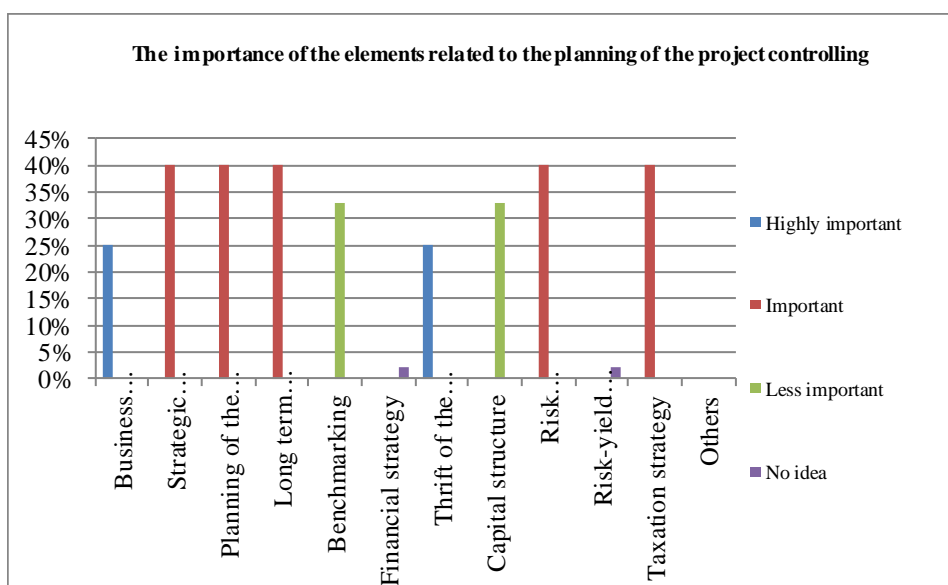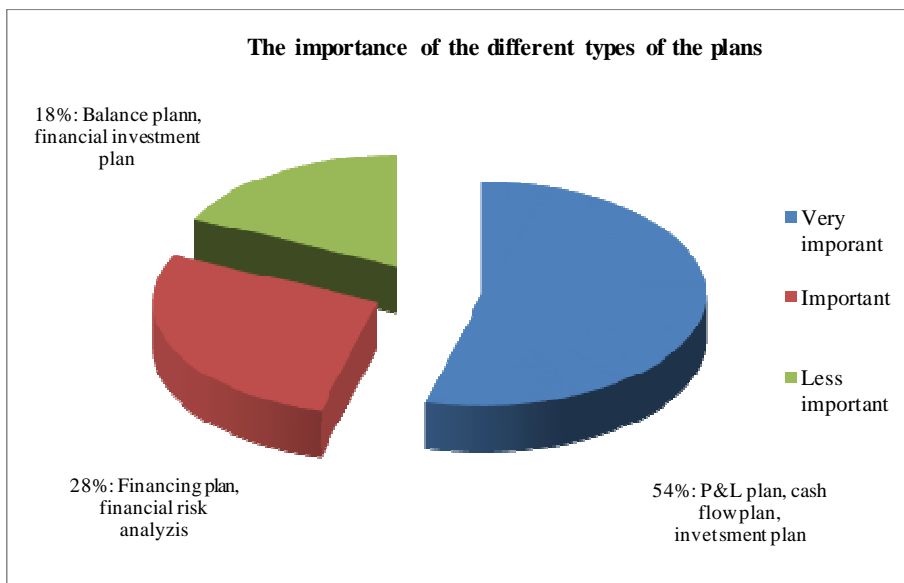

1st graph: The importance of the elements related to the planning of the project controlling (own design)

