Management and
Business Administration
Doctoral School

SUMMARY OF THESES

Factors that Influence the Internal Effects of External Hospital Evaluation
PhD Dissertation

by
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Supervisor:

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Associate Professor

2014 Budapest

Institute of Business Economics
Department of Logistics and Supply Chain Management

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Content

1. Research objectives, previous research and topic selection

Present research aims at evaluating the impact of the implementation of external evaluation methods on the internal actors of hospitals. External evaluation methods are defined as models and practically applied tools for systematic analysis that external stakeholders (such as supervisory authority, financing authorities, accreditation boards, certification institutes, patient rights organizations, etc) use to evaluate how hospitals achieve the appointed goals and objectives, and hereby how they satisfy their stakeholders' demands and expectations. This research focuses on hospitals in which different actors perceive and react to the applied external evaluation methods.

1.1. Relevance of the topic

External evaluation methods have been widely applied in many countries in the last decades including Hungary since 2000, as a result of which hospitals can be assessed by more several external stakeholders at the same time, each of them using different evaluation methods. This practice has raised controversial issues among decision makers and researchers concerning for example the aims and the effectiveness of evaluation methods.

Since the 1990s several research projects have been launched to study the evaluation methods in use. ExPeRT 1996-1999, MARQuIS 2005-2007, ACCREDIT from 2007, DUQuE between 2010 and 2013 are some of these projects. Some of these research projects focused on the effectiveness of the evaluation methods analyzing their impact on hospital output or outcome (e.g. Hibbard et al. 2003, Sunol et al., 2009). The MARQuIS research project found that 88% of hospitals involved in the research project were externally evaluated (Lombarts et al., 2009). Research project results showed that among external evaluation methods accreditation was significantly related to safety outputs and clinical outputs, while ISO was principally related to patient centeredness (Sunol et al., 2009). Other research papers focused on the undesirable effects of some of these methods (Werner – Asch, 2005; Belicza – Takács, 2007). Custers et al (2008) classified the adverse effects of the incentives related to some methods as follows: gaming (maximization of the measured results without achieving the desired objective), multitasking problem (neglecting unmeasured objectives) and at last, the possibility that external incentives undermine motivation of health care workers to improve quality. Motivated by the results of the research of the 2000s further research areas were explored that did not focus exclusively on effectiveness, but they also intended to analyze the background

assumptions (Gröne et al. 2008). The need for a model to classify evaluation methods was also expressed (Boland–Fowler 2000; Gröne et al., 2009).

It can be concluded that previous research focused on the consequences of the application of evaluation methods, such as their impact on output or outcome, or on the undesirable, adverse effects they may have. However, they did not investigate the issue of how these outcomes or undesirable effects are produced. As previous research has already proven that external evaluation methods impact on the behavior of organization members, this dissertation focuses on exploring the processes and influencing factors that may influence the perceptions, reactions, interactions of the internal stakeholders and the external auditors of a hospital and their interpretation of the role of the external evaluation.

In Hungary this research topic is of considerable relevance, as in the past twenty years external evaluation methods such as certification based on ISO standard, or based on Standards of Hospital Care (SHC) and Hungarian Health Care Standards (HHCS) have become widespread in practice. According to a survey by the Institute for Health Care Quality Improvement and Hospital Engineering (EMKI) performed in 2011 72% of the hospitals (appropriate to my definition[1]) disposed of some kind of certification, 38% of the hospitals had ISO 9001 and HHCS, while 28% had only ISO and 6% had only HHCS certifications. (EMKI, 2011 survey, own calculation). The Health Insurance Supervisory Authority administered an indicator system for hospitals between 2008 and 2010. The hospital accreditation system is being under development (2010-2014) within the framework of an EU founded project.[2] Despite the growing interest for these external hospital evaluation methods in Hungary there is only very few research analyzing their effects on hospitals. Therefore, considering the situation of the external hospital evaluation methods in Hungary and the international research trends I decided to study the internal hospital impacts of Hungarian external evaluation methods in an exploratory, qualitative research.

1.2. Research objective and theoretical background

The aim of this research is to explore the internal hospital effects of the external evaluation methods by trying to understand internal organizational processes and the reactions and interactions of hospital actors and by focusing on their relationship with hospital improvement

