THESIS SUMMARY

Ákos Milicz
INSTITUTIONALIZATION OF INTERNAL CONTROL SYSTEMS IN HUNGARIAN BUSINESS ORGANIZATIONS

PhD Thesis

Supervisor:

László Lazár PhD
associate professor

Budapest, 2016
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1. Subject of the thesis
The subject of my Doctoral thesis is the institutionalization of internal control systems in business organizations. I will search for the answer to the question of how internal control systems are institutionalized in Hungarian business organizations and what characteristics, phases, components and key actors this process includes. In my thesis I will deal with the development level of, their rules, characteristics, dominant actors, and the institutionalization and internalization of control systems, and in relation to these I will conduct research with respect to Hungarian companies.

Business activity and enterprises require continuous feedback and the application of various controls in the organizations. Managers need to review and evaluate the results achieved, account for the accomplishment of goals and strategies, provide guarantees regarding the reliability of figures and their regular operation, manage risks and prevent harmful phenomena affecting the business. This responsibility is borne by the management, and the Chief Executive Officer has a key role. However, the owner, the chosen auditor, the tax authority, the civic organizations concerned, the creditors, the financing bank, etc. also expect regular, efficient, effective and reliable operation from the company. At the same time, economic crimes, money laundering, employee frauds, corruption, data fishing, etc. made internal control systems even more significant. Consequently, revision, striving to reach objectives, supervision, feedback and the control of processes became a characteristic of companies, and the operation of these became one of the functions of the management. Today, companies perform this work in an organised framework, which we call internal control system.

The purpose of the internal control system is to ensure regular operation and the efficient achievement of results (objectives) in relation to the operation of the company, and that reliable reports are prepared with respect to these (COSO, 2013a., p.Ch 1.). The management is responsible for the operation of the internal control system, however the employees, middle managers and colleagues engaged in direct control also apply control activities in all areas, levels, branches and departments of the company. The internal control system is present in the daily operation of the organisation, and it is commonly presented via so-called “lines of defense” (IIA, 2013b), (Anderson & Eubanks, 2015.).

The 3-lines model of the lines of defense declares that in the processes within the company, the elimination of risks, the protection of assets, the monitoring of strategic goals, the investigation of abuses, etc. are conducted by those managing business activity, specialized organisations and the independent internal auditing simultaneously, in cooperation with each
other. This cooperative collaboration is also checked by the company management, the supervisory board and other proprietary committees, the group of owners and the organisations conducting external auditing, who operate not within, but outside or independent of the 3 lines of defense.

The requirements of internal control systems were published first in 1992 as a framework. Since then, the model expanded with risk management in 2004, and in 2013, the modified, updated version of the framework was published.

The internal control system is commonly divided into 5 components, listed below:

- control environment, where the factors and elements influencing the control system which management must identify and take into consideration in the course of the operation of the organisation are present;
- risk management, in the course of which the organisation identifies phenomena endangering business activity, and their possible effects;
- control activities, in the scope of which a mix of various controls is applied, and at the same time the persons in charge, timing, frequency, required intervention levels and procedural rules are determined;
- information and communication, by which the external and internal actors concerned are informed about information related to the exercising of controls;
- monitoring tasks, in the scope of which the operation and strong and weak points of the entire control system are analysed and evaluated, and plans are developed for improvement.

The acclimatization and daily utilization of the corporate internal control system, and that it has become an essential factor can be defined well with the institutionalist organisation theory. Institutionalization is an abstract term used in organizational sociology, however it is an organisation theory that can be applied quite well when examining internal control systems. The institutionalization approach examines how an activity becomes a part of the daily life of an organisation, when it becomes indispensable, who its key actors are, what sanctions does its breach incur, and how an already institutionalized system of operation changes (and changes others with it). Institutionalists also analyze questions such as the copying of behaviors (co-opting), the exercise of power, the role of signs and symbols in the operation of companies and the characteristics of the sharing of knowledge in inter-organisational spaces (Meyer & Rowan, 1977., p.341.), (DiMaggio & Powell, 1991., pp.146-151.), (Berger & Luckmann, 1998., p.82.), (Farkas, 2001., p.121.).
From the aspect of institutionalization, we can inspect the operation of the internal control system of companies, set research questions and establish hypotheses. In my thesis, I dealt in detail with the following correlations of the above:

1. What external and internal factors and elements influence the operation of internal control systems in the case of Hungarian companies?
2. Who operate the internal control system and how, who are the key actors of such a system, what functions are responsible for these tasks?
3. What control activities and control mechanisms are common in this system, and what are their relations with each other?
4. How mature is the internal control system, how does it fit into the daily operation and activity of the organisation, i.e. what are the visible signs indicative of institutionalization?