- The importance of the different plans showed a very mixed picture while analyzing the project related controlling of a company
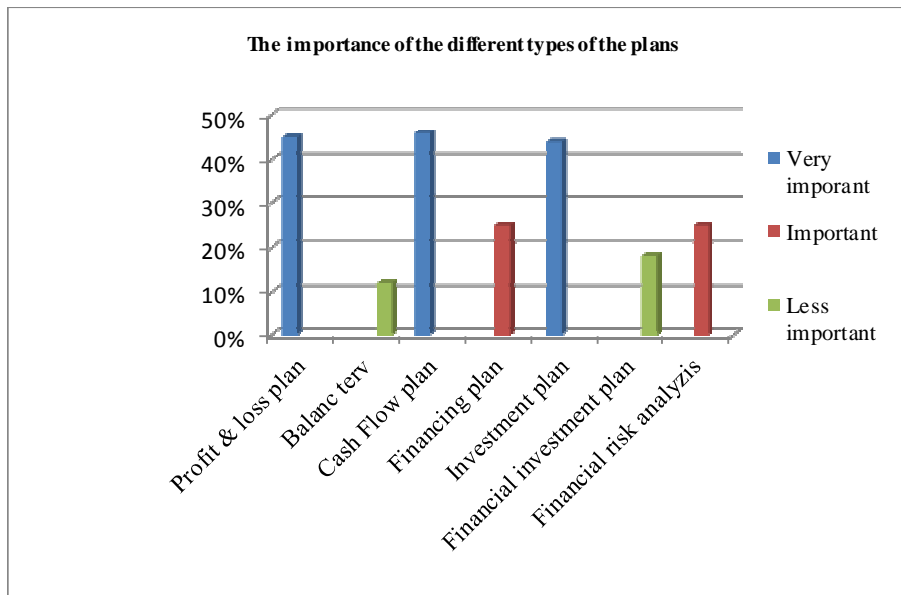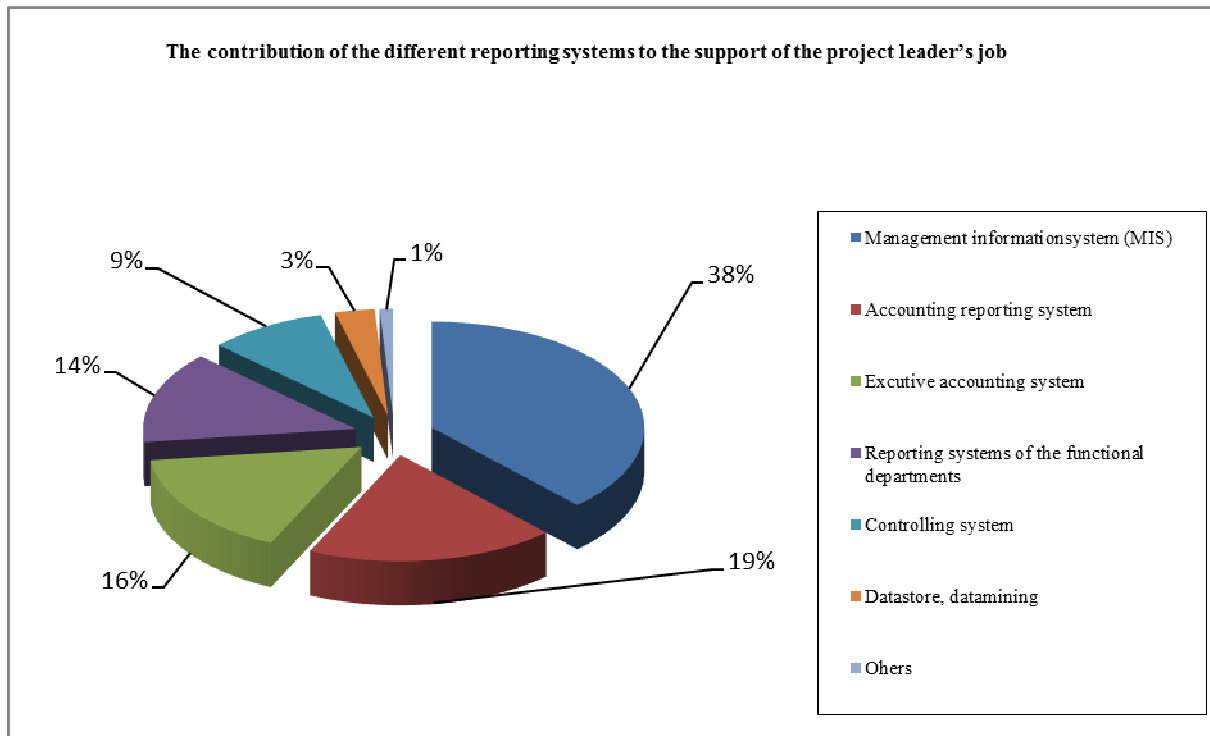

2nd graph: The importance of the different types of the plans (own design)

3rd graph: The importance of the different types of the plans (own design)

- Such reporting systems like Management Information System was highly preferred among the top managers due to the backup to their project management tasks. But the financial managers ranked the accounting reporting system and the executive reporting system to a higher position. At the same time the reporting system of the functional fields was ranked much lower as the data storages and the datamining. All above mentioned are presented in a pie-chart.

The contribution of the different reporting systems to the support of the project leader's job

- Management information system (MIS)
- Accounting reporting system
- Excutive accounting system
- Reporting systems of the functional departments
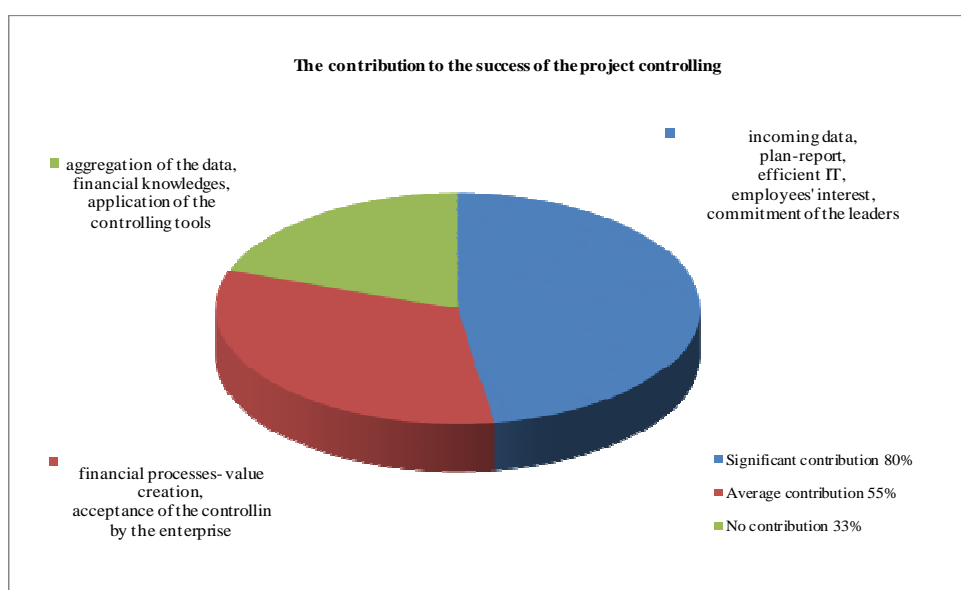- Controlling system
- Datastore, datamining
- Ohers

4th graph: The contribution of the different reporting systems to the support of the project leader's job (own design)

- The experience of the questionnaire based survey showed that the companies evaluated the controlling as an important item regarding the successful management of the company. In addition, it was stated that the controlling provides not only the objectivity to the management in the organization but it supplies information to the management and co-ordinates their activity with backup of the functional fields and connecting the resources to the financial details.