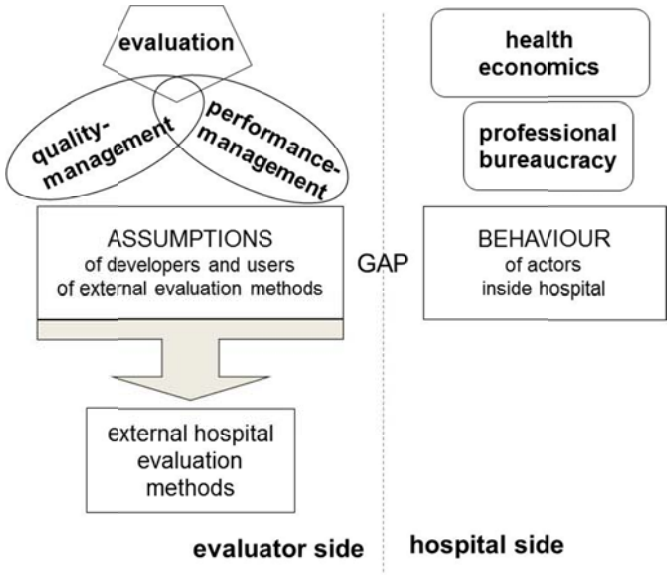
[1] Hospital is meant as a publicly financed institution providing acute in-patient care.

[2] Social Renewal Operational Program (TÁMOP) 6.2.5.A-12/1-2012-0001 project: : To develop organizational efficiency in institutions affected by structural reforms: *Establishing a unified survey system for outpatient care, inpatient care and pharmaceutical supplies.*

initiatives. With regards to the fact that a classification of methods is also required to be able to support fair comparison with other research results, this research also aims at offering a proposal for a framework of such classification.

Theoretical background for this research is provided by other research fields such as evaluation, quality management and performance management; health economics describing the properties of the health sector; and professional bureaucracy theory developed by Mintzberg (1991). [3] Theoretical background for this research is illustrated in Figure 1.

Figure 1. Theoretical background



Source: own elaboration

External hospital evaluation can be considered as a special area of evaluation, as a cognitive process and a professional task. On the other hand, methods of external hospital evaluation are borrowed primarily from quality management and performance management. These three areas partially coincide (see Figure 1). While these areas define the characteristics of the evaluation methods, health economics and professional bureaucracy can explain the behavior of the internal hospital actors which is in the focus of this study. There are considerable differences between the assumptions applied by the background theories of external evaluation methods (quality management, performance management and evaluation) and

[3] Theoretical background for evaluation (see e.g. Guba - Lincoln; 1989; Scriven, 1991), performance management and measurement (see e.g. Wimmer, 2000; Neely et al. 2004) and quality management (see e.g. Demeter, 2008) are described in Chapter 2 of the dissertation, where the use of the terms of quality and performance in Hungary (see e.g. Belicza-Zékány, 1998; Evetovits-Gaál, 2005) is also detailed. The specialities of the health sector are presented in Chapter 3 (see e.g. Kornai-Eggleston, 2004). In this paper only theoretical framework directly related to empirical research are mentioned.

those related to the behavior of hospital actors (peculiarities of the health sector, professional bureaucracy). Lozeau et al. (2002) pointed out these differences which the authors denominate as compatibility gap. This theory applied to my research topic is comprised in Table 1.

Table 1. Compatibility Gap in theory

	Assumptions that lay behind the management methods applied in the competitive sector	COMPATIBILITY GAP	Peculiarities of public hospitals
External relations			
– 'market'	Market mechanisms work (e.g. strong costumers interests work as a driving force)		Demand is represented by several stakeholders (patients, financing authorities). Patients' influence is weak
– 'institutional'	Organizational autonomy: Organization has free choice of strategies and operations		Institutional constraints: government, union and professional groups constrain choices
Internal relationships			
– leadership	Dominant CEO: able to push through decisions and influence the whole organization		Diffuse leadership: strategy and operating processes are heavily influenced by key professionals (doctors)
– internal influence flow	Top-down hierarchy, empowered teams		Fragmentation, negotiated order: strategic priorities and operations are defined locally via interaction of professional and hierarchical power

Source: based on Lozeau et al. 2002.

Compatibility gap described in Table 1 refers to theory only. The question is whether this gap really exists in the practice that is whether this gap between the behavior expected by the evaluation and the perceived practice are really tangible similarly to the gap between theories. Empirical research is limited to analyze the effects of the certifications applied in Hungary such as certification based on ISO 9001 and SHC or HHCS. The principal thesis question was: how do ISO 9001 and SHC/HHCS certifications affect the behavior of hospital actors and, as a consequence, the improvement initiatives of the hospital in the Hungarian health sector?

2. Research methods

Empirical research was based on exploratory qualitative research methods. Research question required the application of such methods (Maxwell, 1996), which also comply with my own attitude as a researcher, as the research question does not only focus on events and behavior, but also on how participants perceive and interpret them and how these influence their

reactions and interactions. This research was based on a hospital case study (one organizational level case with 5 embedded cases, 30 interviews, 94 documents and a two-day observation) and on five interviews with experts.