2. Structure of the thesis, methods applied

The structure of my thesis presents current professional literature and the approaches and theses of authors in a linear structure, along with logical explanations. The basic presentation, timeliness, and the current trends of the subject of the thesis and my own field of interest are included in the introduction of my thesis.

Looking at the Table of Contents, it is apparent that I started to introduce the topic at the basics, with the definition of the key words of the internal control system. I presented the everyday and professional meaning of professional terms, showing that the differences between the Hungarian and the original English terms resulting from translation may mislead their users, so they should be used carefully.

After defining the fundamental terms, I narrowed the topic of internal control systems to business organisations. I presented the branchings, i.e. differences between supervision and internal control; I ruled out the requirements relating to state finance organisations with arguments, and I presented the reasons why I did not deal with other functional auditing tasks, such as technical, pedagogical, work safety, etc. checks. I also drew attention to the fact that I analyse internal control at a system level in my thesis, therefore I do not focus on thematic sub-topics in detail or highlight any single risk (such as corruption, accounting frauds, data security, etc.).

In order to lay the foundation of the specified topic, in my thesis I covered the connotations and different (Hungarian and international) interpretations of the word ‘control’, used in management studies, and I also presented its historical development, so that I could
purposefully study the operation of internal control systems. I applied a systemic approach towards the control activities in the companies through the general systems theory and system theory approach. During this I explored and identified the elements of the system, the interactions between the elements and the environmental conditions affecting the system.

After that, I presented the specific requirements relating to the internal control system, the standard of the framework, and its principles and operating philosophy in detail. In my thesis this model provided the professional basis describing internal control systems, which framework specifies the theoretical operation of the control systems in three dimensions, five components, three targets and seventeen principles. I presented – also based on professional literature – its actors, and finally drew up my criticisms regarding the model. I took a look at the three-factor model of lines of defense, and presented other models built on or existing beside the COSO framework.

My thesis also includes an institutionalizational approach, so I presented information relating to institutional organisation theory in Part IV. of my thesis, first outlining the main theses of the theory, and then connecting them to the theoretical framework relating to the internal control system, and finally presenting my own institutionalization-maturity model. In this chapter, with the presentation of examples, I linked the institutional organization theories to the characteristics of internal control systems, highlighting the most important connection points and factors, which contributed to my subsequent research questions.

Based on the correlations outlined in the chapter covering institutionalization, I formulated my own research questions, set up my H1-H4 hypothesis, and presented the results relating to their testing. At the same time, I presented the methodology of data collection and evaluation, the main steps of data collection via online surveys and the criteria of validity and reliability. On the road leading to my thesis, I assessed each one of my professional hypotheses, conducted detailed exploratory analyses dissecting them, and drew up further conclusions as a result.

My research methodology was for the main part built on quantitative elements, using surveys. At the start of my research, I assembled a list of approximately thirty-three thousand Hungarian small, medium-sized(SME) and large companies, approximately twenty-four thousand of which I was able to reach via e-mail. Eight hundred and thirty-nine companies opened the survey sent, and one hundred and thirty-nine companies completed it in full. Of these, I had to screen out and disregard the answers of seven companies. Therefore, I formulated my research results based on the answers presented in the surveys completed in full by one hundred and thirty-two companies. I also took into account the results of my personal in-depth interview conducted with a further three companies.
I adjusted the research methodology tools applied to the specific hypotheses and the data of the survey database. I used descriptive analyses (average, variation, KURT, mode, median), Sperman rank-correlation, factor analysis, Pearson correlation, cluster and factor analysis and normality analysis via the Kolmogorov-Smirnov test, the results of which I attached to my thesis. In the course of my research, I conducted in-depth interviews with three companies, and analysed the questions and results of the research in the scope of two focus group discussions with the members of two professional organisations.

I attached to my thesis my professional collections relating to my work, the research survey, the structure of the database behind the survey and the detailed numeric data and tables supporting the evaluation of the hypotheses. The Annexes cover my own collections and lists prepared by synthesizing the professional literature, which I took into consideration when I assembled my research survey.

3. Summary of the research results
In my thesis, I drew up and tested four separate professional hypotheses – and thirteen sub-hypotheses within them –, and after evaluating all of them, I conducted deeper analysis with respect to the research questions.

3.1 Influencing factors
As regards professional hypothesis H1, I examined the factors influencing the internal control system using rank-correlation tools. I found that my preliminarily formulated hypothesis has to be discarded because there is no factor relating to company size (headcount, number of premises) at the top of the influence rankings. Instead, the top of the ranking consists of the factors prescribing and regulating requirements, such as the expectation of the owners, legal provisions and industry standards, regulations concerning activity. Therefore, these are the factors that, being the main factors of the control environment, influence internal control systems the most. I found that this statement is true for all but four segments, i.e. I found that there is no substantive difference between the specific industry sectors in the course of their institutionalization.