- Additionally, to the previously mentioned facts the responding persons mentioned it as a highly influencing factor of the project controlling that it can support the decisions of the project leader with relevant financial data at strategic level. Moreover, it provides fast and permanent intervention into the project processes. The leaders of the enterprises thought it important that the controlling can break the project plans down right till functional fields and if the management levels are existing it will be broken down to those and supervised. It is also important from the CEO's point of view that the controlling can support the decisions of the project leader on operative level. Based on the former stated concept the controlling activity can make the relation between the project processes and the value creation much more transparent. Due to that fact the profitability of the company will get better. However, the managers put less importance on the fact that thanked to the controlling activity the liquidity got better and by modifying the cash flow of the project the controlling can ensure the better adaptation to the fast-changing business environment and the rising opportunities. There was also a weak correlation among the project plans and the controlling interaction and the efficiency of the project leaders.
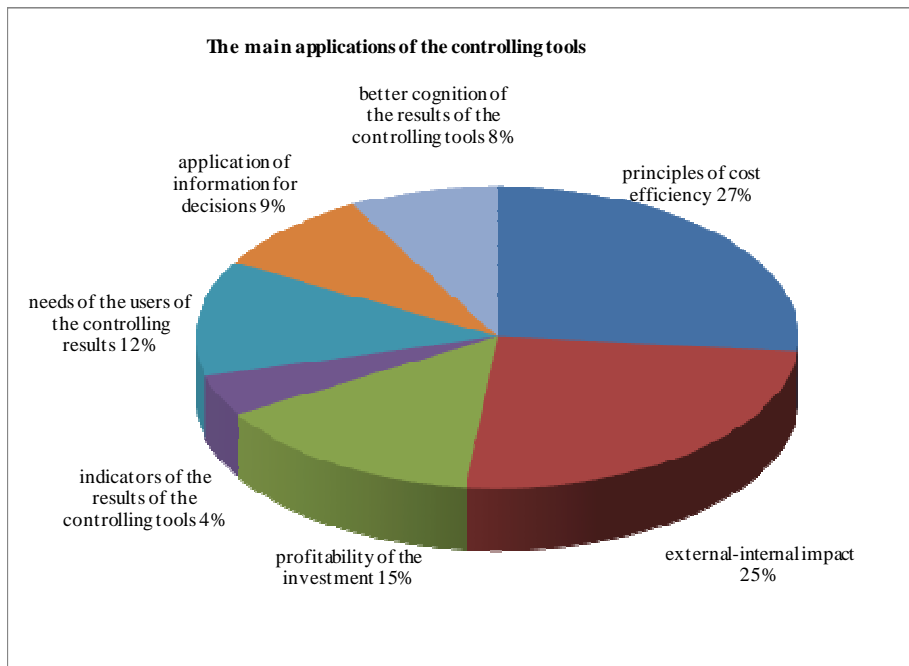
Attributes of the controlling system
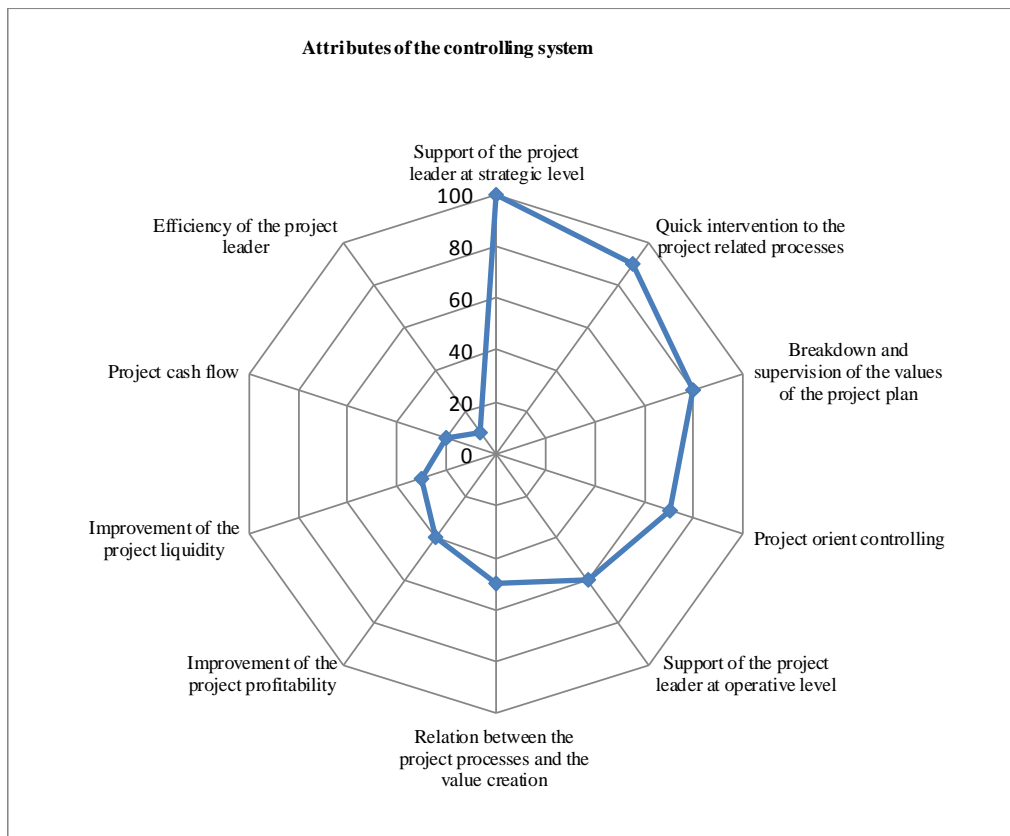
5ᵗʰ graph: Attributes of the controlling system (own design)

- The supporting function of the controlling was assisted the followings: ascending reliability of the incoming data, the coherence of the planed values and the content of reports, efficient IT support, ascending interest of the employees by using the controlling tools, higher commitment of the top managers. The improvement of the acceptance of the controlling and the reveal of the correlation between the project processes and the value creation can contribute to the support of the project.