2.1. Justification of methodology, case and expert interviewee selection

The aim of this study was to have a deep understanding of a phenomenon. Case study method (Yin, 2003) made it possible to obtain detailed understanding of the perceptions, reactions and interactions of external auditors and internal actors of the hospital. The selected methodology is justified by the fact that the analyzed phenomenon cannot be separated from organizational context, and case study method offers several points of view to consider organizational context when analyzing a phenomenon.

Within the case study method one hospital with multiple units of analysis (embedded cases) has been analyzed because this method complied with the exploratory character of my research and it offered the possibility of a deeper understanding of the phenomenon. Embedded cases made it possible to compare analytic units and to perform the analysis of the emerging topics on more than one hospital units. Although the research based on a single case does not allow for generalizations, it can serve as a basis for comparison with other cases as I described the context of the case in detail.

The hospital analyzed was typical in its quality management practice and representing a characteristic group of Hungarian hospitals (regarding size and specialties). Case selection was based on theoretical sampling (Glaser – Strauss, 1967, quoted in Eisenhardt, 1989), considering the following elements:

- hospital size: 300-1000 acute beds, 450-1500 total bed number,
- number of specialties: 10-19,
- hospital type: excluding special hospitals and university clinics,
- ISO or/and SHC/HHCS certification,
- date of obtaining certification, continuity of the maintenance of certification.

Analysis to support case selection was made in the second half of 2012, after the structural changes had been implemented on the 1st of July in 2012. Selection was based on hospital data and surveys on hospital quality activities (Szy–Sinka, 2004; EBF 2008-2010; EMKI 2011). It was an important criterion that the selected hospital was among the institutions that obtained their certification in the boosting years between 2000 and 2004, and that it had the continuity of the maintenance of certification. 15 hospitals met these criteria. From them I

chose those that disposed of both ISO 9001 and HHCS certifications, and that offered the possibility of regular visits for the case study period. It was the third hospital requested that agreed to participate in the research.

In order to gain a wider knowledge of the hospital context and to compare with other viewpoints interviews have been made with five developers or supporters of the external evaluation methods used by Hungarian hospitals (ISO, SHC/HHCS). The expert interviewees were selected based on the criteria that they were able to give information on evaluation tool development and application since the middle of 1990s, and that the selected group included the leading professionals of quality management in Hungary.

2.2. Data collection

It was one of the intentions of this research to compare different points of view on evaluation methods, and I made semi-structured interviews with leading national experts on evaluation methods (5 interviewees), two external auditors of the hospital (2 interviewees) and other hospital actors (30 interviewees). Several data collecting methods have been applied to improve validity of this research by comparing them, such as semi-structured interviews, documents and observation.

Data collection was made in two periods. Interviews with the experts were made in autumn 2012. Data collection for the case study took three and a half months in the first half of 2013. I paid respect to the anonymity of the interviewees and the hospital.

Interviewees were top managers including the former Director General of the hospital, the quality manager and other persons responsible for quality in the hospital, and other employees from the different level of the hospital hierarchy. (For distribution of interviewees see Table 2.)

Table 2. Distribution of hospital interviewees

	physician	**nurse, skilled health worker**	**diagnos-tics**	**economic/ technolo-gical**	**techno-structure**	**Total**
top managers	3	1		1		**5** (16,7%)
middle and lower managers	3	4	1	5	2	**15** (50%)
non-managers	4	2		2	2	**10** (33,3%)
	10 (33,3%)	**7** (23,3%)	**1** (3,3%)	**8** (26,7%)	**4** (13,3%)	**30** (100%)

Source: own elaboration

For the embedded method further analytic units were chosen representing five hospital units: three patient care units, a diagnostics unit and an economic/technological unit. Together with

the embedded cases interviewees represented more than one third of all the hospital units. Besides the interviews 94 documents were collected and analyzed to support the case study. These documents were either provided by the quality manager of the hospital (72), or were collected by myself from the internet (hospital webpage) (22). The third method of data collection was the observation of a two-day external audit process.

I was keeping a research diary during the data collection period, in which I took notes of the circumstances of the interviewees, my experiences in the hospital and why I consider them relevant for my study.

Data processing and data collection periods were not strictly separated. The first analyses made during the first period of data collection helped to define the right focus of the research. I intended to manage data collection process so that I could have access to documents and be able to ask as much as possible in order to find answers to even those questions that emerged during my research.

2.3. Data analysis

Data was coded by NVivo 9 software by open coding in case of hospital and auditor interviews (Strauss – Corbin, 1990) and by mixed coding in case of expert interviews (Miles – Huberman, 1994), and a multi-round analytical process was applied to achieve final results.

Although my original questions served me as sign-posts, open coding and the overlaps in the periods of data collection and data analysis revealed new areas that would have been certainly missed if I insist on strictly following my original ideas.