3.2. Key actors
In professional hypothesis H2, I examined the actors responsible for control activities from the aspect of their function. My examination covered the key actors of institutionalized control systems. It corroborated, that the most important key actor is the manager, who operate several controllactivities. But in the end, I had to discard hypothesis H2 after all.
The reason of this was that the role of accounting and finance, controllers working with internal data and corporate management specialists was far stronger than I previously assumed. By contrast, the role of the quality assurance internal auditor and the individual internal auditor was far weaker in reality than I previously assumed. Based on the answers given, I also found that “exotic” functions such as the compliance officer, forensic accountant, fraud manager or ethics coordinator are few and far between the business organisations replying.

As regards the key actors, I also found that the persons conducting control activities operate the control system typically as a full time job, however more often individually than as a member of an organizational unit, that is to say, they participate in the process of institutionalization as individuals rather than as a specialized organizational unit. Their headcount is low, typically 1-2 persons per control type (excluding the managerial function), and a total of 4-5 persons acting in such a specialized role per company. While these numbers can be deemed to be quite low as absolute values, when I compared them to the headcount data of all companies, I also found that about every fifth employee conducts control activities – i.e. participates in the operation of the company’s internal control system – in companies.

### 3.3 General use of control activities

Professional hypothesis H3 examined the incidence of various control activities, and their correlations with each other. All of the four types of control is known and used in Hungarian business organisations, however they are not used in the preliminary assumed proportions, therefore hypothesis H3 had to be discarded. This discarding is, however, rather technical in nature, as in the case of both sub-hypothesis resulting in the rejection of the hypothesis, I found that the types of control concerned are much more widespread than I previously assumed.

As regards control activities, I also found that companies use a mix of controls, as all four control activities were widespread among them. However, I also found that manual (staff-conducted) controls are outweigh automatized (process-integrated) controls, and human intervention is necessary in many cases where it could be omitted. After that, I performed factor and cluster analysis with respect to the control activities examined, the results of which confirmed the model that emerged in the case of hypothesis H2: 1. managerial controls are a separated control type, 2. retrospective (ex post) controls conducted using numeric data and 3. controls based on physical examination each make up an individual group, and finally, 4. we are left with other controls that mostly belong to the scope of process-integrated controls.
3.4 Institutionalization of Internal Control System

In connection with the evaluation of hypothesis H4, I attempted to evaluate my own model for the maturity of internal control systems, and enable the definition of the maturity model via a mathematic formula and variation analysis. The result was positive, therefore (but) hypothesis H4 had to be rejected, because the homogeneity criterion set out in it proved to be too strict as regards the answers of those completing the survey. I found that with respect to agreeing with the statements relating to institutionalization, answers given regarding maturity levels displayed at most a 1.69 variance on a seven-point scale in the case of 80% of those completing the survey, meaning that in the case of these interviewees, the maturity level of their control system can be characterised from 49 homogeneous answers.

In addition to the requirement regarding homogeneity, I verified via the Kolmogorov-Smirnov test that the average and standard deviation index of 122 pertaining to the level of agreement displays normal distribution, from which I drew conclusions regarding institutionalization levels and their entrant values. Applying the 3σ rule I found that taking the seven-point scale into consideration, the approx. 2/3 of respondents where the institutionalization can be deemed to be close to the average (below average or above average with the specific measure) that I indicated in my model a levels (3) and (4) falls into the 2.80-5.41 range. I sorted interviewees falling outside this range into two categories each (a total of four), with the grades (1) - non-institutionalized, (2) - weak, (5) - effective and (6) - excellent. As such, I created the revised names of the six grades of my own models and set the range limits of each grade.

To sum up, I achieved the following results by examining the topic formulated in my thesis and conducting my own research:

- I explored the relevant professional literature, presented the aspects of control in detail, continued it with the definition of the internal control system, then connected this to institutionalist organizational theory, and drew up my own research questions based on the foregoing;
- I extracted information and found correlations between the current operation of the internal control systems of Hungarian companies and the factors influencing them based on the professional literature and as a result of my own research;
- I attached my own collections and categorizations relating to actors, control activities and risks connecting to each hypothesis as annexes;
- after verifying my own maturity model serving as a starting point, I defined the levels of the institutionalization of internal control systems;
- I presented further characteristics in relation with the operation of internal control systems in Hungarian companies using multivariate statistical analyses.
4. Most important references


5. The author’s publications related to the subject

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