The contribution to the success of the project controlling

aggregation of the data, financial knowledges, application of the controlling tools

incoming data, plan-report, efficient IT, employees' interest, commitment of the leaders

financial processes- value creation, acceptance of the controllin by the enterprise

- Significant contribution 80%
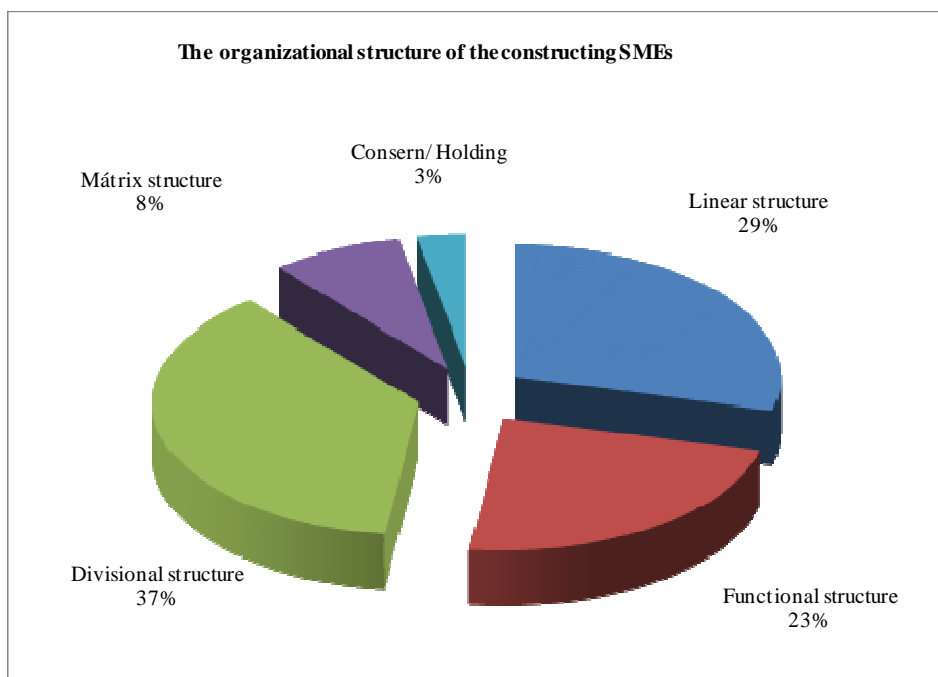- Average contribution 55%
- No contribution 33%

6ᵗʰ graph: The contribution to the success of the project controlling (own design))

- The most relevant factor is the consideration of the cost efficiency and at the main application of the controlling toolbox. In addition, the controlling tools support those external-internal impacts robustfully, which influence the project plan.

The main applications of the controlling tools

- better cognition of the results of the controlling tools 8%
- principles of cost efficiency 27%
- application of information for decisions 9%
- needs of the users of the controlling results 12%
- indicators of the results of the controlling tools 4%
- profitability of the investment 15%
- external-internal impact 25%

7th graph: The main applications of the controlling tools (own design)

- The organizational structure of the constructing SMEs showed an exciting picture. The share of the SMEs by constructing sectors was also informative. We considered only those sectors which gave at least 60% of their turnover either as a main contractor or a subcontractor.

The organizational structure of the constructing SMEs

- Consern/Holding 3%
- Mátrix structure 8%
- Linear structure 29%
- Divisional structure 37%
- Functional structure 23%

8th graph: The organizational structure of the constructing SMEs (own design)
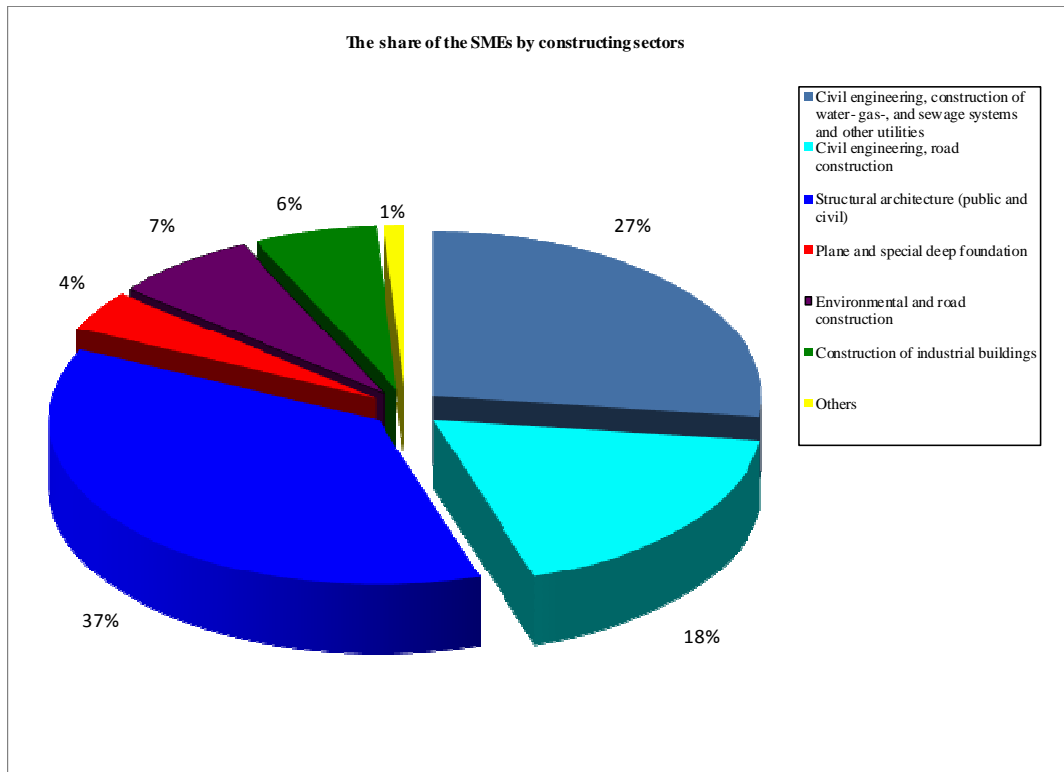
9th graph: The share of the SMEs by constructing sectors (own design)