During data analysis I compared data deriving from semi-structured interviews, documents and observations, and I examined the effects and characteristics of the certification and related audits from different points of view (hospital actors, auditors, experts). The five embedded cases made it possible to make comparisons at hospital unit level. The application of several data collection methods and the comparison of these data (triangulation) strengthen the validity of this study.

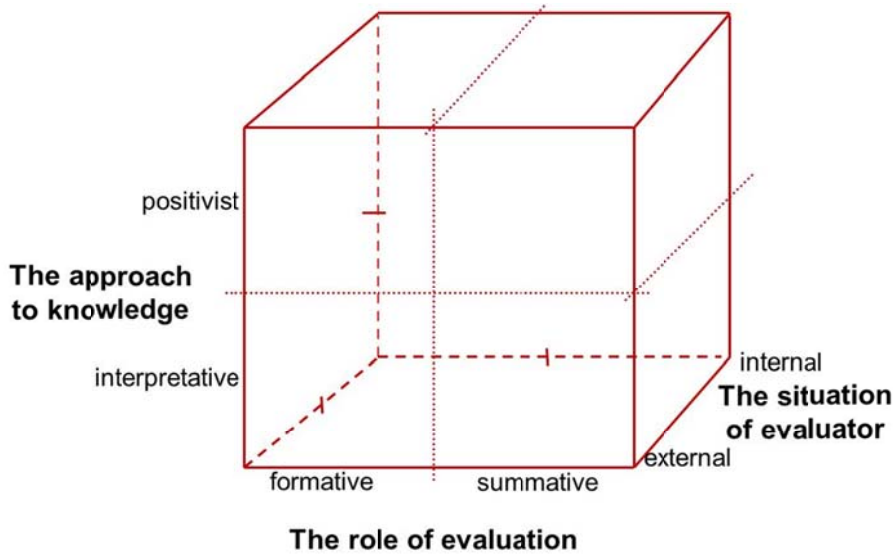
3. Research results

This PhD dissertation contains a proposal for a framework to classify hospital evaluation methods, it identifies six groups of influencing factors as a conclusion of empirical research, and results were compared to literature. The principal results are presented below.

3.1. Framework for the classification of hospital evaluation methods

Figure 2 comprises my proposal for the framework for the classification of hospital evaluation methods. The proposal is based on former studies on external evaluation methods (eg. Boland – Fowler, 2000; Freeman, 2002; Veillard, 2005) and on the general definitions of evaluation. The dimensions applied were defined according to the situation of the evaluator (external or internal), the role of the evaluation (formative or summative) and the approach to knowledge (positivist or interpretative). Further suggested classification criteria refer to what kind of measures or incentives follow the evaluation (the nature of the resultant action and incentives), which organizational areas are affected and whether evaluation is compulsory or voluntary. Besides hospital context the framework proposal can also be used to classify evaluation methods applied in public services. However, it is preferably applied to classify methods already in use, assuming that practice can be quite different from theoretical models (e.g. in resultant actions and incentives). Applicability of the proposed framework for classification has been tested during the research.

Figure 2. Proposed framework for the classification of hospital evaluation methods

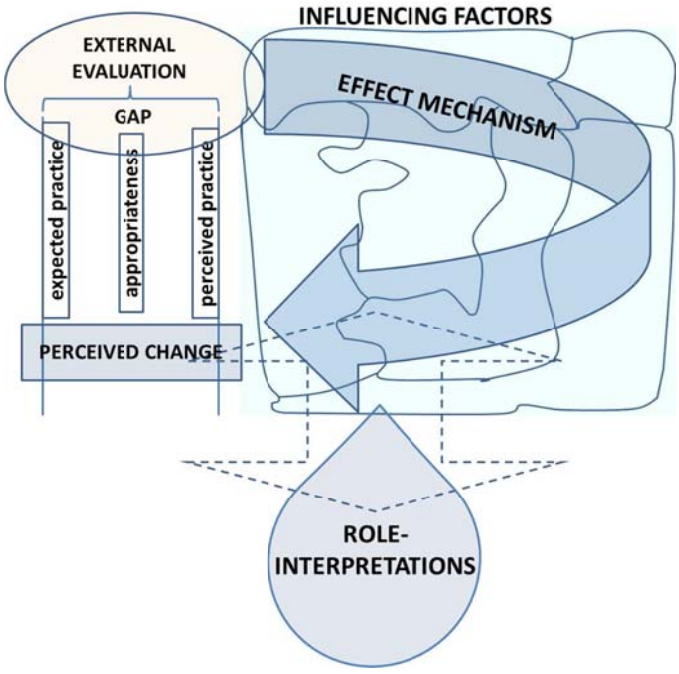


Source: own elaboration

3.2. Analytical framework and conclusions of the empirical study

Results of the empirical study are summarized in Figure 3 indicating that both auditors and hospital actors have different perceptions of hospital operations and the behavior of the participants (perceived practice) and auditors' expectations (expected practice), and they both have different image of the discrepancies between these (GAP) that is of the level of appropriateness. Auditors evaluate this gap using the audit method (external evaluation). The characteristics of this method influence on the reactions of hospital actors, auditors and their interactions, too. Reactions and interactions emerging as a result of the certification and the related audits are called mechanism of effects which are also influenced by further factors (influencing factors), all having an impact on the opinion that participants will ultimately have on the role of the certification in their hospital (role interpretations). These interpretations, however, can also have an influence on the reactions and interactions, and, therefore, on the effects of evaluation on the changes that participants perceive (perceived change).

Figure 3. Analytic framework



Source: own elaboration

It is important to point out that in the case studied here the effects of ISO 9001 and SHC/HHCS certifications cannot be separated. In the hospital examined the earlier introduced ISO system was dominant, but integrated ISO-HHCS audit and system has also been applied for years, therefore the conclusions do not refer to two different external evaluation systems, but to a sole case where two systems were jointly applied.

The following can be stated about the studied external evaluation method that is the certification and the related audit in the present case:

1. Certification as an external evaluation method can be considered as an **interpretative method** in case of this hospital according to the 'approach to knowledge' dimension of the proposed framework for classification. This statement is supported by the following:
    - Audit related information collection and evaluation are not happen in clearly separated phases in succession, but 'moments' of evaluation and giving feedback happen during information collection (in the audit process itself), and this influences on the content of the information obtained.
    - The result of the audit is not just a fully objective external evaluation given by the auditor, but hospital personnel also participate in the evaluation process, for example, they actively react to the proposals and recommendations made by the auditors, and the auditors' constructive attitude also allows to discuss the relevant topics.
    - Audit as a method makes it possible for the auditors to take into account the circumstances, explore the causes, carefully listen to the explanations given by hospital personnel, and auditors take advantage of these opportunities.
    - The audit method is not based on sampling, but it is a random process, which is influenced by the different points of view of the auditors and of the hospital actors.

2. Another dimension of the classification framework is the role of the evaluation, which is **formative** in our case. This statement is supported by the following:
    - Although auditors usually tend to survey the appropriateness to standards, their attitude is mainly influenced by helpful and supportive purpose.
    - Auditors consider that the audit is valuable if it contributes to the development of the system.
    - Hospital actors usually find auditors' attitude helpful and constructive. They perceive that auditors are not necessarily seeking for errors, but they want to help and make supportive recommendations if they find errors.
    - According to hospital actors the role of the certification among others is to reveal, correct and prevent errors and to enhance improvement.
    - Certification as external evaluation is inadequate for summative role in this case as to judge the level of quality or to make comparison with other hospitals.

According to these statements the proposed framework can be used for the classification of external evaluation methods. Further research is required to test the validity of the framework. This research has made me understand that methods should not be merely classified as 'interpretative' or 'positivist' on the basis of the dimension of the approach to knowledge, but the methods can be assessed using both approaches, and we can decide whether from the one or the other point of view the method is acceptable or not.

3. **Voluntary or compulsory** external evaluation method: analysis highlighted that evaluation methods cannot be unequivocally classified as voluntary or compulsory, as volunteering is not a dichotomous variable but preferably a scale where evaluation methods can be placed ranging from fully internally motivated evaluation to compulsory methods that result in severe sanctions (eg. legal sanctions) if it is not applied or fulfilled. The case studied here illustrates the complexity of the issue. The first audit for certification was voluntary according to the report of the managers, although there were some other motives behind, too. However, the maintenance and continuity of the certification is considered as a kind of forced path, because losing the obtained certification would mean considerable loss of prestige for the hospital.

4. Characteristics of the mechanism of effects of the certification and the related audits in the studied case:
   - **Regular supervisions**: According to the proposed additional classification aspects of external evaluation, this characteristic can be considered as a resultant action or incentive. That is the feedback following the audits can affect the organization, because regular follow-up supervisions motivate error correction and implementation of the recommended changes. Audit-related regular supervision does not only include external audits, but internal audits, too, which are expected by the external auditors. Other direct forms of supervision have also appeared. These supervisions strengthen the effect of other control mechanisms applied by the organization.
   - **Exam-like character**: This is manifested in intense preparation before audit and emotional effects (e.g. nerves) signing the importance of the event in the hospital case. The exam-like character of the audits motivates hospital actors to prepare for the event, and this together with the reiterative character result in a cyclical effect.

In my opinion these characteristics of the mechanism of the effects of the certification, together with a formative character, can result in an efficient organizational learning process. Due to the implementation, supervision and reiterative supervision of supportive recommendations the changes become part of the organizational routine. The mechanism of the effects of the certification and related audits revealed in the studied case is worth to compare to the theories of learning in further research.