- Finally, regarding the controlling organization the companies with controlling department or dedicated controller had several alternatives. These options are shown on the pie-chart..
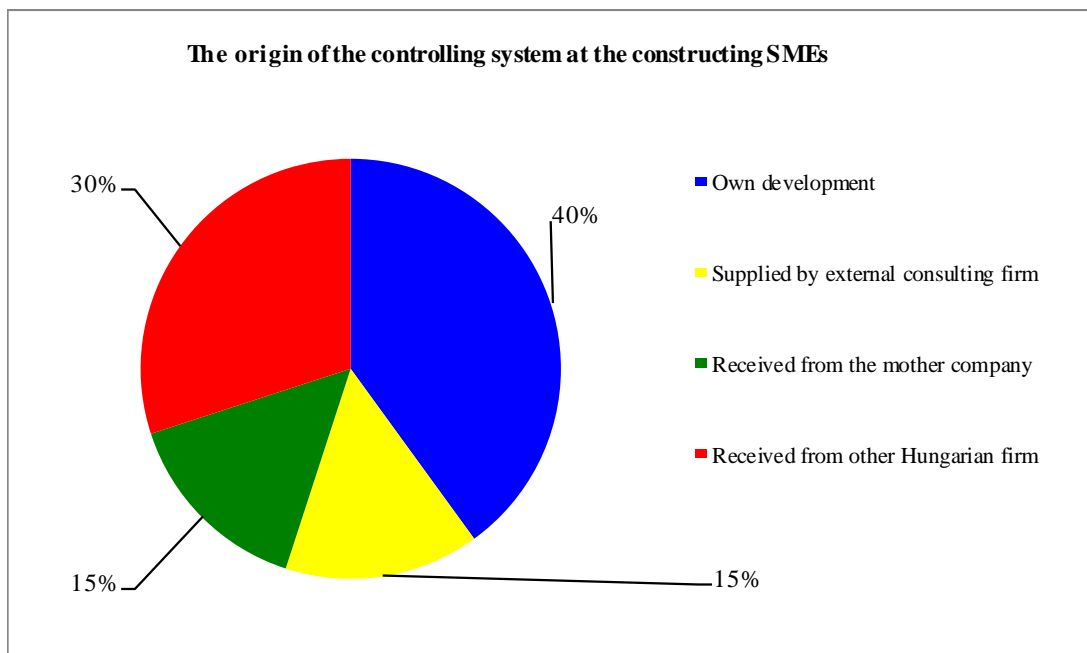
10th graph: The origin of the controlling system at the constructing SMEs (own design)

3.2 Results of in-depth interview

- As mentioned before one of the pillars of my research, the in-depth interviews with the medium and large sized enterprises were the spotlight. These in-depth interviews investigated the structure of the controlling organization and the practice of project controlling.
- To summarize the results of the in-depth interviews the top manager expressed that the project controlling was very important at their companies regarding the successful execution of a project. The most characteristic features of the large constructing companies are the highlight on the principles of cost efficiency and the assistance of the reveal of the project controlling tools which highly influence the project plans. The successful implementation of the controlling tools enables to evaluate the profitability of the investment projects moreover the information granted can be used at the decisions of the management. The origin of the controlling system as at the SMEs showed a mixed picture, there were own developed system, supplied by an external consulting company, received from the mother company or received from other Hungarian company.
- I would underline the planning first as one of the most important elements which establish the basis of project controlling activity. If talking about planning its most significant areas at any sized company are the performance, financial and expense planning.
- The work-out of the panning system is an important decision of the project leader. In the practice the wide scale implementation of controlling, the experiences, the permanent communication, can enhance the efficiency of the project. As the result of planning such documents can be provided which will present the intentions, willingness and requirements of the project leader concerning the future. The multilevel planning is required by the project running in different time horizons.
- The correlation between the planning and settlement of the project is created by the data gathering, the processing by relevant algorithm, and presenting with informative indicators. This is based on easier and more efficient, well-reasoned and well operating project planning system which is automatized by appropriate IT support.
- It is important to mention that one of the topics of the discussions was the discrepancy analysis which is one of the vital elements of the project controlling activities. The efficiency can be facilitated by appropriate IT support.
- We were discussing a lot about the project controlling report. The main task of this report is to provide the decision makers of the enterprise gathered, synthetized and interpreted data. The responsible project leader must be able to define those points where he must intervein into the processes of the project he can appoint the priorities make the necessary actions and submit orders.
- During the measurement of the functions related to the planning of the project controlling the top managers and the project leaders expressed the high importance of business development, thrift calculus of the investment, elaborating different scenarios of the project same as the planning of the contribution to the growth of the corporate value, the long term financial planning of the project, the risk and taxation management.

- Regarding the operative project controlling the managers highlighted the short term financial planning, financing policy, the liquidity management, same as the process of the constructing project related transactions, internal audit of those projects, cost and exposure management.