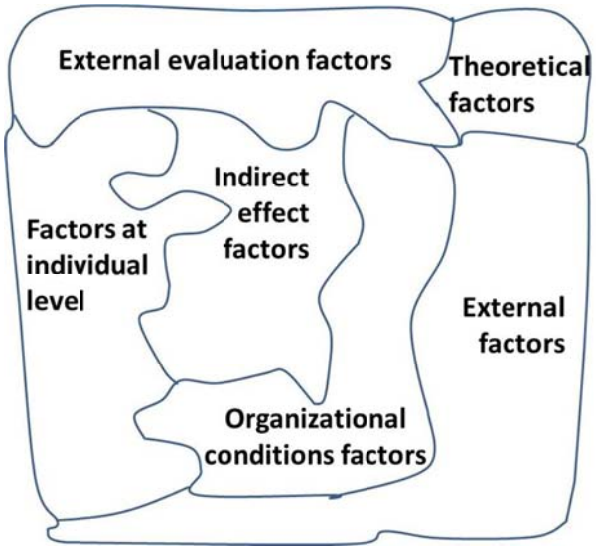
5. Based on the case study it can be claimed that the characteristics of the evaluation method (e.g. dominant method of information gathering is document-checking) and even the perceived changes can influence on how hospital actors interpret the role of the certification (role interpretations). Auditors' and hospital actors' role interpretations also have an effect on their reactions and interactions, on the mechanism of the effects and therefore on the perceived changes.

   Among the information gathering methods checking documentation was the one which was most evidently perceived by hospital actors, and even among the perceived organizational changes documentation related changes were dominant. They rarely perceived effects of certification in their professional work, although ISO had originally been developed to regulate the principal activities of organizations, and the health care related, Hungarian interpretation of the ISO 9001 published in 2003 also refers to the need for the identification, planning and regulation of the professional processes of the health services (ESZCSM, 2003). However, hospital actors and auditors as well considered it quite normal that certification did not produce any significant changes in professional processes. According to hospital actors' interpretation the 'document-checking' role of audits seemed dominant. Furthermore, auditors may think in vain that they contribute to the continuous improvement of the organization through improving quality management system (see PDCA cycle) if top managers do not recognize the decision supporting role of certification. Therefore, it can be concluded that the different actors' interpretations can have an effect on the implementation of a method (on the mechanism of effects, on the perceived organizational changes).

6. Several influencing factors have been identified that influence on the mechanism of the effects of the method and, therefore, on the perceived organizational changes and even on the interpretation of the role of the certification. Influencing factors are of different

origins and may interact with each other. Therefore, I created groups of influencing factors, which are illustrated in a jigsaw puzzle format (Figure 4).

Figure 4. Groups of factors that influence on the effects of external evaluation



Source: own elaboration

Influencing factors are summed up in Table 3. This summary of theses details only the following factors (group indicated in brackets):

- professional guidelines and protocols (external factors),
- legal regulations, authority requirements (external factors),
- role of direct leaders (organizational condition factors),
- denouncements and trials (external factors),
- role of the management (organizational condition factors),
- the presence of a responsible or experienced person (organizational condition factors),
- understanding and experience (factors at individual level),
- interpretation and messages by developers and supporters (theoretical factors).

Table 3. Influencing factors identified by the research

<table>
<tr><td colspan="3">External evaluation factors:
„auditor” market
auditors’ attitudes and their role
auditors’ interpretations and their messages
methods of information collection
aspects and results of evaluation</td><td>Theoretical factors:
Information available about ISO and SHC/HHCS system, interpretations
interpretations and messages by developers and supporters</td></tr>
<tr><td>Factors at individual level:
perception of real and expected behavior
acceptance
understanding
legitimacy
fulfillment of expectation
essential vs. redundant
experience
strong wish to fit
perception of external requirements
external force
appraisal, punishment</td><td>Indirect effect factors:
role of the quality manager
role of internal auditors
role of other persons for quality
auditor escorts
operation of the quality management system:
regulation system
documentation system
supervision system
PDCA cycle</td><td>Organizational condition factors:
role of the management
role of middle managers
responsible / experienced person
antecedents with similar functions to certification (like existence of ISO certification before SHC or HHCS)</td><td>External factors:
perceived expectations of owners
perceived expectations of health policy leaders
possible extra resources (e.g. by tenders)
other certified hospitals
shortage of labor, fluctuation
trials, denouncements
professional guidelines, protocols
legal regulations, authority requirement</td></tr>
</table>

Source: own elaboration

6.a) *Professional guidelines and protocols*

External factors such as professional guidelines and protocols appear among Mintzberg’s (1991) coordination mechanisms, because professional protocols and trainings can be listed in ‘standardization of skills’ coordination mechanism. According to Mintzberg this dominant coordination mechanism makes that hospitals can be considered as professional bureaucracy. The case study confirms the importance of this external factor in case of physicians.

6.b) *Legal regulations, authority requirements*

Other external factors, such as legal regulations and authority supervisions also have a great influence mainly on the technological and economic area in the hospital. According to interviewees working in these fields legal regulations and supervisions by public authorities have much more considerable effect on their work by regulating their activities than certification and related regulation system.

6.c) *Role of direct leaders*

Direct leaders factor listed among organizational condition factors can also be found among Mintzberg’s coordination mechanisms (1991) in the name of direct supervision. According to

the case study results expectations of direct leaders dominate over the effects of certification. Many of the interviewees claimed that the operation of a hospital unit is determined by the expectations of the head of the unit. Some of them think that ISO quality management system requirements are only considered relevant if direct leaders support them. According to Mintzberg the regulation role of the quality management system belongs to the coordination mechanism named standardization of work processes. In fact, this means that the coordination mechanisms called direct supervision and standardization of work processes compete whether personnel accept the latter without the reinforcement of the former. These two coordination mechanisms can also support each other, as in one of the examples of our case where the nurse head supported quality management system requirements and transmitted them to her own inferiors. There were some other managers whose original requirements matched with those of the quality management system (e.g. precise documentation), so ISO did not add anything new to the operation of the unit.

6.d) *Denouncements and trials*

External factors such as denouncements and trials influenced on the interpretation of the role of certification. As these external factors may have serious economic impact on hospitals in the form of penalties, requirements related to these factors seem to have a special weight. The system established as a result of the certification is considered to play an important role in defending the hospital from having problems by preventing cases that could result in complaints, denouncements and trials. Hospital actors who agree with this interpretation also agree that appropriate documentation is an important element of prevention because it assures accountability and therefore protection of the personnel.

6.e) *Role of the management*

Among the elements of the organizational condition factor the management is the one that has a crucial role in the interpretation and implementation of the system to be established as a result of certification. Literature on quality management often emphasizes the importance of management compliance. Auditors usually test such compliance and they usually include results in their report. However, it is important to define what we mean by management commitment. Management commitment does not only mean that the leaders decide for the certification and delegate the related tasks, but also that the behavior and the communication of the Director General reflect to the other hospital actors that it is important to meet these

requirements. The case study proved that such an attitude, which characterized the former Director General of the hospital at the time of implementing the quality system, can bring about changes in the organization. The case also served to prove that the role of the Director General and the management is not only this, but it is also important how they interpret the role, the aims and the mechanism of the method. If the hospital leaders do not implement and do not take advantage of the opportunities offered by the method (e.g. objective setting based on analysis or evaluation of its realization), then their effects (e.g. on improvement through the PDCA cycle) cannot prevail. To sum up, the effects of the certification are significantly influenced by how the important actors like the management or the quality manager interpret the role and function of this method in the organization.

6. f) *The presence of a responsible or experienced person*

The case proves that it makes a big difference if in the organization or within an organizational unit there is a hospital actor who is responsible of operating the quality system and/or has some experience with the audit methods. The embedded cases evidenced (comparison was possible at this level) that in the units where there was an appointed internal auditor it was much easier to meet the requirements of the external audits, while in the unit where there was no responsible staff member or an appointed internal auditor the requirements could not be properly interpreted, which made adaptation even more difficult for the employees. At the level of the units the internal auditors are the most familiar with the method, which allows them to help to interpret the new changes (why are they needed). As during the internal audits they also visit other units than their own, they have more experience of how audits work. Internal auditors also enhance organizational leaning by dispersing best practice. This logic could also work at organizational level, if there was a hospital actor who would work as an external auditor for another hospital, and they could bring best practice of others into the hospital. One of the external auditors of the hospital who works as quality manager for another hospital corroborated this.

6.g) *Understanding and experience*

Among the individual factors I has to mention the importance of **understanding and experience**. A frequently mentioned negative effect of ISO is that it brings about a great documentation burden, as pointed out also by the experts interviewed. However, the case study revealed that this documentation burden is not always perceived, because hospital

actors who think that they understand why documentation is needed can accept it, and once it becomes part of the daily routine it is not perceived as a burden anymore. It was also not perceived as a burden if they had to fulfill similar requirements before (e.g. requirements of a direct leader), or if they experienced that it made sense to document things (e.g. accountability), these factors are included in the influencing factor called 'experience'. This means that the case does not evidence that ISO certification would impose extra documentation burden that provokes resistance of the hospital actors. As an influencing factor it is much more significant if hospital actors see the point in the changes introduced (e.g. in documentation) as a result of the certification or not, which factor is described here by the term of 'understanding'. Understanding means that the hospital actors consider that it makes sense to implement the changes induced by the certification. It is not necessary that all hospital actors agree about what the point is, but the important is that they all consider that there is a reason, and then they accept the changes more easily. However, if they do not see the point in the new method and they only perceive that it is a burden, then they will not accept the method, and even if they try to meet the requirements by external force, fulfillment will be more difficult (as this was the situation in one of the embedded cases). The presence of the factors of understanding and experience does not mean that any documentation burden will be accepted, which is shown by the fact that even those who understood its importance criticized the elements that they could not understand (e.g. duplication in the documentation). There are also other influencing factors that were identified during the case study. (See table 3.)