- During the project related controlling activity, the half of the leaders gave priority to the P&L plan, the cash-flow plan and the investment/project plan.
- Most of the top managers in accordance with the project leaders preferred the monthly and quarterly revisions of the project plans and processes because they were with this frequency the most satisfied.
- Based on my discussions I stated that more and more external information must be processed by the project leaders. The complexity of the projects is increasing and due to that reason the tasks of the managers for co-ordination are also growing. That's why the importance of the supporting management information system is also growing.
- Concerning the controlling system of their own company the managers mentioned that the project controlling could support the project leaders with relevant information on strategic level respectively providing quick and continuous option for intervention into the processes of the project.
- The managers interviewed in the topic of tasks regarding the support of the project management mentioned the planning, optimization of processes, the measuring of the performance, the monitoring, the discrepancy analysis of plans and facts. They defined the project controlling as a toolbox for the management to plan, to monitor and to discover the necessary modifications of the project processes.
- In the in-depth interviews I asked the managers which factors in which measure might help the project processes by the successful support of controlling. According to the majority the reliability and the improved standards of the incoming data, the coherence of the planed values and the content of reports, efficient IT support, ascending interest of the employees by using the controlling tools, higher commitment of the top managers. The improvement of the acceptance of the controlling and the reveal of the correlation between the project processes and the value creation can contribute to the support of the project
- During the meetings with the top managers I detected the toolbox of project controlling used by the company as well as theirs weight in the process. The most usual applied tools were the breakeven point calculation, capacity leverage, analysis of plan-fact discrepancy, ratio of FC/VC, flexible cost calculation and income-expenses calculation.

3.3 Case study- Controlling guidelines for constructing SMEs

In my case study, I have elaborated this controlling guidelines for those constructing SMEs at which I must consider the following attributes based on my sector specific knowledge and my own practice.

Using a few simple elements, I wanted to assist to the business decisions of the owners and/or the general managers of the SMEs working in the constructing industry. I assumed those leaders have not got independent controlling department in their company but they intended to use it for the profitable operation, for the easy access to the transparent information to sustain the liquidity.

This guideline is collection of some very simple theoretical and practical issues completed by some excel sheets what an enterprise can use to support its basic controlling activities. I intend to distribute this "Fundamental Controlling Principles" among the constructing SMEs with the assistance of ÉVOSZ.

- The constructing SMEs are usually working without financial department or they are employing only a small staff. In many cases, they outsource the financial-accounting tasks.

- It is fundamental that the controlling cannot be outsourced so these tasks must be done inside the company. Considering that no skilled controller is doing this job we must aim to create transparent and simple reports with the highest level of automatization and standardization.

- These enterprises, like the Hungarian SMEs, were established with low level of equity and their liquidity is limited. These factors require quick information supply and highlighting on the financial issues and operation.

- In the light of the above mentioned my model is concentrating on those elements which can ensure the survive of the enterprise using controlling tools respectively if it works it will improve the profitability of the company.

The main test fields:
1. The balance, its correlation and the vertical and horizontal analyzes of the data
2. The examination of the assets and the capitalization
3. The examination of the cash management

1st Sheet: The main financial indicators DIMENZIÓ-PSK (2004)

The main financial indicators		Previous period		Current period		Change
Indicators	Calculation	(thousand HUF)	(%)	(thousand HUF)	(%)	(%)
Ratio of fixed assets	Fixed assest / Total assets	0 / 0	0,00	0 / 0	0,00	0,00
Ratio of current assets	Current assets+Accruals / Total sssets	0 / 0	0,00	0 / 0	0,00	0,00
Ratio of equity	Equity / Total equity and Liabilities	0 / 0	0,00	0 / 0	0,00	0,00
Ratio of liabilities	Liabilities / Total equity and Liabilities	0 / 0	0,00	0 / 0	0,00	0,00
Equity multiplier	Total assets / Equity	0 / 0	0,00	0 / 0	0,00	0,00
Capital rotation	Net sales revenues / Equity	0 / 0	0,00	0 / 0	0,00	0,00
Liquidity ratio I. (Current ratio)	Current assets / Short-term liabilities	0 / 0	0,00	0 / 0	0,00	0,00
Liquidity ratio II. (Quick ratio)	Current assets- inventories / Short-term liabilities	0 / 0	0,00	0 / 0	0,00	0,00
Liquidity ratio III.	Liquid assets+Securities / Short-term liabilities	0 / 0	0,00	0 / 0	0,00	0,00
Liquidity ratio IV.	Liquid assets / Short-term liabilities	0 / 0	0,00	0 / 0	0,00	0,00
Efficiency of the equity	After tax profit or loss / Equity	0 / 0	0,00	0 / 0	0,00	0,00
Return on sales (ROS)	Operating profit or loss / Net sales revenues	0 / 0	0,00	0 / 0	0,00	0,00
Return on Equity (ROE)	Operating profit or loss / Equity	0 / 0	0,00	0 / 0	0,00	0,00
Return on Assets (ROA)	Operating profit or loss / Total assets	0 / 0	0,00	0 / 0	0,00	0,00

in Thousand HUF

3.4 Case study – Model of at Hungarian constructing companies generally applicable controlling system- based on own project

In the following I present a flow chart which was worked out considering the practice of my own enterprise. This model as a briefing grants assistance mainly for the SMEs in the constructing industry to apply and integrate my results in their daily routine and to execute the controlling very simply.
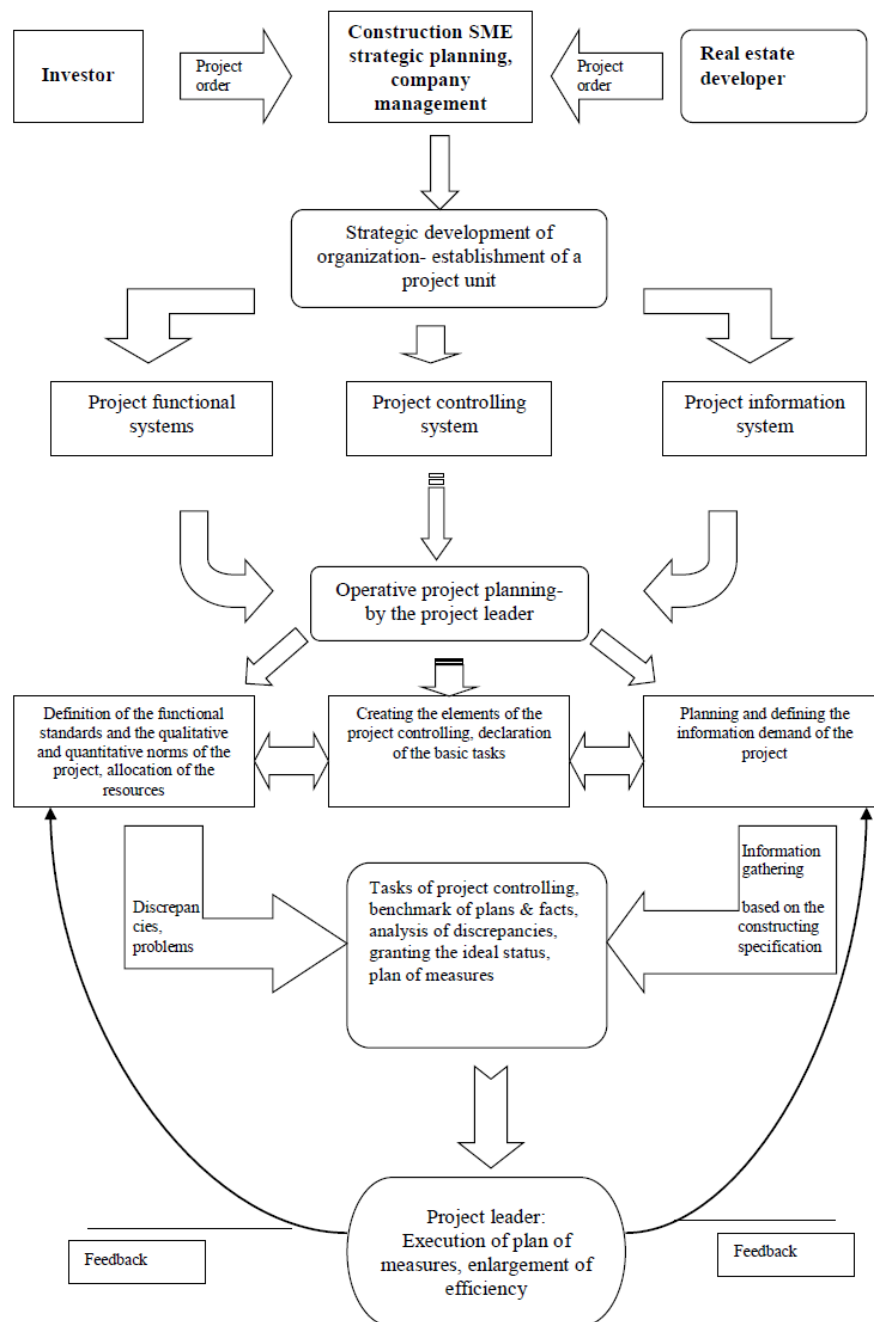
11th picture: The model of the project controlling in the constructing industry (own design)

3.5 New and novel results

New and novel scientific results of my research can be summarized as follows:

H.1. After defining the elements and processes of the industry specific project controlling I was able clarify the basic qualitative and quantitative norms and the principles related to the measurement of the performance. **The main fields of the project controlling became expressed within the constructing industry.**

H.2. Due to my analysis, I have got an insight into the basic functions of the task specific project controlling, the difficulties of the elaboration of parameters, standards and the development of the related strategy and **I could offer alternatives to fight them off**

H.3. I have implemented variant solutions for the more common application of the constructing project controlling, of course only for small enterprises. But this is the first step for the owners and CEO on the way heading to the paradigm shift in the for the determination of the pre-conditions, standards of its launch and for the way to the paradigm shift in the management.

H.4. During my research, I was determining how the project controlling can become a key factor to increase the productivity and effectivity of the constructing SMEs by the monitoring the tasks of these companies.

H.5. Those factors have been defined, which are determining the specifications of the constructing project controlling and I might set up a definite correlation between the specifications and the general methodology. **At the end of the research the results can be integrated into the daily routine of the constructing industry- mainly on SME level.**

4   CONCLUSIONS AND PROPOSALS

After closing my research as its result I have stated the following conclusions and proposals respectively I refer to the model developed for the constructing industry. At the same time I have studied lot of scientific researches, dissertations and publications in this topic to evaluate these controlling specialties to discover the optional changes and to gain relevant information. I have also considered the revealed particularities.

A typical Hungarian constructing company usually has the following activities (as a main contractor or subcontractor):

- Civil engineering, construction of water- gas-, and sewage systems and other utilities
- Civil engineering, road construction
- Structural architecture (public and civil)
- Plane and special deep foundation
- Environmental and road construction
- Construction of industrial buildings
- Others

The production line starts with an offer which works out the budget based on the cost price calculation (in best case). This budget will be usually the offer.

At submitting the offer, we do not have all the information which is necessary to plan 100% properly.

There are lots of incoming information during the execution of the project (amendments of the contracts, supplementary works, proclaims, final construction drawings)

Some projects can have large value even several billion HUF.

In case of some contracts the ratio of the subcontractor can be high.

Based on my own survey I can state that most of the large companies are using such controlling systems which are appropriate to answer to the challenges of the increasing competition and the global business environment. The controlling system is existing partly or entirely and the organizations or project leaders are using them to base the strategic decision making as follows:

- Most of the top managers, we asked, almost agreed that regarding the successful management of the company the controlling has high importance at their companies.