6. h) Interpretation and messages by developers and supporters

With so many influencing factors there is the question of how the original ideas of the developers and supporters on the role of the certification can prevail at all during the application of the method? The history of ISO and SHC/HHCS described in the dissertation illustrates that the understanding and the interpretations of the developers and supporters of the systems can have also significant effect on their operation. The history of the Hungarian SHC system, based on accreditation standards, is a good example for this, because it supported the spread of only one element of the accreditation system, namely the regulatory standards, while another important element, the supervisory system, which was based on a logic different from the supervisory system applied by ISO, was completely ignored, because at that time the developers and the health care quality policy makers did not realize its

importance. They should have understand the essence of the evaluation method and the basic differences between ISO and the new system, be able to communicate them, instead of interpreting standards on their own. This influencing factor is called the interpretations and messages by the developers and supporters.

The research objective and the research questions were oriented so that they focus on the effects on the improvement initiatives. The case study revealed that in the hospital case improvement was among the declared objectives of taking up the certification, but it was not its primary role. According to expert interviewees ISO and SHC/HHCS systems do not really contribute to hospital improvement in Hungary. The changes introduced by the effect of the preparatory phase and the first certifying audit, like more regulated and more disciplined operation, were changes perceived as improvement by most of the hospital actor interviewees experienced these changes. Meanwhile, the certification can also enhance improvement through the recommendations made by the auditors as they can prevail through the described mechanism of effects, however most of the hospital actor interviewees did not perceive these recommendations as an improvement. The case study showed that the quality system established as a result of the certification could enhance improvement through the PDCA cycle, this is hindered by some influencing factors (like the role of the management). Whether hospital actors consider the perceived changes as improvement does not only depend on if these changes are positive or negative, but also on whether hospital actors perceive them at all, or whether they consider them essential or not. The certification and the related audits can bring about organizational changes, but the content and the importance of these changes is also influenced by how the auditors and the hospital actors interpret the role of the certification. To conclude it can be claimed that in the studied case the indirect effects of the certification did not result in generating a proactive improvement potential for the organization, but it induced a kind of reactive behavior, which means that it helped the organization to adapt to changes resulted by other factors, and modified the regulatory system according to these changes, and as a result it fixed and transmitted the new state.

3.3. Research results compared to the literature and direction of further research

The results are appropriate to be compared to those of the literature. They have already been compared to the references of the dissertation.

The findings of this research harmonize with the professional bureaucracy model by Mintzberg (1991) both claiming that among the coordination mechanisms standardization of skills is decisive in case of physicians. I also stated that for nurses and other skilled health workers standardization of work processes that is influenced by certification can be considered as a characteristic coordination mechanism. Mintzberg' model (1997) on the worlds of 'cure' (physicians) and 'care' (nurses) can offer further explanations for this phenomenon. To analyze the influencing factors of physicians' and nurses' attitudes towards regulation (such as different decision making positions, training, professional culture) can serve as topic for further research.

The case presented here has been compared to the findings of Lozeau et al. (2002) from the point of view of hospital actors' reactions to the requirements imposed as a result of certification. It can be claimed that findings can have different interpretations (corruption, customization, loose coupling) according to whose (e.g. developers, auditors, hospital actors) points of view are considered when analyzing real life reactions. Therefore, it is crucial whose interpretation is considered, and this depends on whether our aim is to develop the method or the practice.

During the study further research topics have emerged. One of these issues is the role and the attitude of external evaluators (e.g. auditors and supervisors). Another related issue is that how developers' original assumptions influence on system implementation and effectiveness of the implementation. This later question could serve as a basis for analyzing the Hungarian hospital accreditation system which is currently under development.

The detailed and exploratory description of the phenomenon offered by the dissertation makes further comparison with other cases possible.

The results of the PhD dissertation can be used for the currently ongoing development of the Hungarian hospital accreditation system. The influencing factors identified by this research can contribute to understanding nurses', skilled health workers' and physicians' different attitudes towards regulation. It is also recommended to consider these factors when developing new standards and implementing them in hospitals. This research affirmed that intense communication between developers, auditors and hospital actors is indispensable.

Seeking a common interpretation of the assumptions related to the objectives, role and operation of accreditation can substantially contribute to the success of an evaluation method.

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