- In accordance with the previously mentioned facts the main role of the controlling s to provide rationality to the management, supply with information, to co-ordinate the managers in the structure. In addition, it is important because it supports not only the functional leaders but connects the resources and the financial data.

- Based on the previously expressed thoughts the project controlling can make the connection between the project processes and the corporate value creation transparent which improves the profitability of the company. However, the managers put less

importance on the fact that thanked to the controlling activity the liquidity got better and by modifying the cash flow of the project the controlling can ensure the better adaptation to the fast-changing business environment and the rising opportunities

- The top managers and the project leaders mentioned 4 topics concerning to the main tasks of the project controlling. These 4 topics were: planning, process optimization, measuring and monitoring of the performance, check and analysis of the plan-fact differences.

- Finally, regarding the controlling organization the companies with controlling department or dedicated controller had several alternatives. These alternatives were: own developed system, supplied by an external consulting company, received from the mother company or received from other Hungarian company.

The other conclusion of my dissertation respectively one of our proposals was which based on one of our premises that the Hungarian constructing SMEs namely with employees between 1-50 mostly do not have controlling organization neither for a project nor for the entire company. In best case, there is a controlling unit of 1-2 persons. Moreover, our assumption was confirmed that the controlling does not exist in the vocabulary or management toolbox. of these companies. In aware of the above mentioned the controlling model I has developed as a briefing grants assistance mainly for the SMEs in the constructing industry to apply and integrate my results in their daily routine and to execute the controlling very simply.

5 PUBLICATIONS OF THE WRITER

Part of books in English

- Khalif A. Abdussalam - Mohamed Itimad S. IBRAHIM - Zoltán László SZABÓ (2015): Some issues in the human resource management. P. 14, in press 5th International Conference on Management (ICOM 2015), Management, leadership and strategy for SMEs' competitiveness. Szent István University, Gödöllő, 18-19th June 2015

Articles in English

- Török, Tibor – Szabó, Zoltán László (2015): Methane Reductions to Moderate the Global Warming Effects. Study in Agricultural Economics, In press, p. 14

- Szabó Zoltán László (2015): The theory of international and national accounting and its practical usefulness to business executives and investors. In Press *Controller Info* III. évf. 3. szám, 4. negyedév 2015. november, ISSN 2063-9309

Articles in Hungarian *(scoring 3 X 6 = 18 credit)*

- Szabó Zoltán László – Domján Dóra – Gábor Ágnes (2013): Controlling „1x1" az építőipari kis- és középvállalkozások számára. *Controller Info* I. évf. 3. szám 2013 április ISSN 2063-9309

- Zéman Z – Szabó Zoltán László – Bárczi Judit (2014): A kockázatkezelés controlling vetületei *Controller Info* (ISSN: 2063-9309) 1: (11) pp. 15-20. (2014)

- Vajda Andrea – Török Tibor – Szabó Zoltán László (2015). Az akkreditív ügylet jogviszonyai. P. 18, in press *Controller Info* III. évf. 3. szám/ 3 negyedév, 2015. szeptember, ISSN 2063-9309

Conference brochures in English

- Zéman Z – Gábor Á – Gácsi R – Szabó Zoltán László (2012): The controlling methods possibilities in the green economy. Conference on „*Knowledge and sustainable economic development*" edited by Bélyácz Iván, Fogarasi József, Szabó Katalin, Szász Erzsébet, Oradea, Románia. 2011 Oct 27 – 2011 Oct 29. 2012. pp. 405-412, Oradea: Partium Kiadó, p. 714. ISBN: 978-606-8156-30-9

- Zéman Z – Szabó Zoltán László – Bárczi Judit (2012): The operative and strategic controlling connection with decision making, In: Knowledge and sustainable economic development. 714 p. Oradea, Románia, 2011.10.27-2011.10.29. Oradea: Partium Kiadó, 2012.   pp.   233-245. (ISBN: 978-606-8156-30-9)

- Tibor TÖRÖK, Zoltán László SZABÓ, Bahaa ASMI (2015): Economic growth of ASEAN country group in Asia, pp. 41-49. 5th International Conference of Economic Sciences and 5th Climate Change, Economic Development, Environment and People (CCEDEP) Conference of the Alliance of Central-Eastern European Universities (ACEU) Session: COLLABORATIVE FINANCE, Editors: Katalin Szendrő, Viktória Szente, Róbert Barna, Kaposvár University – Kaposvár – Hungary - 7-8 May 2015, Published and distributed by Kaposvár University, Faculty of Economic Science, ISBN: 978-963-9821-86-6

- Bahaa ASMI, Tibor TÖRÖK, Zoltán László, SZABÓ (2015): Compare the economic development of ASEAN and Latin American countries, pp. 51-60, 5th International Conference of Economic Sciences and 5th Climate Change, Economic Development, Environment and People (CCEDEP) Conference of the Alliance of Central-Eastern European Universities (ACEU) Session: COLLABORATIVE FINANCE, Editors: Katalin Szendrő, Viktória Szente, Róbert Barna, Kaposvár University – Kaposvár – Hungary - 7-8 May 2015, Published and distributed by Kaposvár University, Faculty of Economic Science, ISBN: 978-963-9821-86-6

- GÁCSI Roland-SZABÓ Zoltán László: "Balanced Scorecard in higher education" ME-GTK Lillafüredi Konferencia 2015

- SZABÓ Zoltán László - GÁCSI Roland - SZŐKE Brigitta: The applicability of controlling in the construction industry for SMEs, Szolnoki Főiskola Nemzetközi Konferencia a Tudomány Ünnepén, IX. Alföldi Tudományos Tájgazdálkodási Napok 